Open Space & Recreation Plan
2015-2022
The City of Springfield, Massachusetts

OPEN SPACE AND RECREATION PLAN

FOR THE PERIOD:

SEPTEMBER 1, 2015 – AUGUST 31, 2022

SPRINGFIELD, MASSACHUSETTS

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Table of Contents

SECTION 1: PLAN SUMMARY

The seven-year program of open space improvements presented in this report contains the following key elements:

- **Continued restoration of parks and playgrounds with emphasis on high-use facilities in densely populated neighborhoods.**
- **Continued implementation of the Forest Park Master Plan.**
- **A continuation of the lakes and ponds restoration program.**
- **Management of non-point source water pollution and compliance with NPDES regulations**
- **Conservation Commission acquisition of land with wetland or wildlife value, forest management, as well as trail and hazard tree maintenance on existing properties.**
- **Implementation of the Springfield Bike and Pedestrian Complete Streets Master Plan.**
- **Promote the maturation and continued growth of community gardens and urban agriculture.**
- **Aggressive implementation of a non-native/invasive species vegetation management program.**
- **Initiation/implementation of programs that will promote recreational uses of the Connecticut River Walk and Bikeway as well as planning for connections from the River Walk to existing recreational facilities and other destinations.**

As with the previous plans, this plan is an ambitious one that expands on the concept that a well maintained system of parks, playgrounds and natural areas play a vital role in the quality of urban life.

Recent projects, such as the completion of the Johnny Appleseed and Camp Wilder Parks, the in progress Phaneuf Environmental Center, as well as the continuous upgrades of all open space areas have greatly benefited from and will continue to require federal and state governments extending financial support through grant programs.

INDIAN LEAP, CHICOPEE RIVER


Linda's
PARK

SECTION 2: INTRODUCTION

A. Purpose of Plan

The Open Space Plan for FY 15 through FY 21 sets forth a comprehensive park and conservation land improvement program for the benefit of the residents of Springfield and beyond. It establishes a framework for guiding city expenditures in the ensuing seven years and identifies potential federal and state funding sources for proposed activities. Approval of the Plan, by the Massachusetts Executive Office of Energy and Environmental Affairs, Division of Conservation Services, establishes eligibility for financial support from federal and state agencies for a wide range of park, conservation and recreational programs.

The Plan updates an open space plan prepared in 2008 and components of programs first proposed in the earlier plans are scheduled in the current plan. Projects such as improvements to Forest Park, the City's largest and most heavily used park, and the pond and lakes restoration program, are on-going and date back to the early 1980's. These are long term projects with scopes that go beyond any one Seven Year Open Space Plan.

All recommendations within this plan can only proceed with support from local, state and federal agencies and the residents of Springfield.

B. Planning Process and Public Participation

The Office of Planning & Economic Development: The Office of Planning & Economic Development is the central planning agency of the city. As such, it provides services and overall coordination for a number of other city departments. Our planners maintain a continuous dialog with the neighborhood councils and civic groups to ensure input during the planning process.

Coordination is an ongoing function of the Office of Planning & Economic Development related to its responsibility of preparing and maintaining a comprehensive plan for the development of the city. With respect to open space and recreation planning, coordination is achieved in a number of ways: A member of the Park Commission serves on the Planning Board and both the Historical and Riverfront Development Commissions are staffed by Office of Planning & Economic Development personnel. Moreover, the Office of Planning & Economic Development has traditionally provided planning services for both the Department of Parks, Buildings & Recreation Management and Conservation Commission and accordingly, assumed the lead role in plan preparation and coordination of the 1985, 1992, 1997, 2002 and 2008 Open Space Plans.

The Department of Parks, Buildings & Recreation Management: The Department of Parks, Buildings & Recreation Management (PBRM) has an annual budget of approximately $11 million dollars and has a full-time staff of 105 employees, supplemented by 280 seasonal lifeguards, recreation leaders and laborers. A commission consisting of five members appointed by the Mayor serves as the policy-making body for the department. *The parks department has acquired 6 new properties either expanding existing facilities or creating brand new parks since 2008.*

The mission of the Springfield Park and Recreation Department is to improve residents' quality of life by maintaining and improving the City's parks and open space, offering a diverse range of recreation programs, as well as maintaining and improving all municipal and City-owned facilities and schools.

The provision of neighborhood level programming receives the most emphasis by the department, and attendance figures indicate that these efforts are successful. Highest use levels occur at those facilities which serve low income and minority neighborhoods. Arts and crafts, roller skating, bicycling, picnics, swimming, track and field, and athletic contests are examples of playground activities that are offered. (See Appendix I)

The Recreation Division offers a variety of programs for youth and young adults with disabilities from ages three to twenty-one, and year

round programs for adults with disabilities. Therapeutic recreation programs are staffed by individuals who are trained in therapeutic recreation. The programs include crafts, swimming, adaptive activities, cooking, trips, and special events, and are open to both residents and nonresidents. Many activities are designed to provide carry-over skills that can facilitate independence in self-care.

General park, terrace, and open space maintenance along with maintenance of all park buildings and equipment, is the responsibility of the Maintenance Division. The Department also has a Forestry division which is responsible for a tree nursery, maintenance of all city trees, and special projects such as reforestation in areas of the City affected by the June 1, 2011 Tornado and October 29, 2011 nor'easter.

The Horticulture Division is responsible for horticultural exhibits; landscaping, the park greenhouse, two golf courses and a skating rink are operated by the Department of Parks, Buildings & Recreation Management as well.

The facilities division is responsible for all aspects of the maintenance, repair, and daily building operations of all municipal, school buildings, and grounds. PBRM is committed to maintaining our public building and city vehicles in a manner that will sustain a safe healthy and productive learning, and working environment for the occupants and visitors of all of our schools, municipal buildings and grounds.

The Facilities Division is responsible for maintaining all municipal buildings and infrastructure. The department oversees the maintenance needs of 52 School Buildings, 10 Libraries, the Municipal Group (City Hall, Symphony Hall and the Campanile), and all city aquatic facilities, as well as various monuments and other municipal facilities. The department includes the City's Tradesmen Association.

The Conservation Commission: In February 1960, the Springfield Common Council and Board of Alderman voted to accept Chapter 40, Section 8C of the General Laws authorizing establishment of a Conservation Commission "for the promotion and development of the natural resources and for the protection of the water resources" of the city. Under the provisions of the law, the Commission may acquire land by gift, purchase, grant, bequest, devise or lease, or take land by eminent domain, provided such taking is approved by a two-thirds vote of the City Council. Land acquired by the Commission remains essentially in its natural state, except for trail and plant identification signs. All conservation land is open to the general public for passive recreation and educational use.

The Commission adopted an updated land acquisition program in February of 1984 which has served as a basis for the recommendations contained in the 1985, 1992, 1997, 2002 and 2008 Open Space Plans. Due to financial restraints and the decreasing availability of large portions of land with conservation value, the Commission primarily acquires property through private donations and tax title takings to supplement its existing inventory of protected land. *Since 2008, the Commission has protected over 75 additional acres of undeveloped forest and wetland*. This revised plan will focus on improving management of land already acquired.

In addition to its land acquisition program, the Conservation Commission has the ongoing responsibility of enforcing MGL Chapter 131s. 40, the Wetlands Protection Act. The Commission is composed of seven members appointed by the Mayor.

Public Participation: In order to elicit public input on important policy issues, an online survey was conducted, *eliciting over 260 responses (appendix VI).* The results of the survey are included in this plan are reflected in our targeted goals. Copies of the Open Space plan were posted on the City website, distributed to libraries, the Mayor's office and neighborhood council offices. Public comments were solicited at Planning Board hearings, Conservation Commission hearings, and Parks Commission hearings, and copies were distributed to various non-profit organizations for review, prior to final editing and submission to the Executive Office of Energy and Environmental Affairs. Of particular note was the public engagement process following the June 2011 tornado. A 5 neighborhood master plan was created from numerous public meetings that were advertised in

English and Spanish in local newspapers, online and with cold call phone outreach. Many elements that were incorporated into the tornado recovery master plan are also identified in the Open Space Plan.

Environmental Justice Populations: As one can see in the maps section, the majority of Springfield residents are considered in one or more environmental justice populations. Minority status, income and English isolation designations are mapped throughout the City. This status compels open space managers to provide recreational opportunities for all populations regardless of socioeconomic status. An analysis of recreational facilities shows that the vast majority of parks and open space can be accessed within ½ mile of a bus stop and residents can walk to a park in less than 10 minutes. New park and renovation projects have occurred or are set to occur in all the neighborhoods of Springfield. Our downtown neighborhoods are lacking in large open space areas for recreation. This challenge is due to the lack of usable area, therefore the goal is to make transportation access easier to our larger sites. Planting trees, reducing emissions, restoring water quality and public participation are all goals of this plan to increase the health our residents, particularly the at risk populations.

Publication of public engagement meetings are done in Spanish, the largest minority population in Springfield, as well as English. During the outreach portion of this project, special consideration was given to underserved communities in poor, minority and non-english speaking populations through phone messaging, presentations at neighborhood groups, providing copies of the plan digitally as well as physically at City Hall and all major libraries.

As with the previous Open Space Plans, if this plan is to be effective, it must represent the desires of the citizens of Springfield. Public comment has been sought during the preparation of the plan, and further comments or suggestions on any aspect of this plan are welcome, as it evolves over the next several years. Public comment is also continuously urged as various recommendations in the plan are implemented by the City.

MEMORIAL BRIDGE FROM RIVERFRONT PARK

SECTION 3: COMMUNITY SETTING

A. Regional Context

The City of Springfield is located in southwestern Massachusetts in the scenic Connecticut River Valley. It is a city of 153,060 inhabitants and the center of a metropolitan area of more than 500,000 people. Springfield is bordered on the north by the City of Chicopee (population 55,298) and the Town of Ludlow (22,103); on the east by the town of Wilbraham (14,219); on the south by the towns of East Longmeadow (15,720) and Longmeadow (15,784); and across the Connecticut River on the west by the cities of Agawam (28,438) and West Springfield (28,391).

The Connecticut River, which flows north to south through the Pioneer Valley, is one of New England's major waterways. It originates near the Canadian border, and its drainage basin of 11,250 square miles includes portions of Quebec, New Hampshire, Vermont, Massachusetts, and Connecticut. At the Memorial Bridge in Springfield, it has drained 9,102 square miles. In 1997, this 410 mile long river was designated as one of 14 American Heritage Rivers. The American Heritage Rivers initiative is an innovative response to help river communities seek federal assistance and other resources to meet some tough challenges. Without any new regulations on private property owners, state, local and tribal governments, the American Heritage Rivers initiative is about making more efficient and effective use of existing federal resources, cutting red-tape, and lending a helping hand.

The Connecticut River has had a profound impact on the development of Springfield and the surrounding region. It served as an important transportation route into interior New England for early settlers and traders and later provided a source of power for manufacturing.

Today, Springfield is the major urban center for employment, culture, commerce and government in Western Massachusetts. With a land area of 31.7 square miles, it has an average density of about 5,000 persons per square mile.

B. History of the Community

Springfield was founded in 1636 by William Pynchon of the Massachusetts Bay Company. He chose the site for his new settlement because of its proximity to the Connecticut River and the huge population of beaver living along its shores. The settlement was incorporated as a town in 1641 and named after Pynchon's birthplace in England.

Springfield's isolation and inaccessibility determined its selection in 1777 as the site for an arsenal and munitions storehouse. It was felt that Springfield was not vulnerable to attack from war vessels because the river became shallow downriver from the Springfield settlement. After the war's end, President George Washington and Congress approved establishment of the nation's first Federal Armory in Springfield.

At first, Springfield grew slowly, reaching a population of only 1,574 by 1790. However, the creation of the armory in 1794 had a dramatic impact on the community, with an increase of newcomers, including immigrants, coming here to fill job slots. The 19th century ushered in a sizable expansion of industry along the banks of the Connecticut River. Springfield became an important rail junction when several key lines were laid linking Springfield with other northeastern cities. By 1840, the seeds of a new manufacturing village at Indian Orchard were sown, with water power from the Chicopee River attracting large textile operations. In 1852, Springfield was incorporated as a city and established a municipal government with a mayor, board of alderman, and common council.

The city experienced an economic boom during the Civil War as employment at the Armory increased from 200 to 2,600. By 1870 Springfield's "sandy un-improvable pine barrens" were transformed into its first suburban planned residential development, known as the McKnight District. Besides laying out streets and cutting up parcels

for Victorian residences, the plan called for the creation of green terraces, parks and fountains, all surviving today. This was repeated in the evolution of another suburban neighborhood in Forest Park Heights after the 1890's.

Rapid and diversified industrial growth occurred during the late 19th century with the production of textiles, tools, bicycles and railroad cars in addition to small arms. The nation's first automobile was manufactured in Springfield by the brothers Charles and Frank Duryea. Another Springfield invention was the gas powered motorcycle produced by George Hendee in 1902.

With some of Springfield's working class neighborhoods becoming extremely congested and lacking any significant open recreational space, a few visionary citizens donated land in 1883 to create Forest Park, a multi-purpose recreational area of over 735 acres. From this time until the early 20th century, smaller playgrounds and parks were set aside throughout Springfield.

An era of prosperity followed the turn of the century. The population more than doubled between 1900 and 1930, increasing from 62,059 to 149,900. Business and industry flourished and several firms, including Massachusetts Mutual Life Insurance, Westinghouse, Fiberloid (Monsanto), Diamond Match, Wason Car Works and American Bosch, built new facilities. Many of the buildings which still form an important part of the city's architectural fabric were constructed during this period and, in 1923, the city issued its first master plan. Forest Park was connected to downtown by streetcar and was a popular place for Sunday outings.

The depression of the 1930's caused Springfield to lose jobs and population. Not until World War II did the economy recover. The Armory ran three shifts, employing more workers that it ever had, and military contracts boosted employment in other Springfield firms.

Easy credit in the post-war era spurred low density, auto-oriented development which by the early 1970's had consumed most of the woodland and agricultural fields in the eastern half of the city. The dominance of the automobile continued through the 1970's as two interstate highways were completed through Springfield. While the population of Springfield declined by more than 20,000 residents between 1960 and 1980, the population of suburban communities skyrocketed.

Although a surge of downtown office and housing construction occurred in the mid-1980's, the economic downturn affecting all of New England slowed new development. This placed new fiscal constraints on the city's ability to preserve the remaining natural wetlands of ecological value, and maintain and restore the city's many parks that were set aside for public enjoyment in previous decades. In the late 1990's however, the City of Springfield had seen a new surge in housing development. A number of new subdivisions and downtown market rate residential units have been constructed or rehabilitated throughout the city and more are planned. This upturn in housing can be attributed to the real estate market and low interest rates.

C. Population Characteristics

Population Trends: The U.S. Census Bureau recorded a 2010 population of 153,060 for Springfield. This represents an increase of 978 persons during the 2000-2010 inter-censual period. The U.S. Census Bureau recorded a 2000 population of 152,082 for Springfield. During this time there was a decrease of 4,901 persons during the years of 1990-2000. Between 1960 and 1980 Springfield experienced a loss of more than 20,000 residents due to the suburbs and a declining birth rate. Although there was an increase in population projected for the City of Springfield in 2000, the trends for suburban living and the reduction of multi-family housing stock has attributed to the loss.

Only modest gains are forecast for the future. Based on current trends, an increase of less than 4,000 persons is forecast for Springfield during the next three decades. These projections may, of course, be modified by changing social and economic factors which cannot be anticipated at this time.

Percentage of Population Change: 2000-2010	
City of Springfield	+0.7%
Hampden County	Less than a 1% change
Massachusetts	+5.5%
United States	+13.1%

Population Change		
Year	Population	Population Change
1950	162,390	----------
1960	174,463	+12,845 (+7.4%)
1970	163,905	-10,586 (-6.1%)
1980	152,319	-11,586 (-7.1%)
1990	156,983	+4,664 (+3.1%)
2000	152,082	-4,901 (-3.2%)
2010	153,060	+978 (+0.7%)
Projections		
2020	160,914	+2,246 (+1.4%)
2030		

Minority Group Population: The number of Black and Hispanic residents in the population continues to increase and the proportion of youth in these minority groups is greater than their proportion in the population as a whole. Springfield's Black residents, numbering 33,023 constituted 21 percent of the city's 2010 population.

Minority Population Increase: 2000-2010		
Black	1,551	4.9%
American Indian/ Eskimo/Aleut	569	41%
Asian	2,916	44%
Other	25,016	31%
Hispanic	11,508	27.8%

Although small in number, Asians were again the fastest growing racial group, growing from 2,916 in 2000 to 3,088 in 2010. This is a 44% increase in the Asian population.

Again, the Hispanic community showed a dramatic increase in population between 2000 and 2010, nearly doubling in size from 41,343 to 52,867.

(It should be noted that Hispanics do not constitute a separate racial group as the accompanying chart portrays.) While Black and Hispanic residents are still concentrated in densely settled inner-city neighborhoods, 2010 census data show a greater degree of minority group dispersion than in previous census years.

Age Structure of the Population: Springfield's median age increased from 29.2 years in 1980 to 30.6 years in 1990 to 31.9 in 2000. During the 1980's, the population experienced significant increases in the number of children under five years old and in the 25-44 age group. Corresponding losses occurred for persons 15-24 and 45-64. All other age categories remained relatively constant, including persons 65 and older.

The population density, particularly the density of the youth population, is an important factor in planning for park facilities and recreation programs. Both the Black and Hispanic populations have a significantly lower median age than the white non-Hispanic

population, and a high percentage of the minority population is under 18.

The distribution of the youth population among Springfield's neighborhoods is shown in the table on the following page and also depicted by census tract on the map, "2000 Population Under 18". Neighborhoods with a much higher percentage of youth than average include Old Hill, Memorial Square, McKnight, Bay, and Six Corners, all with high minority populations. Other areas with a concentrated youth population include Indian Orchard and portions of East Forest Park and Forest Park.

Economic Analysis: Springfield serves as the commercial, financial and cultural center of Western Massachusetts. As the fourth largest city in New England, Springfield maintains a diverse economic base, with significant clusters in finance, healthcare, education, and skilled manufacturing. These sectors are driven in part by a significant headquarters presence of companies like MassMutual Finance, Baystate Health, and Smith & Wesson as well as a number of mid-sized companies and higher education institutions. The city is also home to a host of significant development projects underway including the $800 million mixed use MGM Springfield project, which will bring new entertainment, retail, movie theatres, skating rink, and market rate apartments to the city's downtown. In addition, CNR Railways announced a $60 million facility to construct rail cars for the MBTA Boston, a facility that will serve as the first North American location for this China based company. The city through its Springfield Redevelopment Authority is also in the midst of an $80 million rehabilitation of historic Union Station for reuse as an intermodal transit hub, which will include new commuter rail connections to Hartford, New Haven and beyond in late 2016.
According to the Massachusetts Executive Office of Labor and Workforce, Springfield continued a strong surge in job performance in 2015, with unemployment falling 2.7% from April, 2014 to April, 2015. The April, 2015 unemployment number of 7.6% is the lowest mark in the city since the Great Recession. Most recent data indicates the number of unemployed people in Springfield in April 2014 was at 6,556 – a number that has been reduced to 4,891 in April of 2015. That unemployment rate now stands at its lowest since February, 2008, a period of time when a national mortgage crisis and world market decline caused significant economic impacts. It is expected with larger employment projects such as MGM Springfield and CNR Railways coming online in the coming years that the positive employment trend will continue.

Age and Sex of Population			
Age	Male	Female	Total
Under 5 years	5,824	5,782	11,606
5 to 9	6,604	6,341	12,945
10 to 14	6,452	6,052	12,504
15 to 19	6,306	6,037	12,343
20 to 24	5,837	6,186	12,023
25 to 34	9,997	11,249	21,246
35 to 44	10,359	11,502	21,861
45 to 54	8,175	9,495	17,670
55 to 59	2,839	3,398	6,237
60 to 64	2,102	2,639	4,741
65 to 74	3,898	5,347	9,245
75 to 84	2,743	4,572	7,315
85 years and over	666	1,680	2,346
Total	**71,802**	**80,280**	**152,082**

Major Employers: City of Springfield	
Company	# Employees
1. Baystate Medical Center	9,200
2. MassMutual Life Insurance Co.	4,033
3. U.S. Postal Service	2,267
4. Sister of Providence Health Systems	1,849
5. Smith and Wesson	1,167
6. Springfield Technical Comm. College	1,018
7. Springfield College	1,005
8. Western New England University	851
9. Big Y	727
10. Behavioral Health Network	615

MGM SPRINGFIELD RENDERING

CNR RAILWAYS RENDERING

Youth Population by Neighborhood			
Neighborhood	Total Population	Under 18	Percent Under 18
Bay	4,506	1,407	31.2%
Boston Road	4,156	1,102	26.5%
Brightwood	3,912	1,405	35.9%
East Forest Park	10,440	2,160	20.7%
East Springfield	6,207	1,514	24.4%
Forest Park	23,756	6,507	27.4%
Indian Orchard	8,669	2,624	30.3%
Liberty Heights	18,744	5,205	27.8%
McKnight	5,069	1,531	30.2%
Memorial Square	4,134	1,230	29.8%
Metro Center	6,752	1,395	20.7%
Old Hill	4,471	1,653	37.0%
Pine Point	10,318	2,763	26.8%
Six Corners	6,767	1,992	29.4%
Sixteen Acres	24,254	5,461	22.5%
South End	3,016	1,166	38.7%
Upper Hill	7,999	1,942	24.3%
Total	**153,170**	**41,057**	**26.8%**

This data suggests a heavy reliance on public facilities for recreation by a large segment of Springfield's population. In low income neighborhoods, the city's parks and playgrounds are a primary outlet for recreational activity.

	Median Household Income	Percent Below Poverty Level
Massachusetts	$66,658	11%
Hampden County	$49,729	17.1%
Springfield	$35,163	28.7%

D. Growth and Development Patterns

Patterns and Trends: Springfield's Central Business District (CBD) is on the banks of the Connecticut River on the western boundary of the city. It was here that the founders of the city established a trading center in the days when the river served as an important transportation route. Within approximately two miles of the downtown, most of the residential development is multi-family. Densities gradually diminish outward from the CBD and much of the eastern half of the city is occupied by single-family homes. One exception is the Indian Orchard neighborhood in the northeastern corner of the city. It developed as a physically separate community and in many respects duplicates the features of the city as a whole with a small mixed-use center surrounded by high density residential use.

Industrial development is concentrated in the East Springfield neighborhood on several hundred acres of industrial park land, although lesser amounts of industry are found along the Chicopee River and along the major railroad corridors. There are no agricultural uses remaining in the city.

Density: In general terms, Springfield can be described as a predominantly residential city with development densities decreasing from west to east. The oldest neighborhoods surrounding the Metro Center core of the City have the highest level of population density. This would include multi-story apartment building as well as numerous two and three family homes. As development grew in the 1950's and 1960's density went down significantly in the surrounding suburban neighborhoods located in the outer ring of the City.

Transportation Networks: Springfield's parks and conservation areas are readily accessible via an extensive system of streets and highways and a public transit network.

Two interstate highways, I-91 and I-291, as well as several major intra-city arterials, provide direct connections from residential areas to many of the city's major parks. The extent of the local street system can be seen on the Open Space Map.

Several of the larger parks, including Forest Park, Van Horn Park and Blunt Park, have internal roadways maintained by PBRM. Off-street parking areas have been constructed in community parks where organized activities draw participants and spectators from beyond neighborhood boundaries. Beginning in June 1992, vehicle access to Forest Park was regulated and a fee was initiated. Vehicle fees have also been established at Five Mile Pond Park and Blunt Park.

Public transportation in Springfield, and twenty-two surrounding communities, is sponsored by the Pioneer Valley Transit Authority (PVTA). The PVTA provides bus service through operating contracts with private carriers using federal and state subsidies to offset operating deficits.

PVTA operates numerous routes, all of which originate in downtown Springfield and extend outward to various residential neighborhoods. Some of the runs reach into suburban communities. This network allows riders to transfer from one route to another at their common

junction in downtown, providing access to all parts of the city. Service is available six days a week, Monday through Saturday, generally from 5 PM to 9 PM, with headways varying from 10 to 30 minutes. One other company under contract to PVTA, Peter Pan Bus Company, operates routes in less densely populated portions of Springfield and provides intercity express service within the region.

In addition to fixed route service, PVTA provides para-transit services for the elderly, people with disabilities and low income groups. Doorstep services are provided on an on-call basis, and para-transit vehicles are generally equipped with hydraulic lifts to accommodate wheelchairs.

Overall, transit services are adequate to meet the demands of the recreational traveler. Several parks, including the city's three largest and its only outdoor natural swimming area at Five Mile Pond, are directly on transit routes. Para-transit service is available for attendees of the Recreation Division's activities for the elderly and people with disabilities.

Cycling and Pedestrians/Complete Streets:

From 2012 to 2014 the City in partnership with the Pioneer Valley Planning Commission and many local non-profit organizations developed a Complete Streets Pedestrian and Bicycle Plan. Through extensive public engagement and data collected from City departments, a guide was developed to "[improve] access to bicycling and walking opportunities [to] better the quality of life for all Springfield residents". A copy of this plan is attached as Appendix VI.

Springfield Water and Sewer Commission: The Springfield Water and Sewer Commission was organized on June 7, 1996 by a vote of the Springfield City Council in accordance with Massachusetts General Laws, Chapter 40N. The governing body is a three member commission appointed by the Mayor of the City of Springfield and approved by the City Council. The commissioners are responsible for establishing the policies and procedures for efficient water and sewer operations.

The Water and Sewer commission is currently staffed by 150 individuals who transferred to the commission on March 28, 1997 from the previous municipal water and sewer departments. Commission employees and operations are administered by the Executive Director. The commission is not a department of the City of Springfield, however, they work closely with city departments to provide ratepayers with the best possible water and wastewater services.

Drinking water originates at Borden Brook and Cobble Mountain Reservoirs, in the towns of Blandford and Granville. This water is filtered and disinfected at the West Parish Filters Treatment Plant in Westfield, and stored at the distribution reservoir on Provin Mountain, Agawam. From there it travels to the City of Springfield and surrounding communities through large size carrying mains and then through smaller mains and service pipes to the consumer. Littleville Reservoir located in Chesterfield provides back-up water supplies. The West Parish Filters Plant is designed to produce up to 120 million gallons of water per day; the average use is 34.5 million gallons per day. The commission distributes water to homes and businesses in Springfield and Ludlow and wholesales water to the towns of Agawam, East Longmeadow and Longmeadow.

Wastewater leaves the households, businesses and industries within Springfield and surrounding communities including Agawam, Chicopee, East Longmeadow, Longmeadow, Ludlow, Wilbraham and West Springfield and travels through the sewer collection system and pumping stations to the Springfield Regional Wastewater Treatment Facility (SRWTF) located along Route 5 in Agawam. One of the largest most modern facilities in New England, the SRWTF is designed to treat up to 67 million gallons of waste water per day; an average of 44 million gallons of wastewater is cleaned and released to the Connecticut River each day.

The Springfield Water and Sewer Commission serves a population of approximately 260,000. It is expected that the water and wastewater

systems will adequately meet the demands of Springfield and the surrounding communities throughout the foreseeable future.

Long Term Development Patterns: Springfield is an urban community with limited land available for new development. There are approximately 1,560 acres of vacant land in the city representing 7.5 percent of the total land area. However, much of the vacant acreage consists of small lots interspersed throughout otherwise built-up areas. Some of the vacant land in the low density residential neighborhoods of eastern Springfield is marginally developable and has been researched by the Conservation Commission for acquisition of parcels with conservation value. Other vacant lots in our densely populated urban areas, have become the focus of a burgeoning movement in urban agriculture. The City, working alongside local non-profits such as Gardening the Community, has developed Community Garden Regulations helping guide the redevelopment of potentially contaminated lots with urban agriculture.

Considering the limited amount and dispersed nature of vacant land, Springfield can be viewed as having achieved maximum build-out. Future development will consist of continued in-fill development along with redevelopment of older commercial centers, including downtown, and inner-city neighborhoods. A major shift in the general land use pattern is not anticipated nor is the population level expected to change dramatically in the foreseeable future. In fact, at the current rate of population growth, it will be well into the next century before the population once again reached the 1960 U.S. Census count of about 175,000 residents.

Ecological impacts from new growth will be minimal. Public investments will, for the most part, be directed towards upgrading existing infrastructure, redeveloping existing commercial and industrial centers and improving existing residential neighborhoods. With regard to open space resources, the emphasis will be on restoration and enhancement of land and facilities already in public ownership, although some undeveloped wetlands are recommended for protection through Conservation Commission ownership.

Zoning is the city's most important legal instrument for protecting existing land uses and guiding new development. Springfield's zoning ordinance defines twenty land use districts, three of which are designed to protect and enhance the city's natural resources. One is a floodplain district, which is an overlay district coterminous with the flood hazard areas designated by the National Flood Insurance Administration. It regulates development in the 100-year floodplain. A second overlay district is the Connecticut Riverfront District. It is intended to "...promote and protect the natural and aesthetic qualities of the river." Most uses in the Riverfront District are subject to review and approval by the Riverfront Development Commission. The third is the West Columbus Avenue Urban Renewal District. This district was created to accommodate the development of the riverfront within the West Columbus Avenue Urban Renewal Plan in a manner "...respectful of and in keeping with the natural and aesthetic qualities of the Connecticut River for the overall welfare of the general public..."

The Office of Planning & Economic Development, with a Smart Growth Grant from the Executive Office of Environmental Affairs, has completed the re-drafting the city's Zoning Ordinance. This project was started in March 2006 and was enacted May of 2013. Important landscaping issues such as buffers, interior landscaping of parking areas, size and locations of parking areas, open space, etc. have been addressed.

One of the major goals of the project is to implement site plan review for the city. This site plan review will help to better incorporate smart growth principles into commercial and residential development. The site plan review will be designed to incorporate stormwater issues as well.

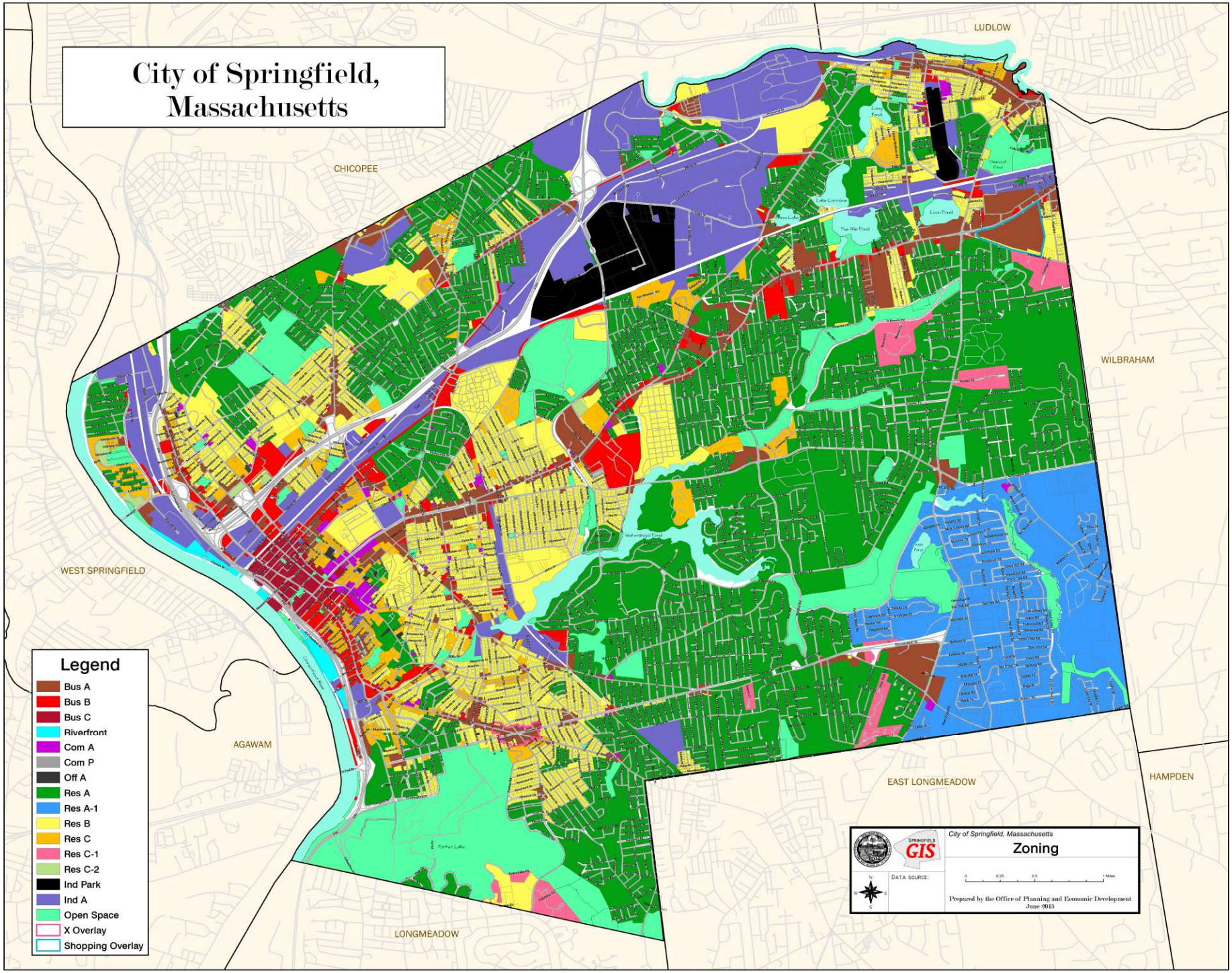
Non-Profit Partnerships: Numerous non-profit entities have provided invaluable input and support to further essential environmental health initiatives. Here are several of note:

Following the tornado of 2011 and numerous severe storms since then, ReGreen Springfield was created to aid the City in replanting areas

devastated by storms. Thousands of trees have been planted and their initiatives, in conjunction with the City Forestry, will continue to promote our green spaces.

Gardening the Community is “a food justice organization engaged in youth development, urban agriculture and sustainable living to build healthy and equitable communities”. It is through partnerships with groups such as this that have created the Springfield Food Policy Council. The 2014 Food In The City report, commissioned the Food Policy Council, is incorporated into this report.

The Pioneer Valley Rowing Club has energized the use of the City’s greatest natural asset, the Connecticut River. The group leases space at Springfield’s North Riverfront Park to “To promote river-based sporting activities, to develop river access, and encourage recreation in the Greater Springfield metropolitan area.”


City of Springfield, Massachusetts
LUDLOW
CHICOPEE
WILBRAHAM
WEST SPRINGFIELD
AGAWAM
EAST LONGMEADOW
HAMPDEN
LONGMEADOW
Legend
Bus A
Bus B
Bus C
Riverfront
Com A
Com P
Off A
Res A
Res A-1
Res B
Res C
Res C-1
Res C-2
Ind Park
Ind A
Open Space
X Overlay
Shopping Overlay
City of Springfield, Massachusetts
Zoning
DATA SOURCE:
Prepared by the Office of Planning and Economic Development
June 2015

SECTION 4: ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Geology, Topography and Soils

Geology and Topography: Geologically speaking, Springfield is part of the Connecticut Valley Lowlands, a north-south faulted area with adjacent uplands rising both to the east and west of the valley floor. Surface topography is characterized by terraces and deltas formed during the melting of huge glacial lakes which once extended from near the Massachusetts-Vermont line south to Middletown, Connecticut. Triassic sedimentary formations underlie the valley floor. In Springfield, they are overlain by unconsolidated surface deposits of varying depth except for small areas in Sixteen Acres and East Forest Park where the bedrock nears the surface.

Remnants of glacial activity are evident throughout the city, and some of the unique glacial features have been preserved in conservation areas such as Indian Orchard Kame, Delta Hills Preserve, and White Cedar Bog. The terrain is broken by a number of meandering streams with relatively flat gradients. Small lakes and ponds are also numerous, some man-made and some of glacial origin.

Lookout Hill, in the southeastern part of the city, is the highest point with an elevation of about 335 feet above mean sea level. Lowest elevations are found along the Connecticut River, which flows from north to south along the western boundary of the city. Normal water surface elevations on the river are approximately 45 feet above sea level as it passes the city.

Soils: It is estimated that more than four-fifths of the surface soils within the city have been modified during the process of urbanization, including all those soils in what was once the floodplain of the Connecticut River.

In 1971, the U.S. Department of Agriculture, Soil Conservation Service (SCS) classified the soils of 4,874 acres of land representing 23 percent of the total area of the city. Approximately one-half of the surveyed acres were located in public parks and conservation areas and one-half within vacant, privately-owned land. In the twenty years since the survey was completed, most of the vacant, non-public land has been consumed by urban development.

Seventy-seven percent of the land surveyed by SCS was occupied by soils of the Windsor-Hinckley-Made-Land Soil Association. These are excessively drained sandy and gravelly soils occurring on level to moderately sloped land. Except for organic mucks and peat found in kettle holes and other depressions, all soils of Springfield are characteristically sandy, reflecting the geologic process of water sorting in their formation. SCS mapped over one hundred separate locations ranging in size from less than 1 acre to over 700 acres (Forest Park). **(See Appendix for USDA Soils Maps)**

B. Landscape Character

As an urban community, Springfield's landscape character can be described within the context of three broad categories related to the density of urban development.

The most densely developed region is the floodplain of the Connecticut River. The city's central business district is located here along with many other commercial and industrial districts that developed along north-south transportation corridors in the city's early history.

A second category includes the medium and high density residential neighborhoods that were established on riverine terraces east of the floodplain. This district is characterized by closely spaced one to three family wood frame residences interspersed with brick multi-family structures. Concentrations of neighborhood stores can be found at the confluence of major streets. Historic districts in the McKnight and Forest Park neighborhoods are included in this category.

A third level of urban density is found in the low density residential districts of eastern Springfield. Here the landscape character is

typically a suburban area with a predominance of the single family home and auto-oriented shopping districts. This was the last area of Springfield to be developed and it contains many of the city's undeveloped parks and conservation areas.

Each of these three districts gradually blends with another forming diversified transition zones. The Indian Orchard community is atypical of this west to east transition as it expanded from north to south from the bank of the Chicopee River in the northeast corner of the city.

Although Springfield can be described as a fully developed urban community, numerous lakes, streams, parks and conservation areas add variety and diversity to the urban landscape. The extent of Springfield's park system has earned it the historical reputation as both the "Garden City" and the "Park City."

C. Water Resources

Connecticut River: An outstanding natural feature of Springfield is the four and one-half mile stretch of the Connecticut River that forms the city's western boundary. It was an important transportation route in the days of early settlement and has had a profound influence on the historical development and character of the region. Historically, flooding of the river caused extensive damage to portions of Springfield. A series of earth dikes and concrete flood walls constructed by the Corps of Engineers now protects the built-up area of the floodplain.

In recent years, water pollution abatement programs, mandated under federal and state law, have resulted in improved water quality and the city is now promoting intensive recreational use of the river. In 1978, a consultant's report suggested that joint public/private investment should occur along the entire 4.5 mile river frontage. The report, entitled "River design Springfield", utilized a unique public participation process that included three hours of live, prime television time to solicit ideas from the public. Proposals for riverfront use included marinas, parks, theaters, landscaping and improved access. A Riverfront Development Commission, which consists of five members appointed by the Mayor, is promoting improved access, facilities for recreation and compatible urban development along the length of the river. (See the section on Recreational Trails for new Riverfront Development.)

Other Surface Waters: Other important rivers are the Chicopee, which runs along the northeastern boundary of the city for three and one-half miles, and the Mill River, which flows westerly from the Wilbraham town line in two branches. Both of these rivers were harnessed at one time as sources of power, the latter to operate the Springfield Armory.

There are fourteen significant lakes or ponds with public access in Springfield. Some are artificial impoundments, while others are natural lakes formed in kettle hole depressions or glacial outwash (See table on page 25). Several of the lakes have no inlets or outlet but are hydraulically interconnected by subsurface ground water.

Fresh water swimming, under the supervision of PBRM., is offered at Five Mile Pond. Swimming at Lake Lorraine Beach is supervised by the State.

Wetlands: The wetland category includes those areas in which the ground water level is at or near the surface for much of the year but generally lack extensive areas of open surface water. Numerous bogs and wooded swamps are found in Springfield. Many are located on land in Conservation Commission or Department of Parks, Buildings & Recreation Management ownership.

Wetlands act as storage basins for surface run-off, thus, reducing localized flooding as well as downstream peak flows. They also provide food and habitat for wildlife and offer opportunities for nature study and other forms of passive recreation. Because of their high water tables, wetlands are poor sites for urban development. Inadequate site drainage, basement flooding and differential settling due to the high organic content of wetland soils are commonly associated with development in wetland areas. The Wetlands Protection Act (Massachusetts General Laws Chapter 131, Section 40)

was enacted to protect the public benefits derived from wetlands. It allows local Conservation Commissions and the Massachusetts Department of Environmental Protection to restrict the use of wetland areas.

Included among Springfield's more significant wetlands are White Cedar Bog, Grayson Kettle, Pasco Road Bog, Duggan Leatherleaf Bog, Tamarack Swamp and Gralia Road Swamp, all in Conservation Commission ownership. **(Wetland areas recommended for acquisition by the commission are described in Appendix III.)**

The Murray Tract in East Forest Park is a large wetland area under the management ownership of PBRM

Water Resources: The Connecticut and Chicopee Rivers form part of the city's borders. Lake Massasoit can be seen near the city's geographic center, while a cluster of large, kettlehole lakes are found in the northeast sector.

Although wetlands are too numerous and generally too small to show on the Water Resources Map, swamps and bogs are identified on the large scale Open Space Map appended to this report and referenced by Appendix II, Public Open Space Inventory, and also by Appendix III, Proposed Conservation Areas. The large scale map should also be referred to whenever exact locations of surface waters are desired.

Flood Hazard Areas: The City of Springfield is a participant in the National Flood Insurance Program and revised Flood Insurance Rate Maps were issued for the city on July 16th, 2013 by the Federal Emergency Management Agency. Both the 100-year and 500-year floodplain boundaries are delineated on the rate maps with the 100-year floodplain boundaries corresponding to the areas of special flood hazards.

For the most part, flood hazard areas are confined to stream valleys which are in Department of Parks, Buildings & Recreation Management or Conservation Commission ownership. Along the Connecticut River, the flood hazard area is limited to a narrow strip of land westerly of flood control structures built by the Corps of Engineers. Only one building, a publicly owned facility leased to the Pioneer Valley Rowing Club, lies within the river's flood hazard zone. It is estimated that less than a dozen structures in the entire city would be impacted by the occurrence of a 100-year flood.

Historic Flood Levels City of Springfield	
Date	Flood Level at Memorial Bridge*
March 1936	65.90**
September 1938	63.00
November 1927	59.70
August 1955	58.40
April 1960	57.30
Height of Existing Protection	66.40

* In feet above sea level.
** Since the construction of 13 upstream reservoirs, a flood equivalent to the one in 1936 would rise to an elevation of 61.4 feet above mean seal level (msl) at the Memorial Bridge.
Source: Water Resource Investigation, Connecticut River Basin, U.S. Department of Army, Corps of Engineers, October,1977

Historically, floods on both the Connecticut and Chicopee Rivers have caused extensive damage to industrial, commercial and residential buildings as well as to railroads, highways and bridges. The greatest flood in Springfield occurred in March, 1936 as a result of spring rains accompanied by melting snow. The second greatest flood was associated with a hurricane which crossed the region in September, 1938. In response to these storms, the Army Corps of Engineers completed a series of flood control dams and reservoirs in the Connecticut and Chicopee River basins and constructed a local protection works along the banks of both rivers. The City of Springfield and the Springfield Water & Sewer Commission are working in conjunction to update the flood control structures along the Connecticut River. Like many communities throughout the country after Hurricane Katrina and subsequent major storms affecting the

northeast such as Hurricane Irene, Springfield was notified by the Army Corps of Engineers of multiple deficiencies. Without the repairs currently underway, large sections of the City could be remapped as within the FEMA 100-year floodplain boundaries.

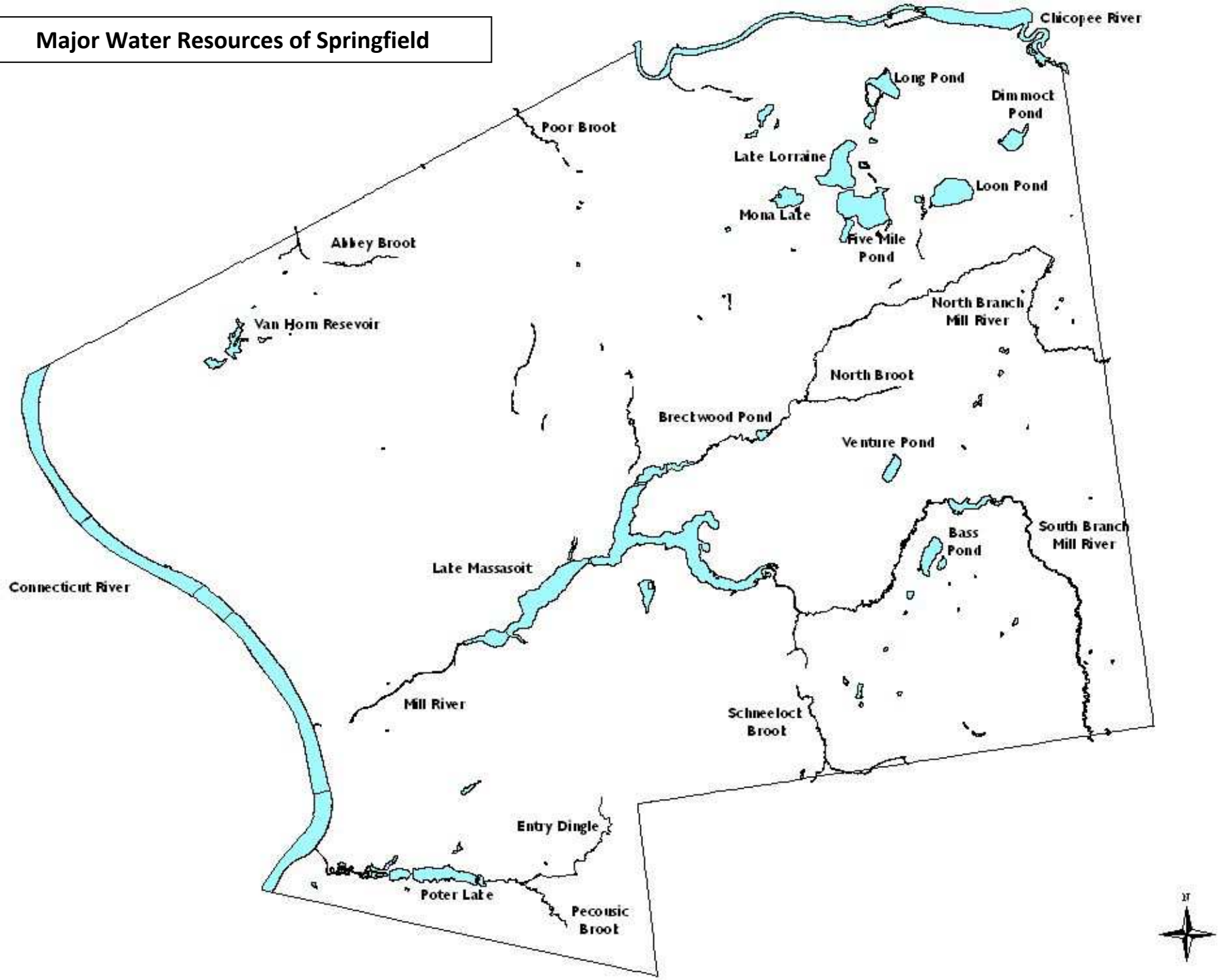
Aquifer Recharge Areas: Nearly every resident in the City of Springfield gets her water from the municipal system originating at Cobble Mountain Reservoir in Otis, MA. There are no surface or sub-surface drinking water supply areas within the City. Therefore no mapping exists to demonstrate any Zones of Contribution.

City Watersheds: The entirety of the City lies within the Connecticut River Basin. However, within the boundaries of Springfield a number of micro-watersheds exist. These are demonstrated on the Stormwatershed Map found in the appendices. A majority of City land flows to the North and South branches of the Mill River, Watershops pond (created at the convergence of the Mill Rivers), the Chicopee River and Connecticut River. Many small ponds such as the kettle ponds in the Northeast section of Springfield have no natural outlets and therefore create small, isolated watersheds with their own issues of water quality degredation. Our watersheds are largely influenced by man-made infrastructure that moves stormwater from streets to natural areas. Typically the microwatersheds are delineated by streets as they constitute the boundaries of where water is collected and piped.

Springfield's Lakes and Ponds				
	Surface Area (Acres)	Maximum Depth (Feet)	Mean Depth (Feet)	Origin
Lake Massasoit	198	20	8	Artificial Impoundment
Lake Lorraine	31	37	17	Glacial Kettle Hole
Five Mile Pond	39	36	15	Glacial Kettle Hole
Dimmock Pond	13	11	6	Glacial Kettle Hole
Upper Van Horn Reservoir	10	20	8	Modified Natural Lake
Lower Van Horn Reservoir	5	8	4	Modified Natural Lake
Venture Pond	8	9	4	Natural Depression
Mona Lake	14	17	5	Glacial Kettle Hole
Loon Pond	26	25	12	Glacial Kettle Hole
Mill Pond	15	4	2	Artificial Impoundment
Breckwood Pond	4	5	2.5	Artificial Impoundment
Long Pond	26	6	3	Glacial Kettle Hole
Putnam's Puddle*	7	8.5	5	Artificial Impoundment
Porter Lake	31	14	8	Artificial Impoundment
Bass Pond	13	50	15	Artificial Impoundment
Quarry Pond	2.3	50	5	Artificial Impoundment
Fountain Lake	5.8	8	5	Artificial Impoundment

*Presently dry due to dam failure.
(Island Pond is privately owned and does not have public access.)
Source: Springfield Lakes and Ponds, Inventory & Restoration Plan: Baystate Environmental Consultants, Inc. and Purcell Associates, May 1980

Major Water Resources of Springfield



D. Vegetation

Few areas of natural vegetation remain outside of public park and conservation areas. However, a wide variety of native and ornamental trees, shrubs and grasses have been planted throughout the city in place of the natural vegetation removed during urbanization.

The majority of the undisturbed woodlands belong to the Oak-Hickory Forest Association, although a small area of eastern Springfield lies within the Elm-Ash-Red Maple Association and a stretch of land along the Chicopee River is within the Aspen-Gray Birch Forest Association. Cottonwood, Basswood and other water-tolerant species are commonly found along river and stream banks.

One important stand of Coastal White Cedar is located in a bog near the geographic center of the city. It has been described as a natural oddity in that it represents the most northwestern stand of Coastal White Cedars with a reasonable chance of continued survival. The bog evolved from a glacial kettle hole, gradually filling with sphagnum moss, which created a seed bed for acid-tolerant plants, including— in addition to the cedars—black spruce, tamarack, leatherleaf, swamp azaleas and over thirty species of liverworts and mosses. In 1968, this unique natural resource, known as the White Cedar Bog, was acquired by the Springfield Conservation Commission.

Public Shade Trees/Urban Forest Management: The Springfield Forestry Division was established in 1898 to care for public trees in the city including street and park trees. The city is home to a remarkable street tree population that has thrived in part due to the City's commitment to providing professional tree care through the Springfield Forestry Division. The Forestry Division currently has three certified arborists on staff with two employees possessing advance degrees in Urban Forestry and Arboriculture. The Forestry division is tasked with ensuring compliance with M.G.L. Chapter 87 and regularly holds public tree hearings and requires permitting for any work done to Public Shade Trees. ReGreen Springfield Inc. was established in 2011 and coordinates closely with the City of Springfield in all of its environmental advocacy efforts.

Springfield currently fulfills all six requirements set by DCR's Urban and Community Forestry Program and received a Massachusetts Sustainable Forestry Award in 2007. These standards still apply today and the city has maintained a Tree City USA designation for 31 consecutive years.

A key component to the Forestry Division's management strategy is the street tree inventory. Springfield has maintained a 100% street tree inventory since 2005. The inventory is used on a daily basis to track tree population characteristics as well as manage forestry crew workflow. The inventory is updated on a daily basis as work is completed and new trees are planted. Recently an effort has been made to extend the inventory to other public trees such as parks and schools. In 2014 trees were inventoried at 49 public schools and this information is being used to manage and maintain tree health and safety. Additionally 14 public parks have recently been inventoried with associated work records.

Street trees are often the most significant component of the natural landscape for many residents. This is particularly true in denser neighborhoods with smaller lot sizes. The location of street trees also puts them in a unique position to provide various ecosystem services. Street trees are located close to the roadway shading the blacktop reducing surface air temperature. Street trees are also often in close proximity to homes and commercial buildings creating shade that helps to reduce cooling costs in the summer months. Maintaining a diverse forest is critical to preserving overall forest health. Stocking too much of any particular species creates a vulnerability to a specific pest or disease. The goal of the Forestry Division is to maintain stocking within the 10-20-30 rule, which suggests no more than 10% of any species, no more than 20% of any genus, and no more than 30% of any botanical family. The most abundant trees found on Springfield's streets are maples and oaks which account for 35% and 12% of stocking respectively. Maintaining the current street tree population by preserving older trees and increasing the population by planting new trees will ensure the environmental benefits provided by

street trees will continue to impact the quality of life for Springfield residents.

Function and Value
Citywide, overall tree benefits are valued at just under $80 per tree annually resulting in total annual benefits of nearly $2.2 million. Current expenditures on the care and maintenance of trees in the City result in a 3:1 benefit-cost ratio. Clearly the trees of Springfield are providing a good return on the investment.

Rare and Endangered Species: As a result of the Conservation Commission's efforts to preserve unique habitats and wetlands for passive recreation and the Department of Parks, Buildings & Recreation Management's establishment of greenway corridors along the city's principal streams, nearly all the areas considered to have a high likelihood of containing protected species have been acquired or are identified in the current land acquisition program.

Conservation land with habitats known to support rare or endangered plants are White Cedar Bog and Pasco Road Bog. The seasonally inundated shorelines of Lake Lorraine, Five Mile Pond, and Mona Lake also provide habitat for a number of rare plant communities.

Several of the rare plants in Springfield are recent records of plants that occupy shorelines and shallow water of ponds that fluctuate naturally throughout the year. Lake Lorraine and Five-Mile Pond have been greatly impacted over the years, but still support disjunct populations of what are mostly species of ponds in the coastal plain. Other species of these habitats have been lost from the City. Other plant species formerly known from Springfield, such as New England Blazing Star and Wild Lupine, suggest open sand areas. Upland forests support Large Whorled Pogonia and Purple Clematis grows on forested rocky cliffs and talus – a variety of habitats that appear to have been lost over time.

Approximately one-third of the shoreline of Loon Pond, a habitat for Teretes Arrowhead, which is rare in this part of Massachusetts, was recently donated to the Conservation Commission and the Massachusetts Division of Youth Services transferred 24 acres of land to the Conservation Commission in which a population of Yellow Lady Slipper (Cypripediem calceolus) had been identified.

There is an uncommon community from Springfield in the NHESP database, Atlantic White Cedar Bog (AWC Bog) is the westernmost example in Massachusetts (and New England) of that natural community type. Atlantic White Cedar Bogs are uncommon community types in the state and region, with most occurrences found in the southeastern part of the state. The occurrence in Springfield, being so remote from the core area, is particularly interesting. This community type and other wetlands depend on a consistent supply of clean water.

There are two Certified Vernal Pools (CVP) and many Potential Vernal Pools (PVP) (identified from aerial photographs, needing verification on the ground) in Springfield. Areas of swamps also provide habitat for vernal pool species. The PVP data are available as a datalayer from MassGIS at http://maps.massgis.state.ma.us/map_ol/oliver.php. Certifying the PVPs would provide more protection to these wetlands and the species that use them. There are several clusters of CVPs/PVPs, which provide extra habitat value for the species that use them since each pool is somewhat different and provides alternate habitats in different years and seasons. Any such lands already protected are good sites for biodiversity and good cores for larger properties.

The Division of Fisheries & Wildlife, Natural Heritage & Endangered Species Program collects and manages information on endangered species within the Commonwealth. In cooperation with the program, the Springfield Conservation Commission has taken the following actions:

- The Commission cooperates with the program by providing background information on existing and potential public open space areas for endangered species surveys.

•The Commission maintains a current list of rare species as compiled by the Natural Heritage Program.

•Within existing conservation areas where rare species are documented, the Commission will establish and maintain uses compatible with their protection. This will include routing trail systems around sensitive areas or limiting direct access as well as not publicizing the specific location of rare or endangered species.

The Natural Heritage Program's listing of rare plant species occurrences in Springfield contains 32 different species. The rarity, ranking and identity of the species are described in the table on page 37.

Non-native management: Of particular importance is the prevalence of large stands of non-native vegetation in Springfield's open space areas. Species such as bittersweet, buckthorn and knotweed have had significant detrimental effects on the diversity of tree and shrub species in the City. Significant resources have and will continue to be required to help return our green spaces to native, diverse populations.

E. Fish and Wildlife

Many common varieties of small mammals, reptiles, amphibians and birds can be found in Springfield in spite of its high degree of urbanization.

Since wildlife populations are intricately related to land use and vegetative types and upland forests and open land are virtually gone, the majority of wildlife types are those that are normally found in and around wetland areas such as bogs, ponds, and wooded swamps. Conservation areas, and undeveloped park land provide habitat for wildlife, and the city's rivers, lakes and streams attract waterfowl. In the suburban environment, bird feeders, nesting boxes and shrub or tree plantings of food value add to the quality of habitat for songbirds.

According to the Natural Resource Conservation Service, there do not appear to be any sites in Springfield that would be suitable for wildlife management. However, the preservation of wildlife habitat in conservation and park areas can provide opportunities for education and enjoyment by nature enthusiasts.

Local rivers, lakes and ponds support fish populations which include bass, pickerel and common panfish such as bluegills and perch. An anadromous fish restoration program in the Connecticut River Basin for Atlantic Salmon and American Shad has been in operation since 1966. Anadromous fish spawn in fresh water but spend most of their lives in the sea. A goal of the program is to restore a run of two million shad and 40,000 salmon to the mouth of the Connecticut River.

Rare and endangered species: According to the Division of Fisheries and Wildlife, Natural Heritage & Endangered Species Program, four areas of Springfield provide habitat for rare wetland wildlife. One area encompasses the length of the Connecticut River and its environs, a second area includes the Grayson Kettle Conservation area and the adjacent Edgemere Road Swamp, a third area includes portions of South Branch Parkway, and the fourth area is located in the vicinity of the South Branch of the Mill River and Tinkham Road in the southeastern corner of Springfield. These areas provide habitat for the Eastern Spadefoot Toad, the Spotted Turtle, the Eastern Worm Snake and the Jefferson Salamander. The Connecticut River is home to the Shortnose Sturgeon, a fish classified as rare and endangered in Massachusetts.

Many of the currently known rare species in Springfield are associated with wetlands. Many of these species, such as the blue-spotted and Jefferson salamanders and Wood and Spotted Turtles also use uplands for much of their lives including for foraging for food. The Blue-spotted and Jefferson Salamanders breed in vernal pools and spend most of their time in surrounding upland forests, under the leaves (as a result, they are called "mole salamanders"). There are detailed guidelines for their management at:
http://www.mass.gov/eea/docs/dfg/nhesp/species-and-

conservation/nhfacts/ambystoma-jeffersonianum.pdf & http://www.mass.gov/eea/docs/dfg/nhesp/species-and-conservation/nhfacts/ambystoma-laterale.pdf .
Four-toed Salamanders nest in areas with sphagnum moss growing over open water – in permanent wetlands. Wood Turtles are found primarily in flowing water and adjacent wetlands and adjoining forests. They travel overland between wetlands and to upland nesting areas. Guidelines for protecting Wood Turtles are at: http://www.mass.gov/eea/docs/dfg/nhesp/species-and-conservation/nhfacts/glyptemys-insculpta.pdfTo continue to have good populations of the recently delisted Spotted Turtle in Massachusetts, protecting areas with good populations, such as wetland forests are important. Eastern Box Turtles use wetlands on hot summer days, but are primarily species of upland forests. All the turtle species use vernal pools as part of their habitat, and all these turtles nest in open, often sandy, areas. Another species of reptiles does not use wetlands in their habitat: Worm Snakes are another species found below the layer of leaves on a forest floor, or shaded ground of vacant lots. Several populations of Worm Snakes occur in Springfield, including on in city parks and in residential neighborhoods. Leaving these areas undisturbed helps maintain the populations of this state threatened species. More information is available at http://www.masnakes.org/snakes/milk/index.html.

The most established rare bird species in Springfield is the Peregrine Falcon that occupy habitat in downtown Springfield. Since 1988, a pair of peregrine falcons have nested in Springfield. The pair had originally nested on a ledge of the twenty-seventh floor of Springfield's tallest building, Monarch Place. However, in recent years, the pair has alternated nesting spots between Monarch Place and underneath the Memorial Bridge. It should be noted that the pair currently nesting in Springfield is not the original pair of falcons. The original pair have died and been replaced by a new nesting pair of Peregrine Falcons. The Peregrine Falcon is an endangered species, and the original pair represented the first to nest in Western Massachusetts in more than forty years. The rare hawks, owls, and water birds formerly known from Springfield, haven't been seen there in many years. http://www.mass.gov/eea/docs/dfg/nhesp/species-and-conservation/nhfacts/falco-peregrinus.pdf

As of the previous Open Space Plan, rare invertebrate species had not been witnessed in the Connecticut River. They require clear clean water, which is only slowly returning to the Connecticut. However, during due diligence for a dock project in 2013, several Yellow Lampmussel specimens were found.

The Natural Heritage Program's listing of rare wildlife species occurrences in Springfield contains 17 different species. The rarity, ranking and identity of the species are described in the proceeding tables.

Threatened Species	
Type of Species	Scientific Name (Common Name)
Amphibian	Ambystoma opacum (Marbled Salamander)
Amphibian	Scaphiopus holbrookii (Eastern Spadefoot)
Reptile	Carphophis amoenus (Eastern Worm Snake)
Vascular Plant	Agrimonia pubescens (Hairy Agrimony)

Threatened Species (Con't)	
Vascular Plant	Ophioglossum pusillum (Adder's-Tongue Fern)
Vascular Plant	Ranunculus pensylvanicus (Bristly Buttercup)
Vascular Plant	Sphenopholis nitida (Shining Wedgegrass)
Vascular Plant	Sphenopholis pensylvanica (Swamp Oats)
Vascular Plant	Vernoicastrum virginicum (Culver's Root)

Species of Special Concern	
Type of Species	Scientific Name (Common Name)
Fish	Notropis bifrenats (Bridle Shiner)
Amphibian	Ambystoma jeffersonianum (Jefferson Salamander)
Amphibian	Gyrinophilus porphyriticus (Blue-spotted Salamander)
Amphibian	Hemidactylium scutatum (Four-toed Salamander)
Reptile	Clemmys insculpta (wood Turtle)
Reptile	Terrapene Carolina (Eastern Box Turtle)
Bird	Accipiter straitus (Sharped-Shinned Hawk)
Bird	Gavia immer (Common Loon)
Bird	Tyto alba (Barn Owl)
Mammal	Sorex palustris (Water Shrew)
Mussel	Alasmidota undulate (Triangle Floater)
Beetle	Cicindela purpurea (Purple Tiger Beetle)

Species of Special Concern (Con't)	
Vascular Plant	Arceuthobium pusillum (Dwarf Mistletoe)
Vascular Plant	Clematis occidentalis (Purple Clematis)
Vascular Plant	Eragrostis frankii (Frank's Lovegrass
Vascular Plant	Liatris borealis (New England Blazing Star)
Vascular Plant	Lygodium palmatum (Climbing Fern)
Vascular Plant	Rhynchospora scirpoides (Long-Beaked Bald-Sedge)
Vascular Plant	Sagittaria teres (Terete Arrowhead)
Source: Massachusetts Natural Heritage & Endangered Species Program, October, 2007	

Rare Species Occurrences In Springfield	
Endangered Species	
Types of Species	Scientific Name (Common Name)
Bird	Asio flammeus (Short-Eared Owl)
Bird	Botaurus lentiginosus (American Bittern)
Bird	Falco peregrinus (Peregrine Falcon)
Bird	Podilymbus podiceps (Pied-Billed Grebe)
Mussel	Alasmidonta heterodon (Dwarf Wedgemussel)
Vascular Plant	Carex mesochorea (Midland Sedge)
Vascular Plant	Pedicularis lanceolata (Swamp Lousewort)
Vascular Plant	Prenanthes serpentaria (Lion's Foot)
Vascular Plant	Rotala ramosior (Toothcup)
Vascular Plant	Sceleria triglomerata (Tall Nut-Sedge)
Vascular Plant	Verbena simplex (Narrow-Leaved)
Vascular Plant	Scheuchzeria palustris (Pod Grass)
Vascular Plant	Ludwigia polycrapa (Many-fruited False loosestrife)

Wildlife Corridors and Species of Note:

Our National symbol, the Bald Eagle, has made a substantial recovery in Massachusetts due to ongoing efforts. According to Massachusetts Division of Fisheries and Wildlife, the Connecticut River has a robust bald eagle population. Bald Eagle sightings are now quite common in Springfield and the surrounding area.

Springfield is annually visited by several migratory bird species. Wildlife enthusiasts have the opportunity of observing species such as Mallards, Black Ducks, Ring Necked Duck, Mergansers and Canada Geese as well as more elusive Woodcock, Wood Ducks, Hooded Mergansers, Green Winged Teal, Gadwall and even Northern Pintail Ducks.

The City of Springfield contains several wildlife corridors allowing movement of seemingly countless species through habitat areas. Most notably are the Pecousic Brook Watershed, the Mill River Watersheds, and the Chicopee River Watershed. The Pecousic Brook Watershed that travels from East Longmeadow through Forest Park to the Connecticut River. The Mill River Watershed which includes the North and South Branch of the Mill River, beginning in Wilbraham, travels through the City to Watershops Pond. The Chicopee River Watershed flows through the Northeast corner of the City in the Indian Orchard neighborhood.

In addition to the wildlife movement on the waterways themselves, much of the surrounding area along these watersheds are wooded providing habitat and facilitating travel of dozens of wildlife species. Sightings of wild turkey, white-tailed deer, eastern coyote, beaver, wild mink, raccoon, and red fox, are common. Fisher, bobcat, river otter, and other species such as great horned owl, red tailed hawk, and countless waterfowl species prove to be using these areas as well.

F. Scenic Resources and Unique Environments

Springfield's most distinctive natural feature is the Connecticut River, which reaches a width of nearly 1,500 feet along the western boundary of the city. The river passes by the city's central business district and creates a scenic backdrop for downtown office employees and visitors. Although Springfield's topography is relatively level, the flood plains of the Connecticut and Chicopee Rivers as well as the Berkshire Hills to the west of the city, the Wilbraham Hills to the east, and the Mt. Holyoke range to the north, can be observed from several vantage points. The 735 acre Forest Park is not only an important regional recreation area, but with its varied terrain and diverse flora and fauna, is a significant contributor to the overall scenic quality of the city. The King Philip's Stockade section of the park offers broad views of the Connecticut River Valley and surrounding uplands to the north and west. Delta Hills Conservation Area and the Chicopee River Overlook offer scenic views of the Chicopee River basin. White Cedar Bog represents a unique environment due to its unusual vegetation and its location so far north and away from its typical coastal environs.

Springfield is home to a number of kettle hole ponds that have no natural inlets or outlets but are fed by groundwater. These depressions were left in the wake of the retreat of our region's most recent glaciation. These ponds offer a unique study in the region's geologic past and the process of transition in the future. "Indian leap" can be found along the edge of the Chicopee river. This cliff system demonstrates the erosive power of the river and offers spectacular views.

From a report written by Thomas Jenkins, P.E. "According to the '"Soil Survey of Hampden County, Massachusetts"' U.S. Department of Agriculture, a significant percentage of the land within the City of Springfield is composed of terrace escarpments (see Figure 1: Terrace Escarpments and Steep Slopes). These unique landforms exist today due to the action of glaciers thousands of years ago. The escarpments generally occur at the margins of stream or glacial outwash terraces or are geological gullies in soft, water-deposited soil strata. Because of the environmental conditions present during their formation, escarpments are closely associated with freshwater wetlands and streams. Although the USDA Soil Survey has mapped significant portions of Springfield as Terrace Escarpments, many of the terrace-associated landforms within the City have been so altered or obscured by urban works and structures that identification of specific soils on a

survey level is impossible, yet the landforms still bear the characteristics of the steep, often-unstable terrace slopes.

Springfield's architectural and cultural heritage has been protected through the efforts of the Springfield Historical Commission. The commission, established in 1972, is responsible for identifying areas or buildings of historical significance, setting priorities for preservation or restoration and insuring that changes to historic properties and districts are compatible with their historic character. To date, the commission has conducted historical surveys for over 3,500 properties and green spaces. Using the surveys, six local historic districts and fifteen national register districts have been established under the provisions of state-enabling legislation or by listing historically significant areas on the National Register of Historic Places. In addition to the districts, more than sixty individual properties are listed on the National Register, including thirty-five properties in downtown. For the most part, the historic districts are located in the central business district and surrounding residential neighborhoods. The location of Springfield's historic districts is depicted on the Historic Districts and Properties Map on the next page.

G. Environmental Challenges

The quality of recreational resources in the Springfield area is affected by a number of environmental problems, some of which are regional in nature while others must be solved at the local level.

Combined Sewer Overflows: Although the quality of the Connecticut River has vastly improved in recent years due to the construction of pollution treatment plants throughout the basin, Springfield, along with a number of other communities in the region, still has combined sewer overflow (CSO) problems during periods of heavy rain. Overflows occur when the existing combined sewage/stormwater collection system capacity is exceeded due to increased flows as a result of wet weather. Excess flows are diverted through CSO outfall pipes to the Chicopee, Mill, and Connecticut Rivers, to prevent street flooding and back-ups into basements. The Springfield Water and Sewer Commission is bound by a United States Environmental Protection Agency (USEPA) Administrative Consent Order to address the problems with CSOs. To date the Water and Sewer Commission has maintained compliance with the USEPA requirements by undertaking CSO abatement projects throughout the City. A $7 million project along the Mill River was completed in 2004, between 2010 and 2012 a $22 million separation project was conducted on CSO 007 and 049, and a project on CSO 008 costing $23 million was completed this year. The Water and Sewer Commission is currently designing projects addressing the main interceptor sewer line and York Street pumping station and CT river crossing with an estimated cost of $78 million. After the Commission has completed the CSO projects underway, there still remain approximately $160 million in further CSO abatement projects on the Connecticut River to meet the federally mandated regulations.

Development of cost effective projects designed to control combined sewer overflows has become a public works crisis nationally. The USEPA has mandated that CSO communities commit to controlling these overflows without providing meaningful financial aid to fund the projects. Maintaining compliance with USEPA mandates while funding CSO projects continues to be a challenge for all CSO communities, including Springfield.

Non-point urban stormwater run-off: CSOs are considered point sources of pollution, while urban stormwater run-off flowing directly into lakes, ponds and streams from streets, parking lots, buildings and lawns is considered non-point pollution. Common pollutants in non-point urban run-off include de-icing salts, fertilizers, pesticides and residues from oil and fuel used in the operation of motor vehicles. Non-point stormwater run-off degrades water quality and accelerates eutrophication of lakes and ponds (discussed below). In addition, non-point run-off impacts the frequency of CSO discharges by entering combined sewer systems. The City has joined 12 other communities of the Pioneer Valley on the Connecticut River Stormwater Committee. The Committee has developed a comprehensive program educating the public about their contributions to stormwater quality via posters, television and radio ads, and presentations. The City has adopted two ordinances tackling pre and post-construction stormwater

management. Over the past several years the City has developed an aggressive illicit discharge detection and elimination program. With impending NPDES regulations expected, new stressors will be placed on Springfield's budget to comply with EPA's stormwater program. It is expected that new revenue sources will need to be identified to comply with such requirements as water quality testing and outfall inspections.

Eutrophication of lakes and ponds: Sediments and pollutants contained in surface run-off have caused shoaling and excessive growth of aquatic weeds and algae in many of Springfield's lakes and ponds. Shallow lakes such as Dimmock Pond, Mona Lake, Lower Van Horn Reservoir, Venture Pond, and upper portions of Lake Massasoit are severely eutrophic while the deeper kettle hole lakes such as Five Mile Pond and Loon Pond are less affected. Advanced eutrophication results in a loss of habitat for fish and wildlife and limits recreational use. The city has embarked on a lakes and ponds restoration program with the goal of eventually restoring all sixteen (16) publicly-owned water bodies. Because of limited financial resources, full restoration may be replaced by a less expensive, but still beneficial, management program. The City's Summary Report on Water Quality for Springfield's Lakes and Ponds provides a baseline for data. Future updating of this document is needed.

Erosion: Nearly all conservation areas and some parks are subject to some degree of erosion. Storm water outlets have caused excessive stream bank erosion in Abbey Brook and Delta Hills. Off road vehicles (ORVs) are also causing erosion in some of the city's conservation areas, most notably in the LaBelle Drive, Delta Hills and Duggan Bogs areas. In Forest Park, stream bank erosion was addressed as part of the Porter Lake restoration program. A long-term solution to this problem will require a combination of strategies including reconstruction of stormwater outlets, stream bank stabilization, trail maintenance and the adoption and enforcement of regulations governing the use of ORVs on park and conservation land. Uncontrolled soil erosion from construction sites also contributes to pollution and sedimentation of water resources. The City has completed a pre and post construction erosion control ordinance as required under the federal NPDES permit to address this issue.

Soil and groundwater contamination: On occasion, leachate from contaminated soil is detected in streams and lakes. Contamination may originate from underground fuel storage tanks, auto-salvage operation, residues from former or current industrial activity and former landfills on Cottage Street and Boston Road. A septic system serving the gun club located in Wesson Park and a leaking and periodically blocked interceptor sewer are the apparent sources of high coliform bacteria counts in Carlisle Brook and the Noonan Cove section of Lake Massasoit. The problem of soil contamination can be addressed through elimination of the few remaining septic systems in the city and diligent enforcement of Massachusetts Contingency Plan (MGL chapter 21E) by the Massachusetts Department of Environmental Protection.

Illegal dumping and vandalism: Unfortunately, the city's conservation areas and undeveloped park lands are often targets for illegal dumping of building debris, appliances and ordinary household garbage. This problem has been addressed to some degree through citizen involvement in Earth Day clean-ups, but more needs to be done. Replacement of vandalized park and playground equipment is an ongoing function of the Department of Parks, Buildings & Recreation Management's Maintenance Division, but budgetary reductions are hampering the division's ability to replace or repair vandalized park facilities. Greater neighborhood involvement in policing and maintaining park and conservation areas is being advocated as a partial solution to this problem. Utilizing our "Clean City" crews, we can respond to illegal dumping in real time and remove eyesores and environmental hazards as they occur.

Brownfields: While there is no formal definition of the term "brownfields" in Massachusetts, brownfields often have certain characteristics in common: they are typically abandoned or for sale or lease; they typically have been used for commercial or industrial purposes; they may have been reported to MassDEP because contamination has been found; or they may not have been assessed due

to fear of unknown contamination conditions. The U.S. Environmental Protection Agency (EPA) has established a definition of brownfields for federal funding purposes, "With certain legal exclusions and additions, the term `brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant".[1]

Springfield's Brownfield Program is managed by the Office of Planning and Economic Development. This office employs three community planners and six economic development professionals. The Office of Community Development also plays a critical role by managing the funds for the program.

The City of Springfield Brownfields Program facilitates Phase I/II Environmental Site Assessments and Phase III Cleanup Plans on priority redevelopment sites. The site assessments have been primarily funded through the City's EPA grants, or from Targeted Brownfields Assessments performed by the Massachusetts Department of Environmental Protection or EPA.

The City's main goal is to promote the sustainable reuse existing brownfields and preventing the creation of additional ones. Redeveloping brownfields shifts development pressures away from undeveloped land, improving and protecting the environment. Further, brownfields redevelopment returns non-productive real estate assets to productive use, promoting economic development.

[1] The Brownfields Site definition is found in Public Law 107-118 (H.R. 2869) - "Small Business Liability Relief and Brownfields Revitalization Act" signed into law January 11, 2002.

Flooding: Springfield in general does not experience chronic flooding. This is a result of several policies and physical interventions. An Army Corps of Engineers flood wall protects the City's western boarder and downtown from rising water in the Connecticut River. This wall is certified for the 100 year interval storm, however was designed to protect neighborhoods adjacent to the river in the event of a 500 year storm. In other neighborhoods development along the north and south branches of the Mill river corridors has been discouraged by public purchase and ownership of open space. Flood plain is primarily forested along these two water resources. During high volume rain events street flooding occurs at a relatively small frequency, as the stormwater infrastructure has been designed to move water off of streets quickly.

Invasive Species: Of particular importance is the prevalence of large stands of non-native vegetation in Springfield's open space areas. Species such as bittersweet, buckthorn and knotweed have had significant detrimental effects on the diversity of tree and shrub species in the City. Significant resources have and will continue to be required to help return our green spaces to native, diverse populations. Invasive management plans have been developed for Park properties and Abbey Brook Conservation Area. The Parks Department is currently updating its Lakes and Ponds management program to adhere to new requirements and incorporate new technologies addressing water quality.

Landfills: Springfield manages one large municipal landfill, "Bondy's Island", handling much of the waste of the region. Currently the bulk of waste entering this landfill is in the form of ash following its processing at a waste to energy plant located adjacent to the facility. Depending on a number of factors, this landfill is scheduled to close in 2028. The City is also responsible for the maintenance of a capped former landfill located at Armory and Stafford Streets. The landfill was capped with a HDPE Geomembrane impermeable layer and covered with vegetation. Regular maintenance includes vegetation cutting and environmental monitoring of wells located on site and at adjacent sites near Mercy Medical center.

There are also several privately owned large capped, inactive landfills located at Cottage Street and Delta Hills, among many other small scale historic capped sites throughout the City.

GENERAL EDWARDS BRIDGE FROM LAKE MASSASOIT

SECTION 5: LANDS OF CONSERVATION AND RECREATION INTEREST

The City of Springfield's open space system is a mix of publicly and privately owned land with characteristics that range from highly managed landscapes to naturally wooded areas. This open space system also ranges in size from park land with over 700 acres to smaller individual parcels.

This open space system is extremely important to the City as it helps to provide residents with both active and passive recreational opportunities and provides wildlife habitats. Additionally, this open space system helps to contribute to the overall aesthetic quality of the city while also helping to mitigate the harmful effects of both urban air and water pollution. Under this section, the term "protected" refers to publicly owned parcels such as municipal parks, federal facilities, municipal conservation areas and municipal school playgrounds.

A. Private Parcels

Springfield is an urban community with over ninety percent of its land area either developed or dedicated for park or conservation use. There are no agricultural lands or large tracts of forest land remaining in the city and no land in special taxation programs such as Chapter 61A or 61B. A number of private institutions, including three private colleges and one private high school, have developed extensive recreational facilities. While these facilities complement public sector activities, public recreation is not recommended for any privately owned property except for some areas proposed for acquisition by the Conservation Commission. These are primarily lands associated with water resources identified on the "Water Resources Map" and are often extensions of existing conservation areas or undeveloped parks. For clarity, the areas are shown on the large scale Open Space Map. They are described in Appendix III, Proposed Conservation Areas.

B. Public and Nonprofit Parcels

All public parks and conservation areas are listed in the public Open Space Inventory (Appendix II) and identified on the Open Space Map. School playgrounds are also identified since they form an important part of the city's recreational inventory. Following is a summary of the federal, state and municipal facilities included in the inventory:

C. Federal Facilities

The 55-acre Springfield Armory National Historic Site is administered by the National Park Service, a branch of the U.S. Department of the Interior. Two buildings constructed in the 1840's are located on the site. One is the Main Arsenal Building, which houses what is regarded as one of the world's largest collection of small arms. There is also a large open space that surrounds the site. Currently, this open space is underutilized for any type of recreational use. The city, along with the National Park Service, are reviewing strategies for ways that this very important asset can be better integrated and utilized by not only the citizens of Springfield, but for tourists as well. These strategies not only include better promotional efforts by both the city and the National Park Service, but also looking for additional funding sources for the continual long term maintenance of the grounds. This maintenance not only includes the park grounds but also the historical sidewalks and tree belts that surround the site.

D. Municipal Parks

There are over 2,000 acres of recreational park land in Springfield, of which 1,081 acres are contained in four large community parks. The remaining acreage is divided among numerous neighborhood recreation areas, two 18-hole golf courses and several undeveloped open space areas. Geographic distribution of facilities is satisfactory, and a wide range of recreational opportunities are available, most of which are free of charge. The abundance and variety of recreational land is an important asset to the community and enhances the quality

E. Municipal Conservation Areas

To date, nearly 600 acres of land in over 60 separate locations have been preserved through the efforts of the Conservation Commission. All acquisitions are in fee interest and are acquired by donation, tax title and in rare cases eminent domain. Land acquired by the Commission remains essentially in its natural state, although hiking trails and plant identification signs are planned for all areas to enhance their value for passive recreation and education. In addition, the Commission regularly requires private land owners to place a Conservation Restriction on a portion of their properties as a condition of their permit under the Wetlands Protection Act and the Springfield Wetlands Protection Ordinance.

F. Municipal School Playgrounds

Thirty-four school playgrounds are listed in the inventory. Unlike public parks or conservation areas, these are not "protected" areas. Exceptions are the Gerena Playground and Linda's Park which were acquired and built with HUD Open Space Land Funds, the Balliet School Playground which was restored with Land & Water Conservation Funds and Chestnut Accelerated Athletic Fields which were constructed with Urban Self-Help Funds. In these cases, the recreational land is protected by deed restrictions. School playgrounds vary considerably in size and quality, ranging from small, paved play areas at some elementary schools to facilities for competitive sports at high schools. The recreational needs of students and the fact that the city is planning to build new schools for a growing student population, assures that school playgrounds will continue to serve as an important component of the recreation supply.

G. Section 504 Handicapped Accessibility Survey

In accordance with the 504 requirements of the Division of Conservation Services, a 504 survey of recreation facilities has been conducted. The survey is appended to this Open Space Plan as Appendix V, but due to its bulk, is available only on request.

H. Recreational Potential

All public parks and conservation lands are dedicated as park land under Massachusetts General Law, Chapter 45, Section 14 and are open to the public with no restrictions other than the daily dawn to dusk hours of operation, and Park Rules as established by the Board of Park Commissioners.

All of the City's parks and open spaces have been identified for its recreational potential, ownership and public availability as indicated in Appendix II, Part II.

FOREST PARK FARMERS MARKET

SECTION 6: COMMUNITY GOALS

A. Description of Process

We have developed five broad goals that cover the individual goals of each City department, allowing every party involved in managing open space in Springfield to be working to the same end. The draft goals were circulated among the key stakeholders for comments. Responses to these changes were positive. The greatest response was collected via an online needs survey, results are attached in the appendices.

Additionally, in order to elicit public input on this important document, a copy of the draft Open Space Plan was posted on the city's website including a form to provide comments. In addition to the online posting, public comments were also solicited at a Planning Board hearing, Conservation Commission hearing and Parks Commission hearing. Copies were also distributed to various organizations for review prior to final editing and submission.

B. Statement of Open Space and Recreational Goals

1) Acquire open space and recreation lands based on its value as a natural resource or recreational opportunity.

2) Adequately and consistently **manage** open space to reduce public safety hazards, increase recreational opportunities and maximize protection for the city's natural resources.

3) Regulate for the proper use and protection of open space and recreation lands.

4) Enforce the regulations for the proper use and protection of open space and recreation lands.

5) Envision, Create and Promote new programming to meet the needs of a modern urban community.

FIVE MILE POND BEACH

SECTION 7: ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

Only a small percentage of Springfield's land has escaped urbanization, but a sizeable portion of the undeveloped land is marginally developable wetland with high resource value. The Springfield Conservation Commission recommends that all remaining wetland areas be preserved through public acquisition or control. This policy recognizes the cumulative effect of past instances of wetland destruction that have permanently altered the environment by lowering the water table, increasing the frequency of local flooding and lowering the quality of water entering Springfield's lakes and streams. In addition, wildlife habitats and potential recreational resources have been irretrievably lost.

This policy is consistent with the Massachusetts wetland policy outlined in the Statewide Comprehensive Recreation Plan (SCORP), a policy which, according to the SCORP, has resulted in a much lower rate of wetland loss in Massachusetts than in other states.

Areas recommended for preservation are described in Appendix III and are identified on the Open Space Map. Many have been targeted for protection since the early 1970's when the U.S. Department of Agriculture, Soil Conservation Service (SCS) evaluated Springfield's natural resources. Two studies were conducted by SCS, a soil survey of undeveloped land and a natural resource inventory. These studies have guided the Conservation Commission in identifying open space areas compatible with their land acquisition goals. Areas recommended for acquisition are generally associated with three categories of wetlands.

Streambelts: Springfield has already set aside significant acreage along the north and south branches of the Mill River, Schneelock Brook, Pecousic Brook and Entry Dingle. These areas serve to protect adjacent flood prone areas. In addition, they form linear greenbelts adaptable to the development of hiking trails and provide a high degree of visual relief in otherwise monotonous expanses of low-density housing. Extensions are proposed to the north and south branches of the Mill River and Entry Dingle. Portions of the streambelt along Jamaica Brook and the lower portion of the Mill River are also recommended for preservation.

Sites bordering rivers, lakes or ponds: The increasing demand for water-oriented recreation can be alleviated through public ownership of land adjacent to the city's many streams, lakes and ponds. As noted in appendix III, many areas have been identified for conservation due to habitat quality and prevalence of wetlands. Many areas targeted in the 2008 Open Space Plan were either partially or fully conserved. The intends to continue with this program utilizing the tax title process and land gift process.

Wetlands: While it is recognized that sites categorized as streambelts or as access sites to streams or lakes often incorporate "wetland areas", a separate wetland category is employed here to designate those areas classified as marshes, swamps or bogs. Every wetland plays a vital role in flood control and water purification and each type has a distinctive ecosystem to which a variety of wildlife is attracted. Marshes are treeless tracts of shallow water dominated by cattails, sedges and other aquatic plants, while swamps are a further stage of succession of marshes in which water tolerant shrubs and trees such as red and silver maples are present. Bogs were formed in kettle hole depressions created during the last glacial period about 10,000 years ago. Eight wetland areas are included in the acquisition program.

In addition to protecting privately owned wetland areas through public acquisition, the city must protect resources already in public ownership from pollution and activities which diminish their recreational value. Programs to alleviate stream bank erosion and eutrophication of lakes and ponds are essential. Pollution abatement programs that affect all surface waters in our urban environment must be supported by federal and state environmental agencies.

Finally, maintaining high quality open space resources can only be achieved if the citizens of Springfield respect park and conservation land.

Degradation of parks and natural areas through vandalism and dumping must be controlled through education and policing. Through continued participation of private organizations and citizen councils, a great deal of progress has been made. Over the past few years these organizations have volunteered to clean up and maintain several neighborhood parks. Based on the survey responses, a public education campaign to complement clean up efforts is needed so that more people become aware of the location of conservation areas and understand the reasons for protecting natural resources.

B. Summary of Community Needs

The recreational needs of Springfield will not radically change in the foreseeable future. The population has grown slowly in the 1980's and decreased in the 1990's, and remained relatively stable through the 2000's, though some increase in the youth population has occurred particularly among minority groups. A nearly stable population is projected into the next century.

Active and passive recreation needs are currently addressed by the PBRM Department within the constraints of budgetary resources. Demand by special interest and demographic age groupings are for the most part satisfied, but deficiencies do exist. A desire for more active recreational facilities and programs has been expressed by neighborhood representatives. Active recreational programs for youth are the most pressing recreational need. Lack of facilities and maintenance has been cited as the most significant shortcoming in the park system, although security and programming are also major concerns. Past surveys have indicated a willingness on the part of neighborhood residents to accept a fee system to pay for facilities and maintenance. The idea of private enterprise providing recreation services for a user fee is another idea that has been receptive in the past to neighborhood residents. Generally speaking, there exists a desire for more and better maintained facilities in existing neighborhood parks, especially those in inner-city neighborhoods. One goal of the Department of Parks, Buildings & Recreation Management is to provide a diverse array of recreational programs for all age groups.

The DPBRM strives to offer a variety of programming to meet the needs of all city residents. The City of Springfield offers a wide variety of programs in its public open spaces. Self-directed recreation, such as walking/biking, basketball, pick-up games, Frisbee, tennis, playground, splash pads and fitness stations are available city-wide in parks that are close to home for many residents. Parks and open spaces also provide the environment for scheduled events such as Youth Sports, walkathons, festivals, concerts, vacation programming, evening gym, summer enrichment and day camps. Additionally, the DPBRM offers therapeutic recreation programming for youth, young adults and adults with disabilities on a year round basis in a variety of community based programs. Additional programs for the City's elder population are offered at neighborhood Senior Drop in Centers that include activities such as computer/technology education, cards, puzzles, social groups, lunch programs, library services and special events.

Appendix I illustrates the recreational programming that occurs in the City's parks and open spaces.

Upgrading facilities will allow for the expansion of recreational programs. While all parks require periodic updating, such as the replacement of playground equipment, more heavily used neighborhood and community parks require more extensive renovation to expand their recreational potential.

One of the most pressing needs of the PBRM is the need to replace outmoded equipment and modernize park buildings. In fact, much of the department's emphasis in the ensuing years will be on upgrading existing resources and facilities to more efficiently and effectively serve the recreational needs of the residents of Springfield. More efficient delivery of services combined with a greater degree of citizen involvement in maintenance activities can do much to counter budget shortfalls.

At many of the public hearings held by the Conservation Commission, residents express dismay at losing naturalized open space. They often discuss how much they enjoy watching the local wildlife and simply walking around a wooded area. As many of the marginal lots in this municipality and others are being developed, it has become clear that residents of Springfield need well-managed conservation land. A lack of funding and staff has not allowed the Commission to develop trails, maps and other amenities on their sites. This plan will address some concrete goals the Commission can pursue in the next seven years to better meet this need.

C. Management Needs

Recreation facilities and services cost money and the budget cuts experienced at all levels of government due to the economic recession are a major obstacle to delivering park services. Proposition 2 ½ further complicates the situation by limiting a community's ability to raise tax money to pay for services. Current budget reductions are forcing the Department of Parks, Buildings & Recreation Management to examine how it manages its open space efficiently and still provide the public with safe quality recreation areas.

The use of technology and equipment will ensure services are delivered in a timely manner to the residents of Springfield. These budgetary constraints are influencing management practices in three distinct ways:

1. Optimization of Existing Resources: Because of the reduction in manpower and maintenance supplies, the PBRM department must make optimum use of its remaining resources in order to sustain a high level of service. This will be accomplished through increased productivity and efficiency, made possible by improved scheduling and maintenance procedures, the use of new technology and the replacement of obsolete maintenance equipment.

2. Citizen Involvement (In progress): Participation in the "Adopt a Park" Program by neighborhood councils and private organizations could be a great success that will assist the Department of Parks, Buildings & Recreation Management by alleviating some of its maintenance responsibilities. The program is designed to have neighborhood groups provide park clean-ups and security watches. This type of citizen involvement instills a sense of pride in participants, which in turn reduces the incidence of vandalism in neighborhood parks.

3. New Funding Sources: The parks department will rely more heavily on fees and private donations to pay for park improvements. A vehicle entry fee for Forest Park was instituted in June, 1992. Vehicle entry fees have also been instituted at Blunt Park and Five Mile Pond Park. Also, fees at the city's two golf courses were raised to help pay for capital improvements. **New funding sources will need to be identified to manage non-point source pollution in compliance with EPA's NPDES program. Clean water benefits all of our open spaces as well as the health of our community.**

D. Major Ongoing Projects

The Connecticut River Walk and Bikeway: The Connecticut River Walk and Bikeway has greatly increased the recreational opportunities along the Connecticut River corridor since its creation. The trail consists of amenities such as a paved path for bicycling, strolling, jogging and rollerblading; scenic overlooks, benches, urban promenades and a landscaped greenbelt. One exciting addition to the walk and bikeway that has considerably increased traffic is the Pioneer Valley Rowing Club. Their organizations leases a building that has access to both the walk way and the Connecticut River. Residents can rent bikes and kayaks, take rowing lessons and access the river. The walkway also offers benefits that go beyond that of recreation. Benefits include reduced automobile traffic and emissions, and the river walk serves as a stimulus for future riverfront development in Springfield. The Office of Planning & Economic Development

continues to explore opportunities in which the new walk/bikeway can be connected to existing recreational facilities throughout the City of Springfield. It is expected that even greater use of the riverfront will occur following a proposed $1,000,000 park improvement being funded by MGM Springfield.

As the regional network of walk and bikeways grow, we are continually looking to connect Springfield's portion to the Cities of Agawam and Chicipee. The long range goal of the Connecticut River Walk and Bikeway is to create a regional pedestrian and bicycle path along the Connecticut River that will connect the communities of Springfield, Agawam, West Springfield, Chicopee and Holyoke. Once completed the total length of the entire River Walk and Bikeway will be in excess of 22 miles.

Riverfront Development: Today, the city benefits immensely from the $100 million Naismith Basketball of Fame development. The site contains a vibrant mix of restaurants, hotels, office space and fitness facilities. The rehabilitation of the former Naismith Memorial Basketball Hall of Fame into a 70,000 square foot riverfront entertainment and fitness experience continues to be an important re-use of existing development along the riverfront. This area draws patrons from the region and beyond. Use of the riverfront is spurred by a handicapped accessible rail crossing that originates from this site providing a safe and beautiful means to arrive at Riverfront park, the location of our annual 4th of July celebration and several festivals.

The former York Street jail site continues to be a focus of riverfront redevelopment efforts. Using the RFP process the City hopes to eventually find a proper reuse of this site, however special considerations must be made to account for significant water and sewer infrastructure on site.

The Highland Division Rail-Trail: This proposed rail-trail is located along the former right-of-way of the Highland Division (or Hazardville Branch) of the Boston & Maine Railroad. The corridor runs from the Hazardville section of Enfield, Connecticut, to downtown Springfield, Massachusetts. The former line comprises 12.5 miles; 8.5 miles in Massachusetts and 4 miles in Connecticut. Originally, the line was part of the New Haven Railroad and subsequently was acquired by Penn Central (1969), Conrail (1976), and B&M (1982). In 1993, the line was formally abandoned.

This rail-trail abuts seven city neighborhoods with a combined population of 67,000. These neighborhoods alone comprise a larger population than any other community in western Massachusetts.

This trail continues to offer the opportunity to turn a deteriorated and overgrown rail line into a unique recreational bikeway for the citizens of Springfield.

A feasibility study was conducted on the McKnight section of the trail, running from State St to Armory Street. This project has strong community support and funding is greatly needed to see it to its conclusion.

CONNECTICUT RIVER FROM DOWNTOWN SPRINGFIELD

SECTION 8: GOALS AND OBJECTIVES

Goal #1: Acquire open space and recreation lands based on its value as a natural resource or recreational opportunity.

Objective: To provide additional water based recreation opportunities in the city.
Objective: To increase inventory of open space, park land and conservation land
Objective: To provide additional open space in areas, which demonstrate the greatest need
Objective: To protect water resources via acquisition of open space and carrying out the Wetlands Protection Act.

Goal #2: Adequately and consistently manage open space and recreation lands to reduce public safety hazards, increase opportunities for interacting with the outdoors and maximize protection for the city's natural resources.

Objective: To restore degraded areas in order to provide greater recreational and open space values.
Objective: To focus resources on invasive species management.
Objective: To continue routine maintenance and repairs.
Objective: To make capital improvements to open space in the city.
Objective: To implement best management practices and low impact development methods related to stormwater quality improvements and comply with NPDES regulations.

Goal #3: Regulate for the proper use and protection of open space and recreation lands.

Objective: Clarify appropriate open space use within the city.
Objective: Carry out the implantation of the MA Wetlands Protection Act.

Goal #4: Enforce the regulations for the proper use and protection of open space and recreation lands.

Objective: Protect open space in the city from detrimental uses and encroachment.

Goal #5: Envision, Promote, and Create programs and projects that further healthy living in a modern City by creating safe access to our recreational facilities and collaborating to further urban agriculture initiatives.

Objective: Collaborate to further access to healthy and affordable food options via community gardens, and static or mobile farmers markets.
Objective: Identify vacant land to be used for the development of urban agriculture plots while decreasing blight and crime.
Objective: Implementation of the City of Springfield's bicycle and pedestrian masterplan.
Objective: Promote the development of unique projects identified in the open space survey.

VAN HORN PARK, LIBERTY HEIGHTS NEIGHBORHOOD

SECTION 9: SEVEN YEAR ACTION PLAN

The Seven Year Action Plan is comprised of projects important to both city residents and the Department of Parks, Building and Recreation Management. All projects are considered to be priorities and will be implemented as funding becomes available. The Department actively seeks grant funding from federal, state, municipal and private grants to implement the action plan. The anticipated funding timeline for each project is included in this section.

GOAL #1: ACQUISITION

Objective: To provide additional water based recreation opportunities in the city.

Action Steps:

Objective: To increase inventory of open space, park land and conservation land.

Action Steps:

1) Acquire approximately 8 acres of land along the Springfield/Chicopee line. (Parks)

2) Creation of McKnight Rail Trial

Objective: To provide additional open space in areas which demonstrate the greatest need.

Action Steps:

1) Identify and acquire small parcels to create neighborhood parks and playgrounds in areas with a high number of children and limited open space.

Objective: To protect water resources via acquisition of open space.

Action Steps:

1) Acquire the Camerota Property, approximately 11 acres of open space located on the north shore of Five Mile Pond. (Parks)

2) Acquire the property at 148 Temby Street. (Conservation)

3) Acquire marginal lots via the tax title process. (Conservation, Parks)

4) Acquire parcels that are contiguous with currently owned parcels, would contribute to a wildlife corridor or greenway, are wetlands or are listed as NHESP Priority Habitat. Conservation)

GOAL #2: MANAGEMENT

Objective: To restore parks and other areas in order to provide greater recreational and open space values.

Action Steps:

1) Renovate Blunt Park, Phase II. (Parks)

2) Brownfield restoration and playground renovation at Walsh Park. (Parks)

3) Dredge Five Mile Pond and upgrade the beach area(Parks)

4) Repairs to various tennis and basketball courts throughout the city. (Parks)

5) Restoration of small triangles and terraces throughout the city. (Parks)

6) Rehabilitate over 60 acres of school athletic fields. (Parks)

7) Restore Meadow 3

8) Construct Botanical Garden

9) Complete conduct 21E process at Wesson Park (Parks)

10) Develop Management Plan for Conservation Areas. (Conservation)

11) Renovation of Duryea Park. (Parks)

Objective: To provide additional swimming water based recreation opportunities in the city.

Action Steps:

1) Restore Jam's Beach Loon Pond for public swimming area, by improving water quality. (Parks)

2) Renovate or construct spray parks throughout the City.

Objective: To continue to provide specialized maintenance and repairs to park properties and buildings.

Action Steps:

1) Replacement of playground equipment city-wide. (Parks)

2) Ball field renovations throughout the City, and Van Horn Park. (Parks)

3) Continue development of recreational amenities at Camp Wilder and Quarry Pond. (Parks)

4) Improve walkways, landscaping, lighting, signage, etc., at Merrick Park. (Parks)

5) General improvements at the two Municipal Golf Courses. (Parks)

6) Continue to manage water resources with herbicides, lake level drawdowns and maintenance of detention basins. (Parks)

7) Continue the City's tree replacement program. (Parks)

8) Ongoing renovations of the park trails and other park systems city-wide. (Parks)

9) Fencing, monument and landscaping improvements at Bay Path, Cherry Lane and Wachogue Cemeteries. (Parks)

10) Implement recommendations in Dam Reports (2012) for restoration and repairs to all City owned dams. (Parks)

11) Continue to upgrade all park roads. (Parks)

12) Continue to make all parks universally accessible. (Parks)

13) Institute a program to regularly remove trash dumped on conservation land. (Conservation)

Objective: To make capital improvements to open space in the city.

Action Steps:

1) Construct new maintenance facilities in park district and golf course facilities. (Parks)

2) Improve access, install dock system, stabilize shore and upgrade existing restroom facilities at Riverfront Park. (Parks)

3) Construct a new community building at Ruth Elizabeth Park. (Parks)

4) Continues renovations to Greenleaf Park. (Parks)

5) Construct concession building at Marshall Roy Park. (Parks)

6) Apply for land management grants. (Conservation & Parks)

7) Design trails on conservation land, possibly with the assistance of college students and interns. (Conservation)

8) Install new trails and signage on conservation land. (Conservation)

9) Organize fishing derbies on conservation land. (Conservation)

10) Encourage research partnerships, especially with local schools and colleges. (Conservation)

11) Create and distribute trifold pamphlets advertising conservation lands, with a special focus on environmental justice outreach. (Conservation)

12) Improvement and installation of equipment at Treetop Park. (Parks)

13) Repairs and improvements to Pynchon Park. (Parks)

GOAL #3: REGULATION

Objective: Clarify appropriate open space use within the city.

Action Steps:

1) Develop and pass new regulations for the appropriate use of conservation and park land. (Parks & Conservation)

2) Develop and pass new regulations regarding stormwater and erosion control as part of NPDES compliance.

3) Attempt to achieve a designation of an Area of Critical Environmental Concern (ACEC) for the white cedar bog. (Conservation)

GOAL #4: ENFORCEMENT

Objective: Protect open space in the city from detrimental uses and encroachment.

Action Steps:

1) Increase staff presence on conservation land. (Conservation)

2) Reinstate ticketing procedures. (Conservation & Parks)

3) Reinvigorate park ranger program

4) Work closely with the Law Department to pursue legal action against violations and encroachment. (Conservation)

5) Work to effectively improve safety and security at all parks and open spaces.

GOAL #5: ENVISION, PROMOTE, CREATE

Objective: Collaborate to further resident access to healthy and affordable food options via community gardens, and static or mobile farmers markets.

Action Steps:

1) Foster relationships with businesses that own vacant lots and encourage lease agreements

2) Preserve existing water infrastructure and identify feasibility of a garden irrigation fund.

3) Partner with organizations to establish rainwater catchment systems

4) Implement the Community Garden Regulations with focus on neighborhood aesthetics

Objective: Identify vacant land to be used for the development of urban agriculture plots while decreasing blight and crime.

Action Steps:

1) Develop easily accessible soil standards and guidance for identifying and mitigating contaminated soils

2) Promote raised beds or hydroponic systems where appropriate

3) Analyze City properties for potential for urban agriculture initiatives

4) Partner with federal agencies such as FDA and EPA to provide services and materials for community gardens

Objective: Implementation of the City of Springfield's bicycle and pedestrian masterplan.

Action Steps:

1) Increase bicycle parking throughout the City with focus on colleges, business districts and school system facilities

2) Adopt Complete Streets program

3) Create walking and bicycle maps highlighting accessibility and destinations throughout Springfield

4) Increase pedestrian and bicycling signage

Objective: Promote the development of unique projects identified in the open space survey.

Action Steps:

1) Perform feasibility studies on the highest ranking "unique" projects from results of the Public Open Space Survey.
2) Implement projects.
3) Continue review of public comments and improve programming, management and availability of open space priorities

A. Discussion

Under ideal circumstances, all projects would be completed in seven years. However, given the current fiscal limitations at all government levels, the plan must be approached with some flexibility. Failure to appropriate sufficient funds, or acquire them through grants, will necessitate rescheduling of activities over a period exceeding seven years.

The priorities of the Department of Parks, Buildings & Recreation Management are reflected in the detailed list of projects that follow. The Seven-Year Action Plan addresses a number of departmental goals ranging from internal management improvements to the continued implementation of the Master Plan for Forest Park. Nearly all projects call for updating existing resources and facilities to allow for maximum utilization by recreational users or to promote more economical and efficient service delivery by the Department of Parks, Buildings & Recreation Management. Cost estimates are supplied for most projects in the attached appendix.

Since its formation, the Conservation Commission has concentrated its efforts on preserving land with natural resource value before it is lost to urban development. Additional land acquisitions are scheduled in the seven-year plan. The 60 acres acquired since the last open space plan have primarily been added to existing conservation areas. The Commission will continue to acquire new land, however the primary focus in the next seven years will be on trail maintenance, trail creation and hazard tree management.

Handicapped Accessibility Plan: The Seven-Year Plan incorporates specific proposals to make some recreation and conservation facilities accessible to people with disabilities. All new park projects include accommodations for those with mobility needs.

Currently, PBRM operates therapeutic recreation activities at Camp STAR Angelina in Forest Park. Programs include, but are not limited to, Camp STAR Angelina, a 6-week inclusive day camp program for youth and young adults, ages 5-22 with disabilities, and the Therapeutic Recreation Club (TRC) program, community-based recreation for adults with disabilities, which offers programming choices such as a bowling league, Zumba, social gatherings, and trip and travel events.

Currently, PBRM operates therapeutic recreation activities at Camp STAR Angelina in Forest Park. Programs include, but are not limited to, Camp STAR Angelina, a 6-week inclusive day camp program for youth ages 3-22 with disabilities, and the "Fun N' Fitness program, community-based recreation for adults with disabilities, which offers programming choices such as a bowling league, Zumba, social gatherings, and trip and travel events.

Accessibility improvements continue in parks and open spaces city-wide. Renovations are currently underway to provide access to open spaces for people of all abilities. Park accessibility improvements include parking, access routes, restroom facilities, proper signage, and accessibility amenities such as playgrounds, benches and picnic tables. Any improvement to new or existing parks will include universal design and accessible elements to provide great opportunity to open space for people with disabilities.

During the design and construction phases on the proposed trails, the Conservation Commission will attempt to provide access for people with disabilities. As conservation land is supposed to be maintained as close to its natural state as possible, there are limitations due to topography, soil material, etc. Still, every attempt will be made to provide universal access at some portion of each developed site.

B. Funding Sources

Potential sources of funding are identified for each proposal in the Seven-Year Action Plan. They include:

Local Sources: The source of operating and maintenance funds for both the Department of Parks, Buildings & Recreation Management and the Conservation Commission is the city's general fund, while major capital improvements are normally funded through the issuance of general obligation bonds. There are some trust accounts available to the Department of Parks, Buildings & Recreation Management that were established for specific activities. Appropriations to the Conservation Fund are used for the local share of the Commission's land acquisition program. Because of budget limitations, the city will become increasingly more reliant on fees and private donations to finance open space projects.

Community Development Block Grant (CDBG, CDBG-DR): Funds from the city's annual CDBG entitlement can be used for recreation facilities when the benefits are primarily for low and moderate income neighborhoods. During the past five years CDBG Funds have been used by the Department of Parks, Buildings & Recreation Management as matching funds for grant appropriations from the Commonwealth. Some recent examples of CBDG Projects include: Mary Troy Park ($380,000), Emerson Wight Park ($200,000), Hubbard Park ($142,000) Camp Wilder Park ($250,000), Gunn Square ($70,000) and city-wide splash pad improvements ($200,000). Community Development Block Grant-Disaster Relief (CDBG-DR)

funding has also been made available to restore neighborhood parks affected by federally declared disasters, which include both the June 2011 Tornado and the October 2011 Snowstorm and other events that impacted the City of Springfield's open spaces. The renovations at Nathan Bill Park ($750,000) were made possible by CDBG-DR funding.

Federal Land and Water Conservation Fund (L&WCF): The Land and Water Conservation Fund provide for the reimbursement of up to 50 percent of the costs of acquiring or developing outdoor recreation facilities. The program is administered by the Massachusetts Executive Office of Energy & Environmental Affairs, Division of Conservation Services.

The Local Acquisitions for Natural Diversity Program: The program provides up to 70 percent reimbursement for the cost of acquiring land for conservation and passive recreation purposes. Since 1969, the acquisition of thirteen conservation areas totaling 275.88 acres has been assisted by $120,965 in Local Acquisitions for Natural Diversity Program funds.

The Parkland Acquisitions & Renovations for Communities Program (PARC): Reimbursement of up to 70 percent of the cost of acquisition and development of active or passive outdoor recreation areas is possible under this program. Similar to the Local Acquisitions for Natural Diversity Program, the Parkland Acquisitions & Renovations for Communities Program is administered by the Division of Conservation Services. Recent projects utilizing PARC Program funds include: the Redevelopment of Camp Wilder Park ($353,536), transformation of a vacant lot into Mary Troy Park ($400,000), renovation of former school land at Balliet Park ($400,000).

Urban Parks and Recreation Recovery Program (UPARR): This federal program makes funds available to municipalities for renovation projects, planning activities and innovative programming. The major thrust of the program is toward rehabilitation of existing recreation facilities. Grants are for 70 percent of project costs. Recent projects receiving UPARR funding are Calhoun and Emerson Wight Parks ($252,000) for new playground equipment and other various recreational amenities. Magazine Park is the most recent recipient of UPARR funds ($300,000) for a new water playground, new play equipment, youth baseball field and other general park improvements.

Rivers and Harbors Program: This program provides up to 50 percent reimbursement for the restoration of publicly owned lakes or other water ways. The Department of Conservation & Recreation administers the program. Over the past ten years, the Department of Parks, Buildings & Recreation Management has received approximately $700,000 towards the restoration of its lakes and ponds.

Special Programs: The Commonwealth often sponsors programs such as Heritage Parks, Town Commons and Olmsted Parks, which provide funds for special purpose parks. Funds may also be sought from diverse sources such as the Commonwealth's Department of Public Works for monies for bikeway projects. Grants specifically for conservation land management will be researched and applied for. Recently, through the governor's Signature Park Program, the City was able to begin renovations at North Riverfront Park ($1,200,000) and transform the former Camp Seco into the new home of therapeutic recreation at Camp STAR Angelina in Forest Park ($1,300,000). Additional funding was received from the state to restore the City's open spaces after the June 2011 Tornado. Support was received from the Office of Energy & Environmental Affairs Department of Conservation and Recreation (DCR) to replant and debrush woodland areas in the tornado zone, including the Murray Tract, South Branch Park, Camp Wilder Park, Nathan Bill Park, and Ruth Elizabeth Park.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Continue the replacement of playground equipment city-wide	$1,200,000	X	X	X	X	X	X	X	Routine replacement of playground equipment with universally accessible equipment, including but not limited to Marshall Roy, Ruth Elizabeth, and Donna Blake Parks.
Continue program to make all community parks universally accessible	$750,000	X	X	X	X	X	X	X	Community parks include, but are not limited to, Blunt Park, Greenleaf Park, Emily Bill, Gurdon Bill, and Forest Park.
Creation of a consistent signage program for all parks city-wide	$600,000	X	X	X	X	X	X	X	Ensure consistent park-specific signage throughout the park system.
Blunt Park Phase II Bikeway/Walkway Park Improvements	$2,000,000	X	X	X					Renovation to the community building; a new equipment storage building for maintenance; renovations to athletic fields, including irrigation; repairs to the running track; the possible construction of a disk golf course; more picnic pavilions; benches; picnic tables; trash receptacles; new field lighting; new decorative lighting; continuation of the bikeway/walkway; trails restoration; water bubblers; signage; woodland restoration; and fencing.
Van Horn Park	$2,500,000		X	X	X				Renovations to include athletic fields, splash pad, maintenance barn; woodland restoration; add irrigation, and dredge Carp Pond.
Ruth Elizabeth Park	$600,000	X	X	X					Renovation of tornado damaged park; transfer city-owned lots to parkland.
Myrtle Street Park	$500,000		X	X	X				General park improvements to include renovations to the basketball court and splash pad.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Greenleaf Park	$2,500,000	X	X	X					Construction of a new district maintenance facility; new accessible playground equipment; install splash pad; new basketball court; renovate two soccer fields and add additional softball fields; improve front entrance with a traffic light; improve parking area.
Walsh Park	$1,500,000			X	X				Renovations including, but not limited to, ball fields, splash pad, picnic tables, benches, and add new playground equipment.
Cottage Hill Park	$1,200,000				X	X			Development of an historic open green space in a neighborhood common area; including benches; trash receptacles; lighting; irrigation; and a centrally located gazebo.
Camp Wilder Park and Quarry Pond	$300,000					X	X	X	Continuation of the development of recreational amenities including, but not limited to, pavilions, increased parking areas, playground equipment, tree work, landscaping, lighting and picnic areas. Lake management of rooted vegetation, algae, planting and trail maintenance.
Five Mile Pond Park	Phase I $1,500,000			X	X	X			Dredging of entrance cove; upgrade picnic grove and old bathhouse; renovate parking and beach areas; and review aquatic weed control measures.
City-wide tennis court improvements	$1,500,000	X	X	X	X	X	X	X	Repairs to tennis courts in various parks throughout the city, ranging from minor improvements to complete restoration.
City-wide basketball court improvements	$1,000,000	X	X	X	X	X	X	X	Repairs to basketball courts in various parks throughout the city, ranging from minor improvements to complete restoration.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Restoration of triangles and terraces throughout the City	$750,000	X	X	X	X	X	X	X	Comprehensive landscaping and irrigation improvements to green spaces citywide, including but not limited to, Thompson Triangle, McKnight Park, Dartmouth Terrace, Clarendon Triangle and other green spaces throughout the city.
Merrick Park	$500,000					X			Improve pedestrian walkways, landscaping, lighting, signage; relocate Puritan monument to Stearns Square.
Hubbard Park	$750,000				X	X	X		Pave parking area; renovate tennis courts; replace playground equipment; expand woodland trails; dredge pond; and upgrade splash pad.
Marshall Roy Park	$500,000					X	X	X	Improve accessibility, renovate splash pad, replace playground unit and upgrade irrigation system.
Tree Replacement Program	$750,000	X	X	X	X	X	X	X	Continue tree replacement for City streets and public parks in accordance with the tree master plan, asset inventory and upgrade to the City's Treekeeper program.
Replacement of Maintenance Equipment	$2,000,000	X	X	X	X	X	X	X	Continuous replacement of park equipment necessary to effectively maintain parks and open space; replace sawmill.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Upgrade School Athletic Fields	$3,000,000	X	X	X	X	X	X	X	Rehabilitation of over 60 acres of school property to meet the increased for athletic fields.
Camerota Property Acquisition Phase I	$750,000					X			Acquisition of approximately 11 acres of open space located on the northern shoreline of Five Mile Pond. Acquisition of property would preserve the watershed.
Camerota Property Phase II	$1,250,000					X	X	X	Restoration of natural woodland to preserve watershed to coincide with the Lake Management program.
Neal Indian Orchard Community Park	$2,000,000			X	X	X	X	X	Implement Master Plan.
Veteran's Golf Course Improvements	$3,500,000				X	X	X		Construction of new club house; expansion of existing maintenance building; paving of cart paths throughout the course; rebuilding of various tees and greens; construction of two rain shelters; water bubblers; fairway repairs; and sand trap renovations.
Construction of a Driving Range or Executive Par-three Course	$2,000,000							X	Facility to be located on Dwight Road adjacent to Franconia Golf Course.
Construction of Maintenance Facilities for Park Districts and Golf Courses	$3,500,000	X	X	X	X	X	X	X	Construction of new maintenance building at park districts and golf course facilities. Replace outdated and inadequate structures with new facility and pavilion at Franconia.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Walker Grandstand	$1,500,000				X	X	X		The stadium is in need of structural, cosmetic, and accessibility renovations. The basement area will be renovated to accommodate classroom space for a horticultural program with Putnam Vocational School.
Forest Park Gully Restoration	$1,500,000					X	X	X	Repairs to gullies that within and surrounding the park; collect and store stormwater to prevent nutrients and sediment loads entering the Park's water bodies.
Forest Park Buildings	$1,200,000			X	X	X			Renovation of old zoo buildings for use as classroom space, and public gathering space in accordance with the Master Plan.
Forest Park Roadways	$950,000	X	X	X	X	X	X	X	Continue to upgrade all park roads with new bituminous, drainage and curbing. Continue bikeway/walkway.
Forest Park Maintenance Building	$450,000	X	X						Replace existing maintenance barn.
Forest Park Meadowbrook Ravine	$1,500,000						X	X	Restoration of this historic area in Forest Park, including but not limited to, trail restoration, bank stabilization, accessible pedestrian bridges, clearing and grubbing of vegetation, and replication of grotto.
Forest Park Horticultural Center/ Botanical Garden	$3,000,000			X	X	X			Razing of existing greenhouse, construction of a new conservatory building with interior and exterior botanical gardens.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Zoo Improvements	$2,000,000				X	X	X	X	Analysis and implementation of existing site with regard to improving the quality of the exhibits.
Cyr Arena	$500,000								Upgrades to the building mechanical operations system; restore and replace maintenance equipment, boards and glass.
Camp STAR Angelina	$1,750,000	X	X	X					Construct a new year-round camp lodge building, trail; overall accessibility improvements.
Forest Park Porter Lake Skate House	$500,000		X	X					Improve site amenities and landscaping
Forest Park Trail Renovation	$750,000	X	X	X	X	X	X	X	Ongoing restoration of the many trails within Forest Park; cleanup of forest due to Wooley Adelgid damage; and increase accessibility.
Forest Park Bowles Fountain	$400,000			X	X				Restoration of Bowles Fountain.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Develop Neighborhood Parks	Cost Undetermined	X	X	X	X	X	X	X	Identify and acquire parcels to create parks and playgrounds in densely populated neighborhoods with limited open space.
Neighborhood Park Renovations	$3,500,000	X	X	X	X	X	X	X	Renovations include new lighting, parking improvements, and new play equipment. Parks include, but are not limited to, Hennessey, Da Vinci, Gurdon Bill, Tree Top, Tubman, Adams Angelina Park, Pynchon Park and Emily Bill.
McKnight Trail	$4,500,000	X	X	X	X	X	X	X	Develop 1.7 miles of an abandoned railway line into a bikeway/walkway trail in the McKnight Neighborhood.
Kenefick Park	$1,500,000		X	X	X				Renovate existing park features including splash pad, basketball courts and ball fields. Request from public for lighting of fields.
Park Buildings	$500,000	X	X	X	X	X	X	X	Renovate buildings and structure including, but not limited to, Trolley Pavilion and stone house in Forest Park; Blunt Park Pavilion
Park Lighting	$1,200,000	X	X	X	X	X	X	X	Repair/replace all security and decorative lighting within the park system.
Park Security	$1,500,000	X	X	X	X	X	X	X	Develop and implement security master plan for the park system.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Loon Pond	$750,000		X	X	X				Develop Master Plan with Pine Point/Indian Orchard communities. Improve beach access, construct community building, waterway cleanup, and increase community awareness of proper waste.
Chicopee River Waterfront (Indian Orchard)	$500,000	X	X	X	X	X	X	X	Create Mater Plan to improve trail system; invasive plant removal; increase accessibility.
City Owned Dams/CT Levy	$4,500,000	X	X	X	X	X	X	X	Implement recommendations in Dam Reports (2012) for restoration and repairs to all City owned dams.
Cherry Lane Cemetery	$100,000			X					Improvements including, but not limited to, fencing, monument repairs, flag poles and landscape improvements.
Wachogue Cemetery	$150,000				X				Improvements including, but not limited to, fencing, monument repairs, flag poles and landscaping.
Bay Path Cemetery	$150,000		X						Improvements, including but not limited to, fencing, monument repairs, flag poles and landscape improvements.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Riverfront Park	$2,500,000	X	X	X	X	X	X	X	Improve access to park from parking areas, install dock system for kayaking and small boating activities, shore stabilization, improve pedestrian access under existing trestle, and upgrade restroom facilities.
North Riverfront Park	$1,500,000		X	X	X	X			Implement Phase II boathouse restoration.
Court Square / Extension	$1,500,000	X	X	X	X				Repair; replace existing brick walk and roadway system, restoration of bronze monuments, general park enhancements.
Wesson Park	$300,000			X	X	X	X	X	Complete 21E.
Acquire marginal lots via the tax title process	Undetermined	X	X	X	X	X	X	X	Identify and acquire tax title properties for land adjacent to parkland.

Seven Year Action Plan Organizations: Park Department									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Greenway Corridors	Cost Undetermined	X	X	X	X	X	X	X	Acquire parcels that are contiguous with currently owned parcels; that would contribute to a wildlife corridor or greenway, and that are wetlands and/or are listed as NHESP Priority Habitat.
Conservation Trail System	Cost Undetermined	X	X	X					Design conservation lands trails; install new signage.
Environmental Stewardship	Cost Undetermined	X	X	X					Create and distribute pamphlets for conservation lands, with a special focus on environmental justice outreach
City-wide Lake Management	$3,500,000	X	X	X	X	X	X	X	Continue to manage the city's many natural water bodies to improve the quality of city water through various practices, including organic lawn care and aquatic weed management; develop organic rain gardens strategically throughout the city.
Organic Lawn/Turf Management	$120,000	X	X	X	X	X	X	X	Implement organic turf management on city properties. Educate residents on benefits of organic lawn care to reduce pesticide use and overabundance of nutrients in waterways.
Lake/Pond/Stream Dredging	Cost Undetermined	X	X	X	X	X	X	X	Remove sediment build up to maintain water bodies city-wide at desired depth. Maintain sediment retention basins including maintenance or replacement of gabion sediment retention systems.
Habitat Management	Cost Undetermined	X	X	X	X	X	X	X	City-wide invasive plant species control/removal to maintain/improve habitat for wildlife and park users.

Seven Year Action Plan Organizations: Planning and Economic Development, Parks and Conservation									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Develop and adopt complete streets resolution for City of Springfield	Cost Undetermined	X	X	X	X	X	X	X	"Complete streets are designed to accommodate bicyclists, pedestrians, public transit users and motorists of all ages and abilities," - City of Springfield Bike/Ped Plan. This ongoing process will identify and implement projects such as bike lanes, cycle track, mid-block crosswalks, pedestrian islands, curb extensions, signage, wayfinding and much more.
Develop pedestrian wayfinding systems to highlight cultural and historic assets in Springfield	Cost Undetermined	X	X	X	X				Signage and wayfinding are essential to safely transport residents to destinations, including all open space. Studies are required to locate the most efficient locations for such signage.
Pioneer Valley regional bike share initiative	Cost Undetermined	X	X	X	X	X			Conduct second phase of regional bike share feasibility study with the newly developed Union Station Intermodal system as a central focus
Close gaps in citywide bicycle and pedestrian network	Cost Undetermined	X	X	X	X	X	X		Feasibility study to connect the Forest Park neighborhood to the CT River Walk and Bikeway and conduct stuy of pedestrian patterns along the "urban trail" from Brightwood neighborhood, across the Amtrak tracks to downtown, while proposing safer walking routes
Establish methodologies to measure mode shift and develop mode shit goals	Cost Undetermined		X	X	X	X			Study and develop a methodology to establish mode shift goals on a project specific basis
Food Policy Council	Cost Undetermined	X	X	X	X	X	X	X	Continue to staff and support Springfield Food Policy Council initiatives.

Seven Year Action Plan Organizations: Planning and Economic Development, Parks and Conservation									
Projects	**Estimated Cost**	**FY '15**	**FY '16**	**FY '17**	**FY '18**	**FY '19**	**FY '20**	**FY '21**	**Description**
Community Garden Ordinance Implementation	Cost Undetermined	X	X	X	X	X	X	X	Provide support and technical assistance to urban agriculture project proponents by carrying out ordinance with focus on aesthetics and proper design/maintenance
Vacant Lot Assessment	Cost Undetermined		X	X					Conduct assessment of vacant public and private lots for agriculture potential and community benefit.
Garden Irrigation Fund Feasibility Study	Cost Undetermined		X	X	X				Conduct study to identify feasibility of irrigation fund to aid local groups paying for irrigation of community gardens.
Establish Soil Standards	Cost Undetermined		X	X	X	X			Research best practices and soil scientific principles and develop guidelines for soil safety and incorporate into Community Garden Ordinance.
Coordination with organizations to promote/develop urban agriculture projects	Cost Undetermined	X	X	X	X	X	X	X	Partner with local non-profit organizations to enhance and develop new urban agriculture projects.
Public Gardens	Cost Undetermined		X	X	X	X			Expand existing public gardens in existing parks and public spaces to provide an outdoor educational classroom for residents.
Arts and Cultural Programming	Cost Undetermined	X	X	X	X	X	X	X	Partner with newly established Springfield Central Cultural District to educate residents and visitors alike as to the cultural assets of the City, and promote further development of programming.
Arboretum	Cost Undetermined		X	X	X	X			Build upon existing facilities and expand capacity and public awareness of Forest Park and STCC arboretums
Dog Parks	Cost Undetermined			X	X	X	X		Conduct a study of appropriate locations for facilities and develop best practices.

BARNEY MAUSOLEUM, FOREST PARK

SECTION 10: PUBLIC COMMENTS

The extensive tallied results from our Open Space survey and public meetings can be obtained from Natural Resources Manager in the office of Planning and Economic Development. (413-787-6020)

SECTION 11: REFERENCES

Open Space Plan, Springfield Planning Department, 1986.

Open Space Plan, Springfield Planning Department, 1992.

Open Space Plan, Springfield Planning Department, 1997.

Open Space Plan, Springfield Planning Department, 2002.

Open Space Plan, Springfield Planning Department, 2008

Massachusetts' Outdoors, Volumes I & II, Executive Office of Environmental Affairs, Department of Environmental Management, Division of Planning and Development, December 1988.

Natural Resources Program of the City of Springfield, Phase I - Study Inventory of Sites with Natural Resource Potential, Natural Resources Technical Team of Hampden County, December 1971.

Water and Related Land Resources of the Connecticut River Region, U.S. Department of Agriculture, 1978.

Water Resources Investigation, Connecticut River Basin, U.S. Department of the Army, Corps of Engineers, October 1977.

Flood Insurance Study, City of Springfield, Federal Emergency Management Agency, June 1991.

Streamflow and Water Quality in the Connecticut River Lowland, Massachusetts, Department of the Interior, U.S. Geological Survey, 1977.

2000 U.S. Census, U.S. Department of Commerce.

Major Employers of the Pioneer Valley, Pioneer Valley Regional Planning Commission, 2015.

Regional Population Projections: 2000-2020, Pioneer Valley Regional Planning Commission, February 1992.

Executive Office of Environmental Affairs, Division of Fisheries and Wildlife and the following departments:

Department of Environmental Management: www.state.ma.us/dem

Department of Fisheries, Wildlife and Environmental Law Enforcement: www.state.ma.us/dfwele

Department of Environmental Protection: www.state.ma.us/dep

Department of Food and Agriculture: www.state.ma.us/dfa

Metropolitan District Commission: www.state.ma.us/mdc

Connecticut River Walk and Bikeway, Grant Application for ISTEA Enhancement Funds, Pioneer Valley Regional Planning Commission, April 1995

City of Springfield Pedestrian and Bicycle Complete Streets Plan, prepared by Pioneer Valley Planning Commission and MassBike for LiveWell Springfield.

Food In the City: An Old Way in a New Time, prepared by the Conway School of Landscape Design for the Springfield Food Policy Council Urban Agriculture Committee

CDC Grant program for state public health agencies to support healthy local initiatives, 1422: Work Plan

The following city departments and individuals:

- Planning and Economic Development
- Parks, Buildings, and Recreation Management
- Capital Asset Construction
- Department of Public Works
- Springfield Conservation Commission
- Springfield Historical Commission
- Springfield Water and Sewer Commission
- Pioneer Valley Planning Commission
- Pioneer Valley Transit Authority

Appendix I
Recreation Programs Sponsored by the Springfield Department of Parks, Buildings & Recreation Management

Programs	Frequency	Participants	Attendance
Movies	Summer	Adults/Children	400
Athletic Programs	All year round	Adults/Children	8,000
Fabulous February	Once a week in February	Adults/Children	2,500
Winter Programs	All parks included	Adults/Children	50,000
Summer Programs	All parks included	Adults/Children	75,000
Pool Programs	July to Labor Day	Adults/Children	15,000
Senior Drop-In Center*	Year round	Adults	2,500
Bright Nights	Nov 21 to Jan 1	Adults/Children	210,000
Mega-Shell Programs	24 Programs	Adults/Children	30,000
Festivals	Seasonal	Children	10,000
Fishing Derby	Once a year	Children	500
Therapeutic Recreation programs	All year round	Adults/Children	5,000
Bocce	Fall, Spring, Summer	Adults	500
Lawn Bowling	Fall, Spring, Summer	Adults	100
Life Guard Training	Twice a year	Adults/Children	100
Childs Road Races	Seasonal	Children	800
Outdoor Concerts / Fire works	Total of 6 in the summer	Adults/Children	6,000
Tennis	Summer	Adults/Children	1,200
Tennis Tournaments	Spring/Summer	Adults/Children	2,000

Appendix I
Recreation Programs Sponsored by the Springfield Department of Parks, Buildings & Recreation Management

Programs	Frequency	Participants	Attendance
Cyr Arena*	October-April	Adults/Children	20,000
Basketball Clinic	Once in summer	Children	150
Soccer Clinic	Once in summer	Adults/Children	150
Golf (Franconia)	April-November	Adults/Children	28,000
Golf (Veterans)	April-November	Adults/Children	28,000
Passive Recreation	All year/All parks	Adults/Children	500,000
Road Races	Year round	Adults/Children	30,000
Walk-a-thons	Year round	Adults/Children	30,000
The Zoo in Forest Park**	Year round	Adults/Children	50,000
Soccer	Fall/Spring	Children	8,000
Volleyball	Year round	Adults	2,500
Evening Gym Program	Fall, Spring, Summer	Children	3,500
After School Programs	Fall, Spring, Summer	Children	2,500
Youth/Adult Leagues	Continuous	Children Adult	10,000 8,000

*Includes all Cyr Arena Programs (hockey, figure skating, and public skating).
**The Zoo is located in Forest Park; the Forest Park Zoological Society is in charge of the maintenance and operation.

APPENDIX II: PUBLIC OPEN SPACE INVENTORY

(Part 1 and 2)

Technical Description: Part 1

Map Key: The map key refers to the large-scale Open Space Map appended to this report. (Note: the first two letters of the key are neighborhood abbreviations, i.e., BW = Brightwood, MS = Memorial Square, etc.)

Name: Open space areas are identified within each of Springfield's seventeen neighborhoods. Neighborhoods are shown on the Open Space Map.

Acres: The acreage of each open space area is given as well as the total public open space acreage for each neighborhood.

Type/Facilities: For open space areas with active recreation facilities, type indicates whether the area functions as a neighborhood or community park. Unless such areas are identified as community parks, it can be assumed that they function primarily to serve the neighborhood in which they are located. Facility abbreviations are as follows:

All properties held by the Conservation Commission are identified as natural areas and, along with undeveloped parks, are available for passive recreation.

Technical Description: Part 2 Ownership, Management, Public Access and Degree of Protection are described prior to the listing of individual sites.

Map Key: (Same as Part 1)
Name of Area: Open space areas are listed by ownership. Listings are in alphabetical order within each ownership category.

Conditions: The current condition is judged as excellent, good, fair or poor. For active recreation areas, condition is based principally on the quality of recreational facilities. For conservation areas and parks lacking active recreation facilities, condition is based on factors such as the degree of erosion or the presence of illegally dumped debris.

Recreation Potential: Recreation potential is rated as low, medium or high depending on whether adding new recreational facilities or upgrading existing facilities will likely increase recreational activity within the area. The recreation potential for natural areas relates to the feasibility of constructing trails and installing benches and signs. It should be noted that many conservation areas are acquired primarily to protect wetland resources and recreation is a secondary benefit.

Funds Used: Federal or state funding programs are identified wherever external funds have been used to supplement local resources for the acquisition, development or restoration of open space. Funding programs are described in Section 9: Seven-Year Action Plan and include:

UPARR - Urban Parks and Recreation Recovery Program
L&WCF - Land and Water Conservation Fund
CDBG - Community Development Block Grant
HUD-OSP - U.S. Department of Housing and Urban Development, Open Space Program
EPA - Environmental Protection Agency (Section 314 Clean Lakes)
DEP - Massachusetts Department of Environmental Protection
DEP Programs:
- Clean Lakes
- Rivers and Harbors

DEM-Massachusetts Department of Environmental Management
DEM Programs:
- City and Town Commons
- Olmsted Parks
- Heritage ParksExecutive

Office of Environmental Affairs -Division of Conservation Services:
- Self-Help
- Urban Self-Help

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Bay Neighborhood			
BY1	Ray Smead Arena	3.2	Skating Rink/State owned
BY2	Blunt Park	161.7	Community Park/Basb., Bask., Soccer, Tennis, Track, Picnic, Ticket Booth
BY3	Acorn Park	4.0	Basb., Tennis, P.E.
BY4	Hennessey Park	1.28	Passive, Monument
BY5	Central HS Athletic Fields	9.87	Basb., Football, Soccer, Track, Tennis
BY6	Ells Playground	4.7	Basb.
BY7	State Pool	1.98	Pool
	Total	**186.73 acres**	
Boston Road Neighborhood			
BR1	Five Mile Pond	22.9	Community Park, P.E., Picnic, Boat Launch, Concession Bldg, Restrooms, Ticket Booth, Parking Lot
BR2	Loon Pond Access	0.39	Boat Launch
BR3	Warner Playground	3.8	Basb., Bask., P.E.
BR4	Grayson Kettle	16.82	Natural Area
BR5	Fanti Bog	11.4	Natural Area
BR6	Merrill/Wrentham Bog	6.74	Natural Area
BR7	Five Mile Pond Access	1.23	Natural Area
BR8	Loon Pond Shore	1.60	Natural Area
BR9	Wollaston Consveration Area	0.83	Natural Area
BR10	Kent Road Conservation Area	0.61	Natural Area
BR11	Loon Pond Beach	4.21	Beach, Picnic Area, Swimming, Restrooms
	Total	**70.53 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Brightwood Neighborhood			
BW1	Kenefick Park	12.70	Community Park, P.E., Water Park, Restrooms, Tennis, Community Bldg.
BW2	Connecticut River Access Park	1.26	Undeveloped
BW3	Wason Avenue Park	1.63	Passive
BW4	Brightwood School Playground	0.63	Bask., Basb., P.E., Handball, Pool, Passive
BW5	Marina Park	3.40	Boat Ramp
BW6	Chestnut Accelerated Playground	5.44	Basb.,Bask., Football, Soccer
	Total	**25.06 acres**	
East Forest Park Neighborhood			
EF1	Treetop Park	17.76	Soccer, Parking Lot, Restrooms, Children's Playground
EF2	Nathan Bill Park	19.02	Community Park, Basb., Bask., Soccer, P.E., Tennis, Picnic, Passive, Restrooms, Parking
EF3	Edward J. Murphy Park	2.49	Undeveloped Woodland
EF4	Red Maple Swamp	26.98	Undeveloped Woodland
EF5	Memorial School Playground	6.07	Basb., Bask., Picnic
EF6	Harris School Playground	1.19	Bask., P.E.
EF7	General Edwards Triangle	0.43	Monument
EF8	Schneelock Brook (Helen C. White Conservation Area)	41.91	Natural Area
EF9	Colorado Street Conservation Area	.31	Natural Area
EF10	Pine Crest Conservation Area	6.45	Natural Area
	Total	**122.61 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
East Springfield Neighborhood			
ES1	Marshall Roy Park	14.63	Basb., Soccer, Football, Bask., P.E., Water Playground
ES2	Rio Vista Park	4.77	Undeveloped Woodland
ES3	Camp Angelina	3.33	P.E., Picnic
ES4	Bircham Park	0.52	Undeveloped Woodland
ES5	Bowles School Playground	1.98	Bask., P.E.
ES6	Pottenger School Playground	0.99	P.E.
ES7	Delta Hills Conservation Area	27.52	Natural Area
ES8	Brookdale Dr. Conservation Area	8.30	Natural Area
ES9	Peter J. Carando, Sr. Conservation Area	8.32	Natural Area
ES10	Neal Indian Orchard Community Park	21.50	
	Total	**91.86 acres**	
Forest Park Neighborhood			
FP1	Forest Park	735.20	Community Park, Pool, Bathhouse, Skating Rink, Basb., Bask., Football, Soccer, Tennis, P.E., Picnic, Bicycle Trails, Nature Trails, Monument, Sculpture, Zoo, Administration & Maintenance Bldg's., Handicap Play Structures, King Philip's Stockade, Carriage House, Parking , Toll Booth, Water Playground, Rose Garden and Horticulture Displays
FP2	Forest Park Extension	77.59	Undeveloped Woodland
FP3	Franconia Golf Course	103.00	18-Hole Golf Course, Clubhouse
FP4	Valentine Park	9.02	Undeveloped Woodland
FP5	Shamrock Park	10.43	Undeveloped Woodland
FP6	Mary Shea Park	0.50	Passive*
FP7	Garfield Triangle	0.12	Fountain
FP8	Beal School Playground	6.76	Bask., Basb., P.E.
FP9	Washington Street School Playground	0.77	P.E.

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Forest Park (cont.)			
FP10	White Street School Playground	0.78	P.E.
FP11	Kensington Avenue School Playground	0.44	P.E.
FP12	Entry Dingle	17.38	Natural Area
FP13	Entry Dingle Access	0.77	Natural Area
	Total	**962.76 acres**	
Indian Orchard Neighborhood			
IO1	Lake Lorraine State Park	1.26	Public Beach, Bathhouse
IO2	Hubbard Park	65.69	Community Park, Basb., Bask., Soccer, Tennies, P.E., Picnic, Nature Trails, Passive, Pond, Restrooms, Parking, Water Playground
IO3	Cottage Hill Park	3.34	Passive
IO4	Myrtle Street Park	1.55	Basb., Bask., Water Playground, P.E., Community Bldg, Restrooms
IO5	Godfrey Park	0.96	Monument
IO6	Kennedy Athletic Fields	16.87	Basb., Bask., Football, Soccer, Tennis, Track
IO7	Indian Orchard School Playground	4.78	P.E.
IO8	Indian Orchard Kame	1.26	Natural Area
IO9	Lake Lorraine Conservation Area	7.98	Natural Area
IO10	Long Pond Bog	10.26	Natural Area
IO11	Mona Lake	0.01	Natural Area
IO12	Chicopee River Overlook	5.87	Natural Area, Walkway, Boat Ramp
	Total	**119.83 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Liberty Heights Neighborhood			
LH1	Atwater Park	9.05	Undeveloped Woodland
LH2	Van Horn Park	113.95	Community Park, Basb., Bask., Football, Soccer, Tennis, P.E., Picnic, Bicycle Trails, Nature Trails, Pond, Skating, Recreation Center, Water Playground, Parking
LH3	John A. Sullivan Park	5.62	Bask., Basb.
LH4	Gurdon Bill Park	6.61	Picnic, Passive
LH5	Walsh Park	4.0	Softball, Bask., P.E.
LH6	Brunton Park	0.12	Passive
LH7	Central Academy (Van Sickle) School Athletic Fields	5.28	Pool, Basb., Bask., Football, Tennis, Track
LH8	Glenwood School Playground	0.90	P.E.
LH9	Liberty Street School Playground	0.98	Bask., P.E.
LH10	Hogan/Abbey Brook Conservation Area	28.13	Natural Area
LH11	Mary Troy Park	.70	
	Total	**175.34 acres**	
McKnight Neighborhood			
MK1	Magazine Park	3.13	Basb., Bask., P.E., Water Playground
MK2	McKnight Glen	2.45	Passive
MK3	Thompson Triangle	0.81	Passive, Fountain
MK4	McKnight Triangle	0.43	Passive
MK5	Rebecca Johnson Park	2.25	Basb., P.E.
	Total	**9.07 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Memorial Square Neighborhood			
MS1	Calhoun Park	2.43	Water Playground, Basb., Bask., Handball, P.E.
MS2	Linda's Park	1.75	Community Gardens, Outdoor Classrooms
MS3	Jaime Ulloa Park	3.41	Basb., Bask., P.E., Picnic, Water Playground
MS4	Lincoln Street School Playground	0.54	P.E.
	Total	**8.13 acres**	
Metro Center Neighborhood			
MC1	Armory National Historic Park	18.50	Small Arms Museum, Passive
MC2	Kibbe Triangle	0.80	Passive
MC3	Quadrangle**	1.06	Passive, Dr. Seuss National Memorial Sculpture Garden
MC4	Merrick Park	0.57	Sculpture, Passive
MC5	Apremont Triangle	0.10	Passive
MC6	Emily Bill Park	4.24	Basb., Bask., Water Playground, P.E., Community Bldg.
MC7	Armoury Commons	0.57	Sculpture, Passive
MC8	Pynchon Plaza	0.44	Sculpture, Passive
MC9	Stearns Square Park	0.41	Sculpture, Passive
MC10	Court Square Park	2.4	Monument, Passive
MC11	Riverfront Park	6.42	Passive, Walk/Bikeway, Amphitheater
	Total	**35.51 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Old Hill Neighborhood			
OH1	Barrows Park	1.63	Water Playground, P.E.
OH2	Pendleton Avenue Park	1.70	Bask., Passive, P.E.
OH3	Harriet Tubman Park	1.70	Bask., P.E., Picnic, Passive
OH4	Mason Square	0.24	Monument, Passive
OH5	DeBerry School Playground	2.83	Basb., Bask., P.E.
	Total	**8.10 acres**	
Pine Point Neighborhood			
PP1	Sylvester & Lorenzo	4.71	Undeveloped Woodland
PP2	Putnam Park	6.83	Soccer, Football
PP3	Balliet School Playground	3.88	Basb., Bask., P.E., Handball, Tennis, Picnic, Shuffleboard
PP4	Dorman School Playground	1.64	P.E.
PP5	White Cedar Bog	26.98	Natural Area
PP6	Seymour Dingle*	20.36	Natural Area
PP7	Good Shepard's Brook	3.62	Natural Area
PP8	Edgemere Road Swamp	4.55	Natural Area
PP9	Hutchinson Bog	1.82	Natural Area
PP10	Bayside Street Wetlands	0.23	Natural Area
PP11	Ralph Street Conservation Area	0.71	Natural Area
PP12	Tilton Street Conservation Area	0.88	Natural Area
	Total	**76.21 acres**	

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Six Corners Neighborhood			
SC1	Stebbins Park*	4.77	Bask., P.E., Picnic, Passive
SC2	Ruth Elizabeth Park	5.94	Water Playground, Basb., Bask., P.E.
SC3	Gerrish Park	1.07	Monument, Passive
SC4	Commerce Playfields	3.47	P.E., Basb., Soccer, Football
	Total	**15.25 acres**	
Sixteen Acres Neighborhood			
SA1	South Branch Park*	167.92	Passive
SA2	Camp Angelina	2.0	Camp (Disabled Children)
SA3	North Branch Park*	94.64	Undeveloped Woodland
SA4	North Branch Tributary Park	27.70	Undeveloped Woodland
SA5	Greenleaf Park	22.0	Community Park, Basb., Bask., Football, Soccer, Tennies, Recreation Center, Restrooms, Parking, Library
SA6	Hermitage Tract	5.34	Undeveloped Woodland
SA7	Veteran's Golf Course	149.0	18-Hole Golf Course
SA8	Venture Pond	10.60	Undeveloped Woodland
SA9	Kiley School Athletic Fields	13.03	Basb., Bask., Soccer, Tennis, Pool
SA10	Duggan School Athletic Fields	14.42	Basb., Bask., Tennis, Pool
SA11	Lynch School Playground	21.07	Basb., Bask., Soccer, P.E.
SA12	Sixteen Acres School Playground	21.89	Basb., Bask., Soccer, P.E.
SA13	Glickman School Playground	4.25	Basb., Bask., P.E.
SA14	Brunton School Playground	3.84	Basb., P.E.
SA15	Freedmand School Playground	5.11	Basb., P.E.

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Sixteen Acres (cont.)			
SA16	Talmadge School Playground	4.64	Basb., P.E.
SA17	Keddy Tracts	16.60	Natural Area
SA18	Bonavita Conservation Area	2.76	Natural Area
SA19	DYS Tracts	24.10	Natural Area
SA20	LaBelle Drive Conservation Area	22.88	Natural Area
SA21	Lake Massasoit Access	0.64	Natural Area
SA22	Duggan Leatherleaf Bog	11.16	Natural Area
SA23	Rose Chase Conservation Area	14.66	Natural Area
SA24	Garvey Drive Promontory	3.52	Natural Area
SA25	South Branch Extension	12.97	Natural Area
SA26	Grand Valley Conservation Area	8.98	Natural Area
SA27	Venture Pond Conservation Area	3.04	Natural Area
SA28	Mill Pond Access	2.41	Natural Area
SA29	Wetstone Tract	0.78	Natural Area
SA30	Tamarack Bog	19.23	Natural Area
SA31	Woodland Park Conservation Area	39.10	Natural Area
SA32	Gralia Road Swamp	10.83	Natural Area
SA33	Broska Farm	27.30	Natural Area
SA34	Dutchess Street Vernal Pool	5.14	Natural Area
SA35	Michael Street Access to South Branch of the Mill River	0.30	Natural Area

Appendix II: Part 1 Public Open Space by Neighborhood			
Map Key	**Name**	**Acres**	**Use/Facilities**
Sixteen Acres (cont.)			
SA36	Heritage Drive Extension	0.34	Natural Area
SA37	Ramblewood Conservation Area	19.60	Natural Area
SA38	Breckwood Park	27.65	Undeveloped Woodland, Pond
SA39	Sabis School Playground	14.85	Basb., Soccer, Football, P.E.
SA40	Senator Street Conservation Area	0.26	Natural Area
SA41	Stapleton Road Conservation Area	0.14	Natural Area
SA42	Timothy Circle Conservation Area	0.73	Natural Area
SA43	Camp Wilder	27.55	Community Park, Pond, Picnic, Restrooms, Camp, Conference Center
SA44	Tinkham Road Wetland	29.10	Natural Area
SA45	South Branch Conservation Area	4.25	Natural Area
SA46	Vann Street Conservation Area	2.84	Natural Area
SA47	Jordon Street Swamp	3.58	Natural Area
	Total	**924.74 acres**	
South End Neighborhood			
SE1	DaVinci Park	0.41	P.E., Passive
SE2	Emerson Wight Playground	6.88	Water Playground, Basb., Bask., Soccer, P.E., Picnic, Pavilion, Track
	Total	**7.29 acres**	
Upper Hill Neighborhood			
UH1	Gunn Square Park	0.78	Bask., P.E., Passive
UH2	Adams Playground	2.28	Basb., Bask., P.E., Picnic, Water Playground
UH3	Weeping Willow Land	1.70	Undeveloped Woodland

Appendix II: Part 1 Public Open Space by Neighborhood			
Upper Hill (cont.)			
UH4	Wesson Park	19.79	Undeveloped Woodland
UH5	Lake Massasoit Access	2.54	Undeveloped Woodland
UH6	Homer Street Playground	0.33	Bask., P.E.
	Total	**27.42 acres**	
City Total: 2844.24 Acres (Note: This inventory does not include numerous small triangles and terrace owned and maintained by the City of Springfield.) *Indicates area extends beyond neighborhood boundaries. **Quadrangle Park is owned and maintained by the Springfield Museums Association.			

Appendix II: Part II
Public Open Space by Ownership

A: Federal Property
Owner/Manager: U.S Department of the Interior
Public Access: Admission is free.
Degree of Protection: Federal Law protecting national historic site.

Map Key	Name of Area	Condition	Recreation Potential	External Funding
MC1	Armory National Historic Park	Good	Medium	Department of Interior

B: State Property
Owner/Manager: Commonwealth of Massachusetts, Department of Environmental Management (DEM)
Public Access: Fee charged at both sites.
Degree of Protection: Article 97 of the State Constitution.

Map Key	Name of Area	Condition	Recreation Potential	External Funding
IO1	Lake Lorraine State Park	Excellent	Low	DEM
BY1	Ray Smead Arena	Fair	Low	DEM

C: Department of Parks, Buildings & Recreation Management
Owner/Manager: City of Springfield, Department of Parks, Buildings& Recreational Management
Public Access: There is a daily automobile fee at Forest Park, Five Mile Pond Parkand Blunt Park. Season passes are available which allow a vehicle to enter all parks for a reduced price. Pedestrians may walk or bike into all parks for no cost. All other parks have no vehicle entrance fee.
Degree of Protection: All land under the Park Department ownership is dedicated for park use and the conversion to other uses invokes Article 97 of the State Constitution.

Map Key	Name of Area	Condition	Recreation Potential	External Funding
BY3	Acorn Park	Fair	Medium	L&CF
UH2	Adams Playground	Good	High	CDBG, L&WCF, Urban Self-Help
MC8	Armoury Commons	Excellent	Low	CDBG
ES3	Angelina Park	Fair	High	
MC5	Apremont Triangle	Good	Low	CDBG
LH1	Atwater Park	Good	Low	
OH1	Barrows Park	Excellent	Low	CDBG, L&WCF, Urban Self-Help

Appendix II: Part II Public Open Space by Ownership				
C: Department of Parks (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
ES4	Bircham Park	Good	Low	
BY2	Blunt Park	Excellent	High	Mass. Hwys., Urban Self-Help
SA38	Breckwood Park	Fair	Low	
LH6	Brunton Park	Good	Low	CDBG
MS1	Calhoun Park	Good	Medium	CDBG, L&WCF, UPARR, Urban Self-Help
SA2	Camp Angelina	Good	Low	
SA43	Camp Wilder	Good	High	Urban Self-Help, City Funds
IO12	Chicopee River Overlook	Fair	High	
BW2	Connecticut River Access	Good	Low	
IO3	Cottage Hill Park	Fair	Low	
MC10	Court Square Park	Excellent	Low	Heritage Park
SE1	Da Vinci Park	Good	Low	CDBG
EF3	Edward J. Murphy Park	Good	Low	
SE2	Emerson Wight Playground	Good	Medium	CDBG, L&WCF, UPARR, Urban Self-Help
MC6	Emily Bill Park	Excellent	Medium	L&WCF, Private Funds, Urban Self-Help
BR1	Five Mile Pond	Good	Low	Clean Lakes, L&WCF, Urban Self-Help
FP1	Forest Park	Excellent	Medium	Urban Self-Help, EPA, Clean Lakes, River and Harbors, Olmsted, MassHighway
FP2	Forest Park Extension	Good	Low	
FP3	Franconia Golf Course	Excellent	Medium	Urban Self-Help

Appendix II: Part II Public Open Space by Ownership				
C: Department of Parks (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
FP7	Garfield Triangle	Good	Low	
EF7	General Edwards Triangle	Good	N/A	
SC3	Gerrish Park	Good	Low	
IO5	Godfrey Park	Excellent	Low	
SA5	Greenleaf Park	Excellent	High	L&WCF, Housing and Community Development
UH1	Gunn Square Park	Fair	Medium	CDBG
LH4	Gurdon Bill Park	Fair	Medium	CDBG, L&WCF
OH3	Harriet Tubman Park	Excellent	Low	CDBG, Urban Self-Help
BY4	Hennessey Park	Good	Medium	CDBG
SA6	Hermitage Tract	Good	Low	
IO2	Hubbard Park	Good	Medium	CDBG, L&WCF, Clean Lakes, Urban Self-Help
MS4	Jaime Ulloa Park	Good	Low	UPARR
LH3	John A. Sullivan Park	Good	Medium	
BW1	Kenefick Park	Excellent	Medium	CDBG, L&WCF, Urban Self-Help, Housing and Community Development
MC2	Kibbe Triangle	Good	Low	
UH5	Lake Massasoit Access	Good	Medium	
BR2	Loon Pond Access	Good	Low	
BR11	Loon Pond Beach	Excellent	Low	Urban Self-Help
MK1	Magazine Park	Good	High	CDBG, L&WCF, UPARR, Urban Self-Help
BW6	Marina Park	Good	Low	

Appendix II: Part II Public Open Space by Ownership				
C: Department of Parks (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
ES1	Marshall Roy Park	Excellent	Low	L&WCF, Urban Self-Help
FP6	Mary Shea Park	Good	Low	
OH4	Mason Square	Excellent	Low	CDBG
MK2	McKnight Glen	Fair	Low	CDBG
MK4	McKnight Park	Good	Low	CDBG
MC4	Merrick Park	Excellent	Low	
IO4	Myrtle Street Park	Excellent	Low	CDBG, L&WCF, Urban Self-Help
EF2	Nathan Bill Park	Good	High	L&WCF, Urban Self-Help
SA3	North Branch Park	Good	Low	
SA4	North Branch Tributary Park	Fair	High	
FP5	Oakland Street Park	Good	Low	
OH2	Pendleton Avenue Park	Poor	Medium	
MC8	Pynchon Plaza	Poor	Low	CDBG
MC3	Quadrangle Prk	Excellent	Medium	Heritage Park
EF4	Red Maple Swamp	Good	Medium	
ES2	Rio Vista Park	Good	Low	
MC11	Riverfront Park	Good	High	CDBG, Hertiage Park
SC2	Ruth Elizabeth Park	Good	Medium	CDBG, L&WCF, Urban Self-Help
SA1	South Branch Park	Good	Low	

Appendix II: Part II
Public Open Space by Ownership

C: Department of Parks (cont.)

Map Key	Name of Area	Condition	Recreation Potential	External Funding
MC9	Stearns Square	Good	Low	CDBG
SC1	Stebbins Park	Fair	High	
PP1	Sylvester & Lorenzo	Fair	Low	
MK3	Thompson Triangle	Excellent	Low	CDBG, City & Town Commons
EF1	Treetop Park	Excellent	Medium	Urban Self-Help
LH2	Van Horn Park	Excellent	Low	Clean Lakes, L&WCF, Urban Self-Help
FP4	Valentine Park	Good	Low	
SA8	Venture Pond	Good	Medium	
SA7	Veterans Golf Course	Excellent	Medium	
LH5	Walsh Park	Poor	High	L&WCF
BW3	Wasson Avenue Park	Fair	Medium	
UH3	Weeping Willow Lane	Good	Low	
UH4	Wesson Park	Good	Low	

D: City Conservation Land
Owner/Manager: Springfield Conservation Commission
Public Access: All areas are open to the public at no cost.
Degree of Protection: All areas a held by the Commission in fee-simple interest and a change is use invokes Article 97 of the State Constitution.

Map Key	Name of Area	Condition	Recreation Potential	External Funding
PP10	Bayside Street Conservation Area	Good	Medium	
SA18	Bonavita Memorial Conservation Area	Good	High	

Appendix II: Part II Public Open Space by Ownership				
D: City Conservation Land (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
ES8	Brookdale Drive	Good	High	
SA33	Broska Farm	Poor	High	
SA25	Carol Ann Conservation Area	Fair	Medium	
EF9	Colorado Street Conservation Area	Fair	Medium	
ES7	Delta Hills	Good	High	Self-Help, HUD-OS
SA22	Duggan Leatherleaf Bog	Fair	High	Self-Help, HUD-OS
SA34	Dutchess Street Vernal Pool	Fair	Low	
SA19	DYS	Good	High	
PP8	Edgemere Road Swamp	Fair	Low	
FP14	Entry Dingle	Fair	Low	Self-Help
FP15	Entry Dingle Access	Fair	Low	
BR5	Fanti Bog	Good	High	
BR7	Five Mile Pond Access	Good	High	
SA24	Garvey Promontory	Fair	Low	Self-Help
PP7	Good Shepard’s Brook	Fair	Low	Self-Help
SA32	Gralia Road Swamp	Good	Low	
BR4	Grayson Kettle Hole	Good	High	
SA26	Grand Valley Conservation Area	Good	Low	
SA36	Hermitage Drive Extension	Good	Low	

Appendix II: Part II Public Open Space by Ownership				
D: City Conservation Land (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
PP9	Hutchinson Bog	Good	Low	
IO8	Indian Orchard Kame	Good	Medium	
SA47	Jordan Street Swamp	Good	Low	
SA17	Keddy Tracts	Good	High	Self-Help
BR10	Kent Road Conservation Area	Fair	Medium	
SA20	LaBelle Drive Conservation Area	Poor	High	
IO9	Lake Lorraine Shore	Good	High	
SA21	Lake Massasoit Access	Good	Medium	
BR8	Loon Pond Shoreline	Good	Medium	
IO10	Long Pond Bog	Good	Medium	
BR6	Merrill/Wrentham Bog	Fair	Low	
SA35	Michael Street Access	Fair	Medium	
SA28	Mill Pond Access	Good	Low	Self-Help
IO11	Mona Lake	Fair	Medium	
ES9	Peter J. Carando, Sr. Conservation Area	Good	Low	
EF10	Pine Crest Conservation Area	Fair	Medium	
PP11	Ralph Street Conservation Area	Fair	Medium	
SA37	Ramblewood Conservation Area	Poor	High	
SA23	Rose Chase Conservation Area	High	High	

Appendix II: Part II Public Open Space by Ownership				
D: City Conservation Land (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
EF8	Schneelock Brook	Good	Low	Self-Help
SA40	Senator Street	Fair	Medium	
PP6	Seymore Dingle	Fair	Low	Self-Help, HUD-OS
SA41	Stapleton Road Conservation Area	Fair	Poor	
SA45	South Branch Conservation Area	Good	Low	
SA30	Tamarack Bog	Good	Low	
PP12	Tilton Street Conservation Area	Good	Low	
SA42	Timothy Circle	Fair	Medium	
SA44	Tinkham Road Wetland	Fair	Medium	
SA46	Vann Street Conservation Area	Good	Low	
SA27	Venture Pond	Good	High	
SA29	Wetstone Tract	Good	Low	Self-Help
PP5	White Cedar Bog	Good	Low	Self-Help
BR9	Wollaston Street Conservation Area	Fair	Poor	
SA31	Woodland Park	Good	High	Self-Help
E: School Department Property Owner/Manager: Springfield School Department Degree of Protection: None except for those areas where federal funds were use for acquisition or development. In those cases, deed restrictions prevent the conversion to other uses without prior consent of the funding agencies.				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
PP3	Balliet Playground	Excellent	Low	L&WCF
FP8	Beal Playground	Good	Medium	
ES5	Bowles Playground	Fair	Low	
BW4	Brightwood Playground	Poor	Low	

Appendix II: Part II Public Open Space by Ownership				
E: School Department Property (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
SA14	Brunton Playground	Fair	Medium	
BY5	Central High School Athletic Fields	Excellent	Low	
BW6	Chestnut Accelerated Playfields	Excellent	Medium	Urban Self-Help
SC4	Commerce Playfields	Excellent	Low	
OH5	DeBerry Playground	Excellent	Medium	Urban Self-Help
PP4	Dorman Playground	Poor	Low	
SA10	Duggan Athletic Fields	Good	Low	
BY6	Ells Playground	Poor	Low	
SA15	Freedman Playground	Fair	Medium	
LH8	Glenwood Playground	Good	Low	
SA13	Glickman Playground	Good	Medium	
EF6	Harris Playground	Good	Low	
UH6	Homer Street Playground	Good	Low	
IO7	Indian Orchard Playground	Good	Low	
IO6	Kennedy Athletic Fields	Good	Low	
FP11	Kensington Avenue Playground	Poor	Low	
SA9	Kiley Playfields	Good	Medium	
MS4	Lincoln Playground	Poor	Low	
SA11	Lynch Playground	Good	Medium	

Appendix II: Part II Public Open Space by Ownership				
E: School Department Property (cont.)				
Map Key	Name of Area	Condition	Recreation Potential	External Funding
SA11	Lynch Playground	Good	Medium	
EF5	Memorial Playground	Fair	Medium	
ES6	Pottenger Playground	Good	Low	
PP2	Putnam Athletic Fields	Excellent	Low	
SA39	Sabis Playfields	Excellent	Medium	
SA12	Sixteen Acres Playground	Fair	Medium	
SA16	Talmadge Playground	Good	Low	
LH7	Central Academy (Van Sickle) Playfields	Good	Low	
BR3	Warner Playground	Fair	Medium	
FP9	Washington Street Playground	Poor	Low	
FP19	White Street Playground	Poor	Low	

Appendix III: Description of Proposed Conservation and Park Areas and Highlights of Successful Land Acquisition Projects Identified in 2008 plan		
Map Key	Area (Acres)	Description
P1	North Branch Extension (88.66)	This site encompasses the stream valley of the North Branch of the Mill River in the portion of its wetland between Parker Street and the Wilbraham town line. There are two main trails adjacent to the Hillcrest Park Cemetery and Spikenard Circle. One is a fire road which was constructed by the cemetery after several fires. There are several other trails within the property. The area is suitable for hiking, jogging and cross country skiing.
P2	South Branch Extension (2.94)	Some of the city's few remaining undeveloped woodlands are located in Sixteen Acres along the South Branch of the Mill River. These areas are adjacent to the towns of Wilbraham, Hampden and East Longmeadow and have been identified by the Natural Heritage as supporting populations of rare and endangered species. Although the potential for recreation is good, it is a good area for natural study. ***2 large parcels to the north of this area have been acquired by the Conservation Commission since 2008***
P3	Entry Dingle (10.47)	Acquisition of the streambelt between Tiffany and Dickinson Street would complete the greenway extending from White Street to Forest Park. One acre was recently donated to the Commission. Recreation potential is limited to hiking due to its steep slopes.
P4	Jamaica Brook (12.71))	Jamaica Brook connects Pasco Road (Fanti Conservation Area) with the North Branch of the Mill River. It is almost entirely wetland.
P5	Chicopee River Overlook (12.39)	This narrow peninsula, located in the Indian Orchard Neighborhood, stretches more that 800 feet into the Chicopee River and along its banks. This area is suitable for walking and notable for its scenic vistas of the Chicopee River. ***~50% of this property was acquired by the Parks Department since 2008.***
P6	Connecticut River Shore (3.88)	This site lies on the riverside of the flood control structure just south of the boathouse at the North End Bridge. It contains the last significant stand of Cottonwoods and Silver Maples in Springfield.
P7	Mona Lake (1.76)	Mona Lake is a shallow 11-acre lake near the intersection of Berkshire Avenue and Cottage Street. It's a recreational potential for boating, swimming and ice-skating.
P8	Lake Lookout (9.20)	The North Branch of the Mill River empties into the lake which is sometimes considered part of Lake Massasoit.
P9	Lake Lorraine Shore (3.50)	A 16-foot easement now connects the Lake Lorraine Conservation Area with the lake. Acquisition of an additional three acres would join the existing conservation area with the lake. This area of the shoreline is now being used by fisherman as the state-stocking program at Lake Lorraine.
P10	Five Mile Pond (9.92)	This area is located at the end of Temby Street and abuts Five Mile Pond. It contains extensive wetlands and a shoreline. It is the former site of a privately owned junkyard.
P11	Wilbraham Road Bog (26.04)	This site is comprised of several bogs located south of Wilbraham Road near the Wilbraham Town line. It is adjacent to 29 acres of conservation land acquired from the state Division of Youth Services. The bogs are located in an area of dense undergrowth and steep slopes, .limiting recreational use.

P12	Tinkham Road Swamp (85.36)	Tinkham Road Swamp is located south of Tinkham Road, near the Gate of Heaven Cemetery. This area is identified as a habitat for rare and endangered species by the Massachusetts Natural Heritage Program.
P13	Robinson Gardens (12.54)	This wetland area is located northeast of Bay Street behind Robinson Gardens Apartments. This area is generally a swamp.
P14	Edgemere Road Red Maple Swamp (15.61)	Edgemere Road Red Maple Swamp is a densely overgrown swamp forming part of the same drainage system and connecting to the Grayson Kettlehoel Conservation Area. A portion of the area has been acquired through tax-title takings and donation. ***Several of these parcels were acquired by the Conservation Commission since 2008***
P15	Ellendale Road Red Maple Swamp (17.57)	There are three small ponds and an unnamed tributary to the South Brach of the Mill River in this wetland area. It is located near the intersection of Cooley and Allen Streets. ***~25% of this property was acquired by the Conservation Commission since 2008***
P16	Jordan Street Swamp (20.06)	As yet, there is little development in the immediate vicinity of this swamp which borders the Wilbraham town line. There are trails through the area which connect to the proposed North Branch Extension Conservation Area. ***Approximately 25% of these properties were acquired by the Conservation Commission since 2008.***
P17	Rocus Street Swamp (7.51)	Poor Brook intersects the southern end of this wetland area near the intersections of Rocus Street and Robbins Road. The central portion is a kettlehole bog. A pair of nesting Red Tail Hawks have been observed in the area. ***~50% of this property was acquired by the Conservation Commission since 2008***
P18	Five Mile Pond Extension (0.30)	This small area is located directly adjacent to Five Mile Pond Park. These parcels are privately owned and currently have structures located on them.
	Plastics Park (21.50)	***This 21 acre parcel is located on Page Boulevard, on the border of the East Springfield and Indian Orchard Neighborhoods. This park space has been acquired by the City during the last OS plan timeline. It is now named the Neal Indian Orchard Community Park.***
P20	Duda Property (3.14)	This property is a 3-acre parcel on the border of the cities of Springfield and Chicopee. The parcel contains a small pond and has scattered vegetation. There is good recreational potential for this site that will serve the surrounding residents of East Springfield.

Appendix IV: Update

Park Department: Forest Park, the city's largest and most heavily used recreation area, is the focus of a large amount of the restoration dollars that come the City's way from the Commonwealth and the Federal Government. Over the last 20 years, in excess of $20 million has been expended toward improvements in Forest Park. At 735 acres, with an average annual attendance of well over 500,000 patrons, Forest Park is always in need of capital improvement funding.

Projects presently under design in Forest Park include:

Forest Park Conservatory and Botanical Gardens: Historically, Forest Park was always known for its beautiful flower and rose gardens. With the completion of the new Rose Garden in the fall of 2000, it is time for the attention to be turned to the renovation of the horticultural area in Forest Park. The current greenhouse is antiquated and in need of complete replacement. A conceptual design has been completed for a Victorian style conservatory with three wings. Botanical gardens are planned for the immediate area surrounding the conservatory.

Estimated Project Cost: $5-10 million

Porter Lake Skate House*:* Improvements planned for this building include gutting the interior first and second floors and renovating the space for continued use for the Environmental Center for Our Schools (ECOS) and future use as a public gathering facility. The septic system is failing and must be replaced with a grinder pump system and new restrooms. The exterior will be improved with new decorative pavers, lighting, benches, landscaping and safer access to the water. Accessibility will be addressed and improved

Estimated Project Cost: $500,000 - $1,500,000

Projects presently under construction in parks city wide, include:

Camp STAR Angelina: Roughly 20 acres of Forest Park, the renovations at Camp STAR Angelina will offer the first universally designed day-camp and park in the area. To be used as the home of Therapeutic Recreation in the City of Springfield, Camp STAR Angelina offers inclusive recreational opportunities for youth and adults with disabilities. The renovations include: a zero-entry accessible swimming pool, bathhouse, Universal Outdoor Amphitheater, accessible woodland trail to Porter Lake and a year-round programming building. The master plan will be completed in phases, with the pool/bathhouse and amphitheater opening in Summer 2015. The project is funded through state and municipal funds, private donations and in-kind services.

Project Costs:	$5,000,000
PHASE 1 & 2 (Bathhouse, Pool, Amphitheater)	
State (Signature Parks Program	$1,300,000
City (CBDG)	$ 350,000
Private Donations	$ 250,000

Balliet Park : This 6.47acre park is located in the Pine Point neighborhood of the City. Balliet Park was transferred from the School Department to the Park Department to be operated as a public park, and through this reclassification the park was eligible for, and received, state grants for renovations. Renovations will include installation of a splash pad, playground area and park amenities, as well as rehabilitation of the playfields, tennis and basketball courts. .

Project Cost:	*$652,000*
State (Our Common Backyards))	$200,000
State (PARC FY15 Program)	$400,000
City (Bond)	$252,000

Nathan Bill Park: Located in the East Forest Park neighborhood, this 19.2 acre park was impacted by both the October Snowstorm and June tornado. Renovations were made possible through a Community Development Block Grant –Disaster recovery Program and include installation of a splash pad, stone dust walking path, irrigation; restoration of the basketball and tennis courts, installation of park amenities, improved ADA accessibility and renovation of the parking lot.

Project Cost:	*$900,000*
Federal (FEMA: CBBD-DR)	$750,000
City (Bond)	$ 150,000

Mary Troy Park: Located in the Liberty Heights neighborhood, this 0.70 acre parcel of vacant land was transferred to the Park Department and renovated into a neighborhood park. To complement the adjacent senior center/library, the park renovations included a patio plaza area with sensory garden plantings, installation of accessible walkways, slash pad, playground and other park amenities. Additional park lighting and landscaping have been installed to aesthetically improve this area and act as a safe connection between two main pedestrian travel lanes of the neighborhood.

Project Costs:	$700,000
State (PARC Grant)	$400,000
City (CDBG Funds)	$300,000

Appendix V: 504 Facility Inventory

In accordance with the Section 504 Compliance Guidelines of the Rehabilitation Act of 1973, a separate inventory for each of the properties under the jurisdiction of the Department of Park and Recreation of Conservation Commission has been completed. A statement of the City's administration policies accompanies the survey form. This inventory has been updated to show compliance with all new parks and buildings. All parks and open spaces within the City of Springfield are open to the public for recreational use by city residents. The Department of Parks, Buildings and Recreation Management aims to ensure all parks are accessible to people of all abilities by providing accessible and equitable amenities options when possible. The City's park inventory increasingly adds accessible and universally designed features for new construction projects and replacing aging infrastructure and/or non-ADA compliant amenities with accessible options. Accessible routes to and from the city's parks and the amenities within each park, are reviewed for compliance and improvements are made as necessary. Survey forms, procedures and requirements of our plan are available for digital viewing upon request or may be viewed at the Office of Planning and Economic Development, 70 Tapley Street, Springfield, MA.

Rehabilitation Issues:

Geographic Areas and Neighborhoods Needing Rehabilitation:

There are seventeen (17) neighborhoods in the City of Springfield. For planning purposes, each neighborhood is treated as a separate entity and, therefore, land use, demographic and social data is compiled on a neighborhood basis. In light of this approach, information on parks, conservation areas and school playgrounds has been summarized by neighborhood in Appendix II and Action Plan proposals are also grouped by neighborhood.

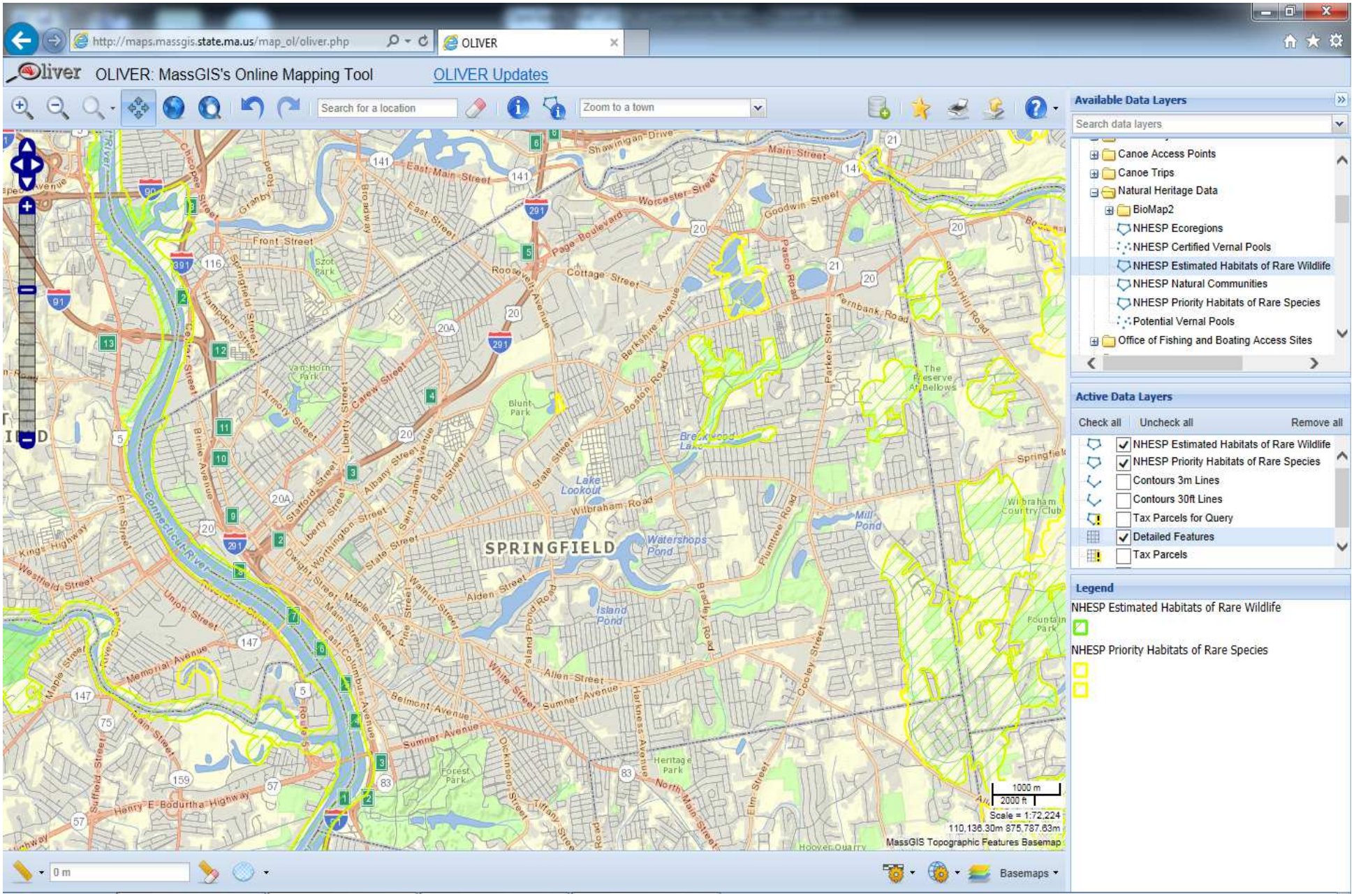
Several neighborhoods are the target of comprehensive rehabilitation strategies due to the prevalence of physical deterioration, economic distress and social problems. Comparative neighborhood data on income, poverty, employment and housing are shown on the previous pages. From the data, it can be seen that certain neighborhoods have poverty and unemployment rates much higher than the city average, while in these same neighborhoods, median income and home ownership rates are generally much lower than those of the rest of the city. Most of the poorer neighborhoods are located in the older, densely populated, westerly portion of the city surrounding and including the central business district. In addition to experiencing physical decline and economic stress, social problems are common in these neighborhoods.

The U.S. Department of Housing and Urban Development (HUD) is the principal source of external funds for housing rehabilitation, urban renewal, public facility improvements and social services. Neighborhoods eligible for HUD monies based on HUD criteria for identifying low and moderate income areas closely correlate with those neighborhoods needing physical rehabilitation. They include; Memorial Square, Brightwood, Metro Center, South End, Six Corners, Old Hill, McKnight and Bay. Portions of Upper Hill, Indian Orchard, Forest Park, Liberty Heights and Pine Point also meet HUD eligibility requirements and are in need of rehabilitation. Since opportunities for developing new parks in these older, densely settled neighborhoods is constrained by the lack of available land, upgrading and improving existing parks is the most cost efficient and practical strategy for satisfying recreation demands. Park renovation is an integral part of the city's neighborhood rehabilitation strategy, and eleven of the thirteen neighborhood parks earmarked for rehabilitation in the Seven-Year Action Plan are located in the low and moderate income areas identified above.

Appendix VI: City of Springfield Pedestrian and Bicycle Complete Streets Plan

Physical document attached to plan

VETERANS GOLF COURSE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NHESP Certified Vernal Pools
NHESP Estimated Habitats of Rare Wildlife
NHESP Natural Communities
NHESP Priority Habitats of Rare Species
Potential Vernal Pools
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Watershops Pond
Island Pond
Mill Pond
Blunt Park
Forest Park
Heritage Park
Fountain Park
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State Street
Wilbraham Road
Boston Road
Parker Street
Page Boulevard
Worcester Street
East Main Street
Front Street
Carew Street
Liberty Street
Dwight Street
Maple Street
Union Street
Memorial Avenue
Belmont Avenue
Sumner Avenue
Allen Street
Island Pond Road
Bradley Road
Cooley Street
Harkness Avenue
North Main Street
Plumtree Road
Fernbank Road
Berkshire Avenue
Roosevelt Avenue
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Goodwin Street
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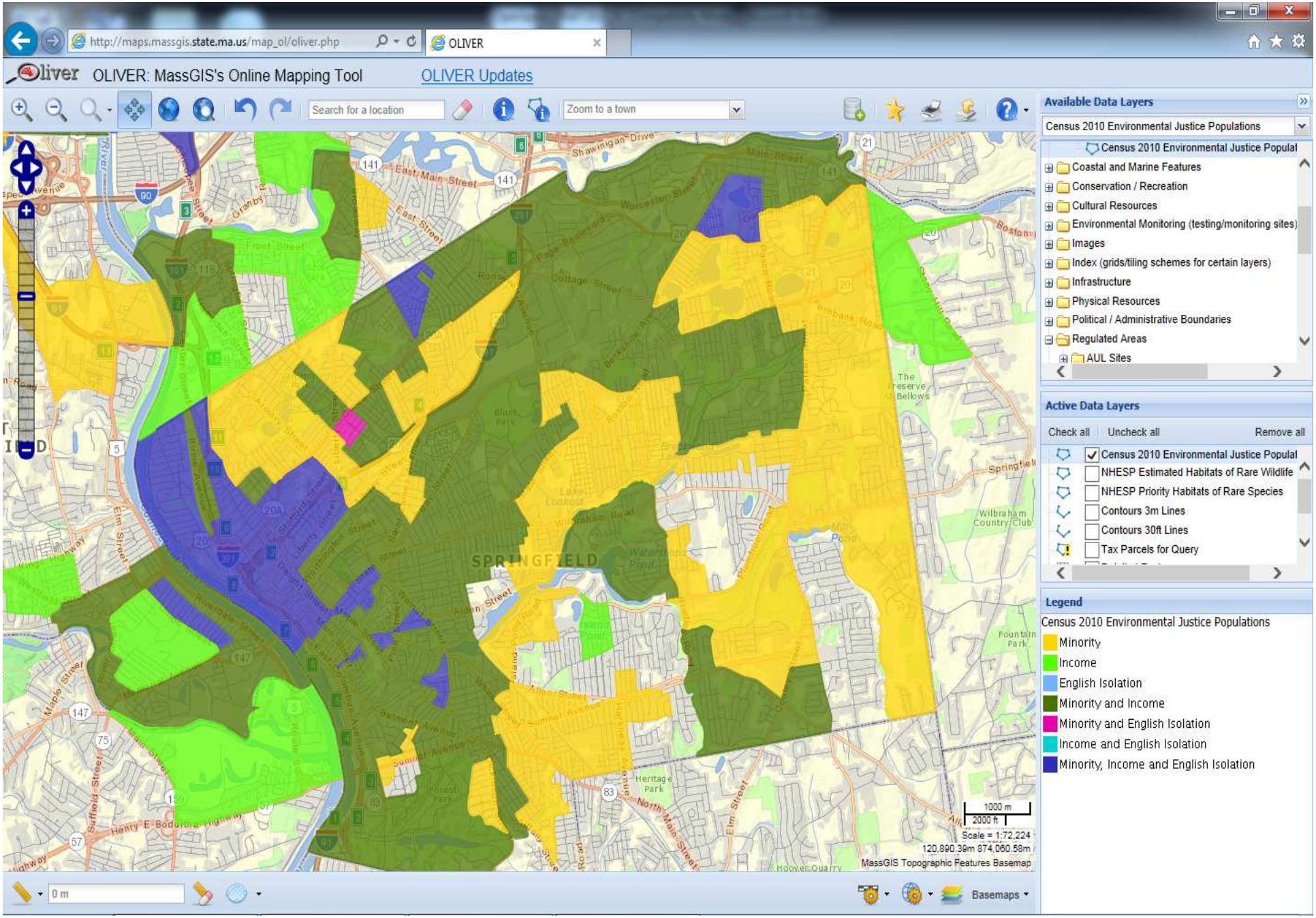
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OLIVER
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Census 2010 Environmental Justice Populations
Census 2010 Environmental Justice Popular
Coastal and Marine Features
Conservation / Recreation
Cultural Resources
Environmental Monitoring (testing/monitoring sites)
Images
Index (grids/tiling schemes for certain layers)
Infrastructure
Physical Resources
Political / Administrative Boundaries
Regulated Areas
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Income
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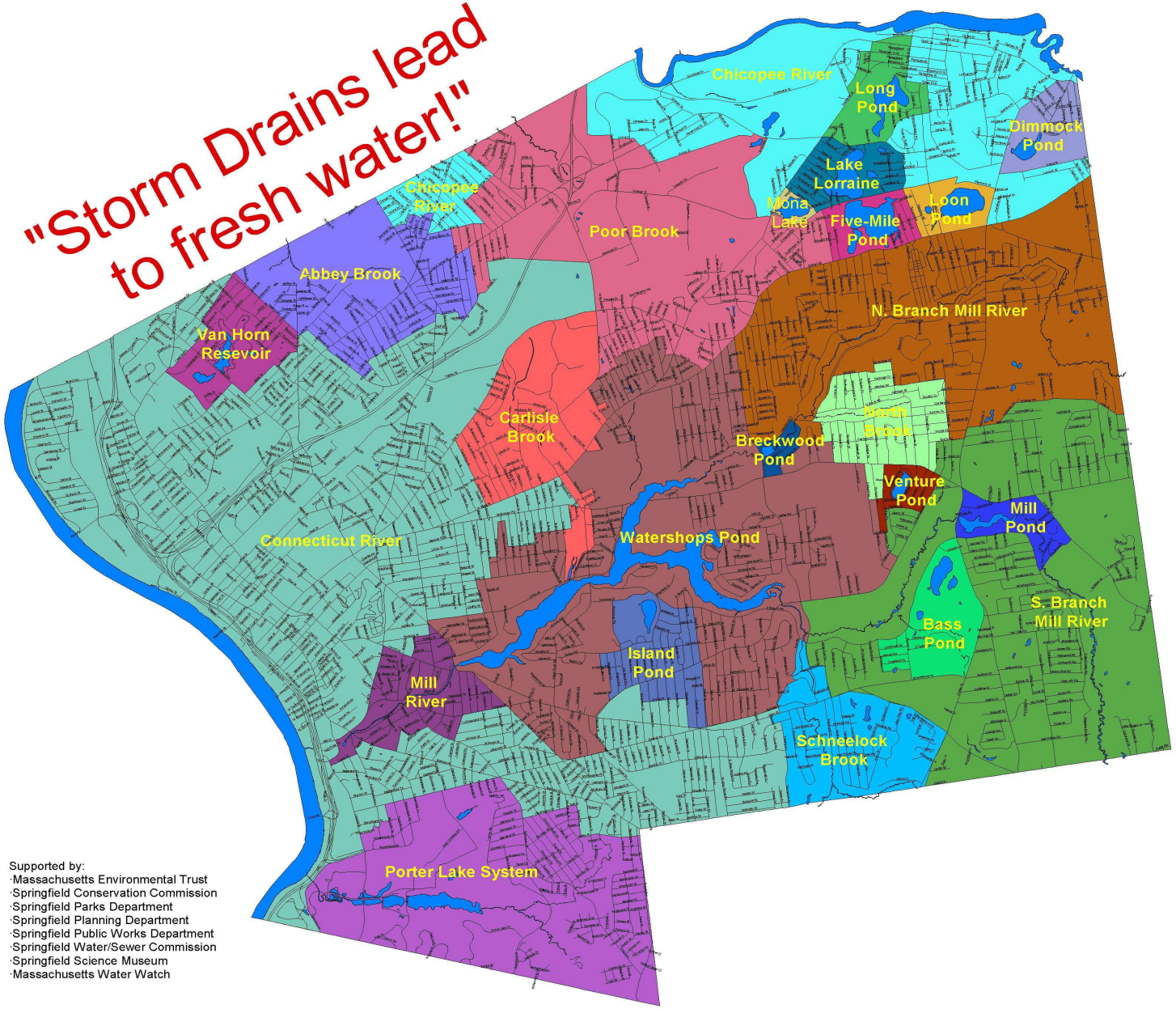
Basemaps

City of Springfield - Stormwatershed Map



Keep Our Streams Clean

Street Litter, Plastics, and Leaves

Be mindful of litter, NEVER throw litter down into storm drains. Keep catch basins free of debris and leaves.

Fertilizers

Avoid use of fertilizers. If needed, use organic fertilizers. Sweep, do not wash any fertilizers or soil off driveways and walkways.

Pesticides and Herbicides

Minimize use of pesticides and herbicides. Use natural alternatives. Trim grass and remove weeds by hand without herbicides.

Pet Waste

Dispose of pet waste by flushing it down the toilet, burying it, or discarding it in a plastic bag and place it in your trash.

Yard Waste

Keep soil, leaves, and grass clippings from accumulating on your driveway, sidewalk, or in the street. Compost yard waste and use on your soil.

Motor Oil

Never pour used motor oil down the drain. Take oil to a local service station to be recycled.

Anti-Freeze

Take used Anti-Freeze to a local service station for recycling. Never mix Anti-Freeze with any other substance.

Paint

Donate old paint to local groups. Dispose of oil and lead based paints at the designated household hazardous waste collection center, Bondi's Island Landfill. Appointments are available by calling 787-7840.

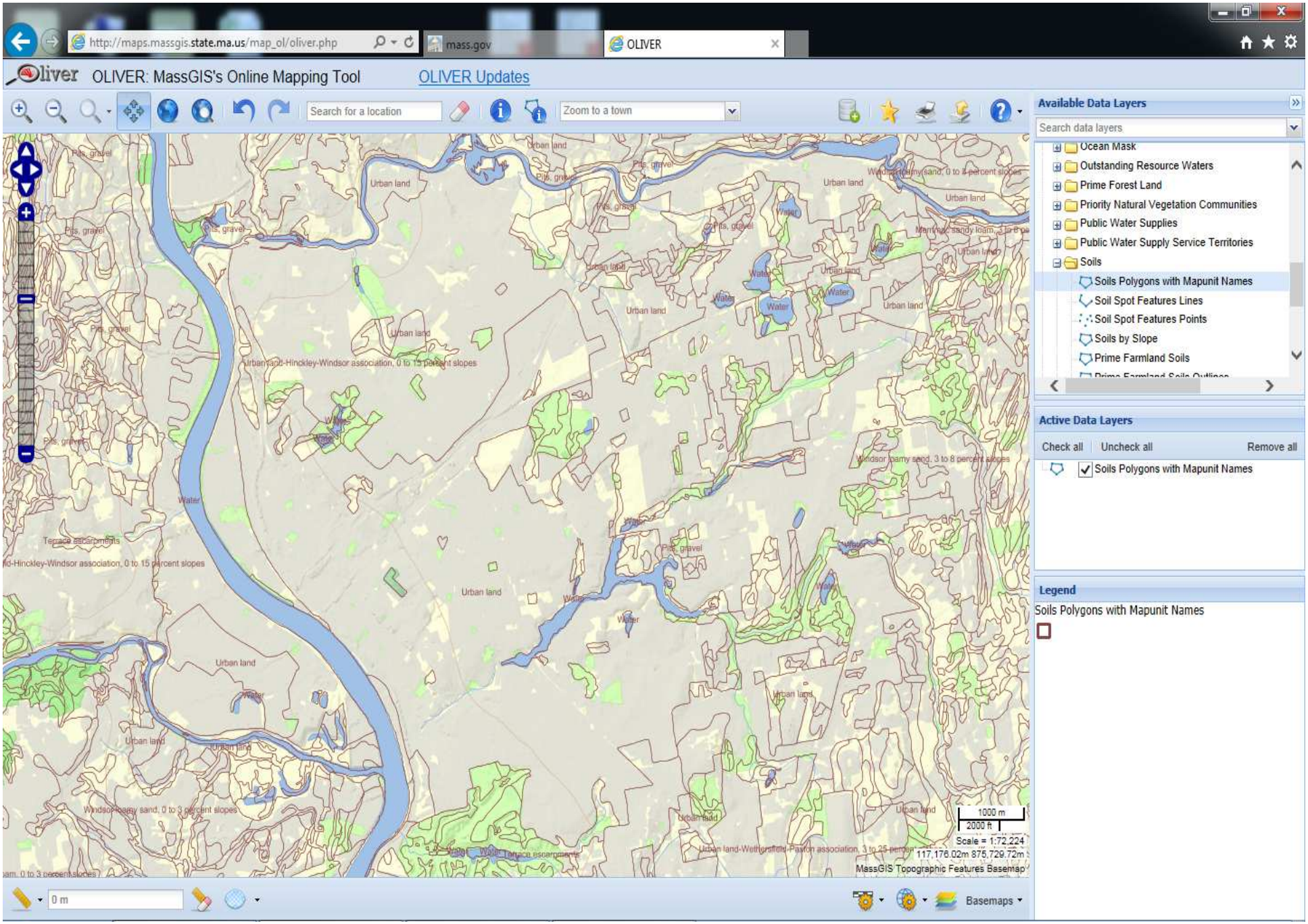
Household Hazardous Waste

Do not pour hazardous waste down any drain or discard with regular trash. Contact your Springfield Solid Waste Office at 787-7840 to learn how to properly dispose of hazardous waste. Use natural or less toxic alternatives to accomplish the task.

Supported by:
·Massachusetts Environmental Trust
·Springfield Conservation Commission
·Springfield Parks Department
·Springfield Planning Department
·Springfield Public Works Department
·Springfield Water/Sewer Commission
·Springfield Science Museum
·Massachusetts Water Watch

Map Produced by: Springfield Planning Department
October, 2001

Soils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Available Data Layers
Search data layers
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Outstanding Resource Waters
Prime Forest Land
Priority Natural Vegetation Communities
Public Water Supplies
Public Water Supply Service Territories
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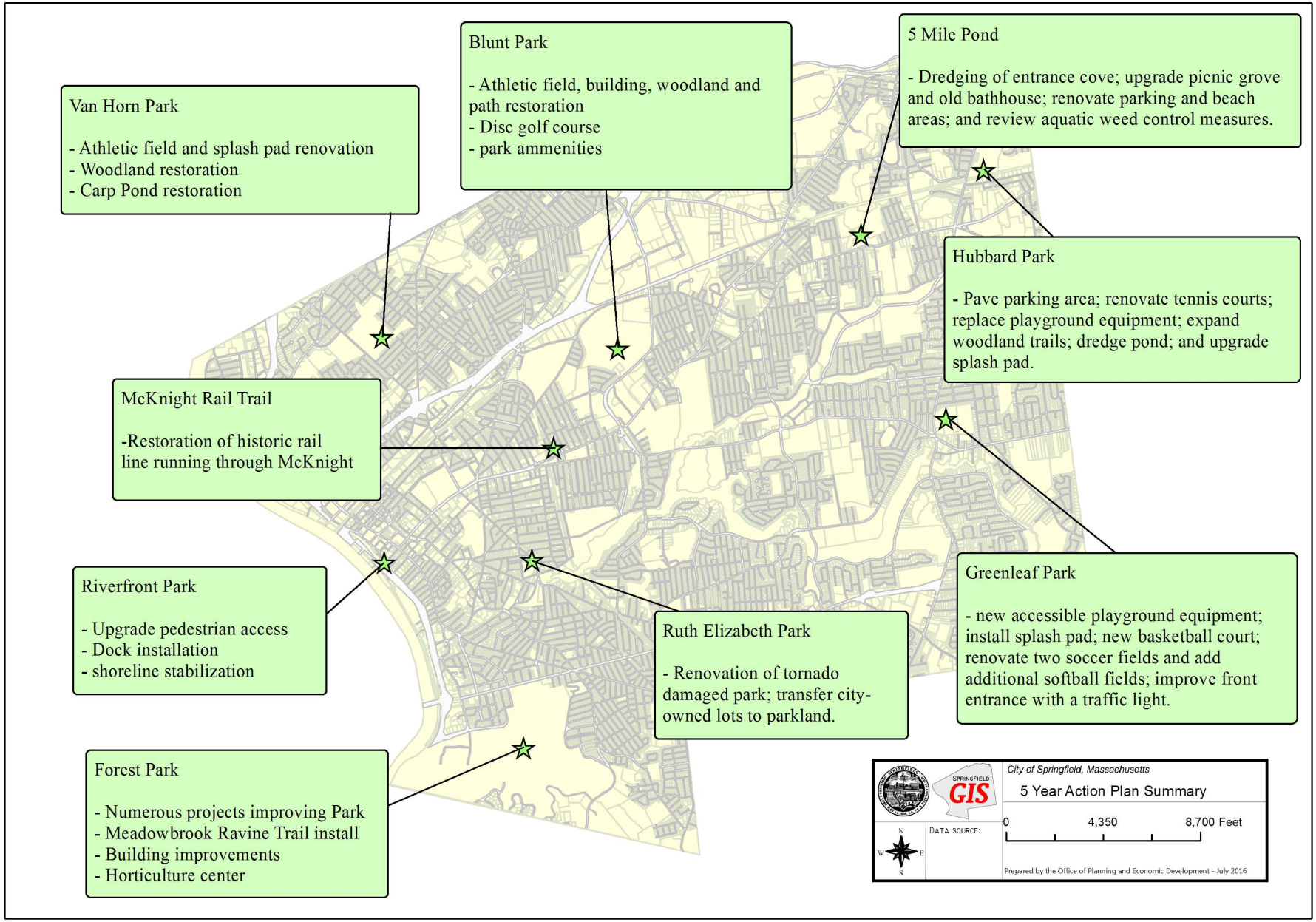
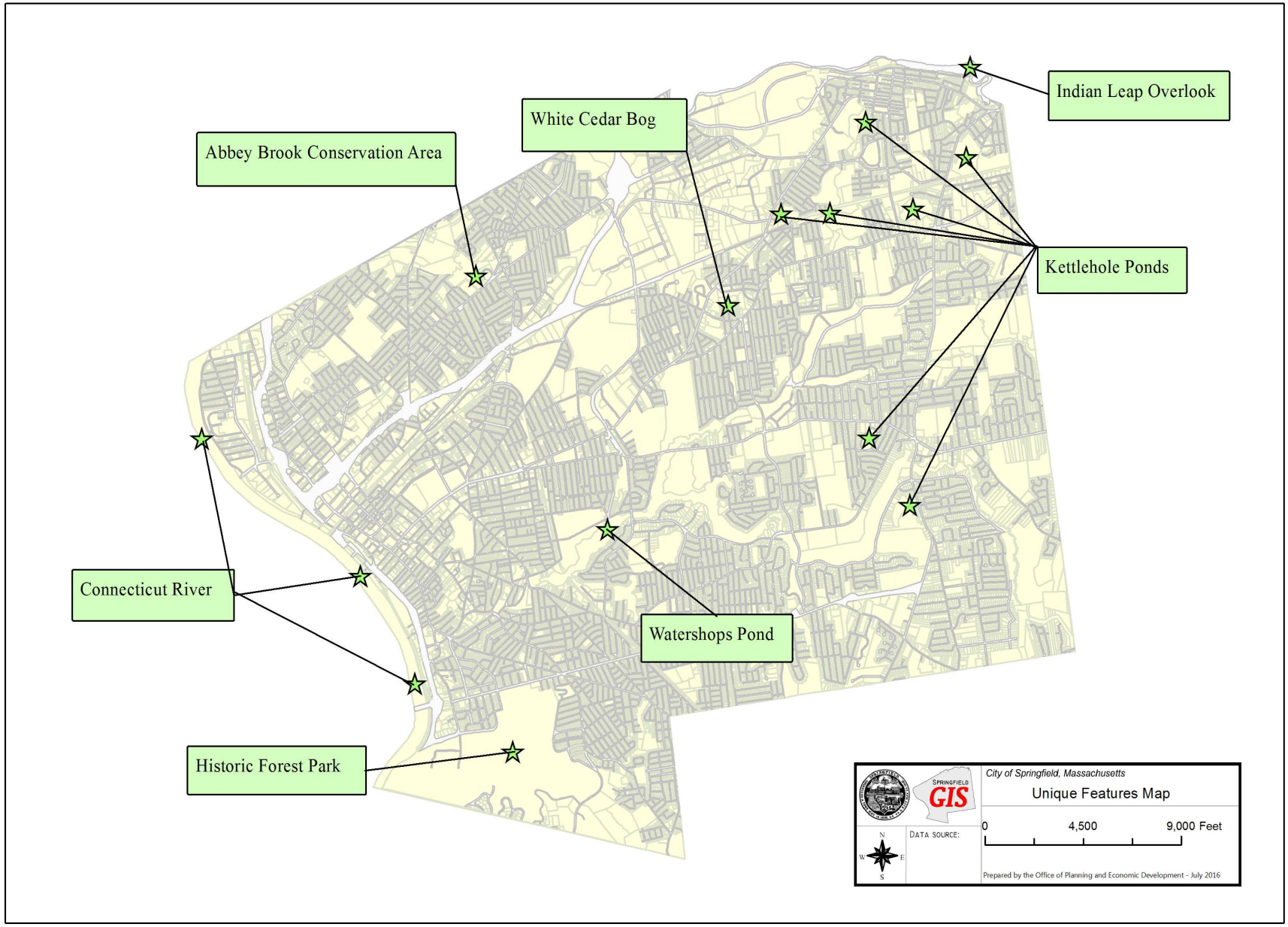
MassGIS Topographic Features Basemap
Basemaps

5 Year Action Plan Summary Map



Unique Features Map



Regional Context Map