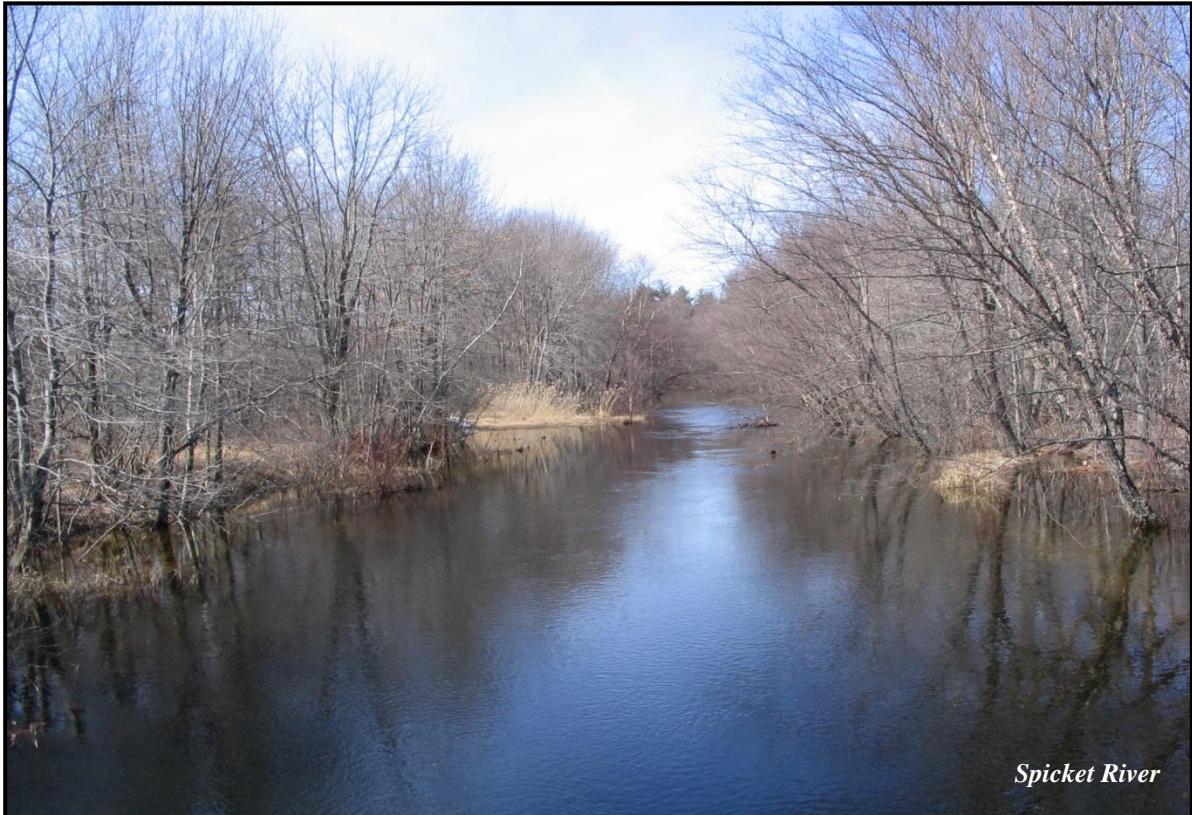


CITY OF METHUEN

OPEN SPACE AND RECREATION PLAN

2013 – 2020



Spicket River

Prepared by

Methuen Open Space and Recreation Plan Working Group

FORWARD

The character of a community is determined not only by its residents and its built structures, but also by its open spaces. These unbuilt places create a unique “landscape identity” for each community. From the very rocks and soils that have sculpted our hills, streams, and ponds; to the woodlots, wetlands, wildflower meadows, and pastures that are the haunts of living creatures large and small – *all* contribute to a community’s signature setting and “sense of place.”

The living landscape we inhabit can serve as a subtle “backdrop” for a community, like the scenery of a play or the background music of a movie. If observed, listened to and understood, the natural environment around us can tell us exactly where we are in the world, much about the history and values of our community, and even help us learn about ourselves. Are we in an urban, suburban or rural community? Are we in an upland area, along a river, or in a coastal plain? Is our neighborhood the site of a former mill complex, or a farm or quarry? Does our community cherish its heritage and place a high value on maintaining a natural landscape, on preserving a place not only for people but for nature, too?

As Methuen residents, we each have an opportunity to contribute to the present and future appearance of our community by the manner in which we alter or preserve the land around us. By action or inaction, by design or as unintended consequences, we determine the landscape identity of our neighborhoods and our community at large. Each of us makes a contribution that will make our community appear more natural or artificial, more open or developed, more wild or managed, more beautiful or blighted. When our citizens share a common vision and act in concert, we can set public policies that will determine the nature of the landscape in which we live, and which will be inherited by our children and generations to come.

This 2013-2020 Open Space and Recreation Plan update, prepared jointly by the municipal government and citizens of Methuen, is intended to serve as a guide and tool for all the residents of Methuen to help us better preserve and enhance our quintessential New England community for ourselves, visitors and future inhabitants. This is our challenge... and our opportunity.

ACKNOWLEDGEMENTS

Contributors

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TABLE OF CONTENTS

SECTION 1. PLAN SUMMARY	I-1
SECTION 2. INTRODUCTION	II-1
A. Statement of Purpose.....	II-1
B. Planning Process and Public Participation	II-1
C. Enhanced Outreach in Environmental Justice Neighborhoods	II-2
D. Multi-Element Planning Approach	II-3
SECTION 3. COMMUNITY SETTING.....	III-1
A. Regional Context	III-1
B. History of the Community	III-2
C. Population and Employment Characteristics	III-3
D. Growth and Development Patterns	III-8
E. Infrastructure.....	III-11
SECTION 4. ENVIRONMENTAL INVENTORY AND ANALYSIS	IV-1
A. Topography, Geology, and Soils	IV-1
B. Landscape Character.....	IV-3
C. Water Resources	IV-4
D. Vegetation and Wildlife Resources.....	IV-9
E. Scenic Resources and Unique Environments	IV-14
F. Environmental Challenges	IV-18
SECTION 5. INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST.....	V-1
A. The Need for Open Space	V-1
B. Why Open Space Planning is Important.....	V-1
C. How Open Space is Protected.....	V-1
D. Methuen Open Space and Recreation Lands Inventory.....	V-3
SECTION 6. COMMUNITY VISION	VI-1
A. Description of Process.....	VI-1
B. Summary of Resident Survey Results	VI-1
C. Active Recreation.....	VI-2
D. City of Methuen Master Plan	VI-3
E. Statement of Open Space and Recreation Goals.....	VI-3
SECTION 7. ANALYSIS OF NEEDS.....	VII-1
A. Regional Needs: The Massachusetts “SCORP”	VII-1
B. Methuen Resource Protection Needs.....	VII-1
C. Methuen Community Needs.....	VII-3
D. Management Needs.....	VII-5

SECTION 8. GOALS AND OBJECTIVES	VIII-1
SECTION 9. SEVEN-YEAR ACTION PLAN.....	IX-1
SECTION 10. PUBLIC COMMENTS	X-1
SECTION 11. REFERENCES.....	XI-1

LIST OF MAPS

- Map #1 – Regional Context**
- Map #2 – Population Characteristics**
- Map #3 – Land Use**
- Map #4 – Zoning**
- Map #5 – Surficial Geology**
- Map #6 – Soils**
- Map #7 – Water Resources**
- Map #8 – Plant and Wildlife Habitats**
- Map #9 – Scenic Resources and Unique Environments**
- Map #10 – Environmental Challenges**
- Map #11 – Open Space and Recreation Lands**
- Map #12 – 7-Year Action Plan**

LIST OF APPENDICES

- A. List of OSRP Working Group Meetings**
- B. NHESP Rare Species, Natural Communities and Biodiversity Documentation**
- C. Summary of Public Outreach Interviews**
- D. Resident Survey Forms (English and Spanish)**
- E. Summary of Residents Survey Results**
- F. Methuen Americans With Disabilities Act Transition Plan Update**

SECTION 1. PLAN SUMMARY

This Methuen Open Space and Recreation Plan 2013-2020 was developed by an Open Space and Recreation Working Group, with the participation of the Mayor's Office, Community Development Department, Conservation Department, Recreation Department, Merrimack Valley Planning Commission, and Groundwork Lawrence, Inc. Through a public survey and personal interviews, important contributions were also made by representatives of the Methuen Rail Trail Alliance, the Forest Lake Association, and numerous other interested and concerned citizens.

The Open Space and Recreation Plan reflects Methuen residents' strong desire for protecting natural resources as a means of preserving some of the community's most recognizable open space assets – wetlands, water bodies, forested areas, and meadows – as wildlife habitats and areas for passive recreation and environmental education. It also recognizes the importance of protecting sometimes less apparent, but equally important, resources such as water quality, endangered species habitats, and scenic and historic landscape features.

The Plan notes that parts of Methuen have been experiencing significant growth. As a whole, the City has seen an increase of more than 16% in the number of households since 1980. There is a diversity of housing types with about 30% of the housing units built before 1930. Dense 2- and 3-family homes are located in the Arlington Neighborhood and low-density single-family homes are located in the West End and East End. Growth has varied with the area of the city, with a decrease in population in the central part of Methuen and increases in the West End and East End. There has also been an increase in the city's Hispanic population and in the portion of the population living below the poverty line. The population has also grown older in the past two decades. With these trends, two important implications for open space and recreation planning have emerged:

- An *increasing* population means an increased demand for some recreation facilities, including new and improved public parks and playing fields
- An *older* population implies a need for more passive recreation opportunities, especially *walking* opportunities via safe and convenient pathways and trails.

At the present time, Methuen has permanently protected about 2.4% (345 acres) of its total area. The City owns an additional 871 acres (6.1% of its total area). The Commonwealth of Massachusetts owns an additional 64 acres. In addition, the Massachusetts Wetlands Protection Act and the Methuen Conservation Commission regulations effectively protect the City's wetlands together with a small buffer area around them. Maintaining and improving the City's existing recreation facilities, providing additional recreation facilities, preserving remaining active agricultural lands ("Chapter 61A" lands), and creating open space linkages and trails are among the major open space issues that the city will face in coming years.

Ultimately, the health of the City's natural systems and the availability of diverse recreational opportunities for all Methuen residents will depend on thoughtful and effective local land use planning and development decisions by the community. This Open Space and Recreation Plan 2013-2020 is intended to help inspire and guide these decisions.

SECTION 2. INTRODUCTION

A. Statement of Purpose

As one of the major elements in the proper development of a community, a system of parks, open space, recreation areas, trails and walkways, and waterways has two overarching purposes. The first is to provide space and facilities for a wide range of recreational activities, both active and passive. These activities may be spontaneous or organized, seasonal or year-round, indoor or outdoor, and may involve individuals or groups. The second purpose is to retain part of the natural world in an unspoiled setting, in order to preserve scenic beauty, provide vital plant and wildlife habitat, and retain the open space character of a community.

There is a temptation, as a community grows, to lose sight of its origins and purposes, and to view open land only as potential sites for new residences or businesses. Acting on this temptation diminishes the quality of life in a community in several ways. It costs each citizen more in tax dollars than is generally realized, and limits, probably forever, the public space available for use by all its citizens.

Open space may be defined as open, undeveloped land that may or may not be in its natural state. This Plan is concerned with the conservation, protection, and stewardship of these areas for both human use and enjoyment and for species diversity and health. This includes public recreation areas, such parks and playgrounds, as well as natural areas such as forests, meadows, and wetlands.

Recreational use as addressed in this Plan is divided into two general categories: active and passive recreation. Active recreation is exertive, typically requiring organization and/or supervision and facility development and maintenance. Examples are field sports, skiing, and swimming. Passive recreation is generally more contemplative and receptive to nature, and does not require organization, supervision, or a high level of facility development. Examples are hiking, cross-country skiing, picnicking, and nature observation.

B. Planning Process and Public Participation

This Methuen Open Space and Recreation Plan 2013-2020 has been developed to update the City's last approved plan, prepared in 1994/1995. Under the initiative and the direction of the Methuen Mayor's Office, an Open Space and Recreation Plan (OSRP) Working Group was convened, consisting of knowledgeable personnel from various City departments (Community Development, Conservation, Recreation), as well as planning staff from the Merrimack Valley Planning Commission (MVPC) and the community nonprofit organization, Groundwork Lawrence, Inc. (GWL). A grant to the City from the MA Executive Office of Energy and Environmental Affairs (EEA) supported the planning assistance provided by MVPC and GWL.

Beginning in June, 2011, the OSRP Working Group met on approximately a monthly basis over the course of a year to carry out a multi-phased planning process consisting of the following major elements:

1. An analysis of open space and recreation needs identified through:
 - A review of the “natural resources, open space, and recreation” element of the Methuen Master Plan, prepared in 2007 following an extensive public participation process
 - An updated open space and recreation lands and facilities inventory and its comparison with generally accepted open space/recreation standards for communities of comparable size, pattern of development, and population characteristics (population size and density, age distribution, etc.)
 - An assessment of open space/recreation accomplishments (site acquisitions, improvements, etc.) undertaken by the City since the 1994/1995 plan, and the impact of these accomplishments on current open space/recreation needs.
 - A re-analysis of the community’s open space/recreation goals and objectives, specifically those cited in the 1994/1995 plan which either have been met or should be modified to reflect changes during the intervening years;
2. A natural resources inventory and analysis based upon available soils, geologic, hydrologic, and plant and wildlife data;
3. An updated parks and recreation areas inventory and analysis based on the types, location, uses, and condition of the various recreational facilities found in the community;
4. An identification of scenic resources and unique environments that help define the City’s landscape and community character;
5. An identification of selected environmental challenges, such as chronic flooding and stormwater pollution, that pose ecological and public safety risks; and
6. A City-wide public outreach and participation process, consisting of:
 - A citizens’ preference questionnaire (printed in English and Spanish, and widely distributed via prominent public places, the City website, and on-line)
 - Personal interviews of interested and knowledgeable City personnel as well as private and nonprofit organization representatives (e.g., Methuen Rail Trail Alliance, Forest Lake Association, Methuen Memorial Music Hall, Central Catholic High School)

C. Enhanced Outreach in Environmental Justice Neighborhoods

Methuen has a prominent “Environmental Justice Area” – the Methuen Arlington Neighborhood – in the south central portion of the City. It is the smallest of Methuen’s neighborhoods in area and has the highest concentration of ethnic minorities in the City. In this area of predominately low- and moderate-income households, the resident population is at least 25% minority, the median household income is 65% or less than the statewide median household income, English proficiency is 75% or lower, and 25% or more are foreign-born.

This area corresponds with the City’s Target Area for the Community Development Block Grant (CDBG)-funded Housing Rehabilitation Program and Commercial Rehabilitation Program, and is generally where the City’s outreach efforts are focused for all of the City’s community development projects and programs.

In an effort to engage the City's environmental justice populations in the open space planning process, Groundwork Lawrence (GWL) personnel went door-to-door in Methuen Housing Authority properties to conduct resident interviews in Spanish. GWL also worked with the Lawrence Methuen Community Coalition and the Lawrence Senior Center to reach other environmental justice neighborhood residents. These strategies were employed in order to meet and converse directly with residents where they regularly congregate, rather than holding centralized meetings about the open space plan.

D. Multi-Element Planning Approach

Together, the above planning elements formed the basis for the current Plan update. This update continues to support most of the goals and objectives of the 1994/1995 plan and the 2007 Master Plan. However, where such goals and objectives were met, they have been removed or modified.

Thus, the general direction and impetus of Methuen's open space and recreation aspirations remain largely unchanged and intact. These aspirations can perhaps best be summed up by stating this Plan's general open space and recreation goal:

“Create a network of high quality open space and recreation areas for the use and enjoyment of all Methuen residents.”

SECTION 3. COMMUNITY SETTING

Regional Context

The City of Methuen is located approximately 27 miles north of Boston in the Lower Merrimack River Valley. It is bordered on the west by the Town of Dracut, on the south by the Merrimack River and the City of Lawrence, on the east by the City of Haverhill, and on the north by the New Hampshire communities of Salem and Pelham.

Methuen covers 23.1 square miles of land area (0.7 sq. mi. of water), and has a current resident population of 47,255 (2010 Census). The City is largely a *single-family residential* community (single-family acreage accounts for 71% of all residential acreage), with an overall density of 1,995 persons per square mile and an average household size of 2.7 persons. Racially, the population is predominately non-Hispanic White, although the Hispanic or Latino population is the fastest growing ethnic group, more than doubling over the last decade to 18% of the population today.



Methuen lies within the Merrimack River watershed, a 5,000-square mile drainage basin with headwaters in the White Mountains of New Hampshire and outlet at the Atlantic Ocean at Newburyport Harbor. The City is a member of the 15-municipality Merrimack Valley Planning Commission (MVPC) regional planning district (see **Map #1 – Regional Context**), as well as of the coterminous Merrimack Valley Regional Transit Authority (MVRTA) and the federally (EDA) designated Merrimack Valley Economic Development District (MVEDD).

The surrounding Merrimack Valley region is sometimes referred to as the “Crossroads of New England” due to the proximity to Interstates 93, 95, and 495 which connect to major population centers in New Hampshire and Maine, as well as Rhode Island and Massachusetts. Downtown Boston is just 30-40 minutes by car from any point in the Merrimack Valley. Methuen is especially well served by an excellent interstate, state, and regional highway system that connects the City to Boston and other regional labor markets and cultural centers. Interstates 93 and 495 both bisect the City and are linked by Route 213, a limited access state highway that is located entirely within the City.

The Valley region has a current (2010) population of 333,748 (U.S. Census), up five percent from 2000. By the year 2035, the region's population is projected to increase by 12% to 375,000 (MVPC Data Center). This growth will be spurred in part by the Merrimack Valley's increasingly diversified economy, including healthcare, advanced manufacturing, creative economy, retail trade, educational services bio-tech business clusters, and tourism. Many of these industry sectors are represented in and around Methuen, along with the emerging green technology / clean energy sector.

Within the Merrimack Valley, Methuen is part of the Greater Lawrence-Greater Haverhill sub-regional employment hub, which also serves as a regional destination for culture,

entertainment, commerce, and recreation. The City and surrounding communities offer numerous attractions for local residents, but also draw visitors from farther afield, providing opportunities for history and architecture buffs, boaters, birders, trail-users, and others who enjoy the City's and region's festivals, concerts, shops, and restaurants.

B. History of the Community

Methuen's distinctive inland, riverine landscape was instrumental in shaping the history of the community from the earliest Native American use of the land to the 19th century factories on

the Merrimack and Spicket Rivers to land use patterns that survive today.



Native Americans of the Pawtucket tribe established mainland trails along the banks of the two major waterways that flow through Methuen – an east-west route along the Merrimack River and a north-south route following the course of the Spicket River. There are documented Native American sites from the Woodland Period which extends back to about 3,000 years ago.

Prior to its incorporation as a town in 1726, Methuen was part of the City of Haverhill. The Town's first English settlement was on Meeting House Hill (now known as Daddy Frye's Hill), near the present-day site of Holy Family Hospital.

Up until the early 19th century, Methuen's primary economic base was agriculture, reliant at first on the Salem, MA market and later, after the 1820s, on the Lowell market. The Early Industrial Period (1830-1870) was the time of a shift to a mixed economic base of agriculture and manufacturing. The center of the community moved to the area of the Spicket River and Spicket Falls, which provided energy for the industrial mills built along the riverbank. In the second half of the 19th century, the textile industry expanded rapidly in the region. Methuen's population growth during this period (from around 1,400 to over 4,500 by 1885) was fueled by the prosperity of the Methuen Company Cotton Mills, owned by David Nevins, and the textile mills of neighboring Lawrence.

Many of Methuen's most distinctive architectural and cultural resources date to three entrepreneurial families who amassed great wealth in the 19th century. The legacies of the **Nevins**, **Searles**, and **Tenney** families include, among others, the Nevins Memorial Library, the Nevins Home for the Aged and Incurable, the MSPCA property donated by the Nevins family, the Methuen Memorial Hall (built by Edward Searles to house the first concert organ in the U.S.), the Searles Building constructed as the city's high school and now used as municipal offices, the Soldiers and Sailors Memorial donated by Charles Tenney, and the granite walls and towers of the Searles and Tenney Estates.



Following World War II, the large estates of Methuen's millionaire industrialist families were either subdivided for residential uses, were developed by the community for school and municipal government purposes, or were acquired for religious/institutional uses.

C. Population and Employment Characteristics

1. Population Characteristics

In order to properly plan for Methuen's present and future open space and recreational needs, the size, density, age, and composition of the population must be properly considered.

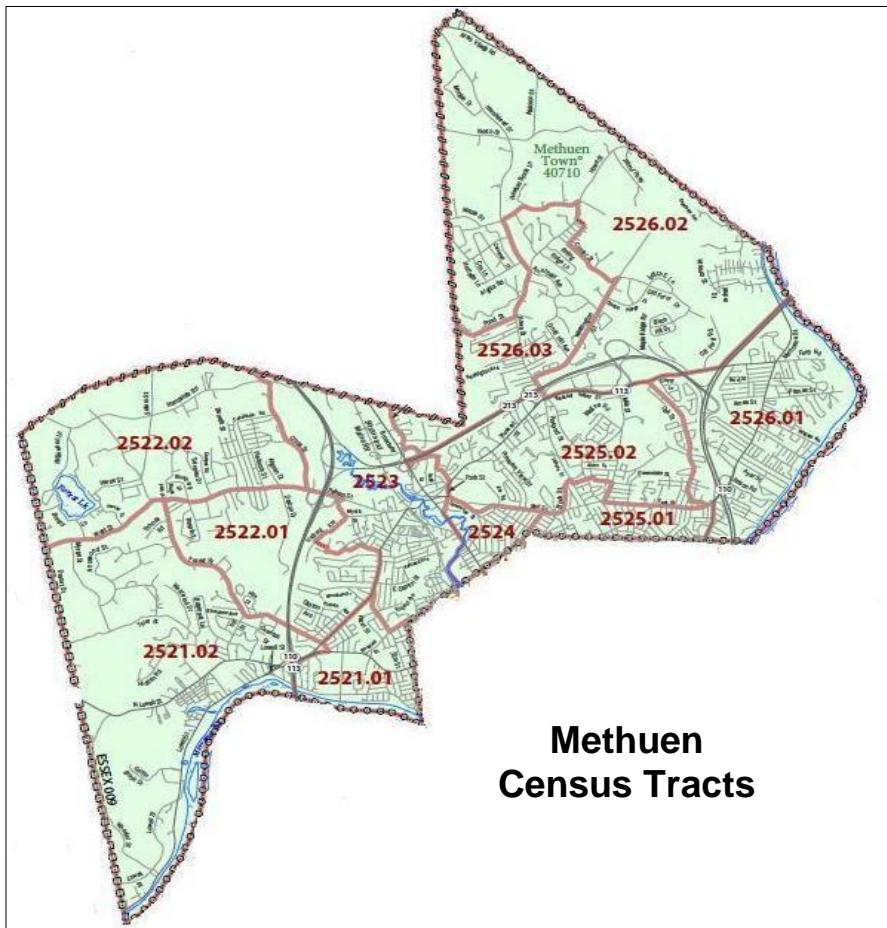
Total Population

According to the 2010 Census, Methuen's population is 47,255, an increase of 7.9% from the 2000 total of 43,789. The largest increase occurred in the easternmost part of the community, as Census Tract 2526.02 gained 23.6% from 3,567 people in 2000 to 4,407 in 2010. The slowest rate of growth occurred in Tract 2522.02, which added only 94 individuals, rising to 3,198 in 2010. Growth was a modest 4.3% in the central Tract 2524, which includes the densely populated Arlington District.

A breakdown of Methuen's population by Census Tract for the years 2000 and 2010 is given in the table below.

Methuen's Population by Census Tract – 2000 and 2010			
Census Tract	2000	2010	% Change
Census Tract 2521.01	3,398	3,509	3.27
Census Tract 2521.02	3,647	3,798	4.14
Census Tract 2522.01	3,054	3,230	5.76
Census Tract 2522.02	3,104	3,198	3.03
Census Tract 2523	5,923	6,552	10.62
Census Tract 2524	4,004	4,175	4.27
Census Tract 2525.01	3,513	3,874	10.28
Census Tract 2525.02	4,666	4,865	4.26
Census Tract 2526.01	6,167	6,621	7.36
Census Tract 2526.02	3,567	4,407	23.55
Census Tract 2526.03	2,746	3,026	10.20
Total	43,789	47,255	7.92

Sources: U.S. Census 2000 and 2010



Population Density

Population density influences demand for public outdoor parks and recreation spaces. In high density areas, residential properties may lack private yard space. Typically, these areas would benefit from small neighborhood parks or playgrounds. In residential areas with lower density, the need for small parks is less significant.

In Methuen, according to the 2010 Census figures, by far the most densely-developed area is Census Tract 2524, with 11,426 people per square mile. In contrast, although it experienced the highest rate of growth, Census Tract 2526.02 is the least densely populated area, with 692 people per square mile.

The total area of the City is 23.1 square miles, of which 0.68 square mile is water. City-wide, the population density is 1,955 persons per square mile of land. This density is characteristic of a mature suburban community with a densely-developed urban core surrounded by more sparsely developed neighborhoods and open space.

Map #2–Population Characteristics depicts the City's various population densities according to the 2010 Census, as well as areas of the community whose resident populations meet Massachusetts Environmental Justice criteria regarding median household income, percentage minority population, and percentage foreign-born.

Age Distribution

Methuen's population continues to age, as the median age for the community has increased from 35.0 in 1990 to 37.5 in 2000 and to 39.3 in 2010. Age characteristics vary somewhat throughout the City, as Census Tract 2524 has the highest concentration of its population of any Tract in both the Under 18 and 18-24 age groups at 31.3% and 12.2%, respectively. In fact, Tract 2524 is the only tract in Methuen that has more than 30% of its population under 18 and more than 10% of its population between 18 and 24. Conversely, Tract 2524 has the lowest percentage of its population older than 65 at 7.1%. The highest percentage over 65 is Tract 2525.02 at 19.8%.

The following table gives a breakdown of Methuen's 2010 percent age distribution by Census Tract. Despite Methuen's aging population, Methuen's youth population increased between 2000 and 2010 as a result of the overall growth in City population. The total number of individuals 19 and under grew from 11,796 in 2000 to 12,462 in 2010.

Methuen's Percent Age Distribution by Census Tract – 2010					
	Under 18	18-24	25-44	45-64	65+
Census Tract 2521.01	21.5	9.5	26.3	25.5	17.2
Census Tract 2521.02	23.5	6.9	22.5	33.4	13.6
Census Tract 2522.01	24.9	6.3	25.6	27.2	16.0
Census Tract 2522.02	24.9	8.0	25.6	31.9	9.7
Census Tract 2523	23.8	8.8	28.4	24.3	14.7
Census Tract 2524	31.3	12.2	27.8	21.5	7.1
Census Tract 2525.01	25.1	8.8	28.7	24.6	12.9
Census Tract 2525.02	22.2	6.9	23.7	27.5	19.8
Census Tract 2526.01	21.3	7.1	25.6	29.9	16.0
Census Tract 2526.02	22.5	9.5	25.9	32.1	10.1
Census Tract 2526.03	23.2	8.1	26.7	30.3	11.8
Total	23.8	8.3	26.2	27.9	13.8

Racial Diversity

Methuen's racial diversity continues to expand, as the percentage of Whites decreased from 89.4% in 2000 to 82% in 2010. The Black or African American population increased from 1.3% to 3.1%, while the Asian population rose from 2.4% to 3.7%. The biggest change has been seen in the number of Hispanics or Latinos (of any race). This group more than doubled, increasing from 4,221 individuals, or 9.6% of the total population in 2000, to 8,531 in 2010, representing 18.1% of Methuen's population.

At the Tract level, the Hispanic or Latino population is fairly clustered, with three Tracts totaling well above the 18.1% average community-wide. According to the 2010 Census, Tracts 2523, 2524, and 2525.01 registered 27.4%, 62.4%, and 26.3% Hispanic, respectively.

Housing Characteristics

Average household size has stabilized over the past couple of decades, following a fairly rapid decline. In 1970, the average size of a Methuen household was 3.24 persons. By 1980, household size had declined to 2.87 persons, and dropped again in 1990 to 2.69 persons. In 2000, there was a further slight decline to 2.62 persons; however, the 2010 Census showed that average household size has rebounded back up to 2.67 persons, almost matching the 1990 figure.

The proportion of husband-wife family households continues to shrink, as the 2010 Census shows that they represent just slightly over half of all households in Methuen at 50.7%. Single parent families stood at 19.5% of all households in 2010, with 14.4% headed by females and 5.1% by males.

2. Employment Characteristics

Income and Poverty Rates

As of the 2010 Census, income and poverty levels are no longer tracked by the U.S. Census Bureau's Decennial Census, and are now compiled through the annual American Community Survey (ACS).

The latest ACS data (2005-2009) show that median household income in Methuen stands at \$62,387, up 26% from \$49,627 in 2000. During this same 10-year period, per capita income rose by 24% from \$22,305 to \$27,721. Methuen's median household income (\$62,387) is 9% lower than that of the surrounding Merrimack Valley Region (\$68,865) and 3% lower than that of Massachusetts as a whole (\$64,509).

The overall poverty rate in Methuen is 7.1%. For those under 18, the rate is lower at 5.8%, while those 65 and over have a higher poverty rate of 12.8%. Poverty rates vary widely throughout the community, with Census Tract 2524 experiencing by far the highest rate at 22.4%. The next closest is Tract 2521.01 at 11.2%. Tract 2526.03 is at the opposite end of the spectrum with a much lower poverty rate of 1.2%.

Employment

As the data in the following table indicate, Methuen experienced a modest increase in economic activity over the past decade, with the total number of businesses rising from 891 in 2001 to 1,064 in 2010, a 19.4 percent rate of growth. Overall employment has risen as well, edging up 3.2 percent to 15,050 in 2010 from 14,586 in 2001. However, the community has seen quite a rather dramatic change within the various employment sectors, as traditional blue collar sectors such as manufacturing have experienced a significant slide, while service oriented industries have steadily grown, reflecting trends seen throughout the state and nation.

Methuen Employment Changes, 2001 – 2010				
	YEAR		CHANGE	
	2001	2010	Number	Percent
Total Labor Force	22,879	24,301	1,422	6.2
Unemployment Rate	4.6%	10.0%		
Number of Business Establishments	891	1,064	173	19.4
Average Weekly Wage	\$638	\$793	155	24.3
Average Monthly Employment				
Total, All Industries	14,586	15,050	464	3.2
Agriculture, Forestry, Fishing & Hunting	59	54	-5	-8.5
Construction	757	669	-88	-11.6
Manufacturing	1,981	1,418	-563	-28.4
Wholesale Trade	470	403	-67	-14.3
Retail Trade	2,374	2,477	103	4.3
Transportation and Warehousing	400	296	-104	-26.0
Information	211	212	1	0.5
Finance and Insurance	338	283	-55	-16.3
Real Estate and Rental and Leasing	131	90	-41	-31.3
Professional and Technical Services	245	328	83	33.9
Management of Companies & Enterprises	72	70	-2	-2.8
Administrative and Waste Services	1,054	811	-243	-23.1
Educational Services	1,012	1,266	254	25.1
Health Care & Social Assistance	2,922	3,245	323	11.1
Arts, Entertainment, and Recreation	155	206	51	32.9
Accommodation and Food Services	1,278	1,663	385	30.1
Other Services, Ex. Public	360	607	247	68.6
Public Administration	767	951	184	24.0

On a percentage basis, real estate and rental and leasing experienced the steepest decline, dropping by 31 percent; however, this corresponded to only 41 lost jobs. The manufacturing sector had the largest job loss, shedding 563 positions. Despite this decline, manufacturing remains a significant industry to this day, ranking as the fourth largest employment sector in 2010. Other significant losses over this period occurred in administrative and waste services, dropping 243 positions (-23%), and transportation and warehousing, which lost 104 jobs (-26%).

On the positive side, a number of sectors saw healthy growth rates in employment, with accommodation and food services leading the pack, adding 385 jobs. Significant gains also were seen in educational services, which added 254 jobs, and in health care and social assistance, which added 323 jobs. Other services—including categories such as private

household businesses and civic organizations—saw the largest percent increase at 69%, adding an impressive 247 jobs. Overall, the leading employment sectors in 2010 were health care and social assistance (3,245), retail trade (2,477), accommodation and food services (1,663), manufacturing (1,418), and educational services (1,266).

D. Growth and Development Patterns

Historical Development

Methuen's present-day land use patterns are a reflection of the city's historical development. Distinctive features include:

- The downtown area mills located along the Spicket River, which are currently used for retail outlets, warehousing, and light manufacturing
- The Arlington District (most of Census Tract 2524), an area of dense residential development, primarily 2- and 3-family homes, that originally served as housing for mill workers
- The Nevins Park area north of the First Congressional Church, which contains large Victorian homes that housed mill managers and others who prospered from the late 19th century industrial growth
- Commercial/industrial areas that developed along highway access
- Low-density single family subdivisions extending out to the east and west sections of the city.

Methuen first adopted zoning to control land uses and regulate growth in 1942. Major zoning revisions that expanded the scope of zoning controls were enacted in 1956, 1961, 1966, 1979, and 1989. Subdivision control was adopted in 1954, setting standards for the creation of building lots and construction of local roadways.

During the 1980s, public sewer lines were extended to the northwest section of the city in the areas of Forest Lake, West Street, and Salem and Hampshire Streets. Over 90% of city residences and businesses are now served by public sewer.

Searles Tenney Nevins Historic District

In 1992, the City established the Searles Tenney Nevins Historic District in order to preserve the distinctive architecture and rich character of one of the Merrimack Valley region's and Massachusetts' most unique neighborhoods. The Historic District is administered by the Methuen Historic District Commission, an oversight board appointed by the City Council that applies rules and regulations to protect the district from alteration and development that might compromise its aesthetic integrity or diminish its historic value.

As mentioned previously, in the industrial boom of the late 19th century, Methuen city fathers Edward F. Searles, Charles H. Tenney, and David C. Nevins amassed considerable personal fortunes through hat manufacturing, textile production, and railroads. Choosing to invest their wealth in Methuen, they heavily influenced the city's economic development and left a legacy of architecture and civic works that has helped shape the community's character and quality of life.

Today, the trio's collective vision can be seen in mills, housing, schools, mansions, churches, monuments, playgrounds, the Library, and the architectural fantasies that resulted from their artistic rivalry. The historic district boundaries were established to include properties and buildings constructed or used by the Searles, Tenney and Nevins families and the people who worked for them.

Methuen Today

As the tabular data below and **Map #3-Land Use**, following, both illustrate, Methuen is a mature city with only limited amounts of land available for future development. As of 2005, the date of the state's most recent land use data, just 5.3% of the city was vacant. 35.6% of Methuen's land was undeveloped but used for open activities such as pasture, crops, and forest resources. Some of this land is available for development but the remainder has development constraints, such as wetlands, steep slope, and unsuitable soil conditions. Some of this open land is protected, to varying degrees, from development by legal restrictions, such as conservation easements. Residential uses account for 43.9% of land uses. Commercial and industrial uses, including gravel extraction, account for just over 6% of the city's area. Active agriculture accounts for only 3.1% of the city's area, and surface water accounts for less than 1%.

Land Use in Methuen: 1985, 1999 and 2005						
	1985		1999		2005	
Land Use	Acreage	%	Acreage	%	Acreage	%
Cropland	564.2	4.2	429.2	3.2	319.7	2.4
Pasture	197.1	1.5	121.7	0.9	33.3	0.2
Forest	4,408.0	33.0	3,890.2	29.1	3,554.1	26.6
Unforested Wetlands	738.0	5.5	797.0	6.0	782.5	5.9
Gravel Pit	102.0	0.8	80.1	0.6	75.2	0.6
Vacant Land	647.2	4.8	604.6	4.5	715.2	5.3
Participation Recreation	324.0	2.4	311.2	2.3	347.1	2.6
Water-Based Recreation	0	0	0	0	3.5	0.0
Multi-Family Residential	143.9	1.1	190.1	1.4	204.3	1.5
Residential under ¼ Acre	1,189.7	8.9	1,209.4	9.0	1,236.4	9.2
Residential ¼ to ½ Acre	2,397.6	17.9	2,657.8	19.9	2,749.8	20.6
Residential over ½ Acre	1,021.6	7.6	1,452.2	10.9	1,684.8	12.6
Commercial	347.7	2.6	314.3	2.3	379.9	2.8
Industrial	247.0	1.8	325.9	2.4	358.7	2.7
Urban Open/Park	397.8	3.0	391.3	2.9	339.9	2.5
Transportation	393.1	2.9	429.9	3.2	426.0	3.2
Landfill/Waste Disposal	72.1	0.5	18.5	0.1	24.4	0.2
Water	77.8	0.6	79.1	0.6	76.3	0.6
Nursery/Orchard	105.7	0.8	72.3	0.5	63.5	0.5
TOTALS	13,374.5	99.9	13,374.8	99.8	13,374.6	100

Land Use Changes

As the preceding data illustrate, during the 20-year period from 1985 and 2005, some 1,220 acres of land (about 2 square miles) was converted from undeveloped to developed categories. Most of these undeveloped lands (1122.5 acres) were converted to residential uses. The developed land category that grew fastest was residential over $\frac{1}{2}$ acre (low density). This category grew from 7.6% of all land in Methuen to 12.6%, a gain of 5%. The second fastest growing category was residential between $\frac{1}{4}$ and $\frac{1}{2}$ acre (moderate density). It grew from 17.9% to 20.6%, an increase of 2.7%.

Other developed land use categories are growing more slowly. Commercial land acreage actually dipped between 1985 and 1999, but picked back up by 2005 to show a slight increase over 1985 from 2.6% to 2.8%. This was largely due to commercial development in The Loop area. Industrial land grew from its 1985 level of 1.8% of all Methuen land to 2.7% by 2005. This is attributed to growth on new industrial areas in several parts of the city.

Almost all new development over the past 20 years has come at the expense of forest and agricultural lands. Forest land dropped from 33.0% of all land in Methuen to 26.6%, a loss of 6.4% or 853.9 acres. Agricultural land dropped from 6.5% of all land in the city to 3.1%, a loss of 3.4% or 450.5 acres. Despite the significant loss of forest land, there is still substantial forest area remaining (3,554 acres), much of which is not developable.

Zoning Distribution and Density of Land Uses

Map #4—Zoning on the following page shows the distribution and density of land uses by zoning district. Most of Methuen is zoned for residential uses, and 73.4% of residential development is on lots of $\frac{1}{2}$ acre or less.

The largest amount of land area (32%) is designated AG-CON (Agriculture-Conservation) which allows single-family homes on minimum sized 80,000 sq. ft. lots (almost 2 acres). The second and third most expansive zoning districts are the R-A and R-B districts (10% of city area each). These single-family residential zones require 40,000 sq. ft. and 25,000 sq. ft. minimum lot sizes, respectively. These lower density residential zones are located in the West and North Ends furthest from Downtown Methuen and outside the ring or beltway formed by the limited access highways I-93, State Route 213, and I-495. Inside this ring are found the higher density residential zones R-C and R-D (3% and 14% of city area), requiring 15,000 sq. ft. and 10,000 sq. ft. minimum lot sizes, respectively.

There are two multi-family zoning districts in Methuen (MA and MB). The MA zone requires a 3 acres minimum lot size and a maximum density of 2 dwelling units per acre. The MB zoning district requires 1-acre minimum lot size and allows a maximum density of 4 dwelling units per acre. The MA and B zones account for about 1% each of Methuen's land area. Almost all multi-family zones are located inside the ring with the exception being one RA zone located along Washington Street just north of Route 213 and the Loop commercial area.

Downtown Methuen is zoned Central Business District (CBD) which requires 4,000 sq. ft. minimum lot sizes and allows retail and offices uses. It encompasses only 83 acres and accounts for less than 1% of Methuen's land area. Methuen does not have an extensive downtown area. Much of Methuen's business activities are located along arterial roadways and in the regional shopping plaza called The Loop, located along Route 213.

Projected Growth

During the Master Plan development process, a residential build-out analysis was conducted for the purpose of projecting Methuen's maximum future population under the current zoning. The assessor's data showed 983 acres in 430 parcels of vacant developable residential land. Most of this land is located in the West and North Ends outside the three "ring" roads. This land would support almost 1,700 new dwelling units, assuming an average density of about $\frac{1}{2}$ acre per unit and 15% of the land used for new roads and utilities. Assuming a future population per housing unit figure of 2.6, the total number of additional people that could reside in Methuen when all the developable vacant residential land is developed is 4,420. If the remaining developable residential land is developed at higher densities, the future additional population would be higher.

E. Infrastructure

1. Transportation

Methuen is conveniently located near two interstate highways, I-93 and I-495, and is served by State Routes 28, 110, 113, and 213. Methuen has approximately 200 miles of roadway, of which 165 miles are owned and maintained by the City. Public transportation is provided by the Merrimack Valley Regional Transit Authority (MVRTA), which provides fixed-route bus service both within Methuen and to the communities of Amesbury, Andover, Haverhill, Lawrence, Merrimac, Newburyport, and North Andover. The MVRTA also provides an advanced phone request service (Methuen Ring and Ride), which provides service to the following Methuen locations: Holy Family Hospital, The Loop, Methuen Plaza, Methuen Square, and Merrimack Plaza.

Methuen also has a Mass. Dept. of Transportation (MADOT) designated Park-and-Ride Lot. Built in 2000 and located on Pelham Street east of I-93, this lot has 177 parking spaces available to commuters. The MVRTA offers bus service from this lot to Lawrence, Andover, and Boston, with 4 trips per weekday.



Commuter rail service to Boston is available to Methuen residents in the neighboring communities of Haverhill, Lawrence, and Andover. General air travel to most parts of the U.S. is available to residents from Logan International Airport in Boston and the Manchester-Boston Regional Airport in Manchester, NH. Several specialized regional services are also available, including: the Lawrence Municipal Airport in North Andover; the Merrimack Valley Seaplane Base in Methuen; and the Plum Island Airport in Newbury.

2. Water Supply

Methuen's primary drinking water supply source is the Merrimack River (MassDEP Source I.D. #3181000-1S). The Massachusetts Surface Water Quality Standards classify the Merrimack River as a Class B waterway. This means that the water withdrawn for drinking water purposes must be treated prior to delivery and consumption. Water pumped from the Merrimack River is treated at the City-owned water treatment plant, located on Burnham

Road, before being distributed through the system to area homes, institutions, and businesses. Currently, the treatment plant has a maximum capacity (during emergencies) of 13 mgd (million gallons per day), although the average annualized demand is 4.7 mgd. During dry summer periods, when lawn watering peaks, the demand can increase to 9.5 mgd. The water system currently has 14,338 customer connections served by 216 miles of water pipe. Although the Merrimack River is an abundant water supply source, the Methuen Water Department regularly encourages and educates all of its customers to be 'water-wise' and conserve water.

3. Sewer Service

With the exception of a few small isolated rural sections, most of Methuen is part of the public wastewater system. The City is a member of the Greater Lawrence Sanitary District (GLSD), a regional wastewater management district that also includes Lawrence, Andover, North Andover, and Salem, NH. The wastewater treatment plant for the District is located in North Andover, with discharges into the Merrimack River.

The maximum (design) treatment capacity of the GLSD plant is 52 million gallons of wastewater per day. In a typical year, the plant treats approximately 30 million gallons of wastewater per day, 900 million gallons per month, and 11 billion gallons per year. It also treats over 50,000 gallons of septage (septic tank pumpings) from its member district communities and from other municipalities.

Methuen has 105 miles of sewer lines to collect and transport wastewater to the GLSD treatment plant.



SECTION 4. ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Topography, Geology, and Soils

Topography

Methuen's 22.4 square miles is characterized by gently undulating uplands and low-lying floodplains that are interspersed with numerous rivers, streams, ponds, and wetlands. Methuen has a maximum elevation of 374 feet above mean sea level (msl) on Poplar Hill in the northwest corner of the city. The lowest point is about 9 feet msl on the Merrimack River as it flows into Haverhill. Intermediate elevations of 100-115 feet msl are more common throughout the city. Slopes exceeding 15% (about 7.4% of the city's total area) occur in scattered locations, but are most prevalent in the northern and western parts of the West End and in selected parts of the East End. Slopes of 15% or greater generally provide some limitation to many types of development, but usually few that cannot be overcome through proper site design and engineering.

Geology

Although the earth has undergone some four billion years of geologic alteration, it is the more recent glacial periods that are of greatest importance to Methuen residents. The glaciers that covered New England and Methuen more than 12,000 years ago scraped and scoured the land surface and left in their wake rock outcroppings and surficial deposits that continue to define our landscape today (**see Map #5–Surficial Geology**). Indeed, surficial geology is the underlying basis for both our natural systems and our human development patterns, and provides important information about the community's environmental and economic potentials and vulnerabilities.

The advance of the mile-thick layer of glacial ice scraped some hills down to bedrock and in its retreat left extensive deposits of till, a mixture of unsorted stones, clay, silt, sand and gravel. Till covers about 60% of Methuen, and in some areas was molded by the weight of moving glacial ice into distinctive streamlined hills known as drumlins. Examples include Reservoir Hill, Pie Hill, Lone Tree Hill, and Gunpowder Hill. Glacial till tends to have moderately or poorly drained soils with many stones and rocks.

As the glaciers melted and retreated, areas of sand and gravel were deposited as outwash between the till deposits and exposed bedrock. Sand and gravel deposits known as kames and kame plains are located around and to the south of Methuen Center, and similar deposits called kame terraces are situated along sections of the Merrimack River, especially its southern bank.

At lower elevations, floodplain alluvium deposits settled out onto flat areas and wetlands, such as areas along the Merrimack River and the wetlands north of Pelham Street and east of Route I-93. These low-lying, water-borne deposits are generally not suitable for development.

Because of the region's glacial legacy, many of the soils in Methuen tend to be poorly drained or rocky with the exception of those soils that developed over the sand and gravel deposits and some till deposits.

Soils

The U.S. Department of Agriculture's Natural Resources Conservation Service (formerly, the Soil Conservation Service, or SCS) is the primary source of soil and soil drainage information in this country. In 1969, along with the Essex Conservation District, the Soil Conservation Service published "Soils and Their Interpretations for Various Land Uses" for the City of Methuen, which was updated in "A Soil Survey for Essex County MA - Northern Part" in February 1981. The following information is derived from these two documents, and assesses the suitability of various soil groups (associations) to accommodate various types of development as well as other uses such as recreation, agriculture, and horticulture. The locations of the various soil groups are shown in **Map #6-Soils**.

Soils altered by urbanization—These soils have been altered by different kinds of development and their limitations are subject to specific engineering investigations. 11.5% of Methuen is in this altered condition.

Canton fine sandy loam and Canton fine sandy loam—These soils have severe limitations for septic systems because of poor filtration and slight limitations for roads, residential or commercial development except in areas with slopes greater than 8%. 12.7% of Methuen is classified as Canton fine sandy loam and 3.0% is classified as Canton fine sandy loam extremely stony.

Swansea and Freetown mucks—These soils have severe limitations for all types of development because of wetness. 7.3% of Methuen is classified as Freetown or Swansea mucks.

Windsor loamy sand—These soils have severe limitations for septic systems because of poor filtration and slight limitations for roads, residential or commercial development except in areas with slopes greater than 8%. Droughtiness is also a limitation. 7.2% of Methuen is classified as Windsor loamy sand.

Hinckley loamy sand—These soils have severe limitations for septic systems because of poor filtration and few limitations for other development other than slope. 4.7% of Methuen is classified as Hinckley loamy sand.

Scituate fine sandy loam—These soils have severe limitations for septic systems because of wetness and moderate limitations for roads, residential or commercial development except in areas with slopes greater than 8%. 4.3% of Methuen is classified as Scituate fine sandy loam.

Rock Outcrop-Charlton-Hollis complex—These soils have up to 90% rock outcrops and are generally unsuitable for most types of construction. 5% of Methuen is classified as Rock Outcrop-Charlton-Hollis complex.

Sutton fine sandy loam—These soils have moderate to severe limitations for development because of wetness. 4.1% of Methuen is classified as Sutton fine sandy loam.

Montauk fine sandy loam—These soils have severe limitation for septic systems because of wetness and slow percolation and moderate to severe limitations for roads, residential or commercial development. 4% of Methuen is classified as Montauk fine sandy loam.

Scituate fine sandy loam—These soils have severe limitations for septic systems because of wetness and moderate limitations for roads, residential or commercial development except in areas with slopes greater than 8%. 3.9% of Methuen is classified as Scituate fine sandy loam.

Ridgebury and Leicester fine sandy loams—These soils have severe limitation for development because of wetness. 3.8% of Methuen is classified as Ridgebury and Leicester fine sandy loams.

Deerfield loamy fine sand—These soils have moderate to severe limitations for development because of high water table. 3.0% of Methuen is classified as Deerfield loamy fine sand.

Paxton fine sandy loam—These soils have moderate to severe limitations for development because of slow percolation and wetness. 2.0% of Methuen is classified as Paxton fine sandy loam.

Scarboro mucky fine sandy loam—These soils have severe limitations for development because of wetness. 1.7% of Methuen is classified as Scarboro mucky fine sandy loam.

Severe to Moderate Limitations—These soils include Sudbury, Whitman, Winooski, Walpole, Woodbridge, and a few other soil types and have severe to moderate limitations for development because of wetness and slopes. The limitations include high ground water, which may impede the installation of septic systems and basements; stones or boulders, which may increase construction costs; steep slopes, or shallow soils over bedrock, which may limit construction and increase costs. There are very few undeveloped areas with few limitations. Slope is more of a limitation for commercial development than it is for residential development.

B. Landscape Character

Methuen's residents place a high value on the community's strong sense of place, which is created by its varied landscape, diverse natural features, and traditional land use patterns. Methuen's inland location on two important rivers – the Merrimack and Spicket Rivers – played a critical role in the community's historical development; and the rivers, mills, former private estates, and historic granite walls remain among the city's most cherished landscape assets. The city has already taken some measures to preserve its most significant buildings and natural areas. It is now looking beyond the traditional resources to the landscapes, streetscapes, rural roads, neighborhoods, and other natural and cultural assets that define the overall fabric of the community.

Like most Essex County municipalities, Methuen is facing multiple pressures for change that threaten land-based uses and natural resources, especially its river frontage and farming areas. Special places within the community that were once taken for granted are now more vulnerable than ever to change.

Development of the limited amount of Methuen's remaining agricultural land is of particular concern. This is an issue that bears the attention of city officials and residents alike. The Merrimack Valley is reported to have some of the richest soil east of the Connecticut River valley, and the few vegetable farms remaining in the eastern side of Methuen are subject to intense development pressures. These pressures stem from the high cost of land, the high demand of modern residential and commercial construction, and the difficulty of successful farming on limited agricultural land surrounded by development. This threatened part of the city's natural landscape, along with the remaining farmland in the northwest section of the city off Hampshire Road, should be a primary focus of the city's future preservation efforts.

C. Water Resources

Methuen is blessed with abundant surface waters including rivers, streams, lakes, ponds, and wetlands. A description and map (**Map #7-Water Resources**) of some of the city's most prominent water resources follows.

Rivers and Streams

Merrimack River. One of Methuen's prize natural resources is the Merrimack River. More than six miles of the river's 110 miles run through the city. Beginning at the West End boundary with Dracut, this magnificent river corridor offers Methuen and other communities in the area outstanding opportunities for active and passive recreation, nature education, and habitat preservation. Importantly, it also serves as part of the city and region's public water supply. It supplies water to Lowell, Lawrence, Dracut, Tewksbury and many other communities along its course. For many rivers in Massachusetts, water withdrawals can result in low-flow problems in summer and winter months. This has not been the case with the Merrimack River because of its large (5000-sq. mi.) watershed and high flow volume. However, water quality is another concern. The river passes through densely-developed urban areas where stormwater runoff and other sources of pollution are important issues. The MA Department of Environmental Protection (MassDEP) regulates the public use of this water resource in Massachusetts. Protection and conservation of the water resources of the Merrimack River require regional cooperation.



Spicket River. The Spicket River flows southward through Methuen from neighboring Salem, NH, and may be divided into three distinct sections by considering the different reaches of the river created by two dams. The first section extends from the New Hampshire state line south to the dam at Lowell Street. This area has a large floodplain, a portion of which, known as the Nevins Pond and Wildlife Area, is under the management of the Methuen Conservation Commission. The development pressure on this section of the river

corridor is significant due to its rural character and choice location at the Rt. 93 & Rt. 213 interchange. This section also contains the only sizeable floodplain for its run in Massachusetts, and the last floodplain which can mitigate the detrimental effect of floodwaters before they enter the urbanized sections of Methuen and Lawrence. The remaining two reaches are in a more urban setting, with floodplain development up to the river banks.

The second reach, extending from the Lowell Street dam to the Memorial Music Hall dam on Broadway, has minimal open land. A high, steep banking along the Union Street side is subject to erosion and needs attention. The dam located at the Music Hall was repaired in the 1990s and this significantly improved this scenic spot.

The last reach of the Spicket River extends from the Memorial Music Hall dam to the Lawrence city line. A continuous strip of land on the north side of the river, from the bridge on Broadway to the Neil Playstead on Lawrence Street, should be maintained as a green corridor. At the lower bridge on Broadway, the open land associated with the Henry C. Nevins Home provides a natural greenbelt.

Even though the Spicket River is a small river, in the spring its floodwaters frequently spill over its banks into adjoining wetlands and have inundated and damaged numerous homes and businesses.

Hawkes Brook. Hawkes Brook is an expansive drainage system that begins in the northeast section of the city and joins Baremeadow Brook prior to entering the Merrimack River near the Haverhill city line. Much of this brook and its tributary streams have undeveloped swampy banks. Erosion problems at nearby Pie Hill have caused severe siltation problems in Hawkes Brook. A conservation project slated for the late 1970s never materialized and the problems at Pie Hill and Hawkes Brook remain.

Harris Brook. Harris Brook rises in neighboring Pelham, NH, and is joined by Forest Lake brook in Methuen. As it winds its way toward the Spicket River, Harris Brook receives water from several unnamed tributaries plus Policy Brook. Several large wetlands abut this brook. For the most part, the land bordering Harris Brook is sparsely developed.

Bartlett, Sawyer, and Griffin Brooks. In the West End of Methuen, three vigorous streams – Bartlett, Sawyer, and Griffin Brooks – flow into the Merrimack River. Bartlett Brook includes a swampy area in Methuen which has been proposed as a possible conservation site. The other two streams lack extensive bordering wetlands, but care should be taken not to further constrict the banks by filling.

Lakes and Ponds

Lakes and ponds are common throughout New England and Essex County. Many are natural, attesting to the wealth of our water resources; others are man-made for agricultural or industrial purposes. Regardless of their origin, these waters are a key feature of our landscape and have the potential to improve the quality of our life both recreationally and aesthetically.

Forest Lake. Forest Lake, a large groundwater-fed pond of approximately 52 acres, is the only Methuen pond large enough for general recreational use. Methuen residents are

provided access to the lake, for a fee, via the Town beach. The recreational area is maintained by the Methuen Department of Public Works, Environmental Management Division, and is managed by the Methuen Conservation Commission.

Water quality problems are present as the lake is experiencing eutrophication symptoms such as weed and algal growth, odors, and turbidity. Proper management of Forest Lake's watershed is warranted in order to prevent this vital resource from becoming a stagnant, polluted pond. The outlet structure for regulating drawdown of the lake was constructed in 1991. Lake drawdown is performed mid-September each year by the city DPW and is overseen by the Conservation Department.



Water from Forest Lake empties into Forest Lake Brook, which flows into Harris Brook, the Spicket River, and, eventually, the Merrimack River. The lake is stocked with trout by the Northeast District Office of the MA Department of Fish and Game.

Hills Pond. Two small ponds located on the former Hill's Farm property on Pleasant Valley Street and Milk Street are an integral part of the Baremeadow Brook watershed. The watershed for these ponds is heavily developed and includes the large residential Glen Magna area and The Loop commercial center.

Surface runoff entering the Hill's Pond area is polluted from contaminants such as road salt, fertilizers, pesticides, and petroleum products, which result from the high-density development within the watershed. This has led to the degradation of the ponds; however, with improved management of the watershed, the ponds could be restored and the area beautified.

Mystic Pond. Mystic Pond, situated at the intersection of Route I-93 and Pelham Street, plays an important role in the watershed system. Peat Meadows and the springs from the hill to the south feed the pond, with the overflow entering the Spicket River at the Route 213 overpass. The George "Shorty" DeGaspe Park, with tot-lot, is situated alongside the pond.

Searles Pond. Searles Pond, on Jackson Street, once a large pond that was filled in almost to the point of non-existence, has been all but restored to its pre-filled condition. This positive action occurred after the city acquired this 8-acre property with grant funding from the Massachusetts Self-Help Program.

At present, the primary use of this area is as a flood retention pond to prevent flood damage caused by an overflow of Bloody Brook which emanates from the pond. Due to its location in a highly urbanized area, this open space has great potential which should be further explored.

Wetlands

Wetlands are water-saturated lands and depressions, often located within floodplains, which include marshes, swamps, wet meadows, and bogs. Wetlands serve a variety of important ecological and societal functions including protection from flooding, pollution filtration, and fish and wildlife habitat. In recognition of these attributes, Methuen's wetlands are protected by both the State (MassDEP) Wetlands Protection Act and the City of Methuen Wetlands Protection Ordinance. Notable wetlands in Methuen include the following:

Peat Meadow. Peat Meadow is a large, conspicuous perennial marsh, comprising over 200 acres, which is bounded by Route I-93, Forest Street, and Pelham Street. The watershed of this large, deep wetland, where the underlying organic soil may reach 30 feet in depth, has a contributing area of approximately 600 acres.

Located within Peat Meadow are two small ponds, formed by the removal of gravel that was used for the construction of I-93. These ponds serve as a resting area for migratory birds and provide habitat for several species of fish. Wildlife such as ducks, geese, beaver, muskrat, and songbirds can be found within Peat Meadow.

Peat Meadow retains water year-round and feeds the Spicket River via Mystic Pond. This prime natural area should be preserved from development impacts.

Adjoining New Hampshire Swamps. Two other large wetland areas are shared with neighboring New Hampshire. One lies west of Howe Street and is bounded on the south by Route 213 and on the west by the state line. The other is bounded on the east by the Merrimack Valley Golf Club and on the west by the state line. Both of these wetland systems drain into New Hampshire.

Vernal Pools. Vernal pools are an important but vulnerable wetland resource in Methuen. Unlike Peat Meadow and other perennial wetlands, vernal pools are small, scattered seasonal water bodies that occur in isolated surface depressions which are usually wet during the spring and early summer and dry up as the summer progresses. Vernal pools typically lack fish populations, making them ideal breeding habitat for many amphibian species. For example, the wood frog (*Rana sylvatica*) and all species of mole salamanders (genus *Ambystoma*) that occur in Massachusetts breed exclusively in vernal pools. Areas in the immediate vicinity of these pools also provide these species with feeding, shelter, and overwintering sites.

Local volunteers inventory vernal pools, and biologists from the Massachusetts Natural Heritage and Endangered Species Program (NHESP) review and certify these pools.

The Massachusetts Wetlands Protection Act protects Certified Vernal Pools for their wildlife habitat value, provided they are large enough to constitute "Areas Subject to Flooding" (as defined by the WPA). However, the State Wetlands Act coverage does not extend protection to smaller Certified Vernal Pools or those that have not yet been inventoried. The protection of Methuen's vernal pool habitat is essential for the continued survival of wildlife species that depend on this unique wetland type.



At present, the State has certified 31 vernal pools in Methuen and has identified, via local field reconnaissance, an additional 86 potential vernal pools. The City's remaining vernal pools should be identified, certified, and mapped as soon as possible so as to steer future development activity away from these critical wetland habitats.

Flood Hazard Areas

When a water body can no longer accommodate increased runoff from heavy rains and/or snowmelt, the excess water overtops the water body and flows onto the adjacent land. The land adjacent to rivers, lakes, and wetlands that is likely to flood during a significant runoff event is known as a floodplain.

Significant parts of the City of Methuen lie within the floodplains of the Merrimack River and the Spicket River, and are subject to recurring (and sometimes *highly damaging*) flooding during prolonged rainfall events. A GIS analysis of the City's FIRM flood hazard area maps by MVPC in 2012 determined that 1,938 acres (3.0 sq. mi.) of land area in Methuen is located within the 100-year floodplain and thus is vulnerable to flooding. An additional 727 acres (1.1 sq. mi.) lies within the 500-year floodplain. Together, these two flood zones constitute nearly one-fifth (18.1%) of the total area of the community.

A community's flood hazard areas are mapped and categorized by the Federal Emergency Management Agency (FEMA) according to the average frequency of flooding, based on topography, hydrology, and development characteristics of the area. Thus, the 100-year floodplain is the area that, on average, is likely to be flooded once every 100 years. In other words, there is a 1% chance that the land will be flooded in any given year. Similarly, the 500-year floodplain is the area that has a 0.2% chance of being flooded in any given year.

Flood hazard areas present risks to people, property, and natural resources that must be assessed and minimized. Unregulated development in a floodplain can increase the likelihood of flooding by adding impervious surfaces and increasing the rate and volume of surface runoff into river or stream channels. In addition, water contamination from flood-damaged sewer or septic systems and debris swept downstream from flooded properties can result in unnecessary hazards to properties and receiving waters downstream. In order to minimize flooding and its impacts, the City of Methuen has adopted a Floodplain Overlay District to regulate further development in the flood hazard areas as delineated on the City's Flood Insurance Rate Maps (FIRMs), prepared by FEMA.

Aquifers

An aquifer is an underground geologic formation (typically a coarse-grained deposit of sand and gravel or fractured bedrock) that is capable of yielding a significant, reliable volume of groundwater to a water supply well. Aquifers of sufficient capacity to serve as a municipal water supply are relatively scarce and found only in locations with certain favorable geologic and hydrologic characteristics. In New England, most aquifers with such capacity were formed in valleys carved into bedrock by ancient rivers and glacial meltwaters that drained the continent thousands, and even millions, of years ago.

In Methuen, four small aquifers comprised of glacial stratified deposits and post-glacial floodplain alluvium have been identified and mapped by the U.S. Geological Survey (USGS). The largest of these is located west of I-93 in the Hampshire Road area near the Salem NH

border. The others, all very small, are located respectively in the Lyndale Avenue area, by the Merrimack River along Rt. 110 in southwestern Methuen, and by the Merrimack River east of I-495 at the Haverhill-North Andover junction. According to Methuen Water Division personnel, none of the four small aquifers yields groundwater in sufficient quantity to serve as a reliable public water supply source for the City. For this reason, the City uses the Merrimack River to meet its municipal water needs.

D. Vegetation and Wildlife Resources

Methuen is blessed with an abundance and variety of natural resource areas – forests, farm fields, meadows, wetlands and waterways – which in turn support diverse vegetation and wildlife resources, including a number of rare and endangered species. Biodiversity is an indicator of the health of the environment and is a source of outdoor enjoyment for residents of all age groups. As the forests of New England rebound after the abandonment of many farms in the 1800s, some species of wildlife have begun to move back into eastern Massachusetts. These include beaver, coyote, and fisher as well as others. The following describes the city's major natural resource areas and the vegetation and wildlife species they support. **Map #8-Plant and Wildlife Habitats** shows the locations of priority and estimated habitats of rare species, as well as certified and potential vernal pools, as determined by MA Natural Heritage and Endangered Species Program (NHESP) biologists and ecologists.

Forest Land

Methuen still has a considerable amount of forest land, but the effect of suburban development has begun to mask the visual impact of many of these remaining forests as large lots are developed along the city's roadways. As of 2005, there were 3,554 acres of forest in Methuen (27% of the city's total area), including primarily the Central Hardwoods-Hemlock-White Pine association and relatively small areas of the Red Maple Swamp association. The Central Hardwood Forest type is located on generally drier outwash soils and tills. The most common trees are red oak (with mixtures of other oaks) and hemlock as well as red maple, aspen, hickories, and gray birch. White pine is common on more sandy soils. Common shrubs and herbs include blueberries, wintergreen, club mosses, and hazel. The Central Hardwood Forest type is found in all parts of Methuen while the Swamp Hardwood Forest type is concentrated along streams or around ponds. The Central Hardwood Forest habitat type is likely to be the most threatened because it is often generally suitable for development.



Some of the common animals found in the Central Hardwood Forest include spotted salamander, redback salamander, wood frog, American toad, eastern milk snake, and eastern garter snake. Common birds include red-tailed hawk, Cooper's hawk, mourning dove, downy woodpecker, great-horned owl, northern flicker, eastern wood pewee, eastern phoebe, blue jay, American crow, white-breasted nuthatch, brown creeper, gray catbird, scarlet tanager, ovenbird, American goldfinch, yellow-rumped warbler, and Baltimore oriole.

Common mammals include Virginia opossum, eastern chipmunk, woodchuck, gray squirrel, red squirrel, white-footed mouse, red fox, eastern coyote, raccoon, river otter, white-tailed deer, and striped skunk.

Swamp Hardwoods, found in the scattered wetland areas of Methuen and along streams, are so dominated by red maples that they are often referred to as Red Maple Swamps. Other common trees include American ash, cedars, and black gum. Wetland understory shrubs are common, including alder, viburnums, blueberries, and others. Herbs are abundant and include sedges, ferns, false hellebore, and skunk cabbage. These woodlands are an important component of the City's remaining forested lands and our state and local wetland laws generally protect them.

Some of the common animals found in the Swamp Hardwood Forest association and not in the Central Hardwood Forest include northern spring peeper, gray tree frog, bullfrog, common snapping turtle, painted turtle, northern water snake, and northern ringneck snake. Birds common to this habitat and not so likely encountered in Central Hardwood Forest include great blue heron, green heron, wood duck, eastern screech owl, barred owl, tufted titmouse, Carolina wren, black-capped chickadee, American robin, northern mockingbird, cedar waxwing, red-eyed vireo, yellow warbler, song sparrow, and common grackle. Many of the same mammals found in the Central Hardwood association are also likely to be found in Red Maple swamps.

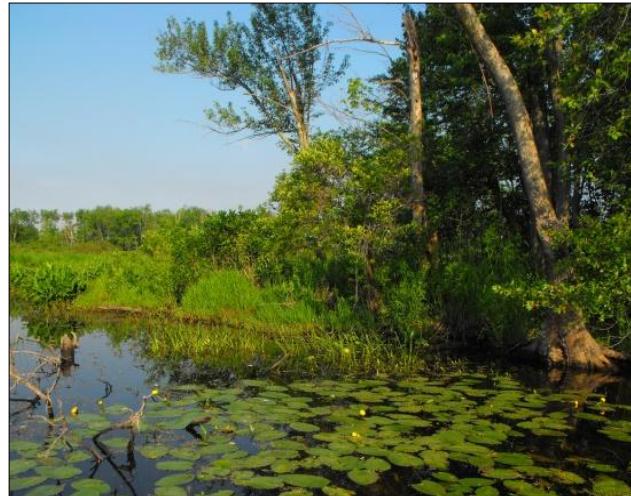
Non-forested Wetlands and Waterways

As of 2005, there were 783 acres of non-forested wetlands in Methuen (6% of the total area) and 76 acres of open water. The majority of the city's non-forested wetlands are found west of Route I-93 and around the intersection of I-93 and Route 213. These rich wildlife resources include meadows, shallow marshes, deep marshes, shrub swamps, and ponds. Other non-forested wetlands are located at scattered locations throughout Methuen.

Meadows are characterized by sedges and cattails, surface water depths to 6 inches in winter and early spring, and exposed but saturated soil surface in summer, and typically provide habitat for the following wildlife species: Northern leopard frog, big brown bat, star-nosed mole, and short-tailed shrew.

Shallow Marshes are characterized by persistent emergent vegetation such as cattails and water depths to 1.5 feet, and provide preferred habitat for the following wildlife species: Northern spring peeper, painted turtle, and northern leopard frog. Common birds may include great blue heron, green heron, American black duck, mallard duck, eastern screech owl, tree swallow, red-winged blackbird, and American goldfinch. Common mammals may include Virginia opossum, little brown bat, muskrat, mink, and raccoon.

Emergent vegetation and floating-leaved plants such as water lilies (*Nymphaea* and *Nuphar*), and water depths to 6 feet characterize Deep Marshes. They typically provide preferred



habitats for the following species: Painted turtle, spotted turtle, and red-spotted newt. Common birds may include pied-billed grebe, and American coot. Common mammals include the same species found in Shallow Marshes.

Woody shrubs such as buttonbush, alder, silky dogwood, and red maple, and white ash saplings characterize Shrub Swamps. They typically provide preferred habitat for the following species: Black-crowned night heron, common snipe, glossy ibis, common yellowthroat, common grackle, song sparrow, swamp sparrow, and American goldfinch. Common mammals include Virginia opossum, little brown bat, eastern cottontail, and raccoon.

Ponds are small bodies of water that are characterized by emergent vegetation such as cattails or floating-leaved plants, or both. Vernal pools are small ponds that are not connected to streams or other water bodies. Thus, they depend on snowmelt and rainwater and usually become dry by late summer. As noted previously, 31 Certified Vernal Pools are identified on the Plant and Wildlife Habitats Map. Vernal pools are critical habitats for salamanders, wood frogs, and a wide variety of other wildlife. Salamanders and wood frogs migrate from surrounding forested uplands to these pools in the spring to breed. Without these vernal pools we would lose these animals. Many more potential vernal pools are thought to exist, but have not been documented. Ponds and vernal pools also provide preferred habitat for the following wildlife species: bullfrog, pickerel frog, eastern painted turtles, little brown bat, big brown bat, mink, and beaver.

Agricultural Land

In the 2005 Land Use Map, the 320 acres of land identified as cropland and 33.3 acres of pasture and 65 acres identified as nursery or orchard (a total of 416 acres or 3.1% of the city's total area) are still important resources for the diversity of wildlife in Methuen. Most of the remaining agricultural land is located in the northern and eastern sections of Methuen—along Hampshire Street, the Merrimack River, and in the Grosvenor Corner area. There are also other small farm parcels scattered in other parts of the city.



Historically, pasture and other open fields have disappeared even faster than forest in Methuen. Only a small percentage of this loss stems from “ecological succession”, or the process of fields reverting back into forest. Pastures tend to be on well-drained, gently rolling upland areas, and this is precisely where the real estate development community first casts its eyes. Developers prize dry pastures because the sandy layers of till readily support septic effluent percolation and site preparation costs are generally low. Many animal species require old field environments to live. The transition zone or “ecotone” found between forest and open field is especially rich in animal and plant species.

Grassland birds, like the eastern meadowlark and the bobolink, likely still use some hayfields, meadows, and pastures in Methuen. In many eastern Massachusetts communities, once plentiful fields are now too small and scattered to attract all but a few passing examples of these once plentiful

grassland specialists. Many other bird species nest near these fields and use them as well as other habitats for hunting and feeding on seeds, insects, and small mammals. Many migrant songbirds, those that move between northern and southern latitudes with the seasons, can still be found feeding in farm fields in Methuen and other nearby towns during migration. Many hawks and owls, such as American kestrels and northern harriers, rely on grasslands for hunting small mammals, while other hawks and owls, such as red-tailed hawks and great horned owls, hunt in these fields as well as the city's forested areas. In addition to birds, voles, white-tailed deer, woodchucks, coyotes, and eastern cottontail rabbits often use agricultural areas. Several snakes, such as the eastern hognose snake and the northern brown snake, can also be found in fields and pastures.

Open fields also offer scenic panoramas and add to rural character. Because old fields are an increasingly rare commodity in Methuen, some should be considered for protection via conservation restriction or acquisition.

Open Land

Power line corridors and unused open land, like agricultural fields that are no longer being cultivated, are also areas used by many of the same species of wildlife that use agricultural land as well as some species that specialize in using these areas. There are just over 715 acres of this type of habitat in Methuen (5.3% of the total area). Power line corridors are also often used as migration corridors for wildlife, providing a means of moving efficiently and safely from one habitat to another.

The birds, mammals, and reptiles that inhabit or frequent these open areas are likely to be the same as those that use the agricultural lands in Methuen.

Rare Species

The most recent list published by the Massachusetts Natural Heritage and Endangered Species Program notes seven occurrences of rare or endangered plants and animals in Methuen. The two listed plants are alternate flowered milfoil (*Myriophyllum alterniflorum* 1883) and Andrews' bottle gentian (*Gentiana andrewsii* 1951). The gentian and milfoil are both listed as Endangered. The date after each species name indicates the last time the species was seen in Methuen.

The seven state-listed animal species that have been found in the city include: Endangered – bald eagle (*Haliaeetus leucocephalus* 1999); Threatened – Blanding's turtle (*Emydoidea blandingii* 2004) and a clubtail dragonfly (*Stylurus spiniceps* 2004); Species of Special Concern – wood turtle (*Clemmys insculpta* 2003), blue spotted salamander (*Ambystoma laterale* 2004), another clubtail dragonfly, called the cobra clubtail (*Gomphus vastus* 2004), and a dragonfly called the umber shadowdragon (*Neurocordulia obsoleta* 2004). For more detailed information on the city's rare and endangered species and their habitats, see Appendix B - NHESP Rare Species, Natural Communities and Biodiversity Documentation.



An intensive natural history inventory may find additional rare species that have not been noted within Methuen. It is likely that there are other important wildlife habitats and possibly many more vernal pools. Such an inventory would give Methuen residents better information about our natural resources.

Public Shade Trees

In addition to the above-described larger resource areas, Methuen also features numerous city parks, cemeteries, and streetscapes which contain a wide variety of shade trees, as well as flowering shrubs and other plants. Together, the shade trees in particular offer a wealth of important amenities for Methuen residents. These include:

- enhance the visual appeal of the City's open spaces, neighborhoods and streets
- increase local residential and commercial real estate values
- curtail noise and air pollution
- reduce stormwater runoff and soil erosion
- moderate urban "heat island" effects in summer
- provide lofty, safe environments for birds, squirrels, and other urban wildlife

In recognition of these diverse benefits, the City's Subdivision Rules and Regulations require that a shade variety of tree be planted every 75 feet along all new roadways. The trees must be at least 12 feet in height, have a caliper of not less than 2-1/2 inches, and be planted and guyed in a manner as to insure their survival and growth.

In addition, the Methuen Mayor's Office and the nonprofit organization Groundwork Lawrence are working collaboratively with the newly-formed Methuen Arbor Group to increase Methuen's tree canopy in public spaces city-wide. As a first step toward advancing these efforts, an application has been filed with the MA Department of Conservation and Recreation for an Urban Forestry Grant which would support the planting of 50 trees along Broadway, by the Library, at Elmwood Cemetery, and other public spaces in Methuen. The City will continue to work with state and federal agencies to pursue grants for planting and replacing trees on municipal properties, while the Methuen Arbor Group will work with residents and businesses to raise private donations and support. The goal is to replace trees either damaged or destroyed by storms and disease, and establish and maintain a diverse, healthy tree population along city roads and in our parks.



E. Scenic Resources and Unique Environments

Methuen is blessed with a number of scenic resources and unique environments, some of the most prominent of which are listed in the accompanying table and are depicted in **Map #9**. These special landscape features are central to Methuen's distinctive community character, and are a source of cultural, aesthetic, and recreational enjoyment and pride. A more detailed description of several of these features follows.

Merrimack River

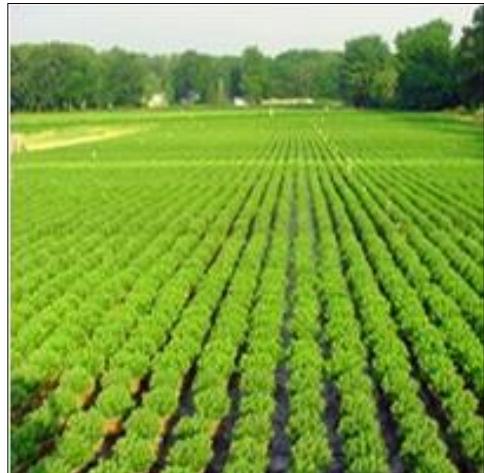
The Merrimack River is a key part of the environmental and historical character of the Methuen. It forms part of the southern and southeastern boundary of the city except where Lawrence abuts Methuen along the southern edge of the city. Much of the river's edge is undeveloped; however, it is largely invisible to the general public due to private ownership and overgrown vegetation. Physical access also is limited with many of the once informal points of access disappearing.

Glimpses of the Merrimack are found along Lowell Boulevard and Lowell Street. Armory Street is a small residential neighborhood that borders the river at the intersection of Lowell Boulevard with Lowell Street. Early 20th century dwellings are constructed on the river banks; however, there is no public access from this neighborhood which is directly opposite Pine Island in the Merrimack. West of the rotary before Rt. 93 there is a plot of land purchased by the City. Bea's Sandwich Shop was located on this parcel. The shop has been demolished and the parcel is now a deteriorated parking lot. The city plans to create a boat launch which will provide limited access to the river. There is no access, planned or informal, on the section of the river that forms part of the eastern edge of the city.

In order to further enhance public access to and enjoyment of the Merrimack River, Methuen is participating in an exciting and ambitious regional project called the Merrimack Trail Initiative. Spearheaded by the Merrimack Valley Planning Commission and the Essex National Heritage Commission, this multi-partner project is aimed at utilizing the region's largest and most prominent natural resource – the Merrimack River – as the spine of a proposed long distance on- and off-road bicycle and pedestrian trail network which, if successful, will connect 17 Merrimack Valley communities to the developing state-wide, New England, and even national trail system.

Pleasant Valley Area Farms

This small southeastern section of Methuen is framed by the Merrimack River on the east and south, and by I-495 on the west and north. The Merrimack River separates this part of Methuen from neighboring North Andover and Haverhill. Merrimack Street (Rt. 110) cuts through the middle of this southeastern section of the city. Once largely agricultural, this area has been developed with medium density housing in place of many of the farms. However, several active farms remain and provide a scenic agricultural landscape as well as farm stands featuring fresh local produce.



Methuen's Scenic Resources and Unique Environments

Map #	Landscape Feature	Location	Description	Data Source*
1	Arlington Neighborhood		Mills, residential streets, alleys that were paths between buildings to walk to the mills.	MRR
2	Merrimack River		Southern and southeastern boundaries of Methuen. Site of former Bea's Sandwich shop now city owned to be converted to boat launch	MRR
3	Pleasant Valley Area Farms	Rt. 110	Scenic agricultural landscape and farm stands: Simone Farm, Bonanno Family Farms, DeLucia Farm (264 Merrimack Street), Pleasant Valley Farm, Mann Orchard	MRR
4	Spicket Falls Area including Osgood Bridge	Spicket Falls Historic District	1831 Osgood Street Bridge, 1869 Lowell Street Bridge, 1880 Dam,	MRR, MW
5	Sands Bridge and Robert Rogers Homestead Site Area	Intersection of Cross St. and Hampshire Rd.	Robert Rogers, leader of a British irregular force during the French and Indian War; Sands Bridge- double arch stone bridge	MRR
6	Searles Bridge and Broadway Area- Tenney Hat Factory Site, Methuen Memorial Music Hall	192 and 238 Broadway	1912 Searles Bridge, 1912 Searles Dam, 1899 Methuen Memorial Music Hall – housed first concert organ in the U.S. (1863)	MRR, MW
7	Searles Estate/Sisters of Presentation of Mary	290 Lawrence St.	Developed from 1880-1920 by Edward F. Searles	MRR, MW
8	Loosigian Farm	Lowell Street	9 acres, major flood plain	MRR
9	Nimmo Farm	Milk Street	51 acres, former dairy farm	MRR
10	Raymond's Turkey Farm	163 Hampstead Street	Active turkey farm, former Feindel dairy farm	MRR
11	Granite Walls		Unique system of historic granite walls throughout downtown area.	MRR
12	Tenney Gatehouse and Grey Court	37 Pleasant Street	1830 Tenney Gatehouse, 2½ story stone structure	MW
13	Hillside Cemetery and MSPCA Farm	Broadway	Harriette Nevins donated the Nevins farmland to the Massachusetts SPCA	
14	Neil Playstead	Lawrence Street	Oldest playground in Methuen	
15	Nevins Bird Sanctuary	Behind Quinn Health & Safety Building (Police)	18-acre city-owned bird and wildlife sanctuary, containing woodland, marsh, meadow and riverine habitats	
16	Cemetery across from Holy Family	East Street		
17	Forest Lake		52-acre recreational lake accessible to residents, for a fee, via town beach	
18	Riverside Park/Byrnham Road Park	Burnham Road		
19	Methuen Rail Trail and Corridor (under development)		2.5-mile multi-use rail trail extending from Lawrence border to Salem, NH	

*MRR = Methuen Reconnaissance Report - Essex County Landscape Inventory, May 2005

MW = Methuen Walks

The land on the eastern end of Merrimack Street comprises the Whirlaway Driving Range on the west side of the road and Simone's Farm which extends to the Merrimack River on the east side of Merrimack Street. The Driving Range was established in the 1930s and continues to be used for this recreational activity. Some consideration has been given to rezoning this land to be compatible with mixed uses particularly multi-housing. The Simone Farm continues to raise flowers which are sold locally. Farther southwest on Merrimack Street are the Bonanno family farms where vegetables are raised and sold. The DeLucia Farm at 264 Merrimack Street is opposite Pleasant Valley Farm, and both are owned by Bonanno. In spite of this area's close proximity to the Merrimack River, there are nearly no public views of the river except from I-495. West on Pleasant Valley Street is Mann's Orchard which has been growing and selling apples at this location since 1877.

Sands Bridge and Robert Rogers Homestead

The birthplace dwelling of Robert Rogers, leader of a British irregular force during the French and Indian War, no longer exists but the location of his homestead is thought to be on a knoll above the marshland at the intersection of Cross Street and Hampshire Road. It is near the old Sands Bridge, a double-arched, mortar-less stone bridge that is owned by the city but is no longer used for travel. The bridge is listed in the National Register of Historic Places, and this designation may present an opportunity to acquire funding for the bridge's stabilization. The historic nature of this area is not well known to the general public, but interpretive signs could be placed in the vicinity of the Sands Bridge to help inform residents about the significance of Robert Rogers and the proximity of his presumed birthplace site. Currently at this site is a privately-owned early twentieth century residence.



Searles Bridge and Broadway Area

The 1912 Searles Bridge which carries Broadway over the Spicket River stands out as a place maker at one downtown gateway. On one side is the Tenney Hat Factory and on the other is the Methuen Music Hall. The bridge's granite walls and crenellated towers are characteristic of the walls that surround the Searles Estate and that line many of Methuen's downtown streets. The Searles Dam of the same 1912 date is located just above the bridge. Just north of the bridge and Harvey Falls at the dam is the Methuen Music Hall, constructed in 1899 by Edward F. Searles to house the first concert organ brought to the United States in 1863. Searles had his preferred architect, Henry Vaughn, design the elaborate Renaissance Revival building prominently displayed on Broadway near the banks of the Spicket River.

Granite Wall System

One of the most distinctive and unique features of Methuen is the miles of high granite block walls that were first installed as part of the development of the large estates and were continued around many of the city properties that were built by contributions of the City's benefactors. Most of the walls now are on city property. The walls are in various states of

disrepair with some crumbling and others that appear stable. Preservation of the walls is critical to the historic character of the city.

Nevins Bird Sanctuary

The Nevins Bird Sanctuary, formerly part of the Nevins Family Estate, was part of the bequest to the City of Methuen when the last heir of the Nevins family, Harriet F. B. Nevins,



passed away. Harriet Nevins was a lifelong champion of Methuen's natural systems and inhabitants.

Once widely known and beloved, this little park tucked away in a corner of the city was nearly forgotten until recently. The Sanctuary is framed by the Spicket River and Rt. 213, and is bisected by the Methuen Rail Trail. It features a variety of habitats – woodland, marsh, meadow, and riverbank – which are home to diverse birds, mammals, and other wildlife. Bird species of note include: Red Tail Hawk, Great Blue Heron, Green Heron, American Bittern, Killdeer, Spotted Sandpiper, Wood Ducks,

Mallards, Hairy and Downy Woodpeckers, Chimney Swifts, American Goldfinch, Eastern Kingbird, Red-breasted Nuthatch, Cedar Waxwing, and occasionally Great Egret, Black Duck, Cormorant, and Osprey.

The Bird Sanctuary plays a far larger ecological role than its size alone would indicate, as it serves as a vital link to many more acres of adjoining conservation wetlands that together provide safe habitat for wildlife breeding and migration.

Methuen Rail Trail

The 2.-mile non-motorized multi-use Methuen Rail Trail, currently under development, will begin at the City of Lawrence line, connect through downtown Methuen and the Nevins Bird Sanctuary, and end at the New Hampshire State Line to the north. It will provide connections within Methuen as well as eventually to the Spicket River Greenway in Lawrence and the Salem-to-Concord Trail in New Hampshire, also under development.

The Methuen Rail Trail Alliance is the advocacy organization behind the development of the rail corridor. At their urging, in April 2011, the city signed a 99-year lease with the MBTA, which owns the corridor. This allowed the City to begin development of the trail. Also in 2011, the City contracted with Iron Horse Preservation to clear the corridor, remove rails and ties, and add a T-base (recycled asphalt) surface.

The trail will be open during the day and permitted uses include walking, bicycling, equestrian, wheelchair and other mobility devices. ATVs and motorbikes will not be permitted. Public parking is planned for the old depot. In the near term,



the Methuen Rail Trail Alliance is working to get a trail sign and mile markers, all made of granite, installed by Iron Horse Preservation. Additional granite boulders will be placed strategically along the trail and used as seating. Another outstanding issue that needs to be addressed is boardwalk access to the Greater Lawrence Educational Collaborative in order to maintain public access at that north end of the trail. Also, signage for both vehicular and bicycle/pedestrian traffic needs to be addressed at intersections on both the trail and the road (i.e., trail crossing signs, stop signs).

The Methuen Rail Trail Alliance would like safety to be enhanced along the corridor with the placement of lighting in the tunnel under Five Corners intersection so that police can more readily monitor activity along the trail. Enhanced access to the trail should be included to ensure that people living in neighborhoods adjacent to the trail can easily access it. While the grade of the trail is easily accessible for people with disabilities, access to the trail could be enhanced. Locations at Oakland Avenue and Five Corners Bridge should be reviewed for enhanced ADA accessibility. The City should review pedestrian safety getting to/from the trail and update sidewalks, crosswalks, and traffic signals where needed. In order to enhance the experience of trail users and to create an overall historic appeal to the trail, the Methuen Rail Trail Alliance has proposed that the Railroad Depot be updated with reroofing and repainting. Funding for such a project still needs to be obtained.

F. Environmental Challenges

As with many other communities across the Merrimack Valley region and the state, Methuen faces a number of environmental challenges that will test our community's resolve and resources. Key among these challenges are chronic flooding, water quality degradation (primarily from urban stormwater runoff), hazardous materials management, habitat loss via forest fragmentation, and invasive species.

Chronic Flooding

As shown in **Map #10 – Environmental Challenges**, and as described previously, significant parts of the City of Methuen lie within the floodplains of the Merrimack River and the Spicket River, and are subject to recurring (and sometimes *highly damaging*) flooding during prolonged rainfall events. A GIS analysis of the City's FIRM flood hazard area maps by MVPC in 2008 determined that 1,969 acres (3.1 sq. mi.) of land area in Methuen is located within the 100-year floodplain and thus is vulnerable to flooding. An additional 737 acres (1.1 sq. mi.) lies within the 500-year floodplain. Together, these two flood zones constitute almost nineteen percent (19%) of the total area of the community. Based on an additional analysis by MVPC, 420 acres in these zones were found to be still open and "potentially developable" under the City's current zoning scheme. Development of this open space would increase the area's impervious surface cover and stormwater runoff, thereby exacerbating the existing flooding problems.

According to the City's Comprehensive Emergency Management Plan (CEMP), the Merrimack River generally floods along Armory and Lowell Streets. The Spicket River generally floods where it approaches Methuen on Hampshire Road, the center of the city along Pine Street, Horne Street, Bentley Circle, and occasionally on Cross and Pelham Streets.

The notorious “Mother’s Day Flood” of May 2006 flood event inundated much of the Swan Street and Jackson Street area for up to seven days, shutting down commercial establishments and forcing the evacuation of numerous residences, including six multi-family homes. The roadways in the area were also closed for this period, seriously impacting commuter traffic. A minimum of five police officers were required to post detours around the impacted areas. Other city personnel and private utility company crews were also required to respond. The 2006 flood was but the latest in a series of such episodes. Other significant flooding events occurred in March/April 2004, spring 1998, and October 1996. Each of these flood events resulted in impacts similar to those of the May 2006 Mother Day Flood, although they were of shorter duration.

City public safety officials have long been concerned over the potential impact of Spicket River flood waters on the Spicket River Dam. This concern was borne out during the May 2006 Flood when the river’s surging floodwaters began to overtop the dam and threaten the abutment, requiring City public safety crews to deploy sandbags in an effort to contain the water and prevent further scouring and erosion. According to the U.S. Geological Survey (USGS), the Spicket River peaked at 2,080 cubic feet per second (cfs), the highest flow recorded since streamflow monitoring began in the river in 2000.



In addition to the Spicket and Merrimack Rivers, the City has numerous other surface water bodies – lakes, ponds, streams, and wetlands – that give rise to occasional localized flooding problems. These latter water bodies include: Forest Lake, Mystic Pond, Mill Pond, Searles Pond, and Hills Pond, as well as Bloody Brook, Hawkes Brook, Bare Meadow Brook, Harris Brook, Bartlett Brook, Sawyer Brook, Griffin Brook, and Bradley Brook.

Erosion, Sedimentation, and Stormwater Pollution

As in many urban areas, land development in Methuen has the potential to adversely impact the local environment. Impacts can occur during and after construction as vegetation is altered and topsoils are disturbed, temporarily allowing wind, rainfall, and snowmelt to increase erosion, sedimentation, and stormwater runoff. In Methuen, stormwater runoff contributes to the periodic impairment of local water quality, most notably in the larger surface waters of the Merrimack and Spicket Rivers and Forest Lake, but also in smaller streams, ponds, and wetlands.



Urban stormwater discharges typically carry a wide range of concentrated pollutants which collect on impervious surfaces (such as streets, driveways, parking lots, and sidewalks) until a storm event washes them into nearby storm drains and waterways. Common stormwater pollutants include: fertilizers, pesticides and herbicides, automotive fluids, sand and salt, pet waste, litter, and other debris. Another concern is illicit connections from households and businesses (such as septic systems and

floor drains) which can discharge fecal coliform bacteria, cleaning agents, and other pollutants into the storm sewer system. Stormwater runoff picks up these and other harmful pollutants then transports them—untreated—to waterways via storm sewer systems. When left uncontrolled, these discharges can result in fish kills, the closure of public swimming beaches, the destruction of wildlife habitats, loss of recreational and aesthetic values, and the contamination of surface drinking water supplies.

Construction site runoff in urbanized areas is also a significant water quality concern because of the devastating effects that concentrated sediment loads can have on local water bodies, especially small streams, ponds, and wetlands. Numerous studies have shown that the amount of sediment transported by stormwater runoff from construction sites that lack adequate sediment controls is significantly greater than from sites with controls. During storms, sediment-laden runoff can overwhelm a small stream channel's carrying capacity, resulting in streambed scour, stream bank erosion, and destruction of bordering vegetative cover. When left uncontrolled, sediment-laden runoff has been shown to result in the impairment of in-stream and in-lake habitats for fish and other aquatic species, loss of flood storage capacity, and adverse impacts on navigation and recreation.



The City of Methuen is actively working on a number of fronts to minimize and mitigate local stormwater runoff pollution, as well as soil erosion and sedimentation. These efforts include enforcement of local development and wetland regulations, monitoring of construction sites, and the development and implementation of a municipal stormwater management program (SWMP) consistent with EPA's "Phase II" stormwater regulations. Through this latter program, the city has begun to develop and implement various stormwater management measures (known as "best management practices", or BMPs) in the following six areas: 1) public education and outreach, 2) public participation and involvement, 3) illicit discharge detection and elimination, 4) construction site runoff control, 5) post-construction runoff control, and 6) municipal operations pollution prevention/good housekeeping.

Examples of specific BMP activities being undertaken by the Methuen Department of Public Works include the following:

- cleaning every catch basin a minimum of once every three years, and more frequently in water resource sensitive areas
- holding an annual Household Hazardous Waste Collection Day each Fall
- repairing and upgrading drainage infrastructure (culverts, pipes, etc.) that is causing or contributing to pollution
- Inspecting all stormwater outfalls to identify contamination and potential connections from household sanitary sewers that are illicitly tied into the municipal storm drainage system
- Improving DPW facilities and services operations that have the potential to adversely affect stormwater quality, such as street sweeping and road sanding/salting.

Over time, these and other measures are expected to result in a reduction in local stormwater generation and improved local stormwater quality.

Hazardous Materials Management

Map #10 also shows sites of known concentrations of hazardous materials. These sites are potential sources of soil and water contamination. According to the Methuen Master Plan, as of 2007 there were 13 oil or hazardous material sites mostly concentrated along Haverhill Street and along the Spicket River in Methuen. Four Tier 2 sites were located on Haverhill Street, two on Swan Street, and two others on Riverside Drive and Lowell Street. Other site locations included Swan Street (Tier 1D), Osgood Street (Tier 1D), Center Street (Tier 1D), Haverhill Street (Tier 1D), and off Oakland Drive.

All of these sites are either under cleanup orders or their cleanup has been completed. Over the last several years, with funding and technical assistance from MVPC's regional brownfields assessment and cleanup program, the city has investigated and remediated the former Appleyard Trucking Facility site (7 Lowell Street) for use as a public park and the former Bullseye Manufacturing Facility site (54 Osgood Street) for potential mixed-use development.

As of 2007, there also were 86 known underground storage tanks located in Methuen. These are scattered in various parts of the city.

Forest Fragmentation

As is aptly pointed out in the Methuen Master Plan, area ecologists generally agree that one of the biggest threats to natural communities and biodiversity in Massachusetts and much of the rest of New England is the fragmentation of large expanses of uninterrupted forest habitats. Many local wildlife and bird species (e.g., scarlet tanager, white-breasted nuthatch, ovenbird) depend on the interior of forests (areas far from an edge) for a significant portion of their life cycle, and the loss of large uninterrupted tracts of forest is contributing to their population declines.

In light of this, the remaining uninterrupted forests in Methuen and surrounding communities are particularly valuable for a broad diversity of wildlife. Four relatively large forest areas remain in the city. One is along the city's western boundary, north of Route 113. Another is south of the Hickory Hills Golf Course along the western boundary of the city. The third is located on the steep slopes of Poplar Hill, north of Forest Lake. Much of this area is protected Town Forest.



Together, these large uninterrupted forest areas provide critically important habitat for birds and wildlife and should be a focus for our open space conservation efforts. Toward this end, the city should establish an effective public-private partnership with appropriate state environmental agencies, nonprofit land trusts (e.g., Essex County Greenbelt Association), and private woodlot owners in order to preserve the remaining unprotected forested parcels from development.

Invasive Species Management

As in many Massachusetts and Essex County communities, invasive plant species in Methuen are a real and growing concern. They are now present in many shallow wetlands and are increasingly abundant along reaches of the Spicket River, where they out-compete the native species by overcrowding, shading out, and/or choking the existing native vegetation. Examples of problem species include purple loosestrife, Common Reed (*Phragmites australis*), Japanese knotweed, and oriental bittersweet. European buckthorn is also present, as is garlic mustard, an aggressive herbaceous plant that is becoming prevalent within the understory along the river.

Invasive species are highly adaptable and are capable of living in disturbed habitats. Disturbed habitats are common along the edges of urban encroachment and in areas impacted by fire, flood scour or erosion. In fact, many invasive species prefer and thrive in such conditions. Invasive species are difficult to manage along rivers because their seeds, tubers, and rhizomes can be easily transported in the water or by wind and deposited along exposed riverbanks. Japanese knotweed, for example, is especially difficult to control because it has a large network of rhizomes and produces thousands of seeds per plant each year.



To combat the spread of invasive species, Methuen will need to work cooperatively with state plant ecologists and land owners to inventory species' locations and evaluate threats, and to develop and implement appropriate control strategies as City resources permit.

Landfill Management

The Methuen Landfill is located on Huntington Avenue off of Howe Street. Closed in 1998, the landfill is approximately 25 acres in size and located on a 60 acre site. The landfill operated from 1955 to 1989 and was capped in accordance with MassDEP landfill closure regulations during the 1997 and 1998 construction seasons. Gas vents and drainage swales are located on the landfill, and gas and groundwater monitoring wells are located around the perimeter of the landfill. The City maintains the landfill with routine mowing and repairs as necessary. In 2012 the City entered into an agreement with Borrego Solar Systems, Inc. to build a 1.3 megawatt (MW) ground mounted photovoltaic solar facility. The facility will feature some 5,000 solar panels and is expected to produce enough electricity to power 150 homes for an entire year or the City's water treatment plant for about four months.

Environmental Justice and Equity

Environmental Justice (EJ) is based on the principle that all people, regardless of their socio-economic status, have the right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. In 2002, the Massachusetts Office of Energy and Environmental Affairs (EEA) adopted an Environmental Justice Policy to provide equal protection and meaningful participation for all Massachusetts residents with respect to environmental laws, regulations, and policies. This EJ Policy also supports equitable access to environmental assets, such as public parks, open space, and recreation areas. The State

has identified communities, including Methuen, that contain Environmental Justice populations – i.e., those with significant percentages of minority, non-English speaking, low-income, and foreign-born persons.

In Methuen, according to 2010 U.S. Census figures, 15 of the City's 35 designated Block Groups (43.9%) are classified as EJ Block Groups. Together, these 15 Block Groups contain an EJ population of 17,463, which represents more than one-third (37%) of the City's total population of 47,255. As shown on **Map #2 – Population Characteristics**, these EJ neighborhoods are primarily clustered along either side of Broadway (Rt. 28) in south central Methuen near the Lawrence City Line. They are generally highly urban in character, with many 2- and 3-story multi-family homes on small lots, as well as small shops on Broadway and commercial/industrial development between Broadway and French Street.

Despite the higher density of development in these areas, they are proximate to and served by a variety of open space and recreation resources. These include: Veteran's Memorial Park, a 24-acre multi-purpose recreation facility; Gill Avenue Playground, a 15.7 acre multi-purpose recreation facility; Neil Playstead, 12.5 acres of ballfields; Chelmsford Street Playground, a 0.61-acre child play tot-lot; and Tenney Street Playground, a 0.55-acre neighborhood recreation facility.

Indeed, as Maps 11A-C depict, Methuen is blessed with a wide range of open space and recreation resources that are well-distributed throughout the community. In keeping with the overarching goal of *“creating a network of quality open space and recreation areas for the use and enjoyment of all Methuen residents”*, the Methuen Open Space and Recreation Plan is committed to the equitable distribution of open space and the ease of access and quality of resources for different family types, income levels, and physical disabilities.

SECTION 5. INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

This section of the Plan identifies and describes the current open space and recreation lands and their associated public amenities within the City of Methuen, as well as selected *regional* properties located throughout the surrounding Merrimack Valley region that offer Methuen residents additional outdoor recreation opportunities.

A. The Need for Open Space

Open Space and areas for recreation in cities such as Methuen are critically important to the overall health and strength of the community and its residents. A city's 'built' environment – encompassing streets, sidewalks, buildings, and infrastructure – and the less structured open space affect the daily lives of residents by providing healthy means of getting to and from work and safe places to exercise. A community as a whole is healthier when there is convenient and safe access to parks and open space across the community. The report, *Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living* by the Healthy Eating Active Living Convergence Partnership, outlines several organizational practices and policies that can shape healthy communities through the built environment. Two main components are walkable and bikeable neighborhoods and park and recreation facilities. Parks and recreation facilities provide the space for unstructured or structured outdoor play and a walkable community has equal opportunity access to those amenities.

B. Why Open Space Planning is Important

In many instances, open space protection can be a *reactive* measure, hastily mobilizing public support and funding to preserve a community's or neighborhood's "last farm" or "last hilltop." This method cannot only be extremely costly, but can also result in disconnected fragments of conservation land with limited ecological value. In contrast, establishing preservation priorities, as well as partnerships, in advance allows the City to be strategic about which lands to acquire (or protect through other means). Since natural systems do not necessarily adhere to political boundaries, effective natural resource protection is often best achieved through collaborative planning with neighboring communities and other partners.

C. How Open Space is Protected

Acquisition

Public open space and park lands can be acquired by a number of means, including outright purchase ('fee simple') or donation of land. Public conservation and recreation lands may be permanently protected, provided they have been dedicated to such uses by deed. They may also be protected via a City Council vote to acquire them for open space or recreation purposes.

Public, private, and non-profit lands that have been dedicated for conservation or recreation uses are protected under Article 97 of the Articles of Amendment to the State Constitution. In 1972, Massachusetts voters approved Article 97, which establishes that any state or municipally owned land taken or acquired for conservation or recreation purposes shall not

be used for other purposes unless the Massachusetts legislature approves the change by a two-thirds vote, among other requirements. Article 97 is intended to discourage lands acquired for these purposes from being converted to other, inconsistent, uses.

Restrictions

Conservation restrictions, known in most other states as conservation easements, are voluntary, yet binding, legal agreements between a landowner and a municipality or land trust. The landowner may be offered various incentives including direct payment, estate tax and federal income tax deductions, and property tax relief to keep parcels in an undeveloped state either in perpetuity or for a specified number of years. The owner keeps ownership of the land, while the holder of the restriction promises to enforce the terms of protection. The unique features of conservation restrictions are that they leave land on the tax rolls, preserve land without public ownership, and allow, in many instances, for public access. In Massachusetts, all conservation restrictions must be submitted according to the written procedures of and be approved by the Secretary of Energy and Environmental Affairs. [Conservation restrictions are authorized under Sections 31-33 of Chapter 184 of the General Laws of the Commonwealth of Massachusetts. For more information, refer to the Massachusetts Conservation Restrictions Handbook, MA Division of Conservation Services, 2008.]

Other restrictions governed by Massachusetts General Laws are historic preservation restrictions, agricultural preservation restrictions, and watershed preservation restrictions. Preservation restrictions are legal agreements to preserve a structure or site for historical significance and require approval by the Massachusetts Historical Commission. An agricultural preservation restriction (APR) applies to lands in active farming or forest use and must be approved by the Commissioner of Food and Agriculture. Watershed preservation restrictions protect public water supplies and are approved by the Department of Conservation and Recreation.

State Regulations

Portions of some parcels can be substantially protected by the state Wetlands Protection Act and the Rivers Protection Act. In coastal communities, land designated as Restricted Wetlands under the Coastal Wetlands Restriction Act (M.G.L. Ch.130, s.105) is also somewhat protected, assuming vigilance in monitoring. Similarly, the state's Chapter 91 can help preserve access to historic tidelands.

Moving farther along the continuum, lands under Chapter 61, while not protected, do offer the City the right of first refusal to meet a bona fide offer to buy the land or, in the case of conversion to a disqualifying use by the landowner, an option to purchase the land at full and fair market value to be determined by an impartial appraisal. Chapter 61, 61A and 61B of the General Laws of Massachusetts are tax laws that allow for significant reduction of property taxes for landowners willing to maintain their land as managed forest, agriculture, or outdoor recreation. If a landowner chooses to withdraw land from this classification, the owner must pay a penalty tax to the municipality equal to the number of years a reduced tax has been paid on the land. When the land is put up for sale, the municipality has a right of first refusal to consider whether or not to buy the land outright.

D. Methuen Open Space and Recreation Lands Inventory

The following inventory of Methuen's open space and recreation lands is organized in seven tables, as follows:

- A. Quasi Public / Non-Profit Properties
- B. Active Recreation Properties
- C. Conservation / Passive Recreation Properties
- D. Chapter 61A and 61B Properties
- E. Playing Fields – Needs Assessment
- F. Town Forest & Parks – Needs Assessment
- G. Regional Parks, Forests & Reservations

Tables A through C list Methuen's various municipal conservation and recreation lands by facility name and address (both Assessor's I.D. number and street location), acreage, major uses, and level of protection. Each table is followed by a corresponding map that identifies each property's location in the community. All told, there are 11 quasi public and non-profit properties, with a combined area of 476 acres; 26 active recreation properties, with a combined area of 272 acres; and 25 conservation/passive recreation areas, with a combined area of 381 acres.

Table D lists the city's private active agricultural lands, designated as "Chapter 61A" properties, as well as private recreational lands, designated as "Chapter 61B" properties. The property owners are identified, along with the property address and acreage. An accompanying map displays the Chapter 61A and Chapter 61B lands.

Table E lists the city's public playing fields by sports activity (i.e., baseball, field hockey, football, soccer, etc.), and identifies, as appropriate, the age levels served, the number of teams and participants, the field conditions and limitations (if any), and the future facility needs, such as improved lighting, drainage, and parking.

Table F gives a representative photo of the Town Forest and various municipal parks, and describes their amenities, maintenance schedules (both routine and annual), and priority needs.

Table G lists 18 prominent *regional* open space and recreation properties in neighboring communities and other Merrimack Valley locations. These properties are generally within a short (15 to 30-minute) drive from Methuen, and together offer Methuen residents a vast array of outstanding outdoor recreational and educational opportunities to complement the City's own considerable open spaces and recreation facilities.

Inventory of Conservation and Recreation Lands

A. Quasi Public / Non-Profit Properties

Map Reference	Assessor's Map I.D. #	Site Name	Address	Acreage	Use	Protection
1	612-120-8	Methuen Memorial Music Hall	192 Broadway	2.20	Historic / Cultural	None
2	610-123-44	MSPCA	400 Broadway	49.05	Animal Shelter	None
3	814-41-22	Holy Family Hospital	70 East Street	70.35	Trails	None
4	212-127-26Z	First Methodist	Hampshire Road	21.77	Soccer / Playground	None
5	810-69-2	Merrimack Golf Course	210 Howe Street	135.00	Recreation	61B
6	612-57-18	MSPCA Pet Cemetery	3 Nevins Road	4.00	Pet Cemetery	None
7	316-130-20A	Eaton's Grove	151 North Lowell St.	6.70	Open	None
8	220-165A-10A	Hickory Hill Golf Course	200 North Lowell St.	150.00	Recreation	61B
9	1113-109AD-1	Merrimack River Watershed Council	Riverview Boulevard	0.23	Conservation	None
10	116-130-60	Methuen Road & Gun Club	240 Tyler Street	26.00	Recreation	61B
11	318-165A-9	MKS Instruments, Inc.	651 Lowell St.	11.13	Soccer Fields	None
					TOTAL ACREAGE	476.43

Inventory of Conservation and Recreation Lands

B. Active Recreation Properties

Inventory of Conservation and Recreation Lands

C. Conservation / Passive Recreation Properties

Inventory of Conservation and Recreation Lands

D. Chapter 61A and 61B Properties

Chapter 61A Properties:

Acct.	Name	PC	Lien BK/PG	Lien Date	Location	Assessor's I.D.	Acreage
180R	Avedisian	710	1636/263	1/1/1983	Hampshire Road	212-127-22	6.54
661R	Avedisian	7120	1636/269	1/1/1983	Hampshire Road	310-126A-52	12.75
416R	Bologna	710			Myrtle Street	216-129A-6A	9.33
13612R	Bonanno Farm Tr	7120	1636/206	1/1/1983	Wingate Ave	1111-110B-107	0.22
14195R	Bonanno Farm Tr	7120	1636/206	1/1/1983	Off Pitman Street	1110-110B-16B	2.76
13611R	Bonanno Farm Tr	7120	1636/206	1/1/1983	Wingate Ave	1111-110B-106	0.11
13488R	Bonanno Farm Tr	7120	1636/206	1/1/1983	Wingate Ave	1111-110B-16A	25.30
13632R	Bonanno Rose	710	1636/206	1/1/1983	Wingate Ave	1111-110C-41	2.00
12963R	Delucia	710	1589/129	7/1/1982	Merrimack Street	1111-108-291	14.73
11744R	Delucia	130	1589/129	7/3/1982	Off Merrimack St.	1012-108-291A	1.27
2451R	Drouin	710	1636/275	1/1/1983	Forest Street	416-129B-27	6.10
1680R	Forcier	7180	1636/273-4	1/1/1983	Lowell Street	320-165A-2B	3.13
1678R	Forcier	7180	1636/273-4	1/1/1983	Lowell Street	320-165A-2	6.68
2R	Garabedian	7120	1636/271-2	1/1/1983	Hampshire Road	110-127-38	17.15
3R	Garabedian	7120	1636/271-2	1/1/1983	Hampshire Road	110-127-39	16.25
120R	Garabedian	7120	1636/271-2	1/1/1983	Off Salem Street	210-127-30B	0.80
203R	Garabedian	7120	1636/271-2	1/1/1983	Off Hampshire Road	212-127-33A	13.80
205R	Garabedian	7120	1636/271-2	1/1/1983	Hampshire Road	212-127-34	1.60
5R	Garabedian	7120	1636/271-2	1/1/1983	Hampshire Road	110-126-130	134.21
206R	Garabedian	7120	1636/271-2	1/1/1983	Off Hampshire Road	212-127-35	2.20
119R	Garabedian	7120	1636/271-2	1/1/1983	Off Salem Street	210-127-30A	1.40
209R	Garabedian	7120	1636/271-2	1/1/1983	Hampshire Road	212-127-37B	3.30
1R	Garabedian	7120	1636/271-2	1/1/1983	Off Hampshire Road	110-127-36	4.60
423R	Gulezian	710	1636/270	1/1/1983	Myrtle Street	216-129A-10	9.90
1439R	Hovanessian	7120	1636/269	1/1/1983	Tyler Street	316-130-47	8.70
1440R	Hovanessian	7120	1636/269	1/1/1983	Tyler Street	316-130-43	11.70
434R	Hovanessian	710	1636/269	1/1/1983	Tyler Street	216-129B-7	45.90
1718R	Loosigian	730	2730/169	5/18/1988	Lowell Street	320-166-10	13.25
9098R	Mann	734	2752/253	6/22/1988	Pleasant Valley St.	812-80-29	32.00
9916R	Martin	717	3575/152	10/22/1992	Howe Street	906-76-3	31.00
926R	Nightingale	710	1636/279	1/1/1983	Forest Street	312-129B-32	7.40

D. Chapter 61A and 61B Properties (continued)

Chapter 61A Properties:

Acct.	Name	PC	Lien BK/PG	Lien Date	Location	Assessor's I.D.	Acreage
11780R	Nimmo	7130	1636/261-3	1/11/1983	Cambridge Street	1014-100-35	4.10
10298R	Nimmo	7110	1636/261-3	1/11/1983	Milk Street	912-82-25	10.20
10252R	Nimmo	7120	1636/261-3	1/11/1983	Baremeadow Street	921-82-7A	8.80
11378R	Nimmo	7130	1636/361-3	1/11/1983	Off Oak Street	1012-100-31A	6.90
10411R	Nimmo	7110	1636/261-3	1/11/1983	Baremeadow Street	912-100-25	23.70
10251R	Nimmo	7130	1636/261-3	1/11/1983	Baremeadow Street	912-82-7	3.60
1989R	Pappastathis	7120	2730/176	5/18/1992	Atkinson Street	914-72-17	5.50
7988R	Pappastathis	7120	2730/172	5/18/1992	Atkinson Street	804-72-16B	2.70
7986R	Pappastathis	7110	2730/171	5/18/1992	Atkinson Street	804-72-16	3.30
6198R	Rischer	741	1636/267	1/11/1983	Hampstead Street	704-72-5	57.20
1242R	Rotondo	7130	1636/266	1/11/1983	Forest Street	315-131-55	26.30
2337R	Rotondo	7210	1636/266	1/11/1983	Deana Road	414-131-57A	6.00
2447R	Rotondo	7180	1636/266	1/11/1983	Forest Street	416-129B-26	17.49
1788R	Rotondo	7120	1636/266	1/11/1983	Hampshire Road	410-126A-11A	9.77
611R	Rotondo	7120	1636/266	1/11/1983	Hampshire Road	310-125-13A	25.00
2336R	Rotondo	7210	1636/266	1/11/1983	Off Don Avenue	414-131-57	6.24
614R	Rotondo	7120	1636/266	1/11/1983	Hampshire Road	310-125-15A	2.45
9987R	Sierpina	710	3575/54	10/22/1992	Washington Street	908-78E-67	13.50
14148R	Simone Bros	7120	1878/76	10/10/1984	Off Pitman Street	1210-110A-10A	9.00
14172R	Simone Bros	7120	1878/76	10/10/1984	Pitman Street	1210-110B-1	5.10
14163R	Simone Bros	7120	1878/76	10/10/1984	Off Pitman Street	1210-110A-98	5.80
14162R	Simone Bros	7120	1878/76	10/10/1981	Pitman Street	1210-110A-97	6.21
12775R	Simone Farms	7120	1529/109	9/1/1981	Merrimack Street	1109-110A-3A	3.00
12779R	Simone Farms	7120	1529/109	9/1/1981	Merrimack Street	1109-110A-9	27.90
14146R	Simone Farms	7120	1529/109	9/1/1981	Off Merrimack St.	1208-110A-5	1.12
14145R	Simone Farms	7120	1529/109	9/1/1981	Merrimack Street	1208-110A-4	7.50

Chapter 61B Properties:

520R	Hickory Hill Golf	831	Pending	New FY93	North Lowell Street	230-165A-10A	150.00
12677R	Kazanjian	830	3575/155	10/22/1992	Merrimack Street	1109-78E-3	10.30
107R	Methuen R&G	830	1636/275	30327	Tyler Street	116-130-60	26.00
104R	Methuen R&G	830	1636/278	1/11/1983	Tyler Street	116-129A-1	4.70

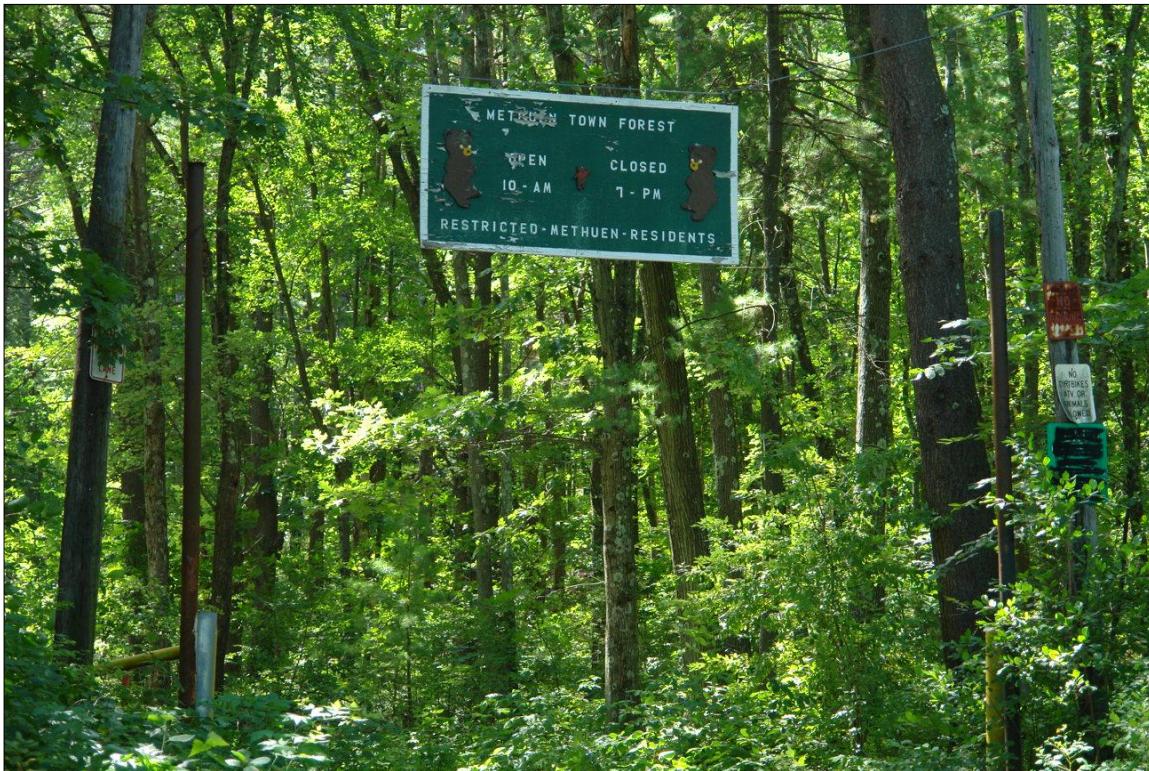
Inventory of Conservation and Recreation Lands						
E. Playing Fields – Needs Assessment						
Sport	Level (Ages)	# of Teams	# of Participants	Field(s) Used	Field Limitations	Comments
BASEBALL	T-Ball	30	450	Nicholson	None	Play on open areas – No diamonds
	Methuen Youth Baseball	80	1,100	Neil Playstead	Lack of parking	New dugouts
				Veteran's Park	Lack of parking	New dugouts
				Pelham Street	Fencing and backstop need repair	
						In need of maintenance plan. In poor condition for a High School field! Practice Field only.
						Practice Field only
				High School		
				Oakland		
FIELD HOCKEY	Methuen High School	3	60	High School		Better drainage
FOOTBALL	Pop Warner	10	400 players; 60 cheerleaders	Inside track @ Nicholson		
				Nicholson		
				Practice Field		
				Nicholson	Lack of Lights	
				Middle Field		
SOFTBALL	Methuen Girls Softball League	60	900	Burnham Road	High School Home Field; new dugouts; prime softball complex in City	Lights on Field 1
				Sargent	Practice Field only	
				YMCA Field	Prime softball complex in City	Irrigation

E. Playing Fields – Needs Assessment (continued)

SOCCEr	Methuen Youth Soccer	60	900	Gill Avenue	Also used for Lacrosse	More parking
				CGS		
				Tenney		
				MKS		
				Hampshire Rd. Fields		
FOOTBALL	MHS Athletics	15	350	Nicholson Stadium	Over use of field	Field Turf
LACROSSE					It is ESSENTIAL that Field Turf be installed at Nicholson Stadium. This would allow our MHS Athletic Teams, along with many of our Youth Sports Teams, to utilize the Stadium. This would result in significantly less need for maintenance park laborers, whose service could be better utilized elsewhere.	
SOCCEr						
FIELD						
HOCKEY						
MHS BAND						

TOWN FOREST & PARKS – NEEDS ASSESSMENT

1. TOWN FOREST, SKI AREA



Amenities

- Public beach
- Picnic tables
- Pavilion
- Swings
- Slide
- Bathroom facilities
- Storage shed
- Changing area

Maintenance – City

Routine

- Daily clean-up
- Raking of beach

Annual

- Bringing in beach sand
- Repairing picnic tables
- Pre-season preparation

Needs

- Complete rehab of Ski Area

2. VETERANS PARK



Amenities

- 1 children play structure with swings
- 1 paved walking path
- Storage shed
- 1 lighted regulation baseball field
- 1 lighted little league baseball field
- 1 lighted street hockey rink
- 1 lighted basketball court
- 2 little league baseball fields

Maintenance – City & West Little League (Home of Methuen West Little League)

Routine

- Cut grass
- Line fields
- Empty trash receptacles

Annual

- Repair backstops, fencing and bleachers
- Field maintenance

Needs

- More parking
- Lights for Little League Fields

3. RIVERSIDE PARK



Amenities

- Children's play structure with swings
- Walking path
- Picnic tables
- Benches
- Gazebo

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- More lighting

4. MARSH



Amenities

- Children's play structure
- Basketball court
- Paved play area

Maintenance – School Department

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

5. CENTRAL



Amenities

- Children's play structure
- Paved play area

Maintenance – School Department

Routine

- Empty trash receptacles

Annual

- Repairs as needed

Needs

- Swings
- Slides

6. SARGENT



Amenities

- Regulation softball field
- 1 small children's paved play area

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line field

Annual

- Repairs as needed

Needs

- Play structure

7. OAKLAND AVENUE FIELD



Amenities

- Little League baseball field
- Basketball court
- Children's paved play area

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line fields

Annual

- Repairs as needed

Needs

- None

8. PLEASANT VALLEY SCHOOL



Amenities

- Paved play area
- Children's play structure
- Slide

Maintenance – School Department

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

9. COMPREHENSIVE GRAMMAR SCHOOL (CCS)



Amenities

- Paved play structure
- Children's paved play area
- 1 basketball court
- 1 regulation softball field
- 1 regulation soccer field

Maintenance – City & School Department

Routine

- Cut grass
- Empty trash receptacles
- Line fields

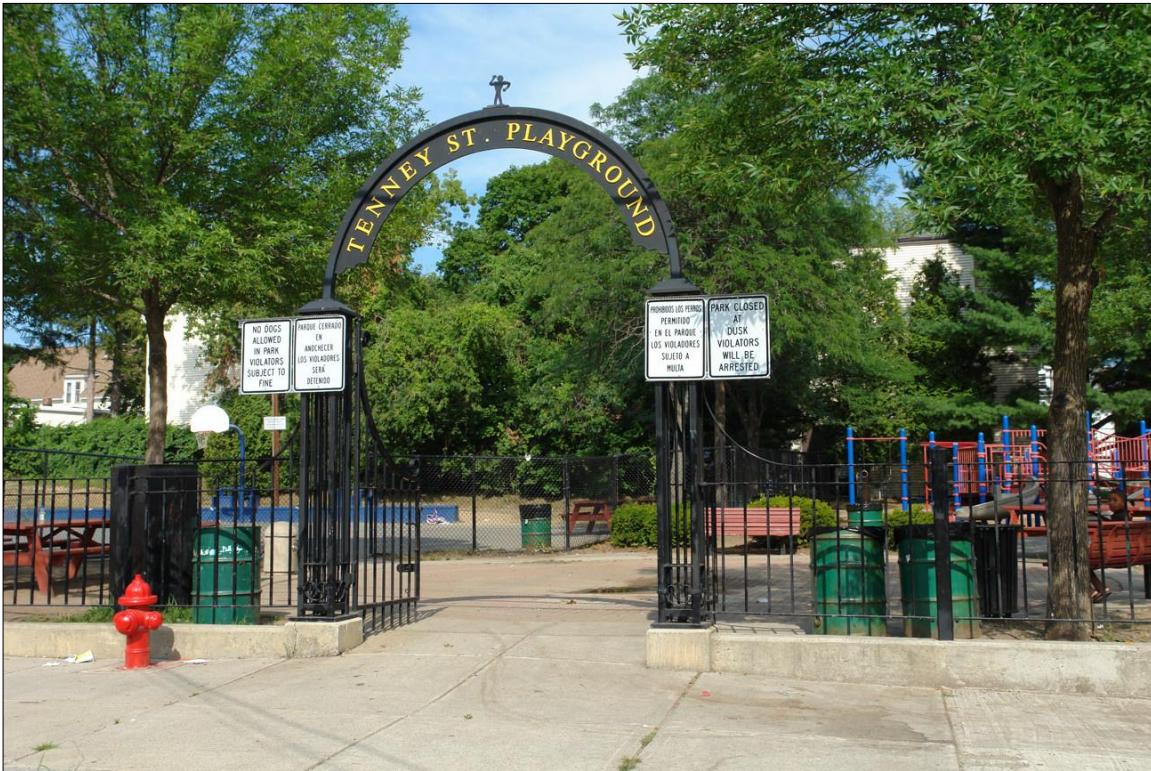
Annual

- Repairs as needed

Needs

- None

10. TENNEY STREET



Amenities

- 2 handball courts
- Lights
- Benches
- Picnic Tables
- 1 basketball court
- Play structure

Maintenance – City

Routine

- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

11. CHELMSFORD STREET



Amenities

- Children's play structure
- Swings
- Benches

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

12. BICENTENNIAL PARK



Amenities

- Benches
- Picnic tables

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

13. DEGASPE PARK



Amenities

- Slides
- Swings
- Benches

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed

Needs

- None

14. NEIL PLAYSTEAD



Amenities

- 6 Little League baseball fields
- 2 storage shed/concession stand
- 1 set of bleachers
- Paved parking for 75 cars
- Bathrooms
- Irrigation

Maintenance – City & East Little League (Home of Methuen East Little League)

Routine

- Cut grass
- Empty trash receptacles
- Line fields

Annual

- Repair backstops, fencing, and bleachers
- Field maintenance

Needs

- Lights on 2 more fields

15. PELHAM STREET



Amenities

- 1 regulation baseball fields
- Bleachers

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line field

Annual

- Repair backstop, fencing, and bleachers
- Field maintenance

Needs

- Lights

16. GILL AVENUE



Amenities

- Soccer field
- Children's play structure
- Swings
- 1 Basketball court
- Benches
- Bleachers
- Parking Area
- Irrigation

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line fields

Annual

- Repairs as needed
- Field maintenance

Needs

- None

17. BURNHAM ROAD



Amenities

- 3 Softball fields, 2 with lights
- Bleachers
- 1 jogging/walking path
- Parking area for 150 cars
- Benches
- Swings
- Slide
- Irrigation

Maintenance – City of Methuen Girls Softball (Home to Methuen Girls Softball)

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed
- Field maintenance

Needs

- Play structure

18. ASHFORD



Amenities

- Soccer field
- Bleachers
- 2 basketball courts
- 1 children's play structure
- Paved play area

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles

Annual

- Repairs as needed
- Field maintenance

Needs

- None

19. NICHOLSON STADIUM COMPLEX



Amenities

- Football stadium with bleachers and lights
- Outdoor track with bleachers
- Practice football field
- 2 bathroom facilities
- Parking lot
- Scoreboard
- 1 regulation multi use field with bleachers
- 1 youth football field with lights – Home of Pop Warner Football

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line fields

Annual

- Repairs as needed
- Field maintenance

Needs

- Field turf in stadium which will allow increased use

20. TENNEY SCHOOL



Amenities

- Soccer field
- Parking lot

Maintenance – City & School Department

Routine

- Cut grass
- Empty trash receptacles
- Line field

Annual

- Repairs as needed
- Field maintenance

Needs

- Irrigation system

21. METHUEN HIGH SCHOOL



Amenities

- 9 tennis courts
- 1 baseball field with lights and bleachers
- Parking lot
- 2 field hockey fields
- Irrigation

Maintenance – City & School Department

Routine

- Cut grass
- Empty trash receptacles
- Line field

Annual

- Repairs as needed
- Field maintenance

Needs

- None

22. YWCA FIELD



Amenities

- 1 baseball court
- 2 softball fields
- Paved play area
- Parking lot
- Irrigation

Maintenance – City

Routine

- Cut grass
- Empty trash receptacles
- Line field

Annual

- Field maintenance

Needs

- None

G. Regional Parks, Forests & Reservations

Park	Location	Acres	Amenities
Harold Parker State Forest	Andover & North Andover	3,180	Trails, picnicking, nature observation
Lowell-Dracut-Tyngsboro State Forest	Lowell, Dracut & Tyngsboro	1,000	Trails, camping, fishing boating
Lowell National Heritage Park	Lowell	141	Historical exhibits, tours, canal rides, slideshow, trolley rides
Lawrence Heritage State Park	Lawrence		Historical exhibits, educational programs, boating, biking, picnicking, fishing
Weir Hill	North Andover	194	Trails, scenic vistas, nature observation, educational programs
Boxford State Forest	Boxford, Middleton & North Andover	828	Trails, picnicking, nature observation
Stevens-Coolidge Place	North Andover	91	Historic house, museum, formal landscape, fields
Ward Reservation	Andover & North Andover	640	Trails, scenic vistas (including Boston skyline), botanical & geological features
Georgetown-Rowley State Forest	Georgetown & Rowley	1,112	Trails, picnicking, nature observation
Plum Island State Reservation	Rowley & Ipswich	73	Beach, fishing, trails
Parker River National Wildlife Reservation	Newbury, Rowley & Ipswich	4,662	Beach-dunes-salt marsh, surf fishing, hiking trails, interpretive exhibits
Salisbury Beach state Reservation	Salisbury	520	Beach, fishing, picnicking, camping, interpretive programs
Maudsley State Park	Newburyport	476	Trails, formal gardens, summer events, nature observation
Deer Jump Reservation	Andover	130	Trails, vistas, nature observation (including immense pine & hemlock groves)
Lawrence Riverfront State Park	Lawrence	49	Merrimack River views, trails, community boating program, fishing
Riverside Park	Haverhill		Ballfields, tennis courts, tot-lots, walking path, river views, boat ramp
Meadowbrook Conservation Area	Haverhill	248	Trails, fishing, nature observation
Den Rock Park	Lawrence	82	Trails, nature observation, interpretive exhibits, educational programs

SECTION 6. COMMUNITY VISION

A. Description of Process

As part of the Open Space and Recreation Plan renewal, the City of Methuen conducted a survey to ascertain the interests and needs of its residents. The City requested Groundwork Lawrence to translate the survey form into Spanish and conducted individual interviews with local officials and residents. Seventy-five households completed surveys representing over 200 Methuen residents. Below is a summary of the outreach conducted for the 2012 Open Space and Recreation Plan update.

- Phone interviews were conducted with William Pare, Director of the Department of Recreation; Paul George, Athletic Director at Methuen High School, Captain Thomas Fram, Police Department; Captain Michael Buote, Fire Department; Heather Robertson, MSPCA's Nevins Farm; Edward Sampson, the Methuen Memorial Music Hall; and Peter Paladino, Athletic Director at Central Catholic High School. The Interviews are summarized in Appendix C.
- The resident survey forms were available at the Nevins Library, City Hall, and online through a Google survey created by Groundwork Lawrence. A copy of the resident survey form is included in Appendix D. Full results of the survey are included in Appendix E.
- In order to encourage populations without internet access to complete the survey, Groundwork Lawrence visited the Methuen and Lawrence Senior Centers as well as properties owned by the Methuen Housing Authority. During November and December of 2011, two staff members made 16 visits to Methuen to help residents complete the surveys in English and Spanish. After completing the survey, the staff members then entered into open ended interviews with residents. Completing the survey and the interview took between 15-30 minutes per interview. The outreach revealed passionate and diverse opinions about the open space and recreational needs in Methuen. Conducting the interviews in both English and Spanish helped the City of Methuen collect opinions from a diverse group of people. Conducting interviews at the Senior Center and housing projects ensured that the sample contained a broad range of age groups.

B. Summary of Resident Survey Results

Through the Open Space and Recreation Plan interviews and surveys, Methuen residents asked for and visualized many changes and improvements not just to the parks and open space but also to the City's infrastructure and community as a whole. Resident feedback highlighted that the existing diversity of the City's districts (East, West, and Central) can be expanded upon and enhanced in a number of ways.

The survey reached a broad cross-section of Methuen residents. Over 70 households representing approximately 200 individuals responded, including a good sample of the City's

three geographic areas and a satisfactory range of age groups. Interestingly, over 73% of the respondents have lived in the City for longer than 10 years.

Overall, the existing park system appears to be meeting the recreational needs of the community. In fact, 66% of the respondents were generally satisfied with the recreational opportunities in Methuen and 12% are very satisfied compared to 22% who are dissatisfied. Respondents say the reason they do not participate in recreational activities is because they either lack the time (43%) or there are no programs which meet their needs (39%). When asked what recreational areas they use outside of Methuen, respondents indicated hiking areas and rail trails throughout the Merrimack Valley region.

A strong preference for passive recreational opportunities is supported by the survey responses. For instance, 64% of households said their family's favorite recreational activity is walking or biking, and 62% believe Methuen needs more jogging/walking trails. Other favorite family activities include swimming (47%), bicycling (44%), and community events (41%).

When asked what type of recreational activities Methuen needs more of, the respondents overwhelmingly favored passive recreation over active recreation. Jogging / walking trails (62%) and bike paths / trails (56%) were listed as high priorities. Active recreational activities such as baseball / softball fields (12%), tennis courts (12%), basketball courts (12%), and soccer fields (3%) were not identified as high priorities for the community.

According to the survey responses regarding land protection, Methuen residents have a very strong conservation ethic. The community overwhelmingly supports protecting open space for recreation / conservation (79%), water supply protection (79%), and passive stream or trail corridors (73%). Furthermore, 71% of respondents feel that city-owned undeveloped land should be used for nature trails or passive recreation. To accomplish this, the majority of respondents (63%) support land acquisition by the City of Methuen.

Many of the comments made by the respondents focused on providing access to the rivers in Methuen. The city has significant frontage along both the Merrimack and the Spicket Rivers which provide locations for boat ramps and opportunities for scenic parks.

C. Active Recreation

The City of Methuen operates a robust youth recreation program. For instance, Methuen currently has 4,220 youth actively involved in sports programs (see chart below).

Youth Recreation Programs	
Sports Activity	# of Participants
Baseball	1,100
Softball	900
Soccer	900
T-Ball	450
Football	400
Multiple Sports	350
Field Hockey	60
Cheerleading	60

The community has identified increasing access to these league activities as a priority, and is seeking to add amenities such as field lights, irrigation systems, additional parking space and artificial turf at the High School stadium. Adding these amenities to existing recreational facilities is expected to significantly increase the number of youth participants throughout the city.

D. City of Methuen Master Plan

The community involvement process for the renewal of the Open Space and Recreation Plan was greatly supplemented by the extensive outreach efforts conducted during the development of the Methuen Master Plan in 2007. Following numerous public visioning sessions and a lengthy public comment period, the Master Plan articulates a vision of protecting the city's natural and cultural resources, maintaining Methuen as a reasonably affordable place for residents, providing a high level of public services and facilities to serve its families and businesses, and fostering a vibrant downtown.

With over 8 miles of frontage along the Merrimack and Spicket Rivers, Methuen's residents envision a future in which the City takes better advantage of riverfronts for recreation and public use purposes. People appreciate the many passive and active recreational opportunities the City currently offers, including Forest Lake, the Town Forest, Riverside Park, and the Nevins Bird Sanctuary among others, and would like to see additional trails, athletic fields, and outdoor gathering places developed.

Additional visions of the community, as expressed in the Master Plan, include: 1) the continued effort to promote historic preservation in Methuen; 2) create a vibrant downtown that serves as a community gathering place, where citizens can fulfill errands, have a meal, and shop for gifts in an easily accessible location; 3) maintain a high level of public services and facilities, while keeping property taxes manageable; 4) increase economic development activities in order to keep Methuen's tax base stable; 5) support a variety of housing options for residents of all ages, incomes, and ethnicities, and 6) promote long-term improvements to the transportation network, enhancing residents' use of sidewalks, bikeways, and transit (buses, trains, car pools).

E. Statement of Open Space and Recreation Goals

On the basis of the various community visioning sessions held and the citizen input received, the OSRP Working Group has developed the following broad statement of open space and recreation goals for the 2012-2019 Methuen Open Space and Recreation Plan:

“Create a network of high quality open space and recreation areas for the use and enjoyment of all Methuen residents.”

SECTION 7. ANALYSIS OF NEEDS

The Methuen Open Space and Recreation Plan Working Group conducted an analysis of the City's open space and recreation needs by reviewing the Statewide Comprehensive Outdoor Recreation Plan (SCORP) together with the resident survey results and the array of materials which had been compiled in the preparation of the previous Plan chapters. This analysis revealed several challenges and needs which must be met in order to achieve the City's overall goal of creating a network of high quality open space and recreation areas for the use and enjoyment of all Methuen residents.

A. Regional Needs: The Massachusetts "SCORP"

Massachusetts Outdoors 2006, the Statewide Comprehensive Outdoor Recreation Plan (SCORP) prepared by the MA Division of Conservation Services, is a five-year plan which identifies the available supply of open space and recreation in Massachusetts, examines the demand for resources and recreation opportunities, provides a discussion of pertinent resource issues, assesses recreation needs throughout the State on a region-by-region basis, and issues policy recommendations.

The City of Methuen is part of the SCORP's Northeastern Region. The Northeastern Region has a higher density of recreation activity per site, and higher utilization and visitation rates than other regions. Notably, it has a larger number of passive and trail-based activities than other regions. The most popular activities for the region as reported by the SCORP are swimming, walking, sightseeing and tours, hiking and fishing. Significant activity rates were also reported in baseball, soccer, sunbathing, horseback riding, off-road vehicle use, snowmobiling, motorized boating, tot lot activity, and pond hockey. Regarding popularity of use, the region recorded high rates of use in coastal beaches and shorelines, followed distantly by golf courses, neighborhood parks, playgrounds and tot lots, lakes and ponds, and historic and cultural sites.

The highest regional demand for new facilities included playgrounds, neighborhood parks, and golf courses, as well as better access to agricultural lands, lakes and ponds, rivers and streams, and coastal beaches. Need was nearly as strongly expressed for bikeways and trails or greenways.

In response to funding preferences, Northeastern Region residents support improving access for people with disabilities more strongly than in any other region. Support for maintaining existing facilities ranks at the top of this region's priority list, as is also the case statewide. Adding park staff received the lowest priority ranking, but still exceeds a two-thirds majority.

B. Methuen Resource Protection Needs

The Conservation Commission remains the main entity in charge of resource protection for the City of Methuen.

The 100+ acre Forest Lake area is one of Methuen's most important conservation resources. Located in the northwest corner of the City, it provides greenbelt and wildlife corridor

connections from Dracut and the New Hampshire communities of Salem and Pelham to the Harris Brook wetland system.

This area has been significantly improved and upgraded since the 1994/95 Open Space and Recreation Plan. Accessibility improvements were made in 2001. These improvements included constructing accessible paths of travel to the beach area; upgrading restrooms and dressing rooms for handicapped accessibility; constructing accessible paths of travel to the concession stand and picnic area; adding amenities for accessibility including picnic tables accommodating wheelchairs, water fountains, and access ramps; making parking area accessible; and installing accessible playground equipment such as wheelchair swings.

However, several challenges remain, including the need for ongoing facility maintenance as well as the need for a comprehensive watershed and lake protection plan to improve and preserve current and future lake water quality from pollution and invasive species.

The Conservation Commission also protected an additional 7.25 acres in the Harris Brook watershed with the acquisition of the Salem Street Conservation Area.

The Spicket River and the Merrimack River are two of Methuen's most prominent natural resources. The Spicket runs through the center of Methuen. Its natural cascade spawned Methuen's 19th century industrial growth and dictated the location of Methuen's urban center. The Merrimack River serves the community and the region not only as the source of recreation opportunities but also as the public water supply. The Merrimack River corridor is also important as the habitat of rare wetlands wildlife such as the bald eagle, the short-nosed sturgeon and other protected species.

The 2006 SCORP notes that the Merrimack River is one of the largest yet least protected riverine systems in New England. This unique resource merits special efforts among the many parties of interest to save and restore it as a primary asset to Methuen and other bordering communities.

The City will continue to work with MVPC to develop the Merrimack River Trail and to protect additional land as it becomes available. Toward this end, the Conservation Commission protected an additional 2.96 acres in the Merrimack River watershed with the acquisition of the Riverside Conservation Area formerly known as "Bea's site". The City will continue to work with the Commonwealth's Office of Fishing and Boating Access (FBA) to construct a boat ramp and park on this land. The City protected an additional 2.78 acres in the Merrimack River watershed with the acquisition of the property at 658 Lowell Street.

The City has also worked to protect land along the Spicket River. Part of this effort includes the creation of a Riverwalk along the river. This initiative was kicked off by the granting of an easement to the City from the Methuen Assisted Living project on Gleason Street in the downtown area of Methuen.

Another recently completed project in the downtown along the Spicket River is located at 7 Lowell Street known as Appleyards Downtown Parking/Park. This project was supported by regional Brownfields assessment funding from MVPC and grant funds from the American Recovery and Reinvestment Act of 2009 (ARRA). The project consisted of the removal of existing pavement, soil remediation, repaving specified area with bituminous concrete to create a parking lot sized for ten cars, provision for retaining walls, a vehicle guard rail along parking area perimeter, signage, granite curbing, various site improvements, including benches, ornamental lamp posts and luminaries, concrete walkways with accessibility ramps, ornamental fence, and plantings. It also included a small section of river dredging.

The City spent time and effort on the refurbishment of the Osgood Street Park after the "Mother's Day" flood in 2006. Nearby, the Spicket River Dam was re-constructed 2000-2002 with the construction of a footbridge over the Spicket Falls Dam. Records show there was a bridge connecting Osgood and Hampshire Streets in the Methuen Downtown.

In 2008 the City enacted zoning to allow for the creation of Open Space Residential Developments. The first of this type of project – the Maple Park OSRD – created protected open space in the Hawkes Brook watershed.

Problems of illicit waste dumping and unauthorized vehicle use plague many of the City's conservation areas. As one noteworthy step to address this, the City has formed a partnership with the Trauma Intervention Program of Merrimack Valley, Inc. (TIP) to use Schruender Park as site for the TIP Healing Garden to promote a positive use of this area.

One of the major vehicles available to communities in Massachusetts to protect natural resources is the Community Preservation Act. To the extent financially and politically feasible, Methuen should consider enhancing its capacity to acquire and protect high priority open space by creating a local conservation land fund and/or adopting the Community Preservation Act (CPA).

The Community Development Board and Conservation Commission will continue to encourage landowners and prospective real estate developers to maximize retention of riparian corridors, including those of smaller brook and streams, in a natural undisturbed state. Projects will continue to be designed and implemented in a manner that minimizes any loss of ecological function within the site itself as well as any loss of connectivity with adjacent vegetated lands.

B. Methuen Community Needs

The OSRP Working Group reviewed the data on recreation and conservation needs from the Community Setting section as well as information gathered from the resident survey and the Master Plan process.

The survey results show that overall the majority of citizens believe that the recreational areas in Methuen are well-distributed throughout the City, although the western section of Methuen is in need of more ball fields. The Recreation Department has identified a need for more playground equipment in this area of the community and will seek funding for a new play structure at Riverside Park. Additional ball fields in the western part of the City will also be actively sought as projects come before the Community Development Board and other opportunities for land acquisition present themselves. The City will also continue to replace

old and outdated equipment throughout the community as the need arises and as funding becomes available.

The City is sensitive to the needs of the “Environmental Justice Area” in the central portion of the community, where the population is at least 25% minority, the median household income is 65% or less than the statewide median household income, where English proficiency is 75% or lower, and where 25% or more are foreign born. The Community Development Department actively seeks grant funding to accomplish the goal of maintaining and replacing outmoded facilities and equipment. In 2013, the Tenney Street Park will be completely upgraded with new ADA compatible playground equipment. The fields at the Gill Avenue playground were recently upgraded as well. Both of these parks are in or near the Environmental Justice Area.

The most popular activities highlighted in the resident survey were hiking, walking, and bicycling. This mirrors the current SCORP for the most popular activities in the Northeastern Region. In order to address these identified needs, the City is actively pursuing the completion of a Rail Trail which will extend from Methuen’s border with Salem, NH to its border with Lawrence. The City is also working with the Merrimack Valley Planning Commission and other riverfront communities to create a regional trail along the Merrimack River. The need for a coordinated sidewalk installation and upgrade plan was identified as many areas either lack connected sidewalks or the sidewalks have fallen into disrepair or are overgrown.

The City’s public school sites and other recreational areas provide the opportunity for participation in organized sports such as football, soccer, baseball, basketball, softball, field hockey, and lacrosse. The increasing demands for active recreation have created a shortage of playing fields. Meeting this demand in a fair and fiscally responsible manner, particularly given the numbers of Methuen citizens who utilize these playing fields on a regular basis, is an important goal for the City in the years ahead.

The City has identified the installation of field turf at Nicholson Stadium as the top priority to address the shortage of playing fields. Field turf will extend the useable life of the fields and reduce the maintenance required allowing for a longer playing season and extended day time use. The City has also recently received a grant to build a new clubhouse at the Stadium which will include ADA-compliant restrooms and locker rooms, separate lockers for the boys’ and the girls’ teams, a concession stand, a multi-purpose room, and office space. This will enhance the overall use and enjoyment of this facility and bring the site into compliance with the ADA.

Methuen has a wealth of natural resources suitable for small craft recreation. However, substantial access and facility improvements are needed to fully realize this recreational potential. Interest in canoeing and kayaking was noted by 29% of the survey respondents. The City recently cleaned up an existing brownfields site along the Spicket River and has created the Appleyards pocket park with access to the river and a picnic area for enjoying the scenic views. The City continues to work with the State in the development of a boat ramp and park at the “Riverside Conservation Area” site on the banks of the Merrimack River. The City also has the opportunity to work with Phillips Academy to develop a boating program at their newly created boating center.

Methuen has identified similar needs as the 2006 SCORP. As outlined above, these include more playgrounds, neighborhood parks, better access to rivers and streams, and more bikeways and trails or greenways.

C. Management Needs

The Recreation Department continues to add and revise programs on a yearly basis to address the needs of Methuen's citizens. The Department faces the constant challenge of managing many fields and playgrounds with limited resources. A field maintenance plan and continued organized coordination among the Recreation Department, the Department of Public Works and Youth sports organizations is needed to extend the life of the current fields. The City has also considered the addition of field turf at Nicholson Stadium which would enhance the current programs by allowing for an extended season for all sports as well as more intensive use of the Stadium.

The process of updating the Open Space and Recreation Plan has identified the need for an active (standing) Open Space and Recreation Committee. This Committee would help the City to maintain some level of continuity from year to year, would assume "ownership" of the Plan to oversee its implementation, would chart the Plan's progress on an ongoing basis, and would periodically report to municipal boards and residents to keep the public informed and ensure that priority implementation activities remain in the spotlight.

The City's most recent Americans with Disabilities Act Transition Plan Update notes the general lack of accessible parking and the lack of established accessible paths of travel at the majority of the City recreation sites. In addition, many water fountains were either broken or not accessible. These are challenges which the City will continue to address as funding becomes available.

SECTION 8. GOALS AND OBJECTIVES

The following goals and objectives build on the inventories of lands, both public and private, in Section 5, the broad statement of open space and recreation goals in Section 6, and the analyses of community needs for resource protection and community and management needs in Section 7.

Goal #1 – Increase regular maintenance and continue to enhance existing recreational facilities

- A. Update and enhance existing recreational facilities by prioritizing and implementing the needs as indicated.
- B. Maintain existing recreational facilities on regular basis with a centralized schedule of tasks to be completed within specific timeframes.
- C. Develop a capital plan to improve the quality of existing facilities and decrease dependence and burden on DPW by encouraging public private partnerships to protect and maintain public spaces.

Goal #2 – Create and maintain areas for walking trails, bike paths, and other passive recreation

- 1. Maintain and update existing walking trails, bike paths and other areas of passive recreation on a regular basis.
- 2. Identify areas locations within the City for new trails and paths that will connect with existing and planned trails both within the City and in surrounding communities.
- 3. Work to acquire easement rights to create new trail connections.
- 4. Continue to construct trail and passive recreation projects already underway.
- 5. Promote the available trails and other passive recreation areas that currently exist in the City.

Goal #3 – Preserve the existing rural character of Methuen

- A. Using Sections 5 and 7 of the Plan as a basis, identify and prioritize lands for permanent protection.
- B. Work with developers and landowners to permanently protect existing agricultural and forested areas.

Goal #4 – Increase access to waterfront resources through enhancement and protection

- A. Identify areas along the Merrimack and Spicket Rivers that are appropriate for public access.
- B. Create partnerships with existing landowners to enhance existing and to create new access points.
- C. Promote existing trails and access points along the Merrimack and Spicket Rivers.

Goal #5 – Increase activity and attendance at existing facilities for all ages and groups by implementing more active in-parks programming

- A. Review existing recreational programs and opportunities.
- B. Create new programs to address identified needs.
- C. Maximize use of existing programs.

Goal #6 – Preserve historic and cultural resources and landscapes

- A. Continue to expand the Searles Tenney Nevins Historic District.
- B. Continue to educate residents and promote Methuen's history through interpretive panels, historic markers, public installations, and publications.
- C. Continue to maintain and restore identified historic and cultural resources.

SECTION 9. SEVEN-YEAR ACTION PLAN

The following Seven-Year Action Plan is a compilation of recommended actions for achieving Methuen's conservation and recreation goals during the period of 2013-2020. The action items are prioritized and organized in a matrix that identifies associated potential funding sources, responsible parties, and a timeframe for implementation. Key actions with a specific geographic basis are depicted in **Map #12** (7-Year Action Plan Map) following the matrix.

GOAL #1: Increase regular maintenance of and continue to enhance existing recreational facilities in addition to creating new facilities to meet the City's growing recreational needs

Objective 1(a): Update and enhance existing recreational facilities by prioritizing and implementing the needs as indicated			
<i>Action Item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Replace deteriorated equipment with new ADA approved play equipment at the Tenney Street Playground	CDBG	CD, DPW	2013
Complete clubhouse project at Nicholson Stadium at the High School	Gateway City Parks Grant	Mayor's Office, DPW	2014
Install field turf at Nicholson Stadium at the High School	PARC Grant	CD, Recreation, DPW	2014
Design and build a play structure at Riverside Park	City Revenue	CD, Recreation, DPW	2015
Assess and address lack of parking at Neil Playstead and Veteran's Park	City Revenue, CDBG Grant	CD, Recreation, DPW	2016
Upgrade Pelham Street ball field	City Revenue	CD, Recreation, DPW	2016
Continue to upgrade playground equipment as necessary and make facilities more accessible to all persons	City Revenue, CDBG Grant	CD, Recreation, DPW	ongoing
Objective 1(b): Maintain existing recreational facilities on regular basis with a centralized schedule of tasks to be completed within specific timeframes			
<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Encourage public private partnerships to maintain parks	N/A	Recreation	Ongoing
Continue to work with existing associations to create "friends of" type groups for recreational facilities	N/A	Recreation	Ongoing
Objective 1(c): Develop a capital plan to improve the quality of existing facilities and decrease dependence and burden on City DPW by encouraging public-private partnerships to protect and maintain public spaces			
<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Convene a working group to create a 5-year capital plan to fund improvements identified by the needs assessment	N/A	Recreation, DPW	2013

Objective 1(d): Continue to assess the need for additional recreational facilities based upon demand and take action to address those needs			
<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Address need of the soccer program for additional fields throughout the City	City Revenue	Recreation, DPW	2014
Assess need, locate and construct a multi-purpose field in the western portion of the Methuen	City Revenue	Recreation, DPW	2015
Continue to work with Central Catholic School in the development of new multipurpose fields for public and private use	Private Funding	Recreation	ongoing

GOAL #2: Create and maintain areas for walking trails, bike paths and other passive recreation

Objective 2(a): Maintain and update existing walking trails bike paths and other areas of passive recreation on a regular basis			
<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Reestablish Trails Committee	N/A	Conservation	2013
Create public private partnerships for trail development and maintenance	N/A	Conservation	Ongoing
Restore and enhance the Nevins Bird Sanctuary	City Revenue	Conservation	2015

Objective 2(b): Identify areas within the City for new trails and paths that will connect with existing and planned trails both within the City and in surrounding communities

<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Identify and map highly used pedestrian/bike corridors within the city and to surrounding regions	City revenue	CD, Conservation, MVPC	2014
Identify missing links in the existing trail network and prioritize areas for land acquisition to connect these areas	N/A	CD, Conservation	Ongoing

Objective 2(c): Work to acquire easement rights to create new trail connections

<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Work with developers to preserve linkages or corridors between natural areas	N/A	CD, Conservation	Ongoing

Objective 2(d): Continue to construct trail and passive recreation projects already underway

<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Work with Rail Trail Alliance to identify funding sources and complete the Methuen Rail Trail Project	City Revenue, Grants	CD, Conservation	2015

Objective 2(e): Promote the available trails, bike paths, and other passive recreation areas that currently exist in the City

<i>Action item</i>	<i>Funding Source</i>	<i>Responsible Agent</i>	<i>Schedule</i>
Improve and Install appropriate signage at all sites	City revenue, Grants	CD, Conservation, DPW	Ongoing

Action item	Funding Source	Responsible Agent	Schedule
Create citywide map of all public open space and recreation areas including trails, bike paths, etc. Publish map on the City Web Site and other areas as appropriate	City Revenue	CD, Conservation, MVPC	2014
Install bike racks at all public buildings, school, and recreational areas	City revenue	DPW	2016

GOAL #3: Preserve the existing rural character of Methuen

Objective 3(a): Identify and prioritize lands for permanent protection			
Action Item	Funding Source	Responsible Agent	Schedule
Create and prioritize a "parcels of interest" list for use to actively seek to acquire open space.	N/A	Conservation, CD	Ongoing
Investigate and prioritize the purchase of Chapter 61 lands	N/A	Conservation, CD	Ongoing
Objective 3(b): Work to acquire by Conservation Easement or through purchase land identified and prioritized above			
Action Item	Funding Source	Responsible Agent	Schedule
Work with developers and landowners to permanently protect existing agricultural and forested areas.	N/A	CD, Conservation	Ongoing
Encourage the use of the Open Space Residential Development Special permit process to permanently protect valuable open space areas.	N/A	CD, Conservation	Ongoing
Pass the Community Preservation Act as a means of funding open space protection and improvements to recreation facilities	N/A	CD, Conservation, City Council	2015
Objective 3(c): Maintain and protect existing open space areas			
Action Item	Funding Source	Responsible Agent	Schedule
Research and maintain data base on property with conservation restrictions and easements	N/A	Conservation	Ongoing
Work to permanently protect existing open spaces areas with conservation easements and restrictions	City Revenue, Grants	Conservation	Ongoing
Monitor and manage existing open space areas	City Revenue	Conservation	Ongoing
Identify existing open space area with appropriate signage and mapping	City Revenue, Grants	Conservation	2014

Goal #4: Increase public access to waterfront resources through enhancement and protection

Objective 4(a): Identify areas along the Merrimack and Spicket Rivers that are appropriate for public access			
Action Item	Funding Source	Responsible Agent	Schedule
Survey the banks of the rivers to identify and prioritize points of public access	City Revenue	Conservation	2015

Action Item	Funding Source	Responsible Agent	Schedule
Identify existing areas to be protected for future access through the acquisition of easements or purchase	N/A	Conservation	Ongoing
Construct Beas Recreation site on the Merrimack River	Grant	CD, DPW, Conservation	2014
Objective 4(b): Create partnerships with existing landowners to enhance existing and to create new riverfront access points			
Action Item	Funding Source	Responsible Agent	Schedule
Work with Phillips Academy and Essex Rowing to explore use of their boating facilities for City programs	N/A	Recreation	2014
Create outdoor and indoor viewing and access points to the Merrimack and Spicket Rivers	City Revenue, Grants	CD, Conservation	2017
Work with the Merrimack Valley Planning Commission to acquire easements necessary to promote the Merrimack River Trail System	City Revenue, Grants	CD, Conservation	Ongoing
Objective 4(c): Promote existing trails parks and access points along the Merrimack and Spicket Rivers			
Action Item	Funding Source	Responsible Agent	Schedule
Create Citywide map of all public open space and recreation areas including trails, bike paths, etc.; publish map on the City web site and other areas as appropriate	City Revenue	CD, Conservation, MVPC	2014
Continue to protect and clean the City's river systems	Grants	Conservation	Ongoing
Objective 4(d): Continue to monitor and enhance water quality of water bodies within the City			
Action Item	Funding Source	Responsible Agent	Schedule
Prepare, adopt, and implement a Forest Lake Management Plan	City Revenue	Conservation, Forest Lake Association	Ongoing
Continue to develop and implement municipal stormwater management program (SWMP) in compliance with EPA and MassDEP requirements	City Revenue	DPW, Engineering, Conservation, CD	Ongoing

Goal #5: Increase activity and attendance at existing facilities for all ages and groups by implementing more active in-parks programming

Objective 5(a): Review existing recreational programs and opportunities			
Action Item	Funding Source	Responsible Agent	Schedule
Conduct a survey of Methuen residents to determine what recreational programs are needed and what age groups should be better served	N/A	Recreation	2014

Objective 5(b): Create new recreational programs to address identified needs

Action Item	Funding Source	Responsible Agent	Schedule
Review staffing needs of current recreational programs and increase staffing as needed to address program development	N/A	Recreation	Ongoing
Establish a youth jobs training initiative and apprenticeship to train Methuen youth (18-24) in planning and running recreational programs	City Revenue, Grant	Recreation	2016
Identify funding sources through grants and public-private partnerships	N/A	CD, Recreation	Ongoing

Objective 5(c): Maximize use of existing recreational programs

Action Item	Funding Source	Responsible Agent	Schedule
Continue to enhance online registration for programs	N/A	Recreation	Ongoing
Review cost for residents to participate in programs	N/A	Recreation	Ongoing
Continue to publicize existing programs in the public and private schools, on the City web site, at the library and other appropriate locations	City Revenue	Recreation	Ongoing

GOAL #6: Preserve historic and cultural resources and landscapes

Objective 6(a): Continue to expand the Searles Tenney Nevins Historic District

Action Item	Funding Source	Responsible Agent	Schedule
Continue to identify historically and culturally significant properties	City revenue	Historic	Ongoing

Objective 6(b): Continue to educate residents about and promote Methuen's history

Action Item	Funding Source	Responsible Agent	Schedule
Continue to install interpretive panels, historic markers, etc.	City revenue, Grants	Historic	Ongoing
Support Historical Commission educational initiative in schools.	City revenue, Grants	Historic	Ongoing
Publicize the Historic Walking Trail on City Web Site and other locations as appropriate	N/A	Historic	2013

Objective 6(c): Continue to maintain and restore identified historic and cultural resources

Action Item	Funding Source	Responsible Agent	Schedule
Explore public-private partnerships to fund restoration efforts	N/A	Historic	Ongoing
Continue to maintain and restore Grey Court, Music Hall, Historic Walls, Sands Bridge	City Revenue, Grants	Historic, DPW	Ongoing

SECTION 10. PUBLIC COMMENTS

SECTION 11. REFERENCES

Massachusetts Executive Office of Energy and Environmental Affairs / Division of Conservation Services, *Massachusetts Outdoors 2006 – Statewide Comprehensive Outdoor Recreation Plan (SCORP)*

Massachusetts Executive Office of Energy and Environmental Affairs / Division of Conservation Services, *The Open Space Planner's Workbook*, June 1991 - Revised March 2008

Methuen Open Space and Recreation Planning Work Group, *Methuen, Massachusetts Open Space and Recreation Plan 1994/1995*

Methuen Master Plan Steering Committee and Methuen Department of Economic and Community Development, *Methuen Master Plan 2007: Planning for Our Future*, June 2007

Methuen Rail Trail Alliance, *Methuen Rail Trail*, July 2011

Massachusetts Department of Conservation and Recreation and Essex National Heritage Commission, *Methuen Reconnaissance Report – Essex County Landscape Inventory*, May 2005

Massachusetts Executive Office of Environmental Affairs, *Merrimack River 5-Year Watershed Action Plan*, June 2002

Land Trust Alliance, *Protecting the Biological Integrity of Local Places*

U.S. Census Bureau: *General Social and Economic Characteristics, 2000 and 2010*

Merrimack Valley Planning Commission, *Merrimack Valley Priority Growth Strategy – The Regional Land Use Plan for the Merrimack Valley Region*, September 2009

Merrimack Valley Planning Commission, *Merrimack Valley 2012 Regional Transportation Plan*, September 2011

APPENDIX A

List of OSRP Working Group Meetings



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #1

Date: June 15, 2011 – 9:30-11:30 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Matt Kraunelis, Chief of Staff, Mayor's Office

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Review and discussion of EEA/Div. of Conservation Services OSRP updating requirements and planning process
2. Roles and responsibilities of Working Group members and prospective planning partners (e.g., MVPC, Methuen Rail Trail Alliance, Forest Lake Assoc., Groundwork Lawrence)
3. Identification and review of relevant existing plan information and data gaps
4. Preparation of draft Base Map and property parcel database for updating existing 1994/1995 OSRP conservation and recreation lands database
5. Receipt/review of written documentation and maps of Methuen rare and endangered species habitats (courtesy of Patricia Swain, Ecologist, MA NHESP)
6. Updating of City socio-economic data using Census 2010 figures (MVPC Regional Data Center)
7. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #2

Date: August 15, 2011 – 8:30-10:15 AM

Location: MVPC Offices, 160 Main Street, Haverhill MA

Attendees: Joyce Godsey, Methuen Rail Trail Alliance

Heather McMann, Exec. Director, Groundwork Lawrence

Jack Burke, Forest Lake Association

Betsy Goodrich, MVPC Transportation/Trails Planner

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Review and discussion of EEA/Div. of Conservation Services OSRP updating requirements and potential role of Groundwork Lawrence in planning process
2. Discussion of potential OSRP public outreach strategy
 - Interviews of knowledgeable Methuen conservation and recreation personnel, public safety officials, etc.
 - Development/dissemination of new residents preference questionnaire, based on 1994/1995 survey form, in City Hall and other public places, on city website, and via internet
3. Status of Lawrence Greenway Project and potential connection of Lawrence B&M Rail corridor to Methuen Rail Trail
4. Status of Methuen Rail Trail development; upcoming development activities
5. Status of Merrimack River Trail Initiative and prospects for enhancing access to Merrimack River and expanding riverbank open space and recreation opportunities
6. Updating of City socio-economic data using Census 2010 figures (MVPC Regional Data Center)
7. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #3

Date: August 19, 2011 – 9:00-10:30 AM

Location: The Searles Building, 41 Pleasant Street, Methuen

MA Attendees: Joseph Giarrusso, Conservation Officer
Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Discussion of existing City open space and recreation datasets and maps, and need for updating
2. Process and timeline for updating existing City parks inventory – park names, locations, amenities, needs, etc. – using latest Assessor's records and with input from Methuen Recreation Dept. Director
3. Creating new digital color images of each public park and playground to accompany revised inventory in updated OSRP
4. Status of existing Chapter 61A and 61B properties inventory; need and timeline for updating
5. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #4

Date: September 12, 2011 – 8:30-10:15 AM

Location: MVPC Offices, 160 Main Street, Haverhill MA

Attendees: Joyce Godsey, Methuen Rail Trail Alliance

Jack Burke, Forest Lake Association

Heather McMann, Exec. Director, Groundwork Lawrence

Betsy Goodrich, MVPC Transportation/Trails Planner

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Further discussion of Methuen Rail Trail status and needs, both short- and longer-term
2. Discussion of existing and potential connections of 2.4-mile Methuen rail trail to other local conservation, recreation, and scenic/historic areas (e.g., Spicket River, Nevins Bird Sanctuary, Sands Bridge and Robert Rogers birthplace); linkages with Lawrence, MA, and Salem, NH, rail corridors
3. Discussion of other Methuen Trails Committee and Forest Lake Assoc. recommended agenda items for updated Methuen OSRP 7-Year Action Plan – i.e.,
 - Methuen Biking
 - Nevins Bird Sanctuary/Birding
 - Spicket River/Water Trail
 - City Perambulation Trail
 - Historical Walking Trails
 - Forest Lake Watershed Issues
 - Searles Pond/Holy Family Recreation Trail
 - Other Methuen Waterways and Trail Items



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #5

Date: September 13, 2011 – 9:00-11:00 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Matt Kraunelis, Chief of Staff, Mayor's Office

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Status of conservation lands, recreation lands, and parks inventories updating
2. MVPC progress on updating “Community Setting” sections (i.e., regional context, history of community, population and employment characteristics, growth and development patterns); preparation of digital (GIS) community context map
3. Presentation/review of initial digital images of parks and playgrounds by Conservation Officer
4. Discussion/development of draft public outreach survey form for website posting and distribution in late fall/early winter
5. Initial progress toward updating of “Environmental Inventory and Analysis” section of OSRP
6. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #6

Date: January 10, 2012 – 9:30-11:30 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. MVPC presentation/discussion of selected draft GIS maps (11 x 17") to be incorporated into OSRP document:
 - Population Characteristics (including Environmental Justice criteria)
 - Land Use (updated to 2005 from MassGIS)
 - Zoning
 - Surficial Geology and Solis
 - Water Resources (also includes wetlands, floodplains, vernal pools)
2. Discussion of Groundwork Lawrence's public outreach strategy and efforts to date regarding city-wide residents survey and personal interviews
3. Discussion of community visioning process and Methuen staff development of draft "Statement of Open Space and Recreation Goals"
4. Initial review of 1994/1995 OSRP "Goals and Objectives" section; discussion of process and timeline for updating this section
5. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #7

Date: February 23, 2012 – 10:00-11:15 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Methuen Community Development Director
Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Overview of OSRP updating process, partner roles and responsibilities, and revised project timeline
2. Report on status of existing planning tasks and draft deliverables
3. Presentation/discussion of draft GIS maps
4. Discussion of public outreach process and initial survey results
5. Process and timeline for drafting remaining plan sections and maps
6. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #8

Date: March 19, 2012 – 10:00-11:45 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Brad Buschur, Groundwork Lawrence Project Mgr.

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Presentation of draft “Plant and Wildlife Habitats” map
2. Further discussion of residents survey results
3. Presentation/discussion of draft “Scenic Resources and Unique Environments” matrix; process and timeline for developing accompanying GIS map
4. Presentation/discussion of draft “Goals and Objectives” section
5. Initial discussion of draft “Analysis of Needs” section
6. Process and timeline for developing draft “7-Year Action Plan” section
7. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #9

Date: April 4, 2012 – 10:00 AM-12:00 PM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Brad Buschur, Groundwork Lawrence Project Mgr.

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Further analysis/discussion of residents survey results
2. Use of survey results to inform “Analysis of Needs” and “7-Year Action Plan” preparation
3. Progress toward updating and reformatting Section 5 information and maps- i.e.,
 - Quasi public and non-profit properties
 - Active recreation properties
 - Conservation/passive recreation properties
 - Chapter 61A and 61B properties
 - Sports playing fields
 - Town Forest and municipal parks
 - Regional parks, state forests, and reservations
4. Preparation of draft Base Map and property parcel database for updating existing 1994/1995 OSRP conservation and recreation lands database
5. Refinement of draft “Goals and Objectives”
6. Discussion of playing fields priority needs, w/ special reference to need for artificial Field Turf to enhance field use by more teams and reduce increased maintenance time and costs
7. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #10

Date: April 25, 2012 – 10:00-11:30 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Brad Buschur, Groundwork Lawrence Project Mgr.

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Further discussion and development of draft “Analysis of Needs” and “7-Year Action Plan” sections
2. Discussion of “Environmental Challenges”: water quality impairment (especially stormwater pollution), brownfield sites, loss and fragmentation of forest habitat by development, invasive species
3. Progress on “Scenic Resources and Unique Environments” matrix, accompanying text and GIS map; inclusion of Methuen Rail Trail as high priority community resource
4. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #11

Date: May 16, 2012 – 10:00-11:45 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Further discussion and development of draft “Goals and Objectives” section
2. Discussion of proposed grant application to EEA/DCS for funds to purchase and install artificial Field Turf, community’s highest playing fields need; revised timeline for drafting OSRP update to meet July 13 grant application deadline
3. Progress on “Environmental Challenges” section
4. Further discussion and development of draft “Analysis of Needs” and “7-Year Action Plan” sections
5. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #12

Date: May 29, 2012 – 11:30 AM-12:30 PM

Location: MVPC Offices, 160 Main Street, Haverhill MA

Attendees: Joseph Giarrusso, Conservation Officer
Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda: open space and recreation facilities tables and Goals and Objectives" section

1. Further review and discussion of draft open space and recreation facilities tables and GIS map representation
2. Incorporation of digital photos into selected park facility inventories



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #13

Date: May 31, 2012 – 10:00-11:30 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Further discussion of “Analysis of Needs” section; general relationship to SCORP northeast MA findings and residents survey results
2. Incorporation of selected plan information and data into OSRP Appendices: Working Group meetings, NHESP documentation, resident survey forms, survey results, etc.
3. Progress on “Environmental Challenges” section
4. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #14

Date: June 21, 2012 – 10:00-11:15 AM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Status of DCS grant application for artificial Field turf funding
2. MVPC update on draft GIS map series
3. Further review and discussion of resident survey results and relationship to OSRP goals setting, community needs assessment, and action plan recommendations
4. Further discussion of draft “Analysis of Needs” and “7-Year Action Plan” sections
5. Next planning steps and draft deliverables; next meeting date.



Methuen Open Space and Recreation Plan 2013-2020

OSRP Working Group Meeting #15

Date: July 9, 2012 – 10:00 AM-12:00 PM

Location: The Searles Building, 41 Pleasant Street, Methuen MA

Attendees: Bill Buckley, Community Development Director

Kathleen Colwell, Asst. Director of Planning

Joseph Giarrusso, Conservation Officer

Bill Pare, Recreation Director

Alan Macintosh, Asst. Director/Envir. Prog. Mgr., MVPC

Agenda:

1. Status of grant application to EEA/DCS for Field Turf funding
2. Presentation/review of completed draft OSRP sections; completion of remaining sections and packaging of draft plan for submittal to DCS by July 13
3. Planning for DRAFT OSRP public review and comment period – Planning Board, Conservation Commission, MVPC, general public, etc.
4. Further discussion of draft “Analysis of Needs” and “7-Year Action Plan” sections
5. Next planning steps and draft deliverables; next meeting date.

APPENDIX B

NHESP Rare Species, Natural Communities and Biodiversity Documentation

Commonwealth of Massachusetts



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

August 24, 2011

Alan Macintosh
Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830

Re: 2011 Open Space Plan, 11-29987
City of Methuen

Dear Mr. Macintosh:

Thank you for contacting the Natural Heritage and Endangered Species Program regarding the Open Space and Recreation Plan for the City of Methuen. Enclosed is information on the rare species that we have documented in the City. This letter and the information are intended to be included in the Open Space Plan.

Enclosed is a printout from our database of all rare species currently known to occur in Methuen. Also attached is a discussion and map of the new BioMap2 Core Habitats (BC) and Critical Natural Landscapes (CNL) and the components that occur in them in Methuen. I encourage you to download fact sheets for the species from our website to include in your OSRP with the species list and BioMap2 discussion. The fact sheets are accessible from: http://www.mass.gov/dfwele/dfw/nhesp/species_info/fact_sheets.htm

We have produced fact sheets describing the various other components of BioMap2 which are also on our website at

http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap_methodology.htm

The components are described in full in the summary report available from:

http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap2_summary_report.pdf

The Merrimack River and its tributaries and their associated wetlands provide habitat for many rare species. Along the mainstem of the river in Methuen (BioMap2 Core 3018) are recent records of nesting Bald Eagles, as well as longer term records of the area being used as important wintering habitat for eagles from further north. The state status of Bald Eagles has been recommended to change from Endangered to Threatened in 2011. Bald Eagles nest in tall trees along large lakes and rivers. The bulk of their diet consists of fish. The Merrimack River supports important winter congregations of Bald Eagles.

The rare invertebrates that are known from Methuen are all dragonflies found along the Merrimack River. The nymphs of dragonflies spend a year or two developing in the bottoms of clear sandy bottomed streams, larger rivers, or ponds, depending on species. Clean water is critical for their survival. Adult dragonflies generally use riverside (riparian) areas and nearby forests for final development. Eggs are deposited back in the aquatic environments. Protected adjacent uplands provide habitat as well as helping to keep the waters clean. The multiple species of dragonflies present in the Merrimack emphasize the importance of the river in providing habitat for a variety of species, common and rare.

Hawkes and Bare Meadow Brooks and their surrounding wetlands and uplands (BioMap2 Cores 2985, BC2982, BC2983, BC2990, and BC2990, all closely connected on the ground), support multiple species of conservation concern. These streams provide habitat that supports the largest known Wood Turtle (SC)



Natural Heritage & Endangered Species Program

Route 135, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

An Agency of the Department of Fish & Game

<http://www.nhesp.org>

population in Essex County. Wood Turtles live in streams and associated uplands, needing uplands around wetlands for summer foraging and resting, and for travel between streams. Because of their travel as adults, they are susceptible to becoming road kill when their routes cross roads. Loss of even a few adults a year can have strong negative effects on the viability of the populations; from a conservation perspective, this means that unfragmented habitats are particularly important to maintaining Wood Turtle populations. The same concern of loss of individuals through road kill applies to Blanding's Turtles (T) that also live in the area of Hawkes and Bare Meadow Brooks. Blanding's Turtles use a mix of upland and wetland habitats. After overwintering in wetlands, Blanding's Turtles travel to feed and mate in other wetlands. Like most turtles in Massachusetts, they lay eggs in open sandy uplands. Those same streams and surroundings provide habitat for several populations of Blue-spotted Salamander (SC). Adult and juvenile Blue-spotted Salamanders inhabit upland forest during most of the year. Adults migrate during early spring to breed in vernal pools and fish-free areas wetlands. Because of the migrations between wetland breeding areas and upland habitat, this species, too, is susceptible to loss of population through road kills.

Several species that are no longer listed under MESA (the Massachusetts Endangered Species Act) remain of conservation concern. Spotted Turtles (delisted), also known from eastern Methuen, use a mix of habitats – dry open uplands for nesting, and forested and non-forested wetlands and their edges for basking, foraging, mating, and overwintering. Vernal pools and larger wetlands are important for Spotted Turtles. Fortunately, due to someone's hard work, several vernal pools in the stream area have been 'certified' by Natural Heritage.

Blanding's Turtles, Blue-spotted Salamanders, and Spotted Turtles also occur in wetlands complexes in northwestern Methuen around Harris Brook and Peat Meadow (BC2964, BC2965 and BC2967). There are clusters of Potential Vernal Pools in this area, (described below) that should be examined for possible certification. In addition, NHESP has records of River Birch, a plant on the non-regulatory Watch List along the Spicket River in BC2964. River Birch is a small, primarily southern, streambank tree. In Massachusetts, it is restricted to the Merrimack River watershed, and occurs primarily on floodplains of the river and its tributaries. Although not uncommon where it occurs, because of its restricted distribution statewide, and because many of the habitats have been degraded by damming, development, and invasion by non-native species, NHESP has been keeping track of populations of River Birch through the Watch List and encourages protection of the habitat.

The Bartlett Brook area also supports the state-listed and delisted turtles and has nearby clusters of Certified and Potential Vernal Pools that contribute to the habitat.

There are two records of state-listed plants known from Methuen, both considered to be Historic occurrences: the species were last reported from Methuen in 1883 and 1951. Both species are Endangered statewide, so are very uncommon. Loss of habitat is likely the reason for their disappearance from Methuen. Andrew's Bottle Gentian is a tall perennial herbaceous plant with showy flowers that grows adjacent to wetlands in moist, but not inundated habitats. Alternate-flowered Water-milfoil is a submerged aquatic perennial herbaceous plant that occurs in northern lakes, ponds, or rivers with bottoms of leaves or muck with sand or gravel in still or slow-moving, shallow water. In Massachusetts it is at the southern edge of its distribution.

There are no examples of NHESP Priority Natural Communities in Methuen.

Methuen has 31 Certified Vernal Pools and many probable vernal pools. Locations of Potential Vernal Pools, PVPs, identified through interpreting aerial photographs, are available as a datalayer from MassGIS at <http://www.state.ma.us/mgis/pvp.htm>. There are large clusters of vernal pools throughout the city that provide particularly good habitat for species that depend on vernal pools for habitat. The clusters mean that there are alternate habitats if something happens to one pool, and slightly different conditions in each may provide different habitats for pool dependent species. Certifying the PVPs would provide more protection to these wetlands and the species that use them.

Enclosed is a map and a discussion of the new BioMap2 cores and Critical Natural Landscape for Methuen (see the NHESP website for the full report and discussion of BioMap2 at http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap_home.htm . Methuen has several BioMap2 areas – the areas of most importance to protect in order to maintain the biodiversity of the City, region, and state. BioMap2 cores were produced by NHESP to identify the areas of most importance for biodiversity: they are based on known locations of rare species and uncommon natural communities, and incorporate the habitats needed by those species to maintain the local populations. They update the original

BioMap, and are based on more components (such as selected species from the State Wildlife Action Plan (http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs_home.htm), as well as aquatic cores, exemplary wetlands, forest cores, and vernal pool clusters). There are also areas of Critical Natural Landscape (CNL) the protection of which will enhance the viability of the BioMap2 areas and pick up large Landscape areas that are themselves very important for all species. Note that the CNL areas often include and buffer the Core Habitats, but can also exist without the particular components of BioMap2 cores. Both Core Habitat and CNL areas are intended as targets for land acquisition to protect the biodiversity of Methuen. Land that abuts currently protected open space within the BioMap2 Cores or CNL should be targeted for acquisition. Many of the polygons of both aspects of BioMap2 extend into other municipalities: these large polygons provide opportunities to protect large unfragmented areas that will provide the best opportunities to limit further species loss from the City and region. The BioMap2 Core and CNL polygons are available from MassGIS. <http://www.mass.gov/mgis/biomap2.htm> There is also an interactive application to see the broad outlines of the polygons in each City that is linked from the NHESP website.

The NHESP produces maps for use under the Wetlands Protection Act (Estimated Habitat maps, provided to the Conservation Commission and shown in reduced form in the *Natural Heritage Atlas*, and the Massachusetts Endangered Species Act (also in the *Natural Heritage Atlas*). These data layers are also available from MassGIS, requiring access to some form of GIS to view them, at <http://www.state.ma.us/mgis/wethab.htm> and <http://www.state.ma.us/mgis/prihab.htm>. These two sets of maps are created for regulatory use. BioMap2 and the original BioMap and Living Waters projects are focused on conservation and cover broader areas and non-regulated components of biodiversity. City commissions and boards are encouraged to request the assistance of the Natural Heritage and Endangered Species Program in reviewing any project proposed in the habitat areas of the regulatory areas of the maps in the *Natural Heritage Atlas*. The Estimated Habitat maps and the Priority Habitat maps are planned to be updated in 2012 and will be on a four year schedule after that.

Management and monitoring of conservation lands become important as acquisition and protection are accomplished. All wetlands particularly need to maintain their natural water regime, including normal fluctuations and connections with the uplands and other wetlands. Water quantity and quality are ongoing issues for wetlands. Another aspect of managing conservation lands that is important in many areas is controlling invasive non-native species that alter the habitat and occupy space that native species would otherwise use. We strongly recommend monitoring conservation land, and removing non-native species before they become a problem and impact native species.

Please note that this evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should new rare species information become available, this evaluation may need to be reconsidered.

Please do not hesitate to contact me at (508) 389-6352 or by email at pat.swain@state.ma.us if you have any questions.

Sincerely,



Patricia C. Swain, Ph.D.
Ecologist

cc: Melissa Cryan, EOEEA, DCS

Commonwealth of Massachusetts



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

Rare Species and Natural Communities Documented in the City of Methuen AS OF August 22, 2011

<u>Scientific Name</u>	<u>Common Name</u>	<u>MESA Status</u>	<u>Most recent Year</u>
VERTEBRATES			
<i>Ambystoma laterale</i>	Blue-spotted Salamander	SC	2004
<i>Clemmys guttata</i>	Spotted Turtle	Delisted	1999
<i>Emydoidea blandingii</i>	Blanding's Turtle	T	2006
<i>Glyptemys insculpta</i>	Wood Turtle	SC	2010
<i>Haliaeetus leucocephalus</i>	Bald Eagle	E*	2010
INVERTEBRATES			
<i>Gomphus vastus</i>	Cobra Clubtail	SC	2004
<i>Neurocordulia obsoleta</i>	Umber Shadowdragon	SC	2004
<i>Stylurus spiniceps</i>	Arrow Clubtail	T*	2004
VASCULAR PLANTS			
<i>Betula nigra</i>	River Birch	WL	
<i>Gentiana andrewsii</i>	Andrews' Bottle Gentian	E	1951
<i>Myriophyllum alterniflorum</i>	Alternate-flowered Water-milfoil	E	1883
CERTIFIED VERNAL POOLS			
Certified Vernal Pool (#31 in Methuen)			2000

This list does not include data sensitive species. Some Watch List dates are not available.
Most Recent Year means the year of the most recent record in the NHESP database.

KEY TO MESA STATUS: E = Endangered. T = Threatened. SC = Special Concern. WL = unofficial Plant Watch List, not regulated. Delisted – species no longer protected under MESA.

***Rank changes have been proposed for some species in 2011:**
Haliaeetus leucocephalus, Bald Eagle, from Endangered to Threatened;
Stylurus spiniceps, Arrow Clubtail, from Threatened to not listed (Delisted).



Natural Heritage & Endangered Species Program

Field Headquarters, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

An Agency of the Department of Fish & Game

<http://www.nhesp.org>

Commonwealth of Massachusetts



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

Methuen BioMap2 Core Habitats and Critical Natural Landscapes

BioMap2 Cores in Methuen: For discussion of BioMap2 and the differences between the two major parts (Core Habitat (BC) and Critical Natural Landscape (CNL)), please see the NHESP website.
http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap_home.htm

BioMap2, like its predecessors, BioMap and Living Waters, is intended to be a guide to biodiversity conservation and is not regulatory. Priority Habitats and Estimated Habitats continue to be part of the regulations protecting rare species and are the representations of the regulated habitats of state listed species under the Massachusetts Endangered Species Act (MESA).

There are ten **BioMap2 Core Habitats** (BC) in Methuen – see the attached map for locations of the Cores. Rare species ranks under the Massachusetts Endangered Species Act (MESA) are: SC – Species of Special Concern; T – Threatened; and E- Endangered. Delisted or Delisting – removal from the MESA list; most such species remain of conservation interest. SWAP species are non-MESA listed wildlife species of conservation concern and WL species are Watch List Plant species, non-listed plants of conservation concern.

SWAP – State Wildlife Action Plan, is discussed at
http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs_home.htm

WL – plant Watch List (WL), an unofficial, non-regulatory list of plants of known or suspected conservation concern that NHESP is interested in tracking, is discussed at
http://www.mass.gov/dfwele/dfw/nhesp/conservation/plants/plant_conservation.htm

There are seven areas of **Critical Natural Landscape** (CNL) in Methuen. Each is often connected to one or several of the Cores. Because BioMap2 Cores and CNL were calculated on different bases, there are areas where one or the other will occur alone.

BioMap2 Cores in Methuen are:

BC2884, embedded in the upland Aquatic Buffer of **CNL1304** is along Bartlett Brook between Rts. 110 and 113, which cut the Core from the cores around the Merrimack and the rest of Bartlett Brook. The BioMap2 components of BC2884 in Methuen include:

Aquatic Core - identifies core habitat for fish Species of Conservation Concern and other aquatic Species of Conservation Concern. In addition to various rivers and streams, a 30 meter band around each river segment is mapped, as well as wetlands that are wholly or partially contained within the band. The resulting Aquatic Cores are designed to protect 10 MESA-listed fish, 17 non-listed fish, as well as 145 MESA-listed species with all or a portion of their life cycle in aquatic habitats.

Upland Aquatic Buffer - identifies upland areas adjacent to all Aquatic Cores. If protected, these upland areas will help protect river, stream, lake, and pond habitat over the long-term.



Natural Heritage & Endangered Species Program

Route 135, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

An Agency of the Department of Fish & Game

<http://www.nhesp.org>

BC2919 is embedded in **CNL1313** in western Methuen. The Core and CNL extend slightly into Dracut. BioMap2 components in BC2919 in Methuen include:

Aquatic Core - identifies core habitat for fish Species of Conservation Concern and other aquatic Species of Conservation Concern. In addition to various rivers and streams, a 30 meter band around each river segment is mapped, as well as wetlands that are wholly or partially contained within the band. The resulting Aquatic Cores are designed to protect 10 MESA-listed fish, 17 non-listed fish, as well as 145 MESA-listed species with all or a portion of their life cycle in aquatic habitats.

Upland Aquatic Buffer - identifies upland areas adjacent to all Aquatic Cores. If protected, these upland areas will help protect river, stream, lake, and pond habitat over the long-term.

BC2964 and **BC2965** (no CNL) is in northwestern Methuen, with habitat extending into New Hampshire and connecting the two cores. BC2965 is a small sliver of habitat in Methuen cut off from the larger BC2964 by development. The BioMap2 components in BC2964 and BC2965 include:

Listed Vertebrate Species

Blanding's Turtle, *Emydoidea blandingii* (T): Blanding's Turtles inhabit a mix of seasonal pools, marshes, shrub swamps, forest, and open uplands. After overwintering in the deep muds of wetlands, Blanding's Turtles move overland to vernal pools and shrub swamps to feed and mate. Loss of only a few adults annually can cause populations to decline as they do not reproduce until late in life (14-20 yrs), and have low replacement rates due to low nest and juvenile survivorship. Roads are the primary cause of adult mortality.

BC2967 (no CNL) is along the New Hampshire border in the western part of Methuen, west of BC2964. The BioMap2 components in BC2967 include:

Listed Vertebrate Species

Blue-spotted Salamander, *Ambystoma laterale*, Special Concern: Adult and juvenile Blue-spotted Salamanders inhabit upland forest during most of the year, where they reside in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, whereupon they disperse into upland forest.

BC2982 and **CNL1333** are in northeastern Methuen. The BioMap2 components include:

Wetlands, Least disturbed wetland complexes.

Wetland Cores - identifies the most intact wetlands within less developed landscapes-those generally with intact upland buffers, little fragmentation, and minimally disturbed by other stressors associated with roads and development. These wetlands, selected across a diversity of ecological settings, are most likely to support critical wetland functions (i.e., natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future. All wetland Priority Natural Communities are also included as part of Wetland Cores.

Upland Buffers of Wetland Cores -identifies upland areas adjacent to all Wetland Cores. If protected, these upland areas will help support the functioning of each wetland over the long-term.

BC2985 is a large core in eastern Methuen that includes **CNL1334** in the western most part of the core. The eastern part extends a small way into Haverhill. BioMap2 components include:

Listed Vertebrate Species

Blue-spotted Salamander, *Ambystoma laterale*, Special Concern: Adult and juvenile Blue-spotted Salamanders inhabit upland forest during most of the year, where they reside in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, whereupon they disperse into upland forest.

Wood Turtle, *Glyptemys insculpta* (SC), habitat is streams and rivers preferably with long corridors of undeveloped, connected uplands extending on both sides of the waterways. The population in Methuen is the largest known in Essex County.

Wetlands, Least disturbed wetland complexes.

Wetland Cores - identifies the most intact wetlands within less developed landscapes-those generally with intact upland buffers, little fragmentation, and minimally disturbed by other stressors associated with roads and development. These wetlands, selected across a diversity of ecological settings, are most likely to support critical wetland functions (i.e., natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future. All wetland Priority Natural Communities are also included as part of Wetland Cores.

Upland Buffers of Wetland Cores -identifies upland areas adjacent to all Wetland Cores. If protected, these upland areas will help support the functioning of each wetland over the long-term.

BC2990 is embedded in **CNL1337** in northeastern Methuen and both extend into Haverhill. BioMap2 components include:

Wetlands, Least disturbed wetland complexes.

Wetland Cores - identifies the most intact wetlands within less developed landscapes-those generally with intact upland buffers, little fragmentation, and minimally disturbed by other stressors associated with roads and development. These wetlands, selected across a diversity of ecological settings, are most likely to support critical wetland functions (i.e., natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future. All wetland Priority Natural Communities are also included as part of Wetland Cores.

Upland Buffers of Wetland Cores -identifies upland areas adjacent to all Wetland Cores. If protected, these upland areas will help support the functioning of each wetland over the long-term.

BC2991 and CNL1338 are in central northeastern Methuen. BioMap2 components include:

Wetlands, Least disturbed wetland complexes.

Wetland Cores - identifies the most intact wetlands within less developed landscapes-those generally with intact upland buffers, little fragmentation, and minimally disturbed by other stressors associated with roads and development. These wetlands, selected across a diversity of ecological settings, are most likely to support critical wetland functions (i.e., natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future. All wetland Priority Natural Communities are also included as part of Wetland Cores.

Upland Buffers of Wetland Cores -identifies upland areas adjacent to all Wetland Cores. If protected, these upland areas will help support the functioning of each wetland over the long-term.

BC3018 in **CNL1362** is a long core and CNL along the Merrimack River shared with surrounding towns and cities. Components of BioMap2 in Methuen in BC3018 include:

Aquatic Core - identifies core habitat for fish Species of Conservation Concern and other aquatic Species of Conservation Concern. In addition to various rivers and streams, a 30 meter band around each river segment is mapped, as well as wetlands that are wholly or partially contained within the band. The resulting Aquatic Cores are designed to protect 10 MESA-listed fish, 17 non-listed fish, as well as 145 MESA-listed species with all or a portion of their life cycle in aquatic habitats.

Upland Aquatic Buffer - identifies upland areas adjacent to all Aquatic Cores. If protected, these upland areas will help protect river, stream, lake, and pond habitat over the long-term.

Listed Invertebrate Species,

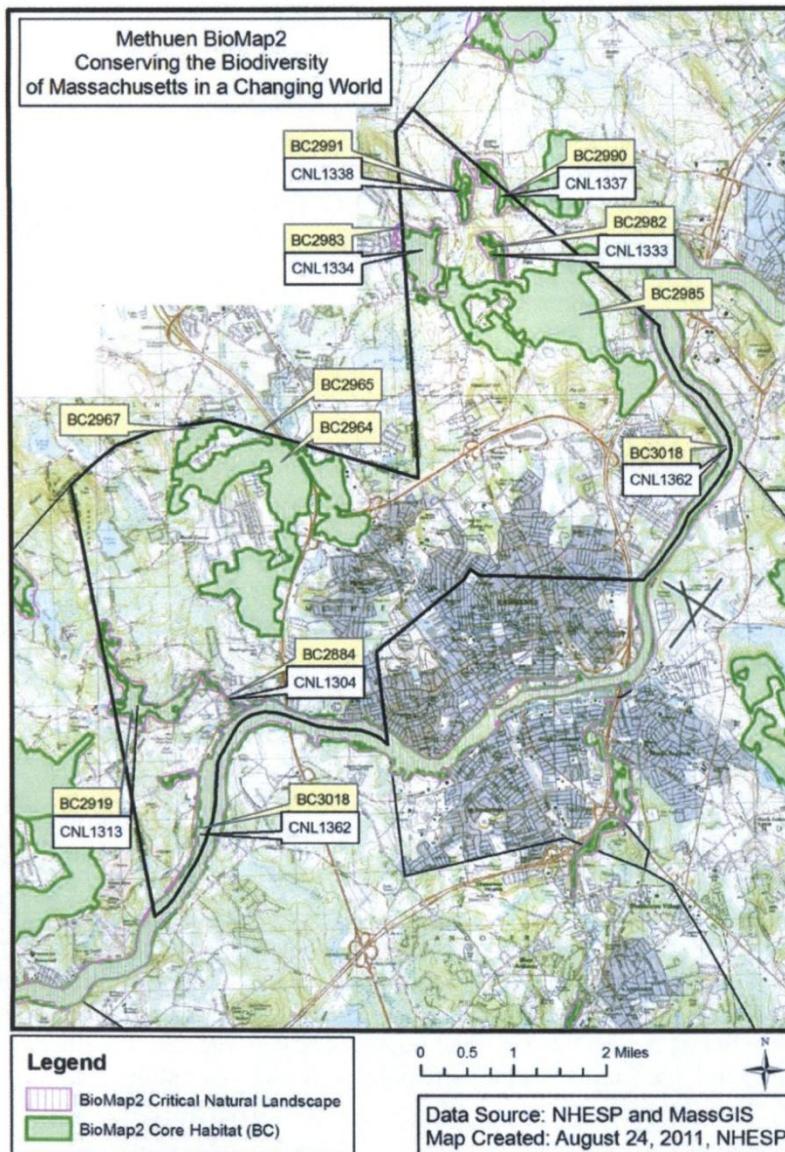
Arrow Clubtail, *Stylurus spiniceps* (T, recommended for delisting in 2011) is a large dragonfly whose aquatic nymphs inhabit medium to large, swift-flowing, sandy-bottomed rivers and occasionally large lakes. The terrestrial adults inhabit riparian areas and the surrounding uplands, and return to the water body to mate and lay eggs.

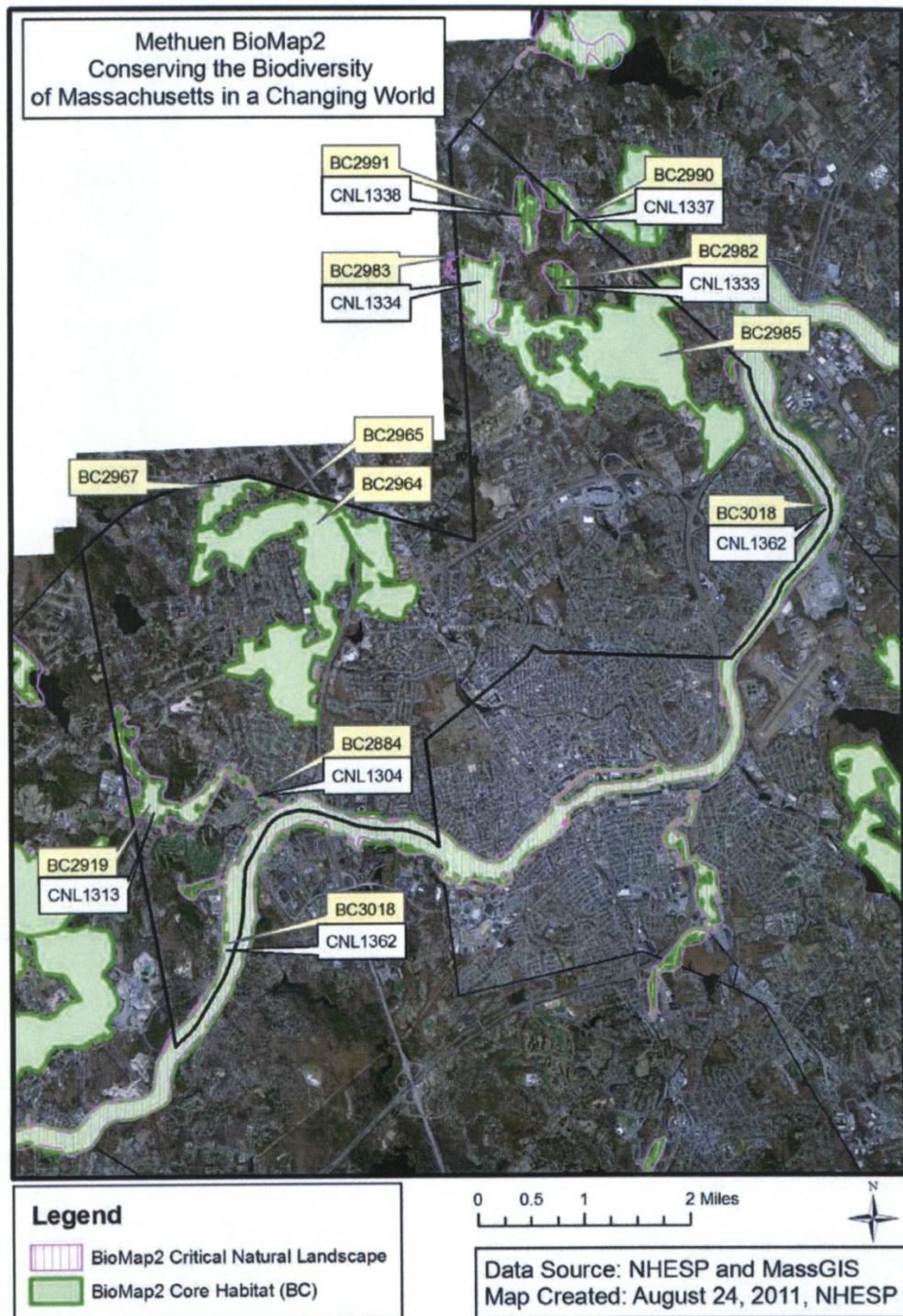
Cobra Clubtails, *Gomphus vastus* (SC) are large dark brown dragonflies. The aquatic nymphs live in large, sandy-bottomed rivers and lakes. In Massachusetts they are found along the Connecticut and Merrimack Rivers. Adults feed and mature in vegetation of adjacent uplands, probably high in the canopy of trees. They return to the water body to mate and lay eggs.

Umber Shadowdragon, *Neurocordulia obsoleta* (SC) is a dragonfly that is found on lakes with rocky shores and medium to large rivers that have relatively little aquatic vegetation. Shadowdragons fly only at dusk when they feed and mate in a frenzy of activity.

Listed Vertebrate Species

Bald Eagle, *Haliaeetus leucocephalus* (the state status of Bald Eagles has been recommended to change from Endangered to Threatened in 2011). Bald Eagles nest in tall trees along large lakes and rivers. The bulk of their diet consists of fish. Large lakes and rivers also support important winter congregations of Bald Eagles.





APPENDIX C

Summary of Public Outreach Interviews

Summary of Public Outreach Interviews

1. William Pare, Methuen Department of Recreation

Mr. Pare feels the City's fields are maxed out. Most kids play soccer early on and then specialize as they get older. He has seen significant growth in lacrosse over the past few years, but baseball is by far the most popular sport offered in the city. The City does not have a recreation center nor does it offer many leagues for adults. Adding lights to existing sports fields would benefit the recreation department's goal of meeting youth demand for recreational activities.

2. Paul George, Athletic Director at Methuen High School

The high school currently only has one turf field, which greatly limits the school's ability to provide a broad range of recreation opportunities for students. The field is overused and not given time to "rest" in the spring. This problem is compounded by poor drainage.

The Athletic Director also believes baseball and softball are the most popular sports followed by football, soccer and basketball. Lacrosse is the fastest growing sport.

3. Captain Thomas Fram, Methuen Police Department

Captain Fram focused on two main issues associated with Methuen Parks: vandalism and crime. He noted that Milk Street Park is particularly susceptible to vandalism because the playground is in the rear of the park far from the street and not accessible by police cruisers. He believes the Tenney Castle Gatehouse is also a target of vandals because the structure is hidden from public view.

Opportunities for additional open space include the rail trail and the old ski hill near Forest Lake.

4. Captain Michael Buote, Methuen Fire Department

The interview with Captain Buote was brief. He gave high marks for the job DPW does in maintaining the parks. They rarely have concerns about brush fires.

5. Heather Robertson, MSPCA's Nevins Farm

Nevins Farm was donated to the MSPCA in 1917 with a number of deed restrictions that prohibit development of the entire parcel beyond the organization's current footprint. The group has approximately 40 acres of undeveloped open space abutting the rail trail.

To date, they are taking a wait and see approach on the development of the path. Their main concern is the parking lot being used by rail trail users rather than visitors to the farm who may be looking to adopt a pet. This could have a potential negative impact on their miss.

6. Edward Sampson, the Methuen Memorial Music Hall

The Methuen Memorial Music Hall is a concert hall that houses the “Great Organ” which was originally built for the Boston Music Hall in 1863. The concert hall grounds have significant frontage on the banks of the Spicket River. Near the parking lot are scenic overlooks of a dam in the River. Mr. Sampson is unsure of the ownership of the dam and is concerned about its structural integrity. Additionally, Spicket River Flooding also poses a risk to the historic structure.

The Board of Trustees is open to more public access to their property as long as it does not interfere with the organization’s mission of providing high quality organ music to concert goers.

7. Peter Paladino, Athletic Director at Central Catholic High School

Central Catholic acquired 30 acres in Methuen for use a sports complex for the Lawrence based High School. The project is currently under design to determine the field capacity of the former Christmas tree farm. The school’s goal is to provide baseball fields and two multisport pitches for soccer and lacrosse. The school believes the project will cost over \$1 million. They have yet to begin a fundraising campaign.

APPENDIX D

Residents Survey Forms (English and Spanish)



City of Methuen, Massachusetts

OFFICE OF THE MAYOR

The Searles Building, 41 Pleasant Street, Suite 306
Methuen, Massachusetts 01844
Telephone: 978-983-8505 Fax: 978-983-8973
E-mail: wmmanzi@ci.methuen.ma.us

William M. Manzi, III
Mayor

Dear Methuen Resident:

Every 5-7 years, Massachusetts communities prepare Open Space and Recreation Plans to guide them in protecting open space and developing recreation areas. The following survey is your opportunity to voice your opinion and help shape Methuen's future. The results of the survey will be used to prepare Methuen's Open Space & Recreation Plan, which is scheduled to be completed later this year. Once it is complete, Methuen will qualify for state and federal grants for acquiring, protecting, and developing open space and recreation areas.

One survey form should be filled out for each household. Please respond for your entire household. Completing the survey should take only 5-10 minutes, and your opinion is very important. If you have questions, please call the Community Development Office at (978) 983-8568. Thank you for your help and cooperation.

Sincerely,

Mayor William M. Manzi, III

Please return your completed survey by **December 31**, 2011. You can drop it off at the Searles Building, Nevins Library, or Senior Center, or mail it to: Community Development Department, Searles Building, 41 Pleasant Street, Suite 217, Methuen, MA 01844.

METHUEN OPEN SPACE & RECREATION SURVEY 2011

Describe You and Your Family

1. Please circle the sex and list the age of each member of your household:
 M/F M/F M/F M/F M/F M/F M/F M/F
2. In which City district do you live?
 East Central West
3. How long have you lived in Methuen? years
4. Does anyone in your household own undeveloped land in Methuen? Yes No

The City of Methuen is an Equal Opportunity/Affirmative Action Employer in its Programs and Activities

Describe Your Family's Interests and Needs

5. Please check your family's favorite recreational activities:

<input type="checkbox"/> Tennis	<input type="checkbox"/> Running/Jogging	<input type="checkbox"/> League Sports
<input type="checkbox"/> Ice Skating	<input type="checkbox"/> Community Events	<input type="checkbox"/> Playgrounds
<input type="checkbox"/> Art Programs	<input type="checkbox"/> Historical Programs	<input type="checkbox"/> Swimming
<input type="checkbox"/> Boating	<input type="checkbox"/> Elderly Programs	<input type="checkbox"/> Fishing
<input type="checkbox"/> Hunting	<input type="checkbox"/> Cross-country Skiing	<input type="checkbox"/> Hiking/Walking
<input type="checkbox"/> Birdwatching	<input type="checkbox"/> Gardening	<input type="checkbox"/> Canoeing/Kayaking
<input type="checkbox"/> Bicycling	<input type="checkbox"/> Mountain Biking	<input type="checkbox"/> Nature Programs
<input type="checkbox"/> Skateboarding	<input type="checkbox"/> Golf	<input type="checkbox"/> Other _____

6. Do you and your family NOT participate in your favorite activities for any of the following reasons? (check all that apply)

<input type="checkbox"/> Too expensive	<input type="checkbox"/> Need instruction	<input type="checkbox"/> Not enough time
<input type="checkbox"/> No programs	<input type="checkbox"/> No transportation	<input type="checkbox"/> Too crowded
<input type="checkbox"/> Safety concerns	<input type="checkbox"/> Not close enough	<input type="checkbox"/> Other _____

7. Are recreational areas well-distributed throughout Methuen? Yes No

If no, which areas are under-served? _____

8. In which recreational programs do you and your family participate? _____

9. In which recreational activities do you and your family participate outside Methuen? _____

10. Do you think Methuen needs more of the following? (check all that apply)

<input type="checkbox"/> Baseball/Softball Fields	<input type="checkbox"/> Soccer Fields	<input type="checkbox"/> Bike Paths/Trails
<input type="checkbox"/> Jogging/Walking Trails	<input type="checkbox"/> Sidewalks	<input type="checkbox"/> Fishing Places
<input type="checkbox"/> Swimming Facilities	<input type="checkbox"/> Tennis Courts	<input type="checkbox"/> Canoeing/Kayaking Places
<input type="checkbox"/> Parks/Playgrounds	<input type="checkbox"/> Skiing Trails	<input type="checkbox"/> Hunting Places
<input type="checkbox"/> Motor Boating Places	<input type="checkbox"/> Ice Skating Places	<input type="checkbox"/> Sailing Places
<input type="checkbox"/> Nature Programs	<input type="checkbox"/> Basketball Courts	<input type="checkbox"/> Other _____
<input type="checkbox"/> Skateboarding Facilities	<input type="checkbox"/> Skateboarding Facilities	

11. Please list any areas in Methuen that should be developed for recreational use: _____

12. Please list any parcels of land in Methuen you feel should be acquired or protected: _____

The City of Methuen is an Equal Opportunity/Affirmative Action Employer in its Programs and Activities

13. In general, how satisfied are you and your family with the recreational opportunities in Methuen?
 Very satisfied Generally satisfied Dissatisfied

Why? _____

14. Should improvements be made to any existing parks or recreational facilities? If yes, please list.

How Should Methuen Protect Open Space?

15. How would you prefer Methuen use its public undeveloped property?

Nature Trails/Passive Recreation Kept in natural state
 Community Farming and Forestry Other _____
 Parks/Active Recreation _____

16. Do you think it is important to preserve: Yes No

Open space for water supply protection? ____ ____
Open space for passive recreation/conservation? ____ ____
Open space for active recreation (parks, ballfields)? ____ ____
Buildings/areas of historical interest? ____ ____
Scenic landscapes and farmlands? ____ ____
Stream or trail corridors? ____ ____
Fish and wildlife habitat? ____ ____

17. What methods of open space protection do you support?

Land acquisition by Methuen
 Land acquisition only through federal/state grants
 Government regulation
 Specific conservation restrictions on future developments
 Open space zoning
 Other (describe) _____

18. To preserve open space in Methuen would you: Yes No

Donate land to the City? ____ ____
Donate money to the City to buy land? ____ ____
Donate land to a private nonprofit land trust? ____ ____
Rewrite your deed to limit future development or use of your land? ____ ____
 Other (describe) _____

Would you volunteer to assist in working on conservation projects, local trails, or recreational programs, or to participate on a City board? Yes No

Area(s) of Interest _____

Name and address _____

Telephone number _____ E-mail address _____



City of Methuen, Massachusetts

OFFICE OF THE MAYOR

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Methuen, Massachusetts 01844

Telephone: 978-983-8505 Fax: 978-983-8973

E-mail: wmmanzi@ci.methuen.ma.us

William M. Manzi, III
Mayor

Estimado residente de Methuen:

Cada 5 a 7 años, comunidades en Massachusetts preparan Planes para Espacios Abiertos & Recreación para guiarlos en la protección espacios abiertos y desarrollo de areas de recreación. La siguiente encuesta es su oportunidad de expresar su opinión y ayudar a dar forma a Methuen en el futuro. Los resultados de la encuesta serán utilizados para preparar los Planos de los Espacios Abiertos & Recreacion de Methuen, los cuales están programados para que concluyan al final de este año. Una vez terminados, Methuen calificaría para fondos estatales y federales para la adquisición, protección y desarrollo de espacios abiertos areas de recreación.

Un formulario de encuesta debe ser llenado por cada hogar. Completar la encuesta debe tomarle solamente de 5-10 minutos, y su opinion es sumamente importante. Si usted tiene preguntas por favor llame a la oficina de Desarrollo Comunitario al (978) 983-8568. Gracias por su ayuda y cooperación.

Sinceramente,

Mayor William M. Manzi, III

Por favor devuelva su encuesta llena para el **31 de Diciembre** 2011. Puede dejarla en el Edificio Searles, en la Biblioteca Nevins, o en el Centro de Envejecientes, o puede enviarla por correo al Departamento de Desarrollo Comunitario, Edificio Searles, 41 de la calle Pleasant, Suite 217, Methuen, MA 01844.

ENCUESTA PARA ESPACIO ABIERTO & RECREACION DE METHUEN 2011

Describase Usted y su Familia

1. Por favor marque el sexo y la edad de los miembros de su familia:

H/M H/M H/M H/M H/M H/M H/M H/M

2. En cual distrito de la ciudad usted vive?

Este Centro Oeste

3. Cuanto tiempo ha estado usted viviendo en Methuen? años

4. Hay alguien en su casa que sea propietario de un terreno sin desarrollar en Methuen? Si No

Describa las necesidades e intereses de su familia

5. Por favor escoja las actividades recreacionales favoritas de su familia:

<input type="checkbox"/> Tenis	<input type="checkbox"/> Correr/Trotar	<input type="checkbox"/> Deportes de Liga
<input type="checkbox"/> Patinaje en Hielo	<input type="checkbox"/> Eventos de	<input type="checkbox"/> Jardines Infantiles
<input type="checkbox"/> Programas de Arte	<input type="checkbox"/> comunidad	<input type="checkbox"/> Natación
<input type="checkbox"/> Bote	<input type="checkbox"/> Programas Historicos	<input type="checkbox"/> Pesca
<input type="checkbox"/> Caza	<input type="checkbox"/> Programas de	<input type="checkbox"/> Alpinaje/Caminar
<input type="checkbox"/> Observar aves	<input type="checkbox"/> Envejecientes	<input type="checkbox"/> Canoa/Kayak
<input type="checkbox"/> Bicicleta	<input type="checkbox"/> Ski de montaña	<input type="checkbox"/> Programas Naturales
<input type="checkbox"/> Patineta	<input type="checkbox"/> Jardinería	<input type="checkbox"/> Otros _____
	<input type="checkbox"/> Bicicleta de Montaña	

6. Usted o su familia NO participan en sus actividades favoritas por cualquiera de las siguientes razones? (marque todas las que aplican)

<input type="checkbox"/> Muy caro	<input type="checkbox"/> Necesidad de	<input type="checkbox"/> No suficiente tiempo
<input type="checkbox"/> Falta de programas	<input type="checkbox"/> Instrucciones	<input type="checkbox"/> Muy concurrido
<input type="checkbox"/> Preocupaciones de	<input type="checkbox"/> No transportación	<input type="checkbox"/> Otro _____
seguridad	<input type="checkbox"/> No lo	
	<input type="checkbox"/> suficientemente cerca	

7. Estan las areas de recreación bien distribuidas en Methuen? Si No

Si es no, cuales areas estan fuera de servicio? _____

8. En cuales programas recreacionales le gustaria a usted y su familia participar? _____

9. En cuales actividades recreacionales usted y su familia participan fuera de Methuen? _____

10. Usted piensa que Methuen necesita más de lo siguiente? (marque todas las que aplican)

<input type="checkbox"/> Campos de	<input type="checkbox"/> Campos de Fúbol	<input type="checkbox"/> Caminos/senderos para
Beisbol/Softball	<input type="checkbox"/> Aceras	<input type="checkbox"/> bicicletas
<input type="checkbox"/> Senderos para	<input type="checkbox"/> Canchas de Tenis	<input type="checkbox"/> Lugares para pescar
caminar/trotar	<input type="checkbox"/> Senderos de Esquiar	<input type="checkbox"/> Lugares para canoas/kayak
<input type="checkbox"/> Facilidades para nadar	<input type="checkbox"/> Lugares de patinar en	<input type="checkbox"/> Lugares de caceria
<input type="checkbox"/> Parques/Jardines	<input type="checkbox"/> hielo	<input type="checkbox"/> Lugares para navegar
infantiles	<input type="checkbox"/> Canchas de Balocesto	<input type="checkbox"/> Otro _____
<input type="checkbox"/> Lugares para botes de	<input type="checkbox"/> Facilidades para patinetas	
motor		

11. Por favor mencione las areas en Methuen que deben ser desarrolladas para recreacion:

12. Por favor mencione las parcelas de tierra en Methuen que deberian ser protegidas:

The City of Methuen is an Equal Opportunity/Affirmative Action Employer in its Programs and Activities

13. En lo general que tan satisfechos estan usted y su familia de las areas recreacionales en Methuen?

Muy satisfechos En general satisfecho Insatisfechos

Porqué? _____

14. Deben hacerse mejoras a parques y areas recreacionales ya existentes? Si, por favor mencione.

Como deberia Methuen proteger el Espacio Abierto?

15. Como usted preferiria que Methuen utilize sus espacios publicos no urbanizados?

Senderos Naturales/Recreacion Pasiva Mantenerlo en su estado natural
 Agricultura comunitaria y Bosques Otro _____
 Parques/Recreación activa _____

16. Qué usted cree que es importante de preservar?: Si No

Espacio abierto para proteger la suministración de agua? _____
Espacio abierto para la recreación/conservación pasiva? _____
Espacios abiertos para la recreación activa (parques,campos de pelota)? _____
Edificios/areas de interés historico? _____
Paisajes o granjas? _____
Arroyos o senderos? _____
Peces o habitat salvaje? _____

17. Que métodos de protección para los espacios abiertos usted apoya?

Adquisición de tierras por parte de Methuen
 Adquisición de tierras solo a través de fondos federales/estatales
 Regulaciones gubernamentales
 Restricciones específicas de conservación sobre evolución futura
 Zonificación de espacio abierto
 Otra (describa) _____

18. Para preservar el espacio abierto en Methuen usted: Si No

Donaria tierra a la ciudad? _____
Donaria dinero a la ciudad para comprar tierra? _____
Donaria tierra a un fideicomiso de tierras privado sin fines de lucro? _____
Amendaria su título de propiedad para limitar futuro desarrollo y uso de sus tierras? _____
 Otra (describa) _____

Usted se haria voluntario para ayudar a trabajar en proyectos de conservación, senderos locales, o programas recreacionales, o participar en juntas para la Ciudad? Si No

Area(s) de interés _____

Nombre y dirección _____

Número de teléfono _____ E-mail _____

APPENDIX E

Summary of Residents Survey Results

GROUNDWORK LAWRENCE

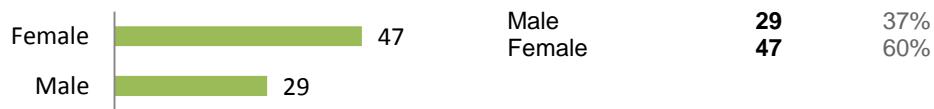
Methuen Open Space & Recreation Plan

Survey Results

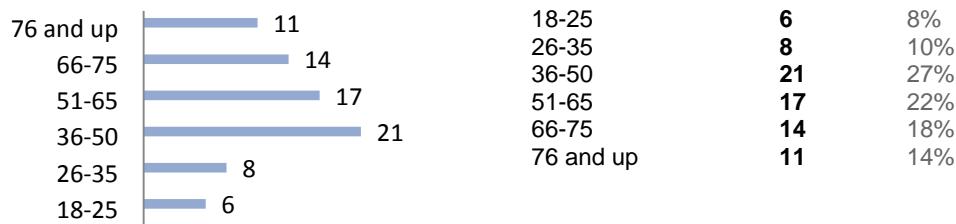
6/1/2012

Methuen Open Space & Recreation Plan Survey Results

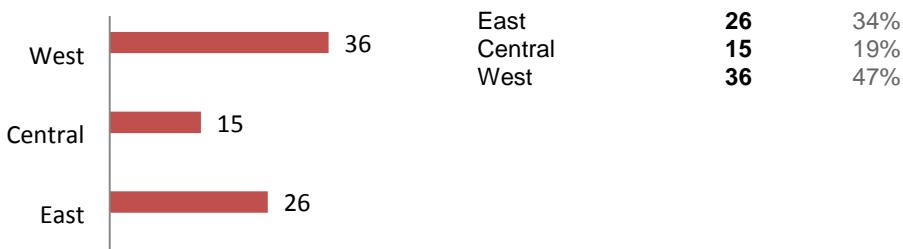
Gender:



Age Groups:



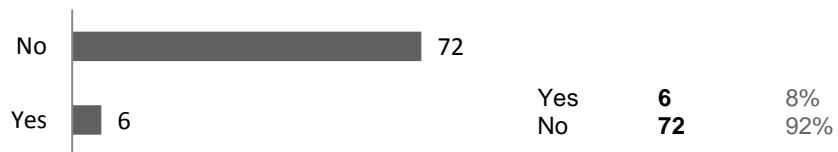
City District:



Length of Residency in Methuen:



Does anyone in your household own undeveloped land in Methuen?



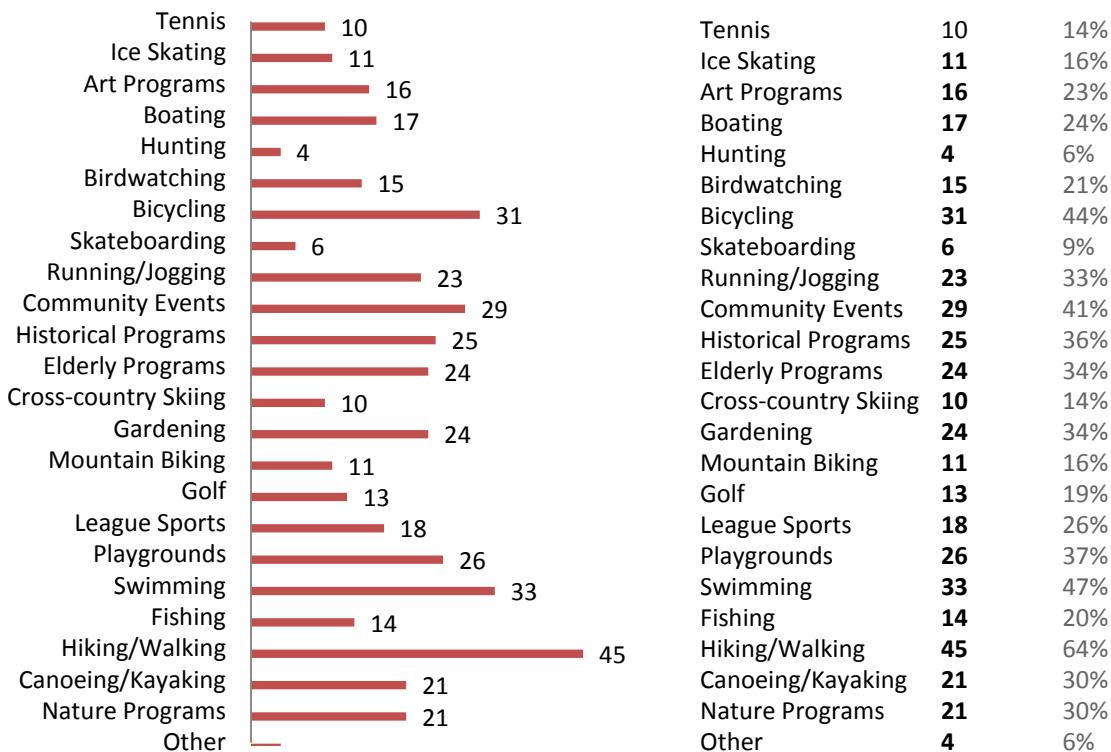
Are recreational areas well-distributed throughout Methuen?



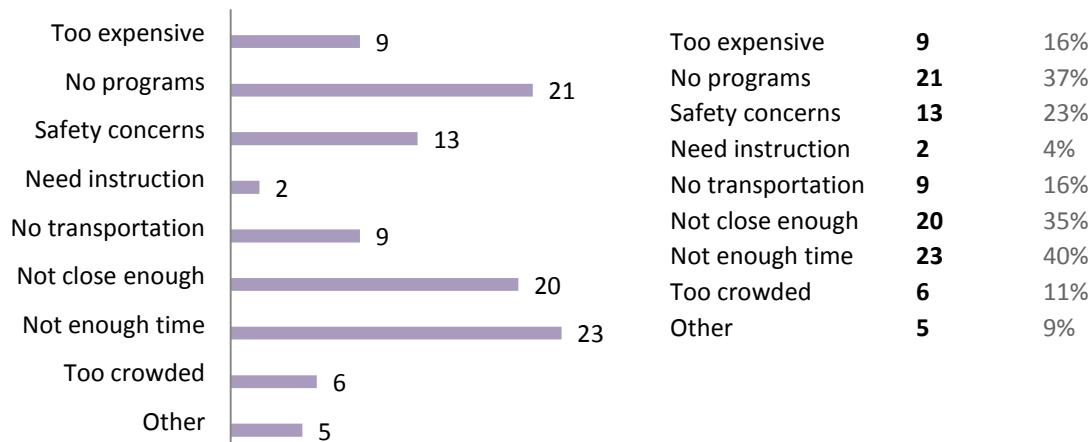
If no, which areas are underserved?

Quantity	Location
1	Burnham Road & Riverside Drive
1	All
1	Cypress Avenue area
3	East Methuen
6	West Methuen
1	General Merrimack River Area
1	Veteran's Park on Milk Street
1	valley RT110 area

Families' favorite recreational activities



Do you and your family NOT participate in your favorite activities for any of the following?



In which recreational areas do you and your family participate?

- *Babe Ruth baseball, 4th of July Fireworks, High school age rec Basketball*
- *bicycling, hiking, kayaking, snow shoeing*
- *biking/walking, nature, bird watching*
- *Boating in the Merrimack River*
- *Golfing at Hickory Hill*

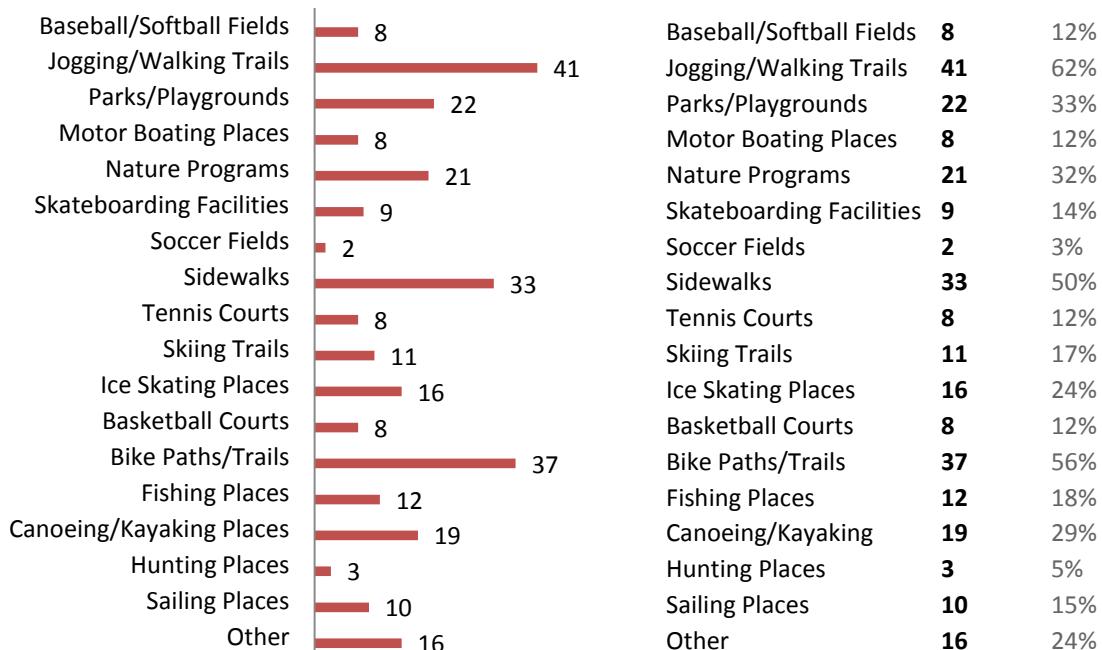
- *community events, elderly programs*
- *dancing at senior center*
- *football, basketball*
- *golf, swimming*
- *Hiking, Biking, Skiing, Nature Walks*
- *hockey, football, baseball, softball, lacrosse and basketball*
- *Ice skating, youth basketball, youth street hockey*
- *Merrimack River*
- *Milk Street walking trail*
- *My sons participated in league sports, baseball, basketball, and we used the playgrounds*
- *none right now, all in past*
- *riverside Park*
- *safety, elderly programs*
- *senior center activities*
- *Senior Center concerts*
- *Senior center to be social*
- *softball*
- *Sr. center*
- *The park near the Merrimack River at the intersection of Burnham Road & Riverside Drive. We also use the playgrounds at the park off Milk Street.*
- *Veteran's Park for walking*
- *walking at parks*
- *Methuen girls softball*
- *walking in the neighborhood and in the park*
- *attending programs at the Senior Center, library*
- *Walking, Tennis, Biking, Running*
- *walking-bicycling*
- *We go to Veterans Park b.c it is the only substantial playground/walking area in Methuen. Even in Veterans one of the playgrounds was taken out and not replaced.*
- *We participated in swimming lessons at Forest Lake, sports programs through the recreational dept, we use many parks and playgrounds.*
- *We walk down the Riverside Drive Park*

In which recreational areas do you and your family participate in outside Methuen?

- *ATV in New Hampshire, Biking in NH, Hiking in NH*
- *Bike Riding, Hiking*
- *Boating at the beach*
- *Fishing at the beach*
- *Golfing at various golf courses*
- *boating, bicycling, league sports, swimming*
- *boating, cross-country skiing*
- *bowling*
- *bowling*
- *Cedardale*
- *fishing, swimming, hiking, canoeing*
- *go to all senior center events*
- *golf*
- *golf, cross country skiing, swimming*
- *hiking, biking, sight seeing*
- *Hiking, Community Events, Nature Walks, Biking*

- *hiking, trail walking*
- *hockey, basketball, swimming*
- *Kayaking, Golf*
- *Lake Winnipaisauki for boating kayaking and swimming*
- *Lawrence Community Works*
- *Rail Trail in Derry.*
- *rail trails, boat ramps, birdwatching groups*
- *shows and Foxwood Baseball Games*
- *softball, dog park*
- *State parks*
- *Swimming lessons*
- *Swimming, Hiking*
- *theater, children's playground (grandchildren)*
- *Walden Pond*
- *walking-bicycling*
- *We typically go to Andover to use playgrounds because Methuen's are so poor. And there are NO wheel-chair accessible playgrounds in the ENTIRE Merrimack valley, which is just plain WRONG. Kids and families with disabilities should be able to play together in their community.*
- *Windham rail trail, Bruce Freeman rail trail, Mausley State Park, Phillips Academy hiking trail, Ipswich Bird Santuary, Carlise State Park, Kenoza Park in Haverhill.*

Do you think Methuen needs more of the following?



Please list any areas in Methuen that should be developed for recreational use

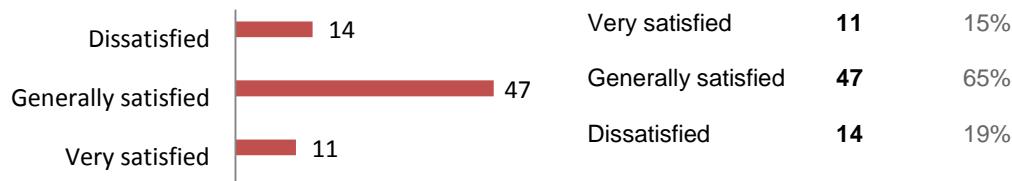
- *Bea's boat ramp should be built. Sidewalks on 110 from rotary to Dracut are largely overgrown and unusable, they should be cleaned. People are forced to walk/run in street. Someone has already been killed.*
- *Cross Street behind Fireside Restaurant*
- *cycling within the city-to schools. Kids should be allowed to ride and park their bikes at school!*
- *East End*
- *Forest Lake area.*
- *Forest Lake. Snowmobilers ruin the skating area. Also don't have a safe place to put a Kayak in the Merrimack River. To steep at Riverwalk Park/ too rocky at Jackson's*
- *have undeveloped space, leave it for nature*
- *in West Methuen, empty spaces should be occupied by a recreational building for kids to hang out*
- *Merrimack River*
- *Rail Trail*
- *more along the east side long rte 110 or rte 113*
- *Old hiking-walking trails should be re-established at end of Washington St, Nevins Bird Sanctuary; Town Forest*
- *Rail Trail*
- *Rail trail, Spicket River, just accessible areas for canoeing and kayaking. Also, please clean it up and keep local businesses from using degreasers, car wax, lawn fertilizer/machinery, and equipment on the riverbanks.*
- *Rail/Trail from Lawrence to Methuen, End of Washington Street/Hawks Brook Area*
- *Safer playgrounds. More police patrols around the current playgrounds*
- *Tenney Castle*
- *The area of Beas and the riverside park-- playgrounds. The area near JayGees*
- *The Old Bea's restaurant land should be a park/kayak/sailing launch area*
- *The old railroad line. Nevins Bird Sanctuary needs trails*
- *The rail trail*
- *The space that used to be Bea's Sandwiches on Riverside. The town bought it for boat launching purposes, then abandoned it.*
- *The Valley*
- *West End*
- *West End*
- *west end*

Please list any parcels of land in Methuen you feel should be acquired or protected

- *all open areas*
- *Along the riverfront should be protected*
- *Any available spaces*
- *Broadway Street*
- *Brox land between Wheeler St, Hickory Hill GC and Lowell St Ext should be protected. Too late for Zambino property....*
- *Hawks Brook Area*
- *Historical Sites*
- *Please try to get as much open space as possible*
- *Rail Trail*
- *Spicket River/Bird Sanctuary area, Rail Lands*
- *Tenney Castle area Park!!!!*
- *the land on the river on 110 where there is an old nursery (going towards dracut)*

- *The parcel of land near the former train depots and Shadi's Restaurant. Eyesore, one, but so many towns have refurbished their old depots and even use them (Reading, MA and Salem, NH in particular) The land adjacent to it, across from Tony's Barbershop is fenced off since its some kind of polluted land. That has been sitting there for too many years, and that's a shame. Makes Methuen look slow and uncaring about its public spaces and public safety.*
- *We shouldn't over build anywhere*

In general, how satisfied are you and your family with the recreational opportunities in Methuen?



Why?

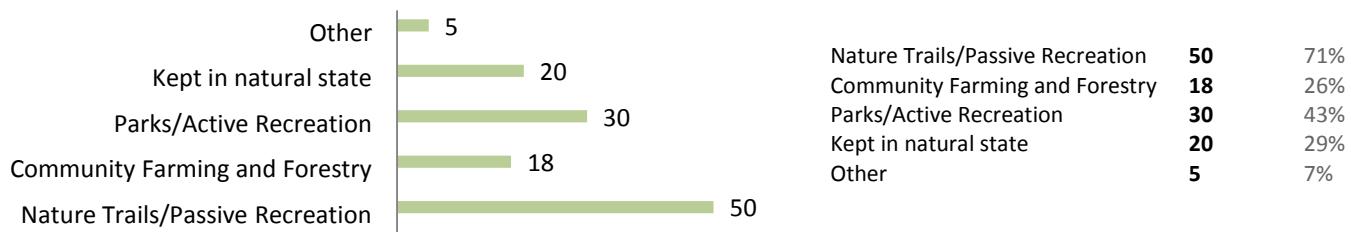
- *There is not a wide enough selection, it is not safe to walk or jog on the public roads. There needs to be places to do that.*
- *A lot of places are rundown, not suitable for kids*
- *adequate facilities*
- *Always can find a place to go. Yet no place to ride a bike*
- *Available as needed and time allows*
- *Do they exist in Methuen? If so, they are not well communicated.*
- *don't know what this means*
- *I have to travel to enjoy natural site*
- *I would like to have a rail trail for me and my kids to ride our bikes on. It is such a safety hazard riding bikes in our neighborhood.*
- *In this stage in our lives the recreational opportunities are adequate for us, but if I had children, particularly teen-agers, I think more opportunities are needed.*
- *keep dirt bikes and ATV off the old ski hill- Town Forest*
- *need more*
- *No place to walk safely and enjoy nature*
- *No safe areas to run, kayak, (access) bicycle, snowshoe, or X-country skiing*
- *There are a lot of places to enjoy the outdoors, and I think the city does a lot for residents in this area. I am hoping the rail trail comes to pass soon...feels like I have been hearing about it forever, but haven't seen any work done.*
- *There are no ice hockey rinks, nearest is Salem, NH, except at the high school.*
- *There isn't a Boys and Girls Club, nearest is Lawrence.*
- *There isn't a community pool.*
- *I'm from a town in Massachusetts that has a Boys and Girls Club, indoor skating, a community pool, public skating rinks, several basketball leagues, competitive town-wide intramural sports. There isn't a lot of that in Methuen.*
- *There needs to be a place for dog owners that can walk with their dogs--It is totally unfair!!*
- *There really aren't any in the West side/ Pelham Street*
- *they offer a great amount at reasonable prices*
- *we are lucky to have the open space we do.*
- *Methuen Girl's softball is terrifically run*

- *we do have a close park at Milk Street, however we have to drive thru the whole loop area to get there, and its really more geared towards baseball. it would be nice to have a walking distance park for the pleasant valley neighborhoods.*
- *would love a dog park and the rail trail*

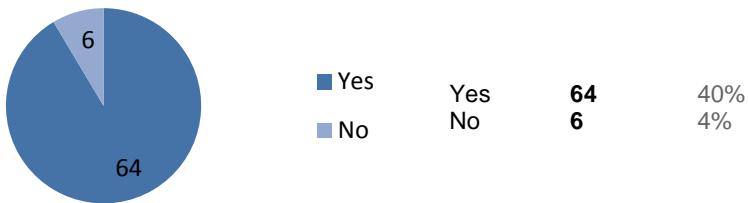
Should improvements be made to any existing parks or recreational facilities? If yes, please list:

- *Better cleanliness of sandy beach at Forest Lake (bird droppings). More life guard time in season*
- *Better/more parking at Veterans Park*
- *general maintenance*
- *I don't support adding more parks if we can't keep up and maintain the parks we already have. I live close to the park on Gill Avenue and people are afraid to go there. It's not a place I took my children. I would take them across town to Milk Street park. My sons play basketball and the hoops at the schools are generally in need of repair.*
- *I live in Homestead Acres off Howe Street. We have a tennis court that could be better used as a park-it would attract families with small children.*
- *not just preventive maintenance*
- *Rail Trail, Spicket River-Conservation, birding areas*
- *Riverside Drive Park should allow dogs on leash*
- *Riverside Park new swings etc nothing for children.*
- *Riverside Park on Riverside Drive*
- *Sidewalks cleaned and repaired.*
- *sidewalks, crosswalks, caution light at Giel Ave and Curiant Hill Rd. Sidewalk on east side of railroad street from '5 Corner Bridge' at fire station to open area at Railroad Depot.*
- *stop motorized use of ATVs, dirt bikes, etc*
- *Tenney Castle!!*
- *The playgrounds are in terrible shape. Riverwalk park, Gill Ave playground, Veterans Park on Milk St....all have broken glass, trash and graffiti.*
- *Tpark near the Merrimack River at the intersection of Burnham Road & Riverside Drive needs a playground.*
- *Veteran's Park on Milk Street and Riverside Park*
- *West End should have more recreational facilities*
- *Yes, Milk Street Park! Look at Field of Dreams in Salem, NH as an example*
- *yes, more equipment for the children*
- *Yes, west end Burnham park*

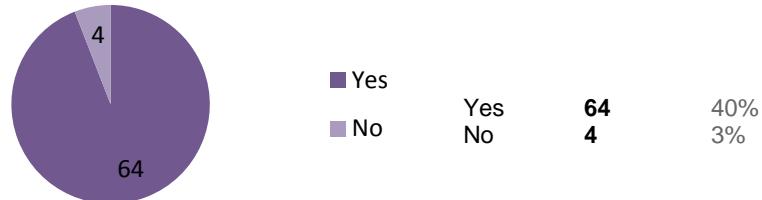
How would you prefer Methuen use its public undeveloped property?



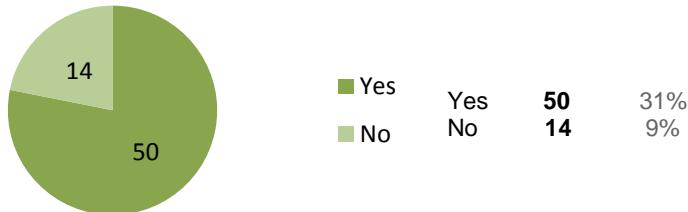
Do you think it is important to preserve open space for water supply protection?



Do you think it is important to preserve open space for passive recreation/conservation?



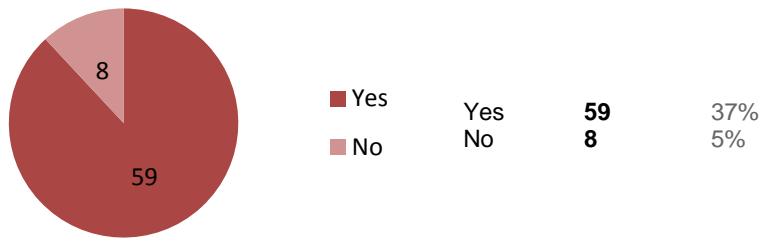
Do you think it is important to preserve open space for active recreation (parks, ballfields, etc)?



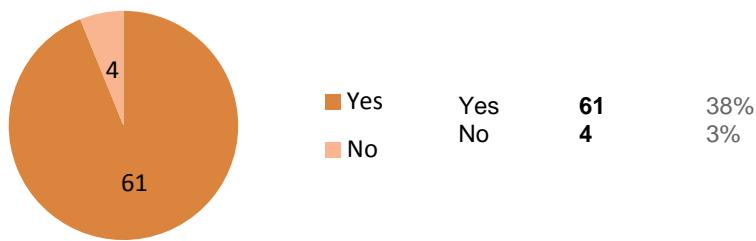
Do you think it is important to preserve buildings/areas of historical interest?



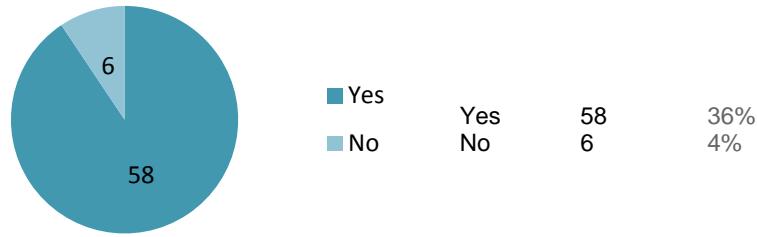
Do you think it is important to preserve scenic landscapes and farmlands?



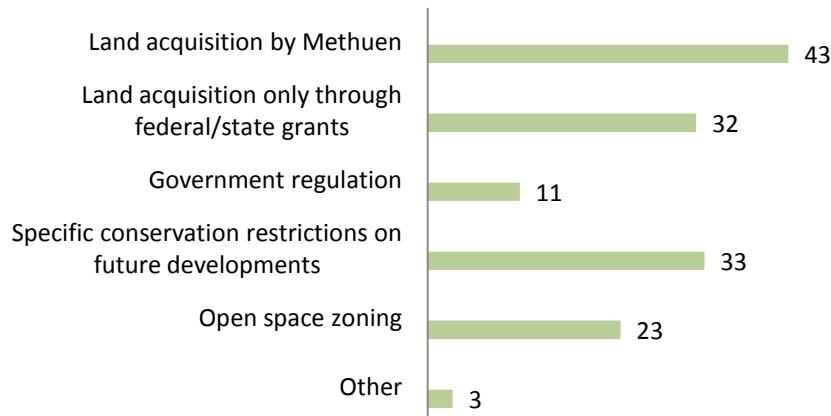
Do you think it is important to preserve stream or trail corridors?



Do you think it is important to preserve fish and wildlife habitat?



What methods of open space protection do you support?

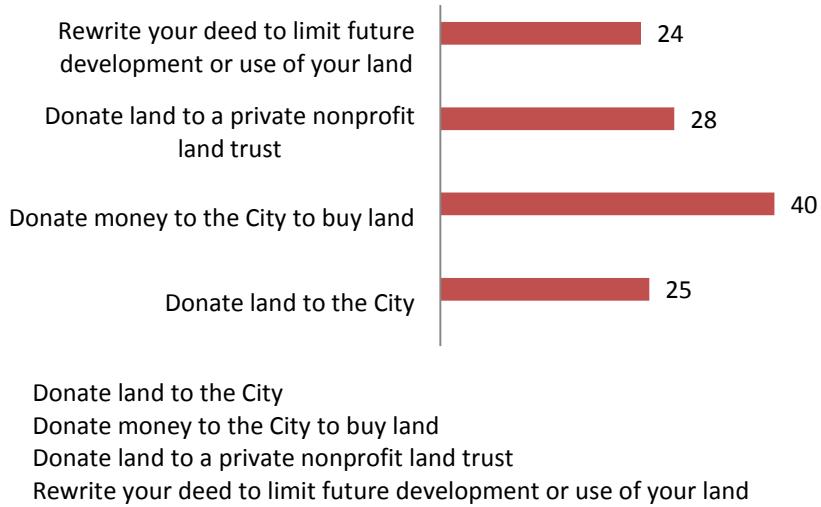


Land acquisition by Methuen	43	65%
Land acquisition only through federal/state grants	32	48%
Government regulation	11	17%
Specific conservation restrictions on future developments	33	50%
Open space zoning	23	35%
Other	3	5%

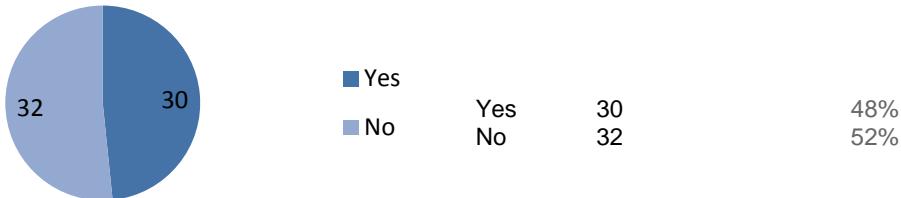
Other?

- *our property taxes should be sufficient. federal grants*
- *possibly*
- *raise money for targeted projects (i.e. accessible playground)*

To preserve open space in Methuen would you (check all that apply):



Would you volunteer to assist in working on conservation projects, local trails, or recreational programs, or to participate on a City board?



Area(s) of Interest

- *accessible playground*
- *All areas*
- *Around Burncim Road*
- *Bird Sanctuaries, Rail Trail, Nature Walks, Rover Clean up and protection*
- *Dog Park or Rail Trail*
- *Dog Parks!!!*
- *I would volunteer to work on the rail trail; however I do not have the time at present.*
- *Methuen*
- *Methuen, Lawrence*
- *Nature trails*
- *Parks and Active Recreation*
- *Rail Trail*
- *River/Boating/Kayaking Projects*

APPENDIX F

CITY OF METHUEN AMERICAN'S WITH DISABILITIES ACT TRANSITION PLAN UPDATE