

Open Space and Recreation Plan



Nagog Pond from Nagog Hill Orchards
Town of Littleton
July 2003

Open Space and Recreation Plan Update

Littleton, Massachusetts

Presented to:

**Jennifer Jillson Soper
EOEA: Division of Conservation Services
251 Causeway Street, 9th Floor
Boston, MA 02114**

Prepared by

**Littleton Open Space and Recreation Plan
Implementation Committee**

with assistance from:

**Beals and Thomas, Inc.
Reservoir Corporate Center
144 Turnpike Road (Route 9)
Southborough, MA 01772-2104**

March 10, 2003

TABLE OF CONTENTS

1.0 PLAN SUMMARY.....	1-1
2.0 INTRODUCTION.....	2-1
2.1 Statement of Purpose.....	2-1
2.2 Planning Process and Public Participation.....	2-1
2.3 History of Committee Work.....	2-2
3.0 COMMUNITY SETTING.....	3-1
3.1 Regional Context.....	3-1
3.2 History of the Community	3-4
3.3 Population Characteristics.....	3-6
3.4 Growth and Development Patterns	3-9
3.4.1 Land Use	3-9
3.4.2 Infrastructure.....	3-10
4.0 ENVIRONMENTAL INVENTORY	4-1
4.1 Topography, Geology and Soils.....	4-1
4.1.1 Topography	4-1
4.1.2 Geology and Soils	4-1
4.2 Landscape Character	4-3
4.3 Water Resources.....	4-4
4.3.1 Surface Water.....	4-4
4.3.2 Wetlands.....	4-5
4.3.3 Aquifer Recharge Areas.....	4-5
4.4 Vegetation	4-5
4.5 Fisheries and Wildlife	4-6
4.6 Scenic Resources and Unique Environments.....	4-7
4.7 Environmental Challenges	4-9
4.7.1 Hazardous Waste Sites.....	4-9
4.7.2 Landfills	4-9
4.7.3 Erosion	4-9
4.7.4 Chronic Flooding	4-10
4.7.5 Sedimentation.....	4-10
4.7.6 Development Impact	4-10
4.7.7 Ground and Surface Water Pollution	4-11
5.0 LANDS OF CONSERVATION AND RECREATION INTEREST	5-1
5.1 Land Protected from Development	5-2
5.1.1 Permanently Protected Land	5-2
5.1.2 State-owned Land.....	5-3
5.1.3 Agricultural Preservation Restrictions	5-3
5.1.4 Conservation Restrictions	5-3
5.2 Lands Not Protected from Development.....	5-4

Littleton, Massachusetts
1686000OS001

5.2.1	Chapter 61 Forest Lands	5-4
5.2.2	Chapter 61A Farm Lands	5-4
5.2.3	Chapter 61B Private Recreation Lands	5-5
5.3	Recreational Facilities.....	5-5
5.4	Regional Open Space	5-5
5.5	Opportunity Areas.....	5-6
6.0	COMMUNITY GOALS	6-1
6.1	Description of Process.....	6-1
6.2	Statement of Open Space and Recreation Goals.....	6-1
7.0	COMMUNITY GOALS	7-1
7.1	Summary of Resource Protection Needs.....	7-1
7.1.1	Land Resources	7-1
7.1.2	Water Resources.....	7-2
7.2	Summary of Recreation Needs.....	7-2
7.3	Management Needs, Potential Change of Use	7-3
7.3.1	Management	7-3
7.3.2	Threatened Areas	7-3
7.3.3	Special Opportunities	7-3
8.0	GOALS AND OBJECTIVES	8-1
9.0	FIVE-YEAR ACTION PLAN.....	9-1
10.0	PUBLIC COMMENTS	10-1
11.0	REFERENCES.....	11-1
12.0	FIGURES	12-1
APPENDIX A – PUBLIC SURVEY SUMMARY.....		A-1
APPENDIX B – MEETING NOTES AND PRESS COVERAGE		B-1
APPENDIX C – HAZARDOUS WASTE SITES AND SPILLS.....		C-1
APPENDIX D – SECTION 504: HANDICAPPED ACCESSIBILITY SELF-EVALUATION.....		D-1

LIST OF FIGURES

- Figure 1 Zoning Map
- Figure 2 Geological Features
- Figure 3 Generalized Soils Map
- Figure 4 Unique and Scenic Features
- Figure 4A Priority Habitats
- Figure 5 Water Resources
- Figure 6 Flood Zones and Wetlands
- Figure 7 Inventory of Conservation and Recreation Land
- Figure 8 Chapter 61 Lands
- Figure 9 Regional Open Space
- Figure 10 Action Map

Section 1
Plan Summary

1.0 PLAN SUMMARY

The 2002 Littleton Open Space and Recreation Plan (hereon referred to as "the Plan") is an update of the 1997 Littleton Open Space and Recreation Plan. The 1997 Plan has been a critical document in the planning efforts of the Town of Littleton over the last five years. It was also heavily leveraged for the writing of the current Littleton Master Plan. This new Plan will be a document that is actively referred to for future planning efforts as well.

Following the completion of the 1997 Plan, the Town initiated an Open Space and Recreation Plan Implementation Committee. This Committee was charged with implementing the five-year action plan specified in the 1997 Plan. Since its inception, the Implementation Committee has worked to carefully and completely march through the goals and objectives from the 1997 Plan.

In addition, a Clean Lakes Committee (CLC) was established to specifically concentrate on clean-up efforts for the Town's many surface water bodies.

The community, the Implementation Committee, and the CLC are committed to preserving the rural character that has 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 add to the existing contiguous parcels of open space in the town, as well as improving the quality of life. The emerging green belt can be traced from our border with the Town of Acton, across Littleton to the border of Groton. Over the past five years we have engaged in many regional efforts with our neighbors to expand trail systems, contiguous open spaces, and wildlife corridors.

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.

Following the completion of the 1997 Plan, Littleton was able to purchase the 107-acre Long Lake Conservation Area (referred to as the Frost/Whitcomb parcel in the 1997 Plan) with the assistance of Division of Conservation Services Self Help Funds. Also during this time period, another large parcel was acquired. The Morrison Orchard, consisting of 130 acres of prime agricultural soils, listed as the number one piece of land townspeople would like the Town to purchase, was acquired in December of 2000, again using Self Help Funds, in addition to APR Funds and other funding mechanisms.

The Implementation Committee has completed a land inventory during its tenure. 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, and 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.

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. The Littleton Conservation Trust has also secured properties through donations. The Town must continue to work creatively to reach our stated objectives.

Going forward, we hope to expand the use of creative funding mechanisms and techniques to continue to preserve our open space resources. Conservation restrictions, Self Help Funds, Trust for Public Land projects, APRs, donations, and critical purchases will help us achieve these goals.

These goals and objectives will not only meet the needs 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.

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, and between Town funding, cell tower revenue, and the Municipal Land Acquisition Fund, the Town is strategically positioning itself for future key land purchases.

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 five years. It begins with an overview of the community setting: the region, Town history, and recent growth (Section 3). That is followed by an inventory of the Town's environmental resources (Section 4), and a detailed inventory of the land parcels which are or should be protected (Section 5). Section 6 provides an overview of the goals being pursued, and on that basis, Section 7 outlines needs for resource protection, recreation facilities, and management needs. Section 8 then details more specific goals and objectives, and Section 9 lays out a five-year plan for addressing them.

**Section 2
Introduction**

2.0 INTRODUCTION

2.1 Statement of Purpose

Historically once a decade the Town has prepared plans as guidance for its open space and recreation efforts. That has been changed to five-year increments, as the rate of development and availability of State funding necessitates more frequent review. A timeline of previous actions and plans undertaken by the Town of Littleton 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.
- 2002: *Littleton Massachusetts Open Space and Recreation Plan* updated.

The current *Open Space and Recreation Plan* has enhanced the Town's ability to gain financial assistance in pursuing resource protection. It is imperative that the Plan be kept up to date in order for Littleton to gain funding and support from State agencies.

The update of this Plan carefully builds on earlier plans in two ways. First, 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. The particulars of how to achieve goals can be expected to change, but implementation should be expected to move relatively slowly.

Second, the Town's record of action in relation to earlier plans is instructive. By critically noting what was *done* in the past in relation to what was *said* in the past, a great deal about real intentions can be discerned.

Maps for the 2002 *Open Space Plan* were prepared carefully, documenting changes in relation to mapped intentions of 1997. Mapping of change was important in shaping this *Plan*. These plans were prepared through the Geographic Information Systems (GIS) capabilities of the Littleton Light and Water Department, for whom a great deal of credit and appreciation is expressed by both the OSRPC and Beals and Thomas, Inc.

2.2 Planning Process and Public Participation

Results of the town-wide survey that was conducted in October of 2001 were tallied and incorporated into this Plan. Over 500 households, or 13.3% of the town, responded quite positively to the acquisition and protection of Open Space and natural resources. A large majority of respondents would support purchasing land via tax dollars. Most people would like to see the farms along Great Road preserved, and mentioned several other

properties near Long Lake and Beaver Brook. Stronger protection for wetlands in Littleton was received favorably. Several recreational facilities were suggested including bike paths, additional tennis courts, skating of all types, a swimming pool, and centers for Littleton's youth and senior residents. A summary of the results of this survey is included in Appendix A of this Plan.

Thus, this current Plan shares much with the 1997 one, but also departs from it in important ways. The emphasis of efforts in this Plan has been 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 the key to accomplishment.

The Open Space and Recreation Plan Implementation Committee (OSRPIC) charged with the responsibility of updating the 1997 Open Space and Recreation Plan includes the following members:

Committee Members:

Rita Biagioni, Chair

Richard Fritz

Debbie Bray

Art Lazarus

Peter Church

Melissa Spurr

Richard Dennis

Linda Stein

Sarah Foss

Gino Frattalone

2.3 History of Committee Work

The Committee began preparing for the Plan update in August of 2001 with the creation and distribution of the above-mentioned survey. Littleton Electric Light Department generously copied the surveys and included them in their September bills. Sarah Foss tallied and published the results in the Littleton *Independent*. The Committee determined that a consultant was needed to assist us in the update process. RFP's were sent to four firms who have experience in Open Space Planning. Three replied, and the Committee chose to interview two of them. The interviews were held on February 27, 2002 and attended by eight members of the Committee, as well Dan Lord, representative of the Conservation Commission, and Al Gregory, representative of the Park & Recreation Commission. Beals and Thomas, Inc. (BTI) of Southborough, MA was chosen to assist us in the update.

On April 10, 2002 the Committee met with Robert Weidknecht and Holly Johnson of BTI, as well as Karen MacNamara from the Board of Selectmen, and Dan Lord of the Conservation Commission. The process of the update was discussed, and Mr. Weidknecht distributed a timeline for the project. The Committee and guests made determinations about what should be contained in the Plan, and suggestions and ideas

were discussed. It was determined what sections of the Plan would be updated by the Committee, and what would be handled by BTI.

At the April 24, 2002 meeting, the Committee broke down the sections of the Plan that we will be responsible to update. They were as follows:

Section 1	Plan Summary	Rita Biagioni
Section 2	Introduction	Sarah Foss
Section 3.1	Regional Context	BTI
Section 3.2	History	Sarah Foss
Section 3.3	Population Characteristics	BTI
Section 3.4	Growth & Development Patterns	BTI / OSRPIC
Section 4.1	Geology	Art Lazarus
Section 4.2	Landscape	Melissa Spurr
Section 4.3	Water Resources	Debbie Bray
Section 4.4	Vegetation	Peter Church
Section 4.5	Fisheries & Wildlife	Peter Church
Section 4.6	Scenic & Unique Environments	Melissa Spurr
Section 4.7	Environmental Challenges	Debbie Bray
Section 5	Inventory of Lands	Richard Dennis / BTI
Section 6	Community Goals	OSRPIC
Section 7	Analysis of Needs	OSRPIC / BTI
Section 8	Goals & Objectives	Art Lazarus
Section 9	Five Year Action Plan	OSRPIC / BTI

The Committee prepared another survey, on the advice of Beals and Thomas, Inc., which was handed out to citizens who attended the Annual Town Meeting on May 6, 2002. Very few people returned those surveys. Maps of Littleton's Open Space were also available for residents to review at Town Meeting.

A public workshop was held from 7:30pm to 9:00pm on September 25th, 2002 in the Board of Selectmen's Meeting Room in Littleton Town Offices. The workshop was advertised throughout Town in the preceding month through notices on the Town website, the Town's local access cable channel, and in the local paper, as well as the posting of flyers at Town offices and buildings, retail centers and other highly visible areas in Town. The meeting consisted of a presentation and review of maps depicting protected and unprotected open space and demographic statistics regarding the changes that Littleton has undergone over the past decade. An open discussion followed, resulting in the review of draft goals and objectives prepared by the Open Space and Recreation Plan Implementation Committee. This open discussion allowed for the gathering of additional information regarding recreational needs, distinctive natural features, the overall character of the Town and environmental concerns. This discussion helped the Open Space and Recreation Plan Implementation Committee and Beals and

Thomas, Inc. further refine the set of goals and objectives within this Open Space and Recreation Plan in order to create a 5-year Action Plan for implementation.

The Open Space and Recreation Plan Implementation Committee worked diligently to complete their assigned sections which were forwarded on to Beals and Thomas, Inc. for review in comparison with the guidelines set forth in the Open Space Planner's Workbook. Beals and Thomas, Inc. reviewed each section for consistency with plan requirements and made comments and suggestions to the OSRPIC in anticipation of preparing a thorough draft for the Executive Office of Environmental Affairs (Division of Conservation Services), the local Regional Planning Agency, the Board of Selectmen, Conservation Commission and Planning Board during their review and public comment period.

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

Section 3
Community Setting

3.0 COMMUNITY SETTING

3.1 Regional Context

Littleton lies in 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, a more familiar regional name. 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 local water supply within the basin is located in adjoining towns. The western portion of the Town drains to the Merrimack via Beaver and Stony Brooks.

The Town lies at the junction of the Route 2 radial corridor, important in both history and current economic development, and the Route I-495 circumferential corridor of more recent significance. Based on consideration of functional relationships, Littleton has been included in the Boston-centered Metropolitan Area Planning Council (MAPC), but at its extreme northwestern edge. Finally, 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.

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 potential for industries 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 more convenient commute for those residents more willing to reside in suburban communities as opposed to an urban setting.

Job growth in the vicinity continues to increase, particularly within the high-tech sector, and numerous larger office complexes have been built along Interstate 495 and Route 2 to provide easy access for commuters. These jobs have tended to be high skill, high paying jobs which capitalize on the well-educated workforce in the region. Despite recent

Littleton, Massachusetts
168600OS001

economic downturns, the overall trend of growth in the region looks to have a resilient and strong future.

Table 3-1 Littleton Subregion Jobs (by place of work)

Town	1990	1995	2001	Change (# of jobs) 1990-2001	Percent Change 1990-2001
Acton	9,395	9,767	9,166	-229	-2.5%
Ayer	6,149	4,897	5,244	-905	-14.7%
Boxborough	2,286	1,833	2,206	-80	-3.5%
Groton	2,739	2,907	2,426	-313	-11.4%
Harvard	1,004	1,527	649	-355	-35.4%
Littleton	5,342	5,105	5,340	-2	--%
Westford	5,565	6,445	11,461	5,896	105.9%
<i>Subregion Total</i>	<i>32,480</i>	<i>32,481</i>	<i>36,492</i>	<i>4,012</i>	<i>12.4%</i>

Source: Massachusetts Division of Employment Training

Given the increases in job growth in the region, the housing growth for Littleton and adjacent communities has increased at a rate greater than the statewide average. Given the well-paying jobs, excellent municipal services, and quality school systems in the region, housing prices have increased over recent years resulting in a shifting demographic of regional residents.

Table 3-2 Littleton Subregion Housing

Town	1990 # housing units	2000 # housing units	Percent change
Acton	6,891	7,680	11.4%
Ayer	2,891	3,154	9.0%
Boxborough	1,485	1,853	24.8%
Groton	2,774	3,268	17.8%
Harvard*	3,141	1,809	-42.4%
Littleton	2,691	2,960	10.0%
Westford	5,530	6,808	23.1%
<i>Subregion Total</i>	<i>25,403</i>	<i>27,532</i>	<i>8.4%</i>
<i>Subregion Total (excluding Harvard)</i>	<i>22,262</i>	<i>25,723</i>	<i>15.5%</i>

Sources: U.S. Census Bureau and 1997 Open Space and Recreation Plan

*Data for Harvard reflects the closing of Fort Devens.

Littleton, Massachusetts
168600OS001

When population and growth trends within Littleton are compared to those towns within its Subregion, one can note that Littleton is relatively in the middle when compared to its peers in terms of population change and density. While the population increases in this area between 1990 and 2000 are well above the state average (5.5%), the density of these towns tend to be much less than the average density for towns within Massachusetts (809 persons per square mile). Based on these trends one can conclude that given an above average growth rate, the density of Littleton will continue to increase over the upcoming decade.

Table 3-3 Littleton Subregion Population

Town	1990	2000	Percent change	Population Per Land Area Square Mile
Acton	17,872	20,331	13.8%	1018
Ayer	6,871	7,297	6.1%	808
Boxborough	3,343	4,868	45.6%	469
Groton	7,511	9,547	27.1%	291
Harvard	12,329	5,981	-51.5%	227
Littleton	7,051	8,184	16.1 %	496
Westford	16,392	20,754	26.6%	678
Subregion Total	71,369	76,952	7.8 %	528

Source: U.S. Bureau of the Census, Department of Housing and Community Development Community Profiles

It should be noted in the table above that the subregional population change from 1990 to 2000 is skewed by the closing of Fort Devens in Harvard. This base closing substantially explains the population of Harvard being cut in half over the past decade. Looking at the same data without including Harvard, the percent change in population over the past decade for the subregion is approximately 16.9%, much greater than the 7.8% the table may lead one to believe.

Water resources vitally link communities in this region. Nagog Pond is not only divided between Littleton and Acton, but its waters provide drinking supplies 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.

Open space and recreational resources amongst the communities are shared and linked through trail systems, wildlife corridors and youth recreational programs. Caught

Littleton, Massachusetts
168600OS001

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. While Littleton has not yet passed the Community Preservation Act, it is not the only regional town that has yet to adopt this measure. Littleton, Boxborough, and Groton have not passed the CPA, while Acton, Ayer, Harvard and Westford have successfully voted for the Act. Taking measures to adopt the CPA might be an additional way for Littleton to secure funds for the acquisition of open space to further the goals and objectives of this Plan.

3.2 History of the Community

Littleton is a town with a full and rich history. Originally named Nashobah, 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, we have been greatly influenced by that first Indian culture.

The Indians lived peacefully in Nashobah 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, Nashobah 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 Nashobahs 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 Nashobahs 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 Nashobah's last survivor, an area of conservation land near Nagog Pond is the Sarah Doublet Forest and we have 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 industry had popped up. 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 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 great clustering of homes on relatively small lots around the lake areas (predominantly Long Lake and Forge Pond) was originally established as summer homes for Bostonians in the 1930's. Littleton was desirable and attractive at the time because of its low tax rate, proximity to Boston and Fort Devens, and natural beauty. Again these same arguments could be applied today.

Then, as now, Littleton was struggling with growing pains. Many in the Town would prefer that it stay residential rather than industrial. 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 their 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?¹

¹Important resources for this portion of the *Plan* included John Thomas Sykes, *A History of Littleton*, 1953; and *Official Dedication Booklet of the 250th Anniversary of the Town of Littleton*, 1965.

Littleton, Massachusetts
168600OS001

3.3 Population Characteristics

The population of the Town, as noted in Table 3-4, has increased steadily since 1940. The U.S. Census (2000) reported a population of 8,184 persons. However, the decade between 1950 and 1960 marked the period of greatest population growth as the residential population increased by 2,760 persons - an increase of nearly 120%. Population growth moderated throughout the 70's and 80's, however the Town has experienced another growth spurt, with an increase in population by 16.1% in the last decade. Population projections for 2005, 2010, 2015 and 2020 based on Census 2000 will not be available through MISER (Massachusetts Institute for Social and Economic Research) until Summer 2003. Early projections from MISER note that Littleton is expected to have a 0 to 10% increase in population between 2000 and 2010.

Table 3-4 Littleton Population Change 1940-2000

Year	Total Population	Percent Change from Previous
1940	1,651	
1950	2,349	42.3
1960	5,109	117.5
1970	6,380	24.9
1980	6,970	9.2
1990	7,051	1.2
1997	7,934	12.5
1998	8,225	3.7
1999	8,280	<1
2000	8,445	2.0
2001	8,640	2.3
2002	8,678	<1

Source: U.S. Bureau of the Census, 1997-2002 from Littleton Town Clerk

The Town of Littleton has had population increases of almost 3 times the rate of growth within Middlesex County, or Massachusetts as a whole, over the past decade (Table 3-5). This growth is indicative of the desirable nature of Littleton in which to live, as it is situated near major commuting routes, has quality school systems, and is still relatively undeveloped compared to neighboring towns to the east.

Table 3-5 Change in Population in Littleton, Middlesex County and Massachusetts, 1990-2000

Year	Littleton	Middlesex County	Massachusetts
1990	7,051	1,398,468	6,016,425
2000	8,184	1,465,396	6,349,097
Percent Change	16.1	4.8	5.5

Source: U.S. Bureau of the Census

Littleton, Massachusetts
168000S001

The age structure of the population is shown in Tables 3-6 and 3-7. It is important to note population groups with special recreational needs. Typically such groups include children (those less than 19 years) and the elderly (individuals 65 years and older). Those 18 years or younger make up 26.7% of Littleton's population - almost the same as the statewide average of 23.6%. The Town's elderly population on the other hand - 12.5% of all Town residents - is less than the statewide average of 13.5%.

Table 3-6 Littleton Population Age Structure (2000)

Age	Littleton
Under 5	671
5-9	699
10-14	585
15-19	388
20-24	233
25-34	980
35-44	1,721
45-54	1,195
55-59	436
60-64	311
65-74	485
75-84	339
84 and older	141

Source: U.S. Bureau of the Census

Table 3-7 Littleton Population Age Structure (1990-2000)

Age	1990	2000	Percent change
Under 5	497	671	26.7
5-19	1,316	1,672	22
20-24	447	233	-48
25-44	2,452	2,701	8.6
45-64	1,500	1,942	22.8
65 and older	839	965	12.5

Source: U.S. Bureau of the Census and MISER

It is evident from the previous table that Littleton has experienced a dramatic drop in its population of 20-24 year olds since 1990. This trend may be a result of a lack of affordable housing for younger people, or other economic and social factors within Littleton.

Littleton, Massachusetts
168600OS001

The residential population is distributed over the Town's land area of 16.5 square miles for a population density (2000) of 496 persons per square mile. There are 2,960 (2000) residential units of which 80.2% are single-family dwellings. About 83% of all residential units are owner occupied with rental units accounting for 17% of all dwellings.

Table 3-8 Littleton Housing (2000)

Occupied Units	Number	Percent
Owner	2,461	83
Rental	499	17
Total Households	2,960	100

Source: U.S. Census Bureau

Table 3-9 shows a breakdown of the types of employment within Littleton. The percentage of manufacturing jobs has slowly declined over the past decade with apparent employment gains in more diverse fields (classified in the table below as "all other"). Over the decade several hundred jobs have been added to the Littleton area.

Table 3-9 Littleton Employment (1990-2001)

	1990		1995		2001	
	#	%	#	%	#	%
Manufacturing	2,940	55	2,286	44.8	1,742	30.2
Wholesale and Retail Trade	506	9.5	744	14.6	947	16.4
Misc. Services	1,214	22.7	1,367	26.8	1,759	30.5
All other	682	12.8	708	13.9	1,325	23.0
Total	5,342		5,105		5,773	

Source: Massachusetts Division of Employment Training

Future Population

Completed population projections for 2005, 2010, 2015 and 2020 based on Census 2000 will not be available through MISER (Massachusetts Institute for Social and Economic Research) until Summer 2003. Early projections from MISER note that Littleton is expected to have a 0 to 10% increase in population between 2000 and 2010 and that the projected 2010 population will be 7,827 residents.

Littleton, Massachusetts
1686000S001

In 2001, a Buildout Analysis was issued by the Executive Office of Environmental Affairs (EOEA) revealing demographic projections for Littleton at complete buildout. A summary of these statistics are shown below:

Population	
1990	7,051
Current	8,184
Buildout	15,433
Households	
1990	2,562
Current	3,055
Buildout	5,909

These numbers are based on currently available land for development under existing zoning regulations within Littleton. While these projections do not reflect when buildout will occur, 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 may 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 Town is in the best interest of the Town from both an environmental and fiscal standpoint.

3.4 Growth and Development Patterns

3.4.1 Land Use

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

Littleton, Massachusetts
168600OS001

commercial and industrial sectors has been very strong in the past three decades, and development pressure is expected to continue.

The northern half of the community, north of Route 495, appears largely rural in nature, though the populated Forge Pond neighborhood lies in the Town's northeast corner. The major concentrations of residences are located south 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 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 cluster at the three Route 495 interchanges.

The Town is fortunate in that much of its acreage remains undeveloped open space land. Agricultural, forest, wetlands, and other open space uses account for nearly three quarters of all land in the Town. 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 need not preclude growth but need only provide a sound course for the path of future development.

3.4.2 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 Gardner - 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, however environmental concerns and political wrangling have delayed any changes to the station's parking capacity.

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 Bennetts 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

Littleton, Massachusetts
1686000S001

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 Lake 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. Land is currently being purchased and exploration will begin in 2003 to see if a high yielding bedrock well or wells can be located in this area of town.

No public sewerage is available in the Town. 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.

Littleton, Massachusetts
168600OS001

The Town has made concerted efforts in recent years to protect its water supply. However, dependence on groundwater necessitates an examination of current protection measures as to their adequacy. Widespread use of on-site septic systems presents a potential threat to groundwater resources. The Department of Environmental Protection (DEP) and the Town are currently reviewing the overlay distinct bylaw to update its contents. In addition, a program is currently underway, spearheaded by the Highway and Water Departments to survey, engineer and eventually install best management practices (BMPs) for the detention and attenuation of stormwater flow. These activities are undertaken as part of the Phase II storm water requirements of the EPA and DEP. A review of measures designed to protect underground supplies from contamination is necessary. 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.

Section 4
Environmental Inventory and Analysis



4.0 ENVIRONMENTAL INVENTORY

4.1 Topography, Geology and Soils

4.1.1 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.

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 Bennet's Brook into Spectacle Pond. Numerous smaller unnamed permanent and intermittent brooks occur in nearly all areas in town.

4.1.2 Geology and Soils

The Town of Littleton is underlain by a variety of unconsolidated glacial deposits overlying relatively shallow bedrock. The bedrock, which outcrops at numerous locations primarily consists 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 all of the bedrock surface is overlain by very thin to relatively thick deposits of unconsolidated stratified and unstratified 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. Commonly, these features overly 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.

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 Hollis-Paxton association comprises 21% of the Town. Rock outcrops and a bedrock close to the surface limit development on these soils.

The Hinckley-Merrimack-Gravel Pit-Made Land association makes up 33% of the Town. These soils 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.

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 (see Figure 2). 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.

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
Old Limestone Quarries	Whitcomb Ave.	-small historic quarry sites	Smith, under Cons. 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

4.2 Landscape Character

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 surveys involving citizen participation, also identified significant landscape character including:

- The Long Lake Park area that affords scenic views and comprises part of an Acton to Groton greenbelt. It also contains important cultural resources, including stone walls that 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 property surrounding Beaver Brook, which 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, 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.

Selected items are depicted on the Unique and Scenic Features Map included within this Plan (Figure 4).

4.3 Water Resources

Water and wetlands occupy over 1,000 acres of the Town's area. Two major watersheds drain the Town (See Figure 2). 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 recreational, water supply and wildlife habitat purposes.

4.3.1 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 (See Figure 2).

There is extensive developed recreational access to Long Lake on lands variously managed by the Park and Recreation Commission 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.

4.3.2 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 (Refer to Figures 5 and 6).

4.3.3 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 (See Figure 5). 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.

4.4 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.

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, where other species may have kept them in check, and put them 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.

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. The woolly adelgid has been identified in neighboring communities and may even be in Littleton. 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.

4.5 Fisheries and Wildlife

The combination of the varied 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.

Several sites in Littleton have been identified by the Natural Heritage and Endangered Species Program and designated 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 (see Figure 4a). 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 has recently developed an extremely useful tool to help identify areas in Massachusetts that help protect native species and natural communities across the state. The Biomap was produced to help guide the protection of the state's biodiversity through land

conservation and acquisition of Biomap Core habitats. Littleton has several Biomap core areas, of which only a small fraction is protected open space (See Figure 4a).

4.6 Scenic Resources and Unique Environments

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 Unique and Scenic Features Map (Figure 4). In the 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 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 Massachusetts Historical Commission is currently investigating the historical significance of this bridge.

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 were recently 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.
- 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 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 4.5) for details on the rare and endangered species that live in these areas.

4.7 Environmental Challenges

Littleton's major environmental problems stem from growth, despite the care with which it is managed. With a 1/4 increase in housing units and a doubling of locally-based jobs in a single decade, every resource in the Town is strained as a result of growth engendering land consumption, displacement of habitats, and threats to groundwater quality.

4.7.1 Hazardous Waste Sites

According to data maintained by the Massachusetts Department of Environmental Protection –Bureau of Waster Site Cleanup, there are a number of properties in Littleton that are currently being remediated or have completed remediation. A comprehensive list of areas of chemical releases and spills in Littleton can be found in Appendix C.

4.7.2 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.

4.7.3 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. The Littleton Highway and Water Departments are currently researching the requirements and methods of implementation for the Phase II Stormwater Runoff regulations that must be in place by March 10, 2003. Enacting these guidelines will aid in abating sedimentation and other stormwater impacts from residential, agricultural and commercial properties, as well as mass transit corridors.

Littleton currently does not have an earth removal bylaw. While Littleton does have larger areas of agricultural land, there are no known cases of large-scale

Table 4-2 Littleton Subdivisions Approved since 1997

Name	New Lots	Total Acreage (Acres)	# of Units Built as of May 2002	Year Approved	Open Space Area (Acres)
Meadow View Estates	6	21.6	0	2002	9.4
Cobb Development**	17	118.6	0	2001	98
West View Estates	5	7	0	2001	0
Mary Shepherd Estates	17	36.5	10	2000	20.3
Wilson Estates	5	7.7	0	2000	0
Richard Way	7	8.9	7	2000	3.34
Delaney Drive	14	31.4	14	1999	21.6
Laury Lane	4	7	4	1999	0
Highland Farms	5	8.6	0	1999	0
Center Village	3	5	3	1999	0
Apple D'Or Phase 2	26	*	*	1998	
Old Farm Road*	4	*	*	1998	
Drover Lane*	4	*	*	1998	
Jane's Drive	5	8.64	5	1998	0
Partridge Lane	5	7.83	5	1998	0
Russell Court	2	10	2	1997	7
Apple D'Or Phase 1*	36	*	*	1997	
TOTAL	165	278.77	50		159.64

* The Apple D'Or Phase 1, Phase 2, Old Farm Road, and Drover Lane are a portion of a subdivision approved in 1961, partially constructed, and recently updated in four phases.

** The Cobb Development is actually an ANR, not a subdivision, but it is included in this listing.

4.7.7 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 suggest 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 have been awarded to the Town of Littleton to install a series of BMP's (best management practices) throughout the Long Lake neighborhood; this approach is designed to control and remediate the stormwater runoff that drains the steep neighborhood streets and discharges directly into the Pond. Other segments of this remediation project include: 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.

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. The Army Corps of Engineers have teamed up with the Town to review the dredging plans and other remediation options for Mill Pond; barring any unforeseen complications, it is expected that permitting for this project may begin in 2003.

Section 5

Inventory of Lands of Conservation and Recreation Interest

5.0 LANDS OF CONSERVATION AND RECREATION INTEREST

The goal of this section is to identify and map all protected and unprotected land of interest for conservation and recreation interest. This inventory has been developed by reviewing the files of lands held by the Town and lands with special tax-exempt or tax-reduced status. Each parcel has been categorized and numbered for reference on the accompanying maps.

Table 5-1 summarizes the protected open space lands that are owned by the Town of Littleton or the Littleton Conservation Trust, and are managed by the Trust, the Littleton Water Department or the Conservation Commission. Table 5-2 is a summary of unprotected lands (park and recreation land, multi-purpose open space land) that are owned primarily by the Town and are managed by various entities, including the Park Department, the School Department, the Board of Selectmen, the Town the Board of Health, the Highway Department or Littleton Water and Light. An inventory of Conservation and Recreation Lands are depicted on Figure 7. Table 5-3 lists those lands enrolled in the State's Chapter 61 Program for Forest Land; Table 5-4 lists those lands enrolled in Chapter 61A for Agricultural lands; and Table 5-5 lists those lands in the Chapter 61B program for private recreation lands. The inventory categorizes the conservation and recreation lands in Town and identifies the name, location, owner, manager, acreage, and zoning of the lands, as well as a description, condition, recreation potential, public accessibility and degree of protection for each parcel.

It is important to recognize that parcels subject to Chapter 61 restrictions are not necessarily protected in perpetuity, they are vulnerable to development and the protection offered to the community. Figure 8 indicates the location of these "unprotected" lands in Littleton.

SUMMARY OF PROTECTED AND UNPROTECTED LANDS

Land Category	Acreage	% of Town
Protected Lands	1111.25	10.3
Park and Recreation Land (unprotected)	31.91	<1
Multi-purpose Open Space Land (unprotected)	380.26	3.5
Chapter Lands (unprotected)	2149.22	20
Conservation Restrictions	9.5	<1
Agricultural Preservation Restrictions	48	<1
TOTAL	3730.14	34.7

Total Area of Town = 10,760 acres

5.1 Land Protected from Development

Protected lands in Littleton are comprised of those areas either owned by the Town of Littleton or the Littleton Conservation Trust (LCT) and managed by either the Water Department, LCT or the Conservation Commission. 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.

Beyond Town-owned lands, there are State-owned lands, conservation restrictions and agricultural preservation restrictions. 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 are helpful in maintaining community character without the actual purchase of the land by the Town or Conservation Trust.

5.1.1 Permanently Protected Land

Conservation Land owned by the Town or Littleton Conservation Trust (LCT); managed by the Water Department, LCT or the Conservation Commission.

Permanently protected Town lands include:

Manager	Acreage	% of Town
Water Department	123.47	1.1
Conservation Commission	588.97	5.5
Littleton Conservation Trust	276.76	2.6
Joint-management	122.05	1.1
TOTAL	1111.25	14.9

Total land area = 10,760 acres

Amongst these protected lands are Bumblebee Park (Conservation Commission "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 April 2000, that 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.

5.1.2 State-owned Land

The Commonwealth of Massachusetts owns ninety-six acres bordering Route 2 and the Boxborough line. At one time a Commuter Rail Station was scheduled to be built there, however environmental concerns negated this from happening. The protection status on this land is unclear as it is not owned by the Department of Environmental Management or other state land management agency.

5.1.3 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. There is presently 1 Agricultural Preservation Restriction in the Town of Littleton, totaling 48 acres that the Town submitted on a section of Nagog Hill Orchard.

5.1.4 Conservation Restrictions

Conservation restrictions 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 4 parcels in Littleton that contain conservation restrictions, at approximately 9.5 acres in total, owned by 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.;
- 7.16 acres on Whitcomb Ave, owned by Conservation Trust; and
- 45 acre gift of land to the Littleton Conservation Trust and Littleton Conservation Commission with conservation restrictions on 1-mile of trail easement on public and private property. The easement, known as the Robert and Emily Cobb Memorial Footpath Easement was given in December 2002.

There are several more CRs in the process of being designated, but have not been finalized at the completion of this report.

5.2 Lands Not Protected from Development

Private open lands can be offered various levels of protection. 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 is classified as temporarily protected under this tax abatement program.

Property 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 of the municipality in which it is located. The Town has 120 days 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. Figure 8 shows the location of these lands.

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.

5.2.1 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 285 acres in Littleton are classified as Chapter 61 Forest Lands.

5.2.2 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 1,622 acres of land classified as Chapter 61A Farm Lands in Littleton.

5.2.3 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 242 acres of land in Littleton classified as Chapter 61B land.

5.3 Recreational Facilities

Littleton currently has numerous recreational facilities to serve the community. Many of these facilities are located on municipal lands associated with local schools. A current inventory of recreational fields includes:

- Koerper Field (1) – Ayer Road; soccer;
- King Street Fields (2) – King Street; (leased from St. Anne's) multi-purpose;
- High School Fields (5) – King St; 2 tennis courts, 1 baseball, 1 soccer, 3 multi-purpose;
- Russell Street Fields (5) – including track, football and 3 multi-purpose fields;
- Shaker Lane Fields (3) - 1 baseball, 2 multi-purpose;
- Shattuck Street behind Town Hall - (1) 1 baseball, 2 tennis courts;
- 300 King Street - 1 outdoor basketball court, skateboard park, 2 tennis courts, "Castle in the Trees" playground;
- Foster Street - Fay Park some playground equipment, large field for public gatherings, concerts, picnics, events, etc. and gazebo; and
- Town Road- Town Beach with beach house, picnic area, playground.

Recreational facility needs are based somewhat on demographics, but mostly on enrollment in school and in Park and Recreation programs.

5.4 Regional Open Space

Figure 9 shows areas of open space located in towns adjacent to Littleton. Consideration should be given to creating linkages between areas of open space across communities as part of this Open Space and Recreation Plan Update. It should also be noted that Littleton shares numerous water bodies with neighboring towns. This presents unique challenges to the effort of preserving open space and maintaining water resources in the area.

5.5 Opportunity Areas

Opportunities exist in Littleton to expand its inventory of publicly available open space and recreation land. 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 response to community and regional needs.

LITTLETON OPEN SPACE INVENTORY

Oct-02

TABLE 5-1

Site	Map	Lot Location	Owner	Manager	Acres	Zoning	Description	Funds Used	Condition	Recreation Potential	Public Access	Degree of Protection
PROTECTED LANDS												
Conservation Lands												
C1	R24	15 Great Road	Town of Littleton	Cont. Comm.	1111.25	N/A	With #3		Good	None	Free	Perpetuity
C2	R15	2 Oak Hill Road	Town of Littleton	Cont. Comm.		N/A	Oak Hill Conservation Land	Town	Good	None	Free	Perpetuity
C2	R15	15 2 Harvard Road	Town of Littleton	Cont. Comm.		N/A	Trails for hiking.	Town	Good	High	Free	Perpetuity
Other Lands												
C3	R17	2115 Delaney Drive	Town of Littleton	Cont. Comm.	13.22	N/A		Town	Good	None	Free	Perpetuity
C3	R18	14-1 Beaver Brook	Town of Littleton	Cont. Comm.	220.00	RAWR		Town	Good	None	Free	Perpetuity
C3	R15	30 Mill Road	Town of Littleton	Cont. Comm.	0.22	RAWR	Oak Hill Conservation Land	Town	Good	High	Free	Perpetuity
C4	R15	1 Harvard Avenue	Town of Littleton	Cont. Comm.	24.24	RAWR	Rock (el. 500 ft.) located here.	Town	Good	None	Free	Perpetuity
C5	R15	29 Mill Road	Littleton Conservation Trust	LCT	4.00	RAWR	Potential Well Site	Town	Good	High	Free	Perpetuity
C5	R15	29 Mill Road	Littleton Conservation Trust	LCT	2.25	RAWR	Well #2.	Town	Good	None	Free	Perpetuity
C6	U23	29 Mill Rd.	Littleton Conservation Trust	LCT	14.70	RAVA	Mill Hill Conservation Area (21.2	Town	Good	Limited	Free	Perpetuity
C6	U9	4-1 White Street	Littleton Conservation Trust	LCT	17.00	RAVA	acres) and adjacent Town of Littleton	Town	Good	None	Free	Perpetuity
C7	R11	26 Taylor Street	Littleton Conservation Trust	LCT	24.24	RAWR	Property (approximately 4 acres),	Town	Good	High	Free	Perpetuity
C7	R11	29 Taylor Street	Littleton Conservation Trust	LCT	4.00	RAWR	Hiking paths, picnic area.	Town	Good	None	Free	Perpetuity
C7	R11	31 NW of 495	Littleton Conservation Trust	LCT	5.00	LAWR	50%9	Town	Good	High	Free	Perpetuity
C7	R20	75 Hartwell Ave	Littleton Conservation Trust	LCT	5.02	LAWR	Mill Pond Marsh	Town	Good	None	Free	Perpetuity
C7	R11	23 Tree Road	Town of Littleton	Cont. Comm.	3.49	R	Mill Pond Marsh	Town	Good	None	Free	Perpetuity
C7	U19	30 King St.	Town of Littleton	Cont. Comm.	8.73	R	Mill Pond Marsh	Town	Good	None	Free	Perpetuity
C8	R12	8-A Porter Road	Littleton Conservation Trust	LCT	7.17	R	Brook Way	Town	Good	Fair	Free	Perpetuity
C8	R13	5-A Whitcomb Ave	Littleton Conservation Trust	LCT	4.63	RAVA	Continued Beaver Brook Marsh	Town	Good	High	Free	Perpetuity
C9	R13	7-A Whitcomb Ave	Littleton Conservation Trust	LCT	9.00	RA	Beaver Brook Marsh	Town	Good	High	Free	Perpetuity
C9	R13	3-15 Off Whitcomb Avenue	Town of Littleton	Cont. Comm.	12.00	RA	Beaver Brook Marsh	Town	Good	High	Free	Perpetuity
C10	U20	5-A Newtown Road	Town of Littleton	Cont. Comm.	16.30	RA	Beaver Brook Marsh	Town	Good	Limited	Free	Perpetuity
C10a	R8	5 Foster Street	Town of Littleton	Cont. Comm.	97.50	R	Newtown Hill Conservation Area.	Town	Good	High	Free	Perpetuity
C11	R8	8 Tabanawas Road	Littleton Conservation Trust	LCT	1.47	R	Water Dept. parcels	Town	Good	NA	Free	Perpetuity
C12	U31	10 Tabanawas Road	Littleton Conservation Trust	LCT	14.00	RAWR	Burnell Brook Park	Town	Good	High	Free	Perpetuity
C12a	U31	59 Tabanawas Road	Littleton Conservation Trust	LCT	0.50	R	Construction Land	Town	Good	Poor	Free	Perpetuity
C13	U31	61 Harvard Ave.	Town of Littleton	Cont. Comm.	2.87	R	Construction Land	Town	Good	Good	Free	Perpetuity
C14	U31	61-A Tabanawas Road	Town of Littleton	Cont. Comm.	0.85	R	Holly Park - Conservation Land	Town	Good	High	Limited	Perpetuity
C14a	U31	61-B Tabanawas Road	Town of Littleton	Cont. Comm.	7.00	R	Construction Land.	Town	Good	High	Free	Perpetuity
C14b	U79	1 Newtown Road	Town of Littleton	Cont. Comm.	0.49	R	Construction Land.	Town	Good	Medium	Free	Perpetuity
C15	U79	21 Newtown Road	Town of Littleton	Cont. Comm.	0.66	R	Construction Land.	Town	Good	Unimproved	Free	Perpetuity
C15a	U79	1 Old Natick Road	Littleton Conservation Trust	LCT	23.75	R	Construction Land adjacent to	Town	Good	Unimproved	Free	Perpetuity
C16	R2	9 Natick Road	Town of Concord	Cont. Comm.	1.07		Fort Pond, Newtown Hill	Town	Unimproved	Poor	Limited	Perpetuity
C17	R1	5 Natick Road	Littleton Conservation Trust	Water Dept.	95.04	R	Natick Road/Becket Forest	Town	Excellent	High	Free	Perpetuity
C18	R4	5 Natick Road	Town of Littleton	Cont. Comm.	34.53	R	Land adjoining Natick Pond	Town	Good	None	Limited	Perpetuity
C19	U73	5 Riverira Drive	Town of Littleton	Cont. Comm.	25.78	R	Conservation Land	Town	Good	Medium	Free	Perpetuity
C19	U31	7 Tabanawas Road	Littleton Conservation Trust	LCT	113.35	R	Long Lake Park	Town	Excellent	High	Free	Perpetuity
C19	U31	15 Harvard Avenue	Town of Littleton	Cont. Comm.	28.87	R	Gift	Town	Excellent	Limited	Free	Perpetuity
C19	U31	17 Springfield Drive	Town, LCT	0.80	R	Near Natick Park	Town	Unimproved	None	Free	Perpetuity	
C19	U31	69 Harvard Avenue	Town of Littleton	Cont. Comm.	60.64	R	Long Lake Park	Town, State	Excellent	Free	Perpetuity	
C20	U12	14 Lake Shore Dr	Town of Littleton	Cont. Comm.	4.57	R	Near Holden Park	Town	Unimproved	Good	Free	Perpetuity
C20	U12	14 Lake Shore Dr	Town of Littleton	Cont. Comm.	1.62	R	Long Lake	Town	Unimproved	Medium	Limited	Perpetuity

TABLE 5-1

Site	Map	Lot Location	Owner	Manager	Acreage	Zoning	Description	Funds Used	Condition	Potential	Access	Protection
C21	U40	14 Whitecomb Ave.	Town of Lintleton	Water Dept.	16.11	R/A	Well Field #1	Town	Good	None	None	Perpetuity
C23	R3	1935 Meadow Drive	Town of Lintleton	Coast. Comm.	4.03	R	Scots water basin	Gift	Unimproved	None	Fire	Perpetuity
C23a	R4	2 Newbern Rd	Lintleton Conservation Trust	LCT	9.46	R	Front Center	Gift	Unimproved	None	Fire	Perpetuity
C24	R5	25 Grimes Lane	Town of Lintleton	Coast. Comm.	2.66	R/W/R	Marsh	Town	Unimproved	Medium	Fire	Perpetuity
C24a	R6	3 Bulkeley Rd	Lintleton Conservation Trust	LCT	7.50	R	Marsh	Town	Unimproved	None	Fire	Perpetuity
C25	R14	24 Moore Lane	Town of Lintleton	Coast. Comm.	4.63	R	Black Pond Marsh	Gift	Unimproved	Medium	Fire	Perpetuity
C26	R23	18.1 Spectacle Pond Road	Lintleton Conservation Trust	LCT	34.13	R/A	White Tail Woods	Private	Good	High	Fire	Perpetuity
C27	U12	22 Lake Drive	Town of Lintleton	Coast. Comm.	0.23	R	Conservation Land	Private	Good	High	Fire	Perpetuity
C28	U29	41 King Street	Town of Lintleton	Water Dept.	0.37	R/W/R	Beaver Brook	Private	Good	Limited	Fire	Perpetuity
C28a	U36	3 Warren Street	Town of Lintleton	Coast. Comm.	0.15	R/W/R	Haner Brook	Gift	Good	Limited	Fire	Perpetuity
C29	U17	307 Lincoln Drive	Town of Lintleton	Coast. Comm.	0.25	R	Conservation Land	Town	Unimproved	Medium	Fire	Perpetuity
	U17	15 Birch/Cedar Road	Town of Lintleton	Water Dept.	0.69	R	Cedar Hill Standpipe					
	U17	160 Forest Road	Town of Lintleton	Coast. Comm.	0.09	R	Isolated lot					
	U17	162 Forest Road	Town of Lintleton	Coast. Comm.	0.14	R	Isolated lot					
A15	K4	5 Nauboda Road	Town of Lintleton	Coast. Comm.	11.50	R	Morrison purchase 1999	Town/State	Good	High	Fire	Perpetuity
A15	R4	8 Nagot Hill Road	Town of Lintleton	Town, Coast.	61.41	R	Morrison purchase 1999	Town/State	Good	High	Fire	Limited
F3a	U3 & 4	Great Road	Town of Lintleton	Coast. Comm.	20.00	R	Mary Shepherd	Gift	Fair	Good	Fire	Perpetuity
X	U2	32 Great Road	Town of Lintleton	Coast. Comm.	20.25	R	Farm Pond	Gift	Fair	Poor	Fire	Perpetuity
TOTAL ACREAGE												
												1111.25

TABLE 5-2

LITTLETON OPEN SPACE INVENTORY

Oct-02

Site	Map	Loc Location	Owner	Manager	Address	Zoning	Restriction	Encl/Und Condition		Recreation Potential	Public Access	Degree of Protection
								677.91	31.91			
Park and Recreation Land												
P1	U19	32 King Street	Town of Littleton	Park Dept.	8.91 P/WR	Recreation area, playground	Grn	Excellent	High	Free	TBD	
P2	U20	13 Foster Street	Town of Littleton	Park Dept.	2.25 P/WR	Fay Park, Playground, Gazebo	Grn	Excellent	High	Free	TBD	
P2	U2	32-5-A Great Road	Town of Littleton	Park Dept.	5.18 P/WR	Grit Mill Road/Farm Pond	Grn	Unimproved	Fair	Free	TBD	
P3,4	U12	1 Town Road	Town of Littleton	Park Dept.	9.57 R	Town beach, swim area, boat launch, playground area, boat launch, and parking	Town	Good	High	Free	TBD	
P5	U43	1 Ayer Rd	Town of Littleton	Park Dept.	6.00 P/WR	Soccer Field @ highway garage	Town	Excellent	High	Parking fee	Long-term	
Multi-Purpose Open Space Land												
M1	U42	5 King St.	Town of Littleton	School Dept.	29.36 R/A	Littleton High School 2002	Town	Excellent	High	Free	Long-term	
M2	U19	21 Russell St.	Town of Littleton	School Dept.	54.50 P/WR	Littleton Middle School, Russell School, and Town Offices on Statwick St. Reservation areas maintained by Park and Rec. Dept.	Town	Good	High	Free	Long-term	
M3	U38	37 King Street	St. Anne's Church	Park Dept.	15.20 R/A	Town currently leasing land from Church, Park and Rec. Dept. maintains two ball fields.	Private	Poor	High	Free	None	
M4	R9	30 Liberty Square	Town of Littleton	Park Dept.	0.11 R	Liberty Square	Town	Medium	Medium	Free	TBD	
M5	U13	1 Shaker Ln.	School Dept.	Park Dept.	31.73 R	Shaker Lane School	Town	Good	High	Free	TBD	
M6	U7	42 King St.	Town of Littleton	Park Dept.	1.25 P/WR	Littleton Common	Town	Good	Medium	Free	TBD	
M7	U10	1 King St./Great Road	Town of Littleton	Park Dept.	0.13 P/WR	Littleton Common	Town	Good	Medium	Free	TBD	
M7	U10	117 Statwick St.	Town of Littleton	Park Dept.	0.25 P/WR	Harwell Park, Passive recreation area	Town	Good	Medium	Free	TBD	
M8	U4	22 Shaker Ln.	Town of Littleton	Park Dept.	0.25 R	Mary Shepard Park, Passive recreation area	Town	Good	Medium	Free	TBD	
M9	U18	6 Statwick St.	Town of Littleton	Park Dept.	2.00 P/WR	South Common, Passive recreation	Town	Good	Medium	Free	TBD	
M10	U18	42 Flower St.	Town of Littleton	Town	1.70 P/WR	Open land	Town	Unimproved	Limited	Free	TBD	
M11	U29	7 Newtown, Coughlin Rd.	Town of Littleton	Town	1.30 R	Passive recreation land	Town	Good	Medium	Free	TBD	
M12	U10	49-C Ledgelea Road	Town of Littleton	Town	1.11 P/WR	Open land	Town	Unimproved	Limited	Free	TBD	
M13	U14	Long Lake Area	Town of Littleton	Town	15.23 R	Vacant parcels to the north and east of Long Lake.	Town	Good	Medium	Free	TBD	
M16	R19	1-A Beaver Brook Road	Town of Littleton	Town	2.40 R/A	Town Electric & Light building	Town	Good	Limited	Free	TBD	
M17	U37	1 King St.	Town of Littleton	Town	43.03 P/WR	Westtown Cemetery	Town	Good	Low	Free	TBD	
M18	Y5	2 Newtown Road	Town of Littleton	Town	1.00 R	Town's owned land	Town	Unimproved	Limited	Free	TBD	
M21	R5	2-33 Newtown Road	Town of Littleton	Town	1.23 R	Cemetery land	Town	Good	Limited	Free	TBD	
M22	R22	11 Spectacle Pond Road	Town of Littleton	Bd. of Health	10.90 P/WR	Transfer Station	Town	Unimproved	Limited	Free	TBD	
M22	R22	11-B Spectacle Pond Road	Town of Littleton	Town, LCT	5.40 P/WR	Morain, Two Brothers Trail	Town	Unimproved	Limited	Free	TBD	
M23	U79	108 King Street	Town of Littleton	Town	50.80 P/WR	Town-owned land	Town	Good	Limited	Free	TBD	
M24	U29	1 Rogers Street	Town of Littleton	Town	0.45 P/WR	Ad. to Newtown Hill	Town	Unimproved	Limited	Free	TBD	
M25	U29	4 Newtown Road	Town of Littleton	Town	5.53 R	Mill Pond area	Town	Unimproved	Limited	Free	TBD	
M26	U39	13 Lake Warren Road	Town of Littleton	Town	6.55 P/WR	Town-owned land	Town	Unimproved	Limited	Free	TBD	
M27	U40	15 Whittle Ave.	Town of Littleton	Town	2.75 R/A	Town Fire & Police building	Town	Good	Limited	Free	TBD	
M29	U79	9 Foster Street	Town of Littleton	Town	2.00 P/WR	Lights A Water Department office	Town	Good	Limited	Free	TBD	
M30	U43	1 Ayer Road	Town of Littleton	Town	14.25 P/WR	Light & Water	Town	Good	Limited	Free	TBD	

TABLE 5-2

Site	Map	Lot Location	Owner	Manager	Acreage	Zoning	Permittee	Residential Condition	Industrial Condition	Access	Protection
M30	U4.3	2 Ayer Road	Town of Litchfield	Highway Dept.	4.11	LOWR	Highway Department office	Town	Good	Limited	TID
F8	F7	8 Hawgood Ave.	Town of Litchfield	Town	77.50	R	Town Forest	Town	Good	Free	TID
J31	J.3	20 Pickard Lane	Town of Litchfield	Town	30.00	R	School Septic System	Town	Good	Good	TID
A15	F.2	7 off Naseby Hill Rd	Town of Litchfield	Town	0.22	R	Naseby Hill Orchard	Town	Good	Good	Long-term
A15	F.3	5 Naseby Hill Road	Town of Litchfield	Town	29.27	R	Purchase	Town	Good	Limited	Long-term
A15	F.2	10 Naseby Hill Road	Town of Litchfield	Town	20.08	R	Orchard purchase	Town	Good	Good	Long-term
TOTAL ACREAGE					451.95						

TABLE 5-3
Chapter 61 Forest Land

LITTLETON OPEN SPACE INVENTORY
OS-02

Site	Map Forest and Wooded Lands	Lot Location	Owner	Manager	Address 285.51	Zoning	Description	Facts Used Condition Factors	Recreation Access	Public Access	Degree of Protection
F1	R13	13 Whiscomb Ave.	Harvard Spearman's Club	HSC	29.00 DA	Ch. 61 forest land	None	N/A	Limited	None	Short-term
	R13	12 Whiscomb Ave.	Harvard Spearman's Club	HSC	11.00 R/A	Ch. 61 forest land	None	N/A	Limited	None	Short-term
R10	4 Liberty Square	Harvard Spearman's Club	HSC	3.00 DA	Ch. 61 forest land	None	N/A	Limited	None	None	Short-term
R10	3 Taylor Street	Gatherer/Sweeney/Crafle		32.91	Ch. 61 forest land	None	None	None	None	None	Short-term
R10	6 Taylor Street	Gatherer/Sweeney/Crafle		11.00	Ch. 61 forest land	None	None	None	None	None	Short-term
R10	7 Taylor Street	Gatherer/Sweeney/Crafle		1.25	Ch. 61 forest land	None	None	None	None	None	Short-term
F2	U34	27 Takatawan Road	D. Smith	13.60 R	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
F3	R13	5 Whiscomb Ave.	P. Smith	21.96 R/A	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
E13	6 Whiscomb Ave.	P. Smith	P. Smith	13.70	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
K13	7 Whiscomb Ave.	P. Smith	P. Smith	7.40	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
R13	8 Whiscomb Ave.	P. Smith	P. Smith	7.16	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
R6	4 Old Bonthrough Road	G. Krusen	G. Krusen	23.00 R	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
E5	9 Foster St.	B. Anthony	B. Anthony	20.20 R/WR	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
F7	12 (3) Fort Pond	I. Chaste	I. Chaste	12.12 R	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
	17 Sarah Island Way	C. O'Neal	C. O'Neal	5.61	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
F10	R17	C. Harwell	C. Harwell	22.62 R/WR	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
R17	3 Harwell Avenue	C. Harwell	C. Harwell	21.00 R/WR	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
F11	1 Great Road	A. Fletcher	A. Fletcher	10.98 R	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
	4 Great Road	A. Fletcher	A. Fletcher	18.00 R	Ch. 61 forest land	None	None	N/A	Limited	None	Short-term
TOTAL, ACREAGE								285.51			

LITTLETON OPEN SPACE INVENTORY
Oct-02

TABLE 5-4
Chapter 61 Agricultural Land

Site Agricultural Land	Map Lot	Location	Owner	Manager	Acreage 162.09	Zoning	Restriction	Funds Used	Condition	Recreation Potential	Public Access	Degree of Protection
A1	U13	7 Great Road	D. Pickard	D. Pickard	34.20	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U5	4 Great Road	D. Pickard	D. Pickard	71.37	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A2	R12	30 Oak Hill Road	B. Sanderson	D. Sanderson	28.82	R/A	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R12	33 Oak Hill Road	A. Sanderson	D. Sanderson	22.00	R/A	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R12	29 Sanderson Road	D. Sanderson	D. Sanderson	7.50	R/A	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R12	31 Sanderson Road	A. Sanderson	D. Sanderson	3.50	R/A	Ch 61A farmland	None	N/A	Limited	None	Short-term
A3	R16	4 Reuse Road	J. Pickard	J. Pickard	76.00	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R16	5 Brandy Hollow	J. Kao	J. Kao	13.35	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R16	18 Bruce Road	J. Pickard	J. Pickard	1.00	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
A4	R19	7 Great Road	J. Theodore	J. Theodore	52.25	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R13	12-A Great Road	P. Lincham	R. Lincham	82.36	R/A/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
A5	R6	1 Grimes Lane	D. Peck	D. Peck	123.58	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A6	R6	6 Grimes Lane	D. Peck	D. Peck	1.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A7	R6	7 Grimes Lane	J. Blachard	J. Blachard	40.46	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R6	8 Grimes Lane	E. Mich	E. Mich	2.40	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A8	U5	2 1 Great Road	P. F. Iac	P. F. Iac	10.52	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U3	2A Great Road	P. F. Iac	P. F. Iac	35.25	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U3	2 0 Great Road	J. Blachard	J. Blachard	15.84	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A9	R3	3 Newtons Road	L. Yapp	L. Yapp	7.14	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R3	4 Newtons Road	L. Yapp	L. Yapp	18.25	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R3	19 Brook Lane	V. Anthony	V. Anthony	7.83	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A10	R27	12 Fort Pond	I. Chair	I. Chair	2.33	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R3	3-1 Newtons Road	P. Yapp	P. Yapp	15.71	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U33	34-A Tabularawas Road	M. Callasano	M. Callasano	24.10	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A11	U31	46 Harwood Avenue	C. Halloran	C. Goldring	8.50	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A12	R22	16 Bruce Road	P. Kizza	P. Kizza	8.12	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
A13	U22	1 Wilderness Road	D. Proby	D. Proby	105.00	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U20	12 Foster Street	D. Proby	D. Proby	5.00	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
A14	R9	6 Belkley Road	C. Webster	C. Webster	41.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A15	R4	4 Narboba Road	Camp Narboba	Camp Narboba	6.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R4	6 Narboba Road	Camp Narboba	Camp Narboba	11.50	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U25	5 Narboba Road	Camp Narboba	Camp Narboba	55.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A16	RS	15 Foster Street	S. Durke	S. Durke	50.00	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R20	7 Great Road	E. Matheson	E. Matheson	6.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A17	R19	9 Off Great Road	E. Matheson	E. Matheson	82.25	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R24	1 Great Road	E. Matheson	E. Matheson	1.25	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R19	8 Great Road	E. Matheson	E. Matheson	0.30	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
	R19	9 Great Road	E. Matheson	E. Matheson	2.00	R	Ch 61A farmland	None	N/A	Limited	None	Short-term
A18	R23	4-A Spectacle Pond Road	G. Cravagh	G. Cravagh	11.08	R/A	Ch 61A farmland	None	N/A	Limited	None	Short-term
A20	U6	4 1 Great Road	D. Flax	D. Flax	0.93	R/WR	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U6	4 2 Great Road	D. Flax	D. Flax	1.25	R/B	Ch 61A farmland	None	N/A	Limited	None	Short-term
	U6	2 0 Great Road	D. Flax	D. Flax	5.83	R/B	Ch 61A farmland	None	N/A	Limited	None	Short-term

TABLE 5-4
Chapter 61 Agricultural Land

Site	Map Lot	Location	Owner	Manager	Acres	Zoning	Deed status	Enacted	Condition	Recreation Potential	Public Access	Degree of Protection
A21	U6	2 3 Great Road	D. Flagg	D. Flagg	3.06	R/RD	Ch 61/A farmland	None	N/A	None	None	Short-term
	R9	5 Bulkeley Road	C. Webster	C. Webster	41.39	Ch 61/A farmland	None	N/A	N/A	None	None	Short-term
	R9	7 Bulkeley Road	C. Webster	C. Webster	12.00	R	Ch 61/A farmland	None	N/A	None	None	Short-term
A23	U45	3 Bruce Street	Matheron	Matheron	94.50	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
	U45	2 Bruce Street	Matheron	Matheron	15.00	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
A24	U7	19-5 Robinson Road	J. Cataldo	J. Cataldo	3.18	R	Ch 61/A farmland	None	N/A	None	None	Short-term
	U7	19-6 Robinson Road	J. Cataldo	J. Cataldo	10.28	R	Ch 61/A farmland	None	N/A	None	None	Short-term
	U7	46 Robinson Road	J. Cataldo	J. Cataldo	2.59	R	Ch 61/A farmland	None	N/A	None	None	Short-term
A25	R9	8 Crane Road	C. Kimball	C. Kimball	12.56	R	Ch 61/A farmland	None	N/A	None	None	Short-term
	U5	5 Great Road	Cooper	J. Parkiewicz	31.25	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
A27	R18	6 Great Road	J. Parkiewicz	J. Parkiewicz	6.00	R/A	Ch 61/A farmland	None	N/A	None	None	Short-term
A28	R15	22 Ayer Road	J. Cataldo	J. Cataldo	9.49	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
A29	U20	10 Wilderness Road	M. Harvey	M. Harvey	2.75	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
	U20	7 Wilderness Road	M. Harvey	M. Harvey	7.75	R/WWR	Ch 61/A farmland	None	N/A	None	None	Short-term
TOTAL ACREAGE												
												1622.09

TABLE 5-5
Chapter 61B Recreation Land

LITTLETON OPEN SPACE INVENTORY
Qtr-02

Site	Man	Loc Location	Owner	Manager	Acres	Zoning	Encumbrances	Encl. Use		Condition	Recreational Potential	Public Access	Degree of Protection
								241.62	241.62				
R1	U13	17 Tibbettswan Road	M. Brown	Brown, Mary	0.93	R	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
R1	U33	2 Tibbettswan Road	M. Brown	Brown, Mary	23.67	R	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
R2	R8	13 Foster Street	C. Kaye	Kaye, Charles	43.00	R	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
R7	R7	1 Tibbettswan Road	A. Glavey	A. Glavey	46.50	R	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
R8	U44	7 Harvard Road	E. Reed	E. Reed	9.50	R/A	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
R9	R18	15-16 Beaver Brook Road	Litteresa Spertmann's Club	LSC	20.75	R/A	Ch. 61B recreation land		N/A	Limited	Fee	Short-term	Short-term
R10	R5	13 Boothborough Road	J. Williams	J. Williams	60.00	R	Ch. 61B recreation land		N/A	Limited	None	None	Short-term
	R5	17 Boothborough Road	A. Campbell	A. Campbell	37.25		Ch. 61B recreation land		N/A	Limited	None	None	Short-term
TOTAL ACREAGE								241.62	241.62				

Table 5-6: Unique or Natural Lands Currently with Limited or No Protective Status

Name	Address/Zoning	Current Protect Status	Potential Use and Condition
Route 2A/ Route 119	From Powers Road to Gilson Road	Limited; privately held	Maintain current roadway, preserve agricultural use.
Newtown Road	From Telephone Tower to Ipswich Drive; Nagog Hill Road to Orchard & Cobb property	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		Limited; privately held	Protect aquifer; add to wildlife corridor

Section 6
Community Goals

6.0 COMMUNITY GOALS

6.1 Description of Process

The Town of Littleton's Open Space and Recreation Plan Implementation Committee began work in August 2001 to guide and oversee the development of this Open Space and Recreation Plan Update. The participation process culminated in a public workshop held on September 25, 2002 to solicit feedback on draft goals and objectives that were developed by the Implementation Committee. This forum allowed participants to express opinions and concerns, as well as provide knowledge on certain aspects of the Plan. The goal of this workshop was to refine these goals to establish overall open space and recreation goals, and to create actionable items to be included with the final plan.

The meeting consisted of a presentation and review of maps depicting protected and unprotected open space, and demographic statistics regarding the changes that Littleton has undergone over the past decade. An open discussion followed, resulting in the review of draft goals and objectives prepared by the Open Space and Recreation Plan Implementation Committee. This open discussion allowed for the gathering of additional information regarding recreational needs, distinctive natural features, the overall character of the Town and environmental concerns. In addition to representatives of Beals and Thomas, Inc., participating in the process of this public workshop were:

From the Town of Littleton

Rita Biagioni, OSRPIC
Sarah Foss, OSRPIC
Richard Dennis, OSRPIC
Peter Church, OSRPIC
Melissa Spurr, OSRPIC
Art Lazarus, OSRPIC
Gino Frattallone, OSRPIC
Joe Souza, Open Space Master Plan
Barbara Chapin, Conservation Commission Administrator
Albert Gregory, Littleton Parks and Recreation Department

The general goals described below in this section, as well as the more refined "Goals and Objectives" (Section 8), and the "Five Year Action Plan" (Section 9), are all the result of individual and collective efforts of members of the above listed groups.

6.2 Statement of Open Space and Recreation Goals

Littleton has worked hard in the past to utilize planning tools and available funding sources to maintain the rural character of the community. Using self-help funds as a result of an approved Open Space and Recreation Plan, the Town has acquired lands critical to forwarding its overall goals of open space preservation and recreational opportunities. With over 1,000 acres of protected lands in its inventory, Littleton has

taken positive steps towards the preservation of open space. In the past 5 years alone, the Town has protected 361 acres of land and open space.

Based on the input through the public workshop and the Open Space and Recreation Plan Implementation Committee, the following is a statement of broad, long-term goals regarding open space and recreation:

- *Promote the preservation of Littleton's important land resources through study and inventory, education, land acquisition and improved management.*
- *Protect and enhance the quality of Littleton's surface and groundwater as a source of drinking water and for recreational and wildlife use.*
- *Provide adequate recreational opportunities for all Littleton residents.*
- *Promote the efficient management and maintenance of the open space and recreation areas of Littleton.*
- *Promote opportunities for the linkage of Littleton's open space both throughout the Town in wildlife or aquifer areas, or on a regional level, particularly near shared natural resources.*
- *Continue to increase environmental awareness and understanding amongst Littleton's residents.*
- *Use regulations to balance development with the preservation of open space and to help retain Littleton's community character.*
- *Promote the protection of agricultural lands within Littleton.*

Section 7
Analysis of Needs



7.0 COMMUNITY GOALS

7.1 Summary of Resource Protection Needs

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

7.1.1 Land Resources

Conservation Land

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

Contributing to these undeveloped areas are more than two thousand acres of land that is considered "temporarily protected" in the State's Chapter 61, 61A and 61B Program. Approximately three-quarters of this land are 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. Acquisition of these lands will also provide an opportunity to secure lands along the aquifer and sensitive wetlands, and to provide scenic views. This would protect the rural character of the Town, and help to extend the "Wildlife Corridor" that is desired by many residents. It is important to protect distinct natural communities of flora and fauna, such as wetland areas, grasslands, vernal pools, and old-field growth.

Littleton has several unique geological features, formed during the melting of the glacier that once covered the area. The most unusual is Tophet Chasm on Oak Hill. It was formed as an outlet to the meltwater from the glacial lake, Nashua. The Chasm is approximately eighty feet deep, though much of the bottom has filled in with muck and debris. The outlet from Long Lake to Fort Pond is also a glacial meltwater channel.

Recreation Land

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 and day camp. As of this writing, an extensive project is underway to remediate stormwater run-off, which is the

main contributor to Long Lake's degradation. Plans to restore Mill and Spectacle Ponds are also in process.

Littleton has playing fields and tennis courts available on Town and school properties, and also leases fields from St. Anne's Church. Through a survey, citizens have requested Teen and Senior Centers, and bike paths.

7.1.2 Water Resources

Littleton has several water bodies that afford recreation and drinking water supply opportunities. Long Lake, Mill Pond, Spectacle Pond, and Lake Matawanakee 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 watershed's 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 coming into compliance with the new Stormwater Management regulations that have been set forth by the Environmental Protection Agency.

- The Clean Lakes Committee is in the process of administering a 319 and Demonstration Grant for the restoration of Long Lake. BMPs and in-lake restoration techniques are being implemented with the goal of decreasing the nutrient and sediment load into Long Lake, and significantly reducing the near-shore aquatic vegetation.
- In addition, plans are underway for the restoration of Mill Pond as well as Spectacle Pond.

At the Special Town Meeting held on November 12, 2002, the Town voted to acquire approximately 88 acres of land along Beaver Brook. This will assist in protecting some of Littleton's well fields, and provide new well sites. "Best Management Practices" should be implemented by the residents and businesses that are in the aquifer and water resource zones.

7.2 Summary of Recreation Needs

Identified needs in terms of recreation and facilities included:

Short Term:

- Two Little League sized baseball diamonds
- One outdoor basketball court

- One outdoor volleyball court
- Renovation and expansion of the park area at 300 King Street to include a water park, fitness trail, restrooms, and general improvements in design and landscaping.

Long Term:

- Development of a Youth/Teen Center or some type of multi-purpose recreational facility.
- Development of a Senior Center or Community Center.

7.3 Management Needs, Potential Change of Use

7.3.1 Management

- Consider a change in ownership of undeveloped municipal lands to the Littleton Conservation Trust or Conservation Commission to establish "protected" status under the Open Space and Recreation Plan guidelines.
- Continue to work towards the adoption of a local Wetland Bylaw.
- Continue to fund the municipal land acquisition fund and use income from cellular telephone towers to provide monies to purchase open space lands of interest and importance.

7.3.2 Threatened Areas

The areas along Rt. 2A / Rt. 119 provide a distinct character to Littleton and reflect its pastoral and agrarian history. This area should be the focus of preservation as they are the location of large tracts of undeveloped land and provide a unique landscape for those passing through 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.

7.3.3 Special Opportunities

- The Town should continue efforts to create a Tri-Town Conservation Area with Boxborough and Harvard. Focus efforts where possible on acquiring lands in this area to create linkages with existing conservation lands.