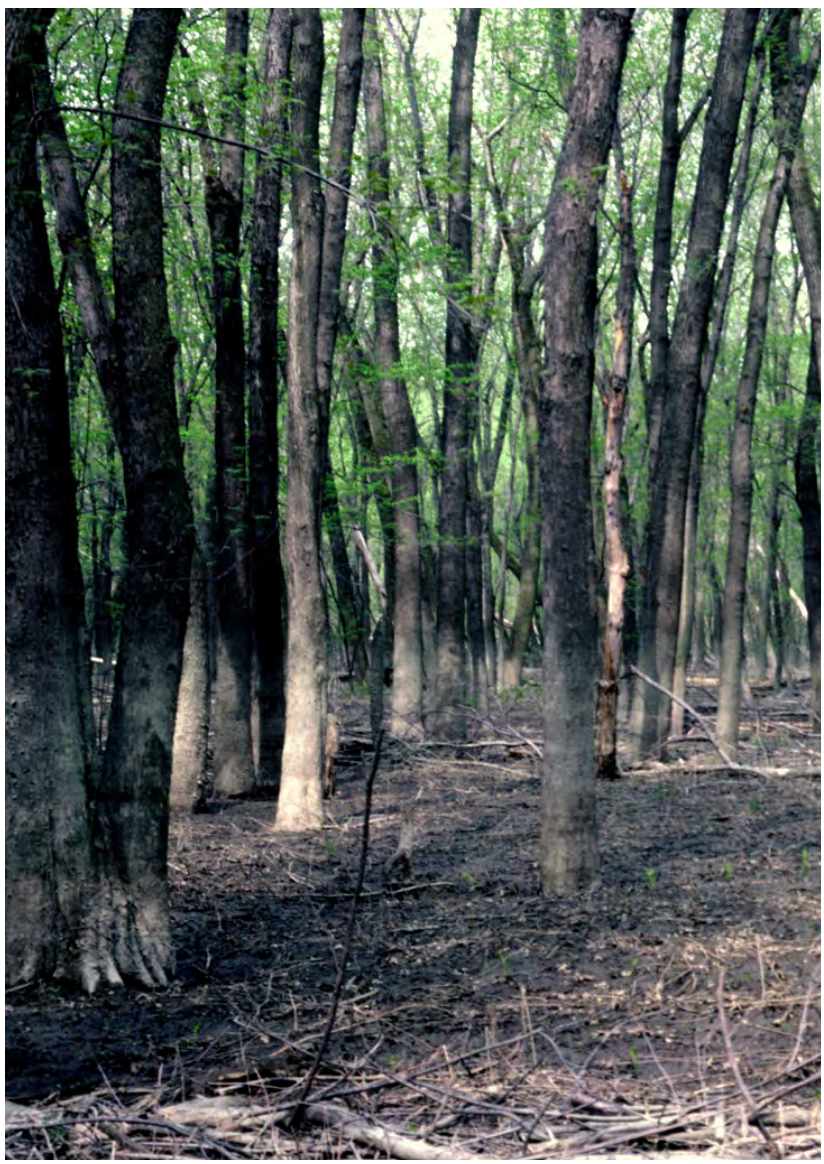
The City of Northampton's Five-Year Action Plan of
its open space and recreation areas.
2011–2017

# Open Space, Recreation & Multi-Use Trail Plan



# Open Space & Recreation Planning & the City of Northampton Sustainable Development Initiative

The City of Northampton has updated the Open Space and Recreation Plan in order to provide an ongoing framework that outlines how the community can continue to work towards maintaining vibrant urban centers and obtaining the benefits of sustainable development, without compromising the City's valued environmental resources.

The development of this plan is coupled with an exciting vision to create a "sustainable development initiative," as announced by Mayor Higgins in May 2005. As part of this process, teams of architects, planners, hydrologists, economic development specialists, and other related professionals will collaborate with the citizens of Northampton to create a comprehensive plan to ensure that our public policies and actions are sustainable long into the future.

Subsequently, over the next 18 months, as the sustainable development initiative progresses, the Open Space and Recreation Plan will likely be subject to change as we seek new and innovative ways to be ecologically sustainable and yet economically viable and socially responsible in our management of the City's open space and recreation areas.

For updated information on the evolution of the Open Space and Recreation Plan, or for information on the sustainable development initiative and how you can get involved, please visit the Office of Planning and Development's website at www.northamptonma.gov/opd.

## Committees acting on the Plan:

Planning Board: Approved _____, 2010

Conservation Commission: Approved _____, 2010

Recreation Commission: Approved _____, 2010

Transportation and Parking Commission: Approved _____, 2010

City Council: Endorsed _____, 2010

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# 1 Plan Summary

The Open Space and Recreation Plan provides guidance on how the City of Northampton can best use limited resources to meet the City's open space, conservation, and recreation needs. Building on extensive participation of citizens and municipal boards, the Northampton Conservation Commission, Recreation Commission, and the Planning Board have identified critical steps that the City should undertake to meet some of these needs.

The City, in cooperation with state and federal funding sources, must:

1. Make capital improvements and improve maintenance of recreation facilities.
2. Manage conservation properties to preserve and restore plant and animal habitats.
3. Acquire land for future recreation needs.
4. Acquire land for conservation and open space needs, preservation of plant and animal habitat, protection of scenic vistas, public enjoyment, and to enhance the character and sustainability of the community.
5. Take regulatory and non-regulatory measures to protect water supplies and sensitive environmental resources.
6. Preserve the environment and cultural and natural resources through land and easement acquisitions and regulation changes.
7. Inform citizens about public and private open space and recreation resources and potential land use options.
8. Identify and examine means for augmenting financial and other resources available for carrying out the goals and objectives laid out in this plan.

# 2 Introduction

## Statement of Purpose

The City of Northampton is blessed with an exceptional wealth of scenic, natural, cultural, and recreation resources. Public and private organizations, businesses, farmers, and individual citizens provide our residents with open space, conservation, and recreation areas, which contribute greatly to our high quality of life.

The demand, however, for open space and recreation areas exceeds those currently protected and available for public use, public health and public appreciation. Rapid suburban development, escalating land values, and limited financial resources have contributed to the loss or degradation of potential open space and recreation areas, and have foreclosed opportunities for their permanent protection and for public use.

This plan provides an inventory of land of ecological, cultural, and recreational importance to the City, including permanently protected, temporarily protected, and unprotected parcels. It examines and catalogues unmet recreational and resource protection needs and provides guidance on how the City can utilize limited resources to meet Northampton's open space, conservation, and recreation needs.

The plan attempts to be specific enough to guide decision-making and planning while allowing flexibility to respond to changing opportunities and constraints. It covers proposed acquisitions of land and easements as well as the management of current holdings. The plan also touches on regulatory and infrastructure initiatives that can increase Northampton's effectiveness in resource protection without requiring additional funding.

Achievement of the goals outlined herein will require commitment by all parts of Northampton's government and the larger community. While recognizing that there are limits to currently available funds, the City commits to exercising creativity in identifying and obtaining resources from other potential sources as well as utilizing avenues other than acquisition.

Through adoption of this Open Space and Recreation Plan, the City acknowledges that permanent protection and wise stewardship of its natural, cultural, and recreational resources are not only intrinsically important but are also essential to the community's quality of life, long-term economic health, and sustainability.

This plan meets the Open Space and Recreation Plan requirements of the Self-Help Act and is an element of the Northampton Comprehensive Plan. The Conservation Commission, Recreation Commission, and the Planning Board have adopted the Plan. The Planning Board adopted the Plan in accordance with Massachusetts General Laws, Chapter 41, §81D.

# Planning Process and Public Participation

This plan builds on six earlier *Open Space, Conservation, and Recreation Plans* (1975, 1980, 1985, 1989, 1994, and 2000) and on other planning, conservation and recreation documents, including *Northampton Vision 2020* (1999) and *Grow Smart Northampton: Community Development Plan* (2002). This plan was written under the direction of the Conservation Commission, Recreation Commission, and Planning Board, with participation from an ad-hoc Open Space and Recreation Plan Committee.

The ad-hoc Open Space and Recreation Plan Committee met several times in an open meeting format during the planning process and the City held two public hearings to solicit public input on the plan. The Conservation Commission, Recreation Commission, Planning Board, and Northampton City Council reviewed and approved the final document.

# 3 Community Setting

## Regional Context

The City of Northampton contains approximately 35.7 square miles in Massachusetts and is mid-way between Connecticut to the south and Vermont to the north. The City is also mid-way between Albany, NY to the west and the City of Boston to the east.

The City of Northampton is located on the west side of the Connecticut River and sits in the valley between that ancient waterway and the glacial formed hills to the west. The land nearest the Connecticut River has rich, fertile soils and a deep agricultural history. Adjacent to the fertile floodplains of the Connecticut River is the flat glacial outwash, which underlies much of the historic residential, commercial, and industrial development in downtown Northampton and downtown Florence. Further to the west, where the elevation rises and the soil thins out, are the steep sloping hills composed of bedrock-dominated glacial till, where the more recent residential development is occurring.

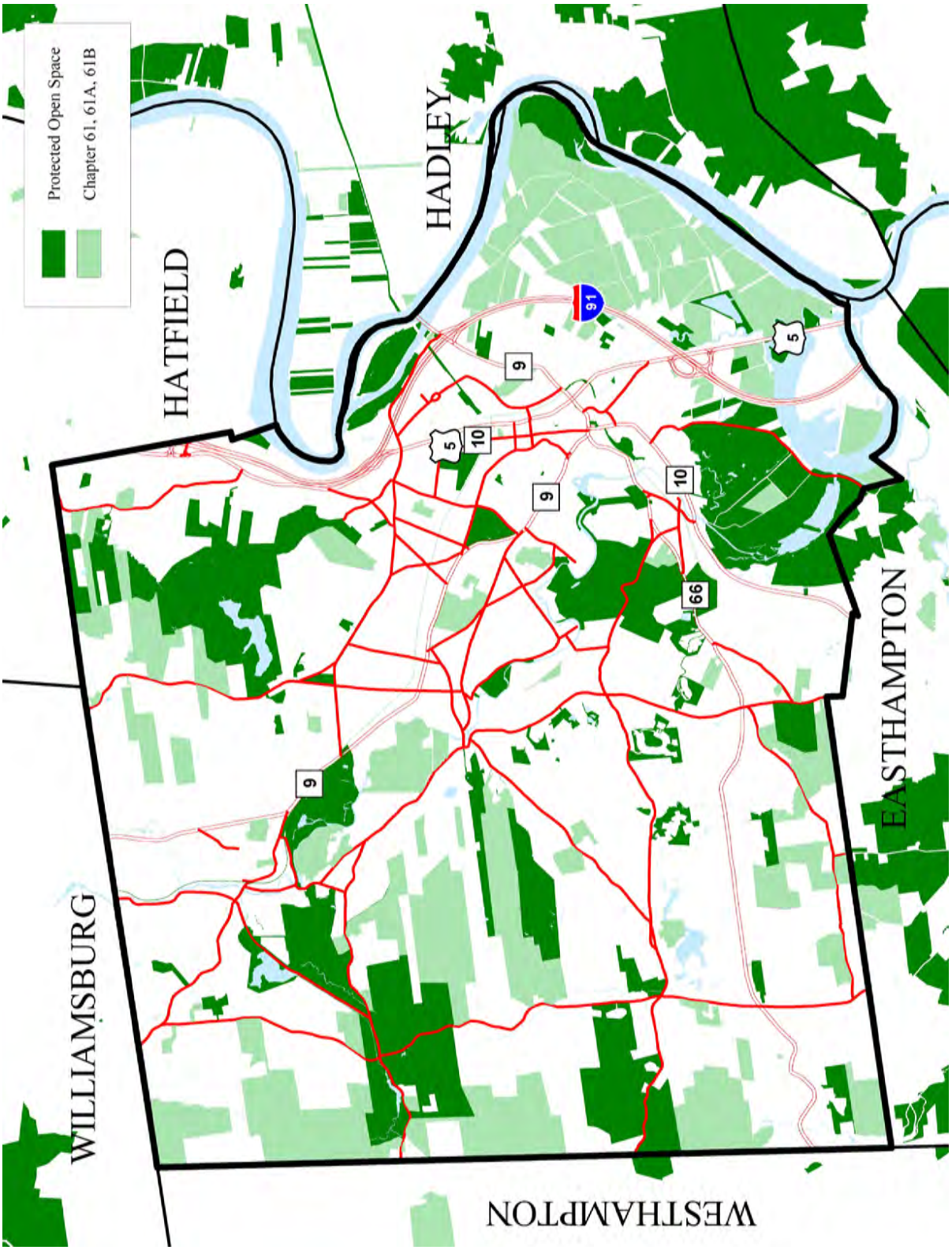
The City of Northampton is contained within the Connecticut River Watershed. The Connecticut River Watershed is the largest river ecosystem in New England and spans four states, including Vermont, New Hampshire, Massachusetts, and Connecticut. The river itself defines the eastern border of the City of Northampton. The many brooks and streams that flow through Northampton eventually find their way to the Connecticut River.

From its beginnings on the Canadian border to its end in Long Island Sound, the Connecticut River drains a landscape that is 11,000 square miles and 410 miles long. The river drops 2,400 feet from its source to the sea and is one of the most developed rivers in the Northeast. It enters Massachusetts through the Town of Northfield and flows through 45 communities before entering the state of Connecticut. The watershed is approximately 80% forested, 12% agricultural, 3% percent developed, and 5% wetlands and surface waters. The Connecticut River Watershed was designated the "Silvio O. Conte National Fish and Wildlife Refuge" by an act of Congress in 1991, the first refuge of its kind, encompassing an entire watershed ecosystem. The Connecticut River also received special attention in 1998 when it became one of only 14 rivers in the US designated as a National Heritage River.

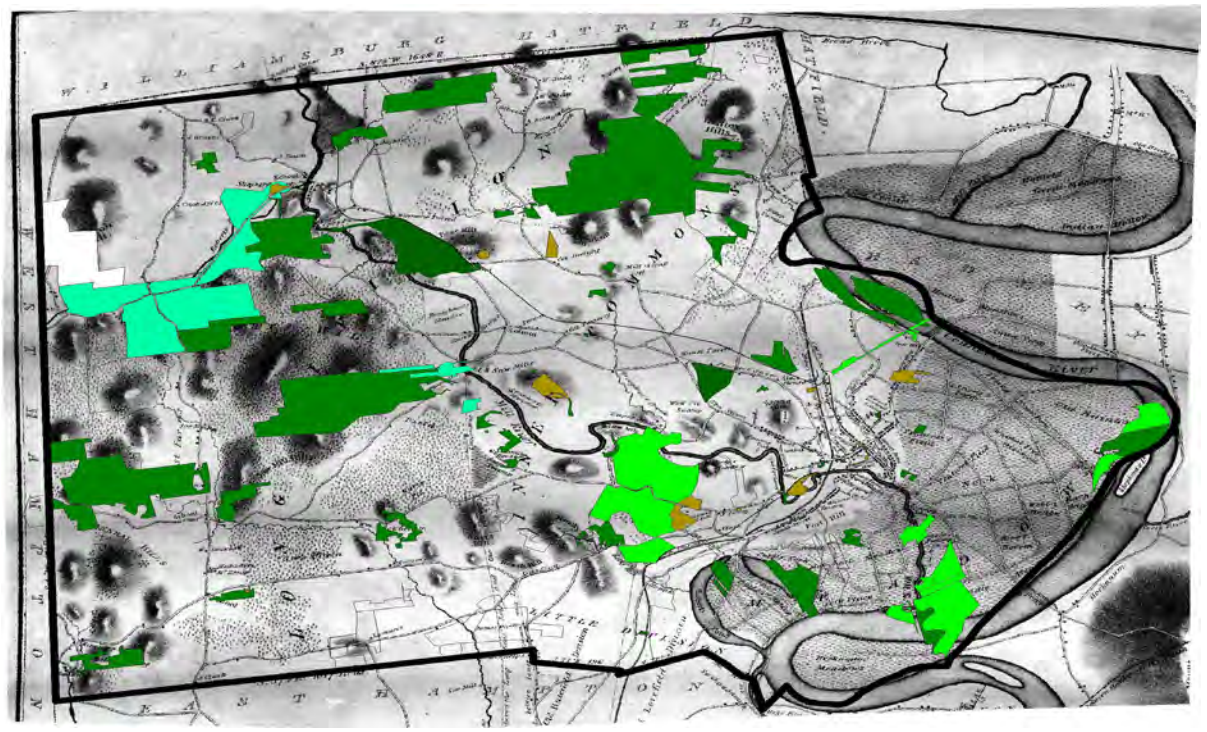
While Northampton's natural neighbors are the Connecticut River and surrounding picturesque hills, its political neighbors are the Towns of Westhampton to the west, Williamsburg to the north, Hatfield to the northeast, Hadley to the east, and the City of Easthampton to the south.

The City of Northampton has worked and continues to work with the neighboring communities to acquire water supply lands and

# REGIONAL CONTEXT



# OPEN SPACE OVERLAY ON HISTORICAL MAP OF NORTHAMPTON



jointly preserve forestland and watershed areas. The City of Northampton receives its primary water supply from surface water reservoirs in the towns of Conway, Williamsburg, and Hatfield. Additionally, much of Hatfield's drinking water aquifer is located in Northampton, and the City of Northampton has aggressively regulated this area and acquired forestland to protect Hatfield's water supply.

Contiguous forestland is important to Northampton and the neighboring communities. Forestland conserves water supplies by sustaining the soil's ability to receive precipitation and recharge ground and surface waters slowly. Woodlands and their changing foliage give residents surroundings upon which to gaze and appreciate. Forests clean the air and provide cool air currents in warm months. Large blocks of contiguous forestland are important regional resources. Northampton like other cities in the Connecticut River Valley still contains many areas where forests stretch to include thousands of acres of relatively pristine lands that cross political borders.

The map of open space in a regional context shows the open space holdings within Northampton and the surrounding communities (open space in surrounding communities is based on the MassGIS layer and has not been verified). Riverfront, agricultural, wetland, and upland resources all extend from Northampton into all neighboring communities.

The City of Northampton not only shares its resources with the neighboring communities but also strives to engage in regional conservation and land protection efforts. The City has worked with the Town of Easthampton on joint open space acquisitions in the past and has worked with the Department of Conservation and Recreation to coordinate projects involving the Town of Hatfield. The Northampton Conservation Commission has identified additional opportunities for joint projects with the Towns of Hatfield, Williamsburg, Westhampton, and the City of Easthampton. Joint projects with the Town of Hadley are less likely

to occur because the communities are separated by the Connecticut River, but Northampton and Hadley have worked together with the Department of Conservation and Recreation, the Division of Fisheries and Wildlife, and the Valley Land Fund, Inc. on projects concerning the Connecticut River.

Northampton has also worked with its neighboring communities on a series of projects designed to extend recreational facilities across political borders—a rail trail network that connects the City of Northampton to the adjoining communities. Currently, the City is the coordinating agency on a rail trail project with the City of Easthampton.

Northampton is also working with some of its neighboring communities on economic development efforts. The City of Northampton prepared a joint economic development strategy with the City of Easthampton and worked with the Town of Hatfield to develop a coordinated plan for development off Interstate 91-Exit 21, which is located on the Northampton/Hatfield town line.

**CITY OF NORTHAMPTON DEMOGRAPHIC INDICATORS**

| Percent of the population who is: | % in Northampton | % in MA |
|---|---|---|
| Living in urban areas | 87.7 | 88.8 |
| Living in rural areas | 12.3 | 8.6 |
| Under age 18 | 16.8 | 23.6 |
| Age 65 and over | 13.7 | 13.5 |
| White | 89.7 | 84.5 |
| Black/African American | 1.9 | 5.3 |
| Asian | 3.2 | 3.8 |
| Hispanic | 5.1 | 6.7 |
| Immigrated in 1990–2000 | 2.6 | 4.9 |
| Speak only English at home | 87.5 | 81.3 |
| Speak Spanish at home | 4.8 | 6.2 |
| Speak other Indo-European language at home | 5.3 | 8.9 |
| Speak Asian language at home | 1.7 | 2.9 |
| | | |
| **Percent of Households that are:** | **% in Northampton** | **% in MA** |
| Married couples | 37.4 | 50 |
| Single parents | 12.3 | 15 |
| Non-family | 12.8 | 7.1 |
| Living in urban areas | 87.7 | 88.8 |
| Living in rural areas | 12.3 | 8.6 |

—Pioneer Valley Planning Commission Factbook 2002

## Socioeconomic Context

Northampton offers a sophisticated rural lifestyle that is rich in cultural, artistic, academic, and business resources. Northampton features one of the most vibrant downtown centers in New England and was named "Number One Best Small Arts Town in America" by author John Villani and was recognized as one of the top 25 Arts Destinations in the nation by American Style magazine. The National Trust also named it as one of the Dozen Destinations of Distinction for Historic Preservation.

Residents see Northampton as both traditional and innovative. Several village centers provide focal points for outlying residential areas while the downtown is alive during the days and evenings. The City offers a wide selection of retail, services, restaurants, coffee, and ice cream shops; theaters, including the only municipally owned theater in the state; clubs featuring an array of music; street musicians; and a Center for the Arts. All of this activity provides a perfect atmosphere for casual strolling along the tree-lined streetscape.

The City also offers strong municipal programs in education, recreation, public safety, and public works. It is known for its energy conservation

program and initiative to improve handicap access to downtown establishments.

The community has a strong and diverse economic base consisting of a mixture of traditional operations (wire protrusion, plastic molding) and innovative ones (production of heat sensing devises) and a large institutional base, which includes county services and two hospitals. Northampton is also home to Smith College and is strongly influenced by Amherst College, Hampshire College, Mount Holyoke College, and the University of Massachusetts as part of the Five-College system in the region.

The superb quality of life in Northampton contributes to its strong economic base with growing manufacturing, technology, and service sectors. The local labor force is diverse, well educated, and highly skilled.

Any light pointed at Northampton still inevitably shines on the downtown. The City's downtown central business district has succeeded where many of its size across the nation have failed. The downtown serves as the cultural and shopping hub of Hampshire County and attracts tourists, gourmands, and residents from the region. Main Street retail vacancy rates remain low, and the upper floors of Main Street buildings are largely filled with offices and residences.

## CITY OF NORTHAMPTON HOUSING INDICATORS

| Percent of housing units with: | % in Northampton | % in MA |
|---|---|---|
| Owner occupancy rate | 53.5 | 61.7 |
| Vacancy rate | 3.1 | 3.1 |
| No vehicle available | 11.3 | 12.7 |
| No telephone service | 0.9 | 0.9 |
| Inadequate plumbing | 1.0 | 0.7 |
| Inadequate kitchen | 1.4 | 0.8 |
| | | |
| Median year housing built | 1946 | 1956 |
| Average household size | 2.14 | 2.51 |
| Median gross rent | $647 | $684 |
| Rent as % of income | 25% | 26% |
| Median owned-home value | $144,600 | $185,700 |
| Median monthly owner costs | $1,171 | $1,353 |
| Owner costs as % of income | $21 | $22 |

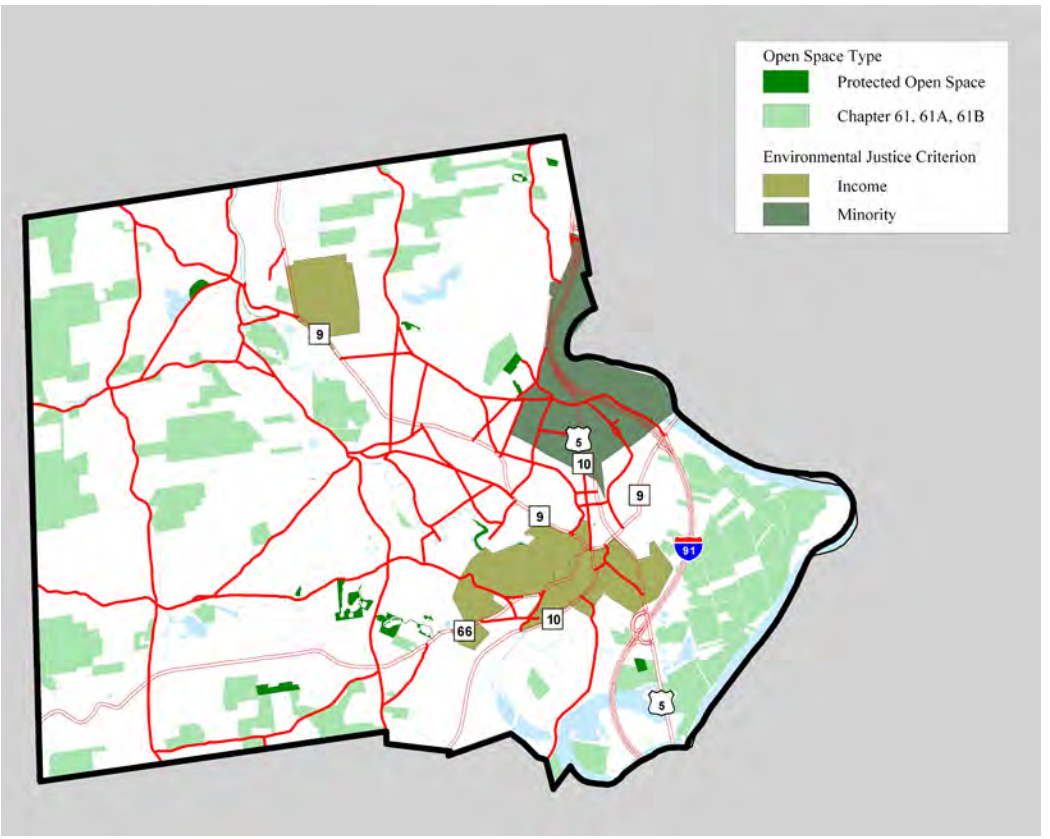
—Pioneer Valley Planning Commission Factbook 2002

Around the country, downtowns in similarly sized communities suffer from inattention, competition, and high commercial vacancy rates. The result is decay. Even in communities with healthy downtowns, success often means a bustling downtown from 9 a.m. to 6 p.m., with little evening and weekend activity. Northampton's downtown is hopping day and night, weekdays and weekends.

The lead role played by Northampton's downtown is not a new one. It has been the leading retail center for Hampshire County over the centuries. It has long served as a regional center, and it has traditionally had the largest market share of retail spending. While downtown Northampton remains the most defined urban/retail center in the county, it has a smaller market share of total county retail spending now than in the past and a smaller market share of retail (non-restaurant) spending than the malls in Hadley. Per capita retail and restaurants sales for Northampton are significantly above those sales for Hampshire County and for the Springfield Metropolitan Statistical Area.

The City does pulse beyond Main Street. Vibrant service, commercial, and institutional sectors are found in the City's outlying villages of Florence, Leeds, and Baystate.

Those looking can find a hearty commercial and residential pulse in Florence Center—the center of business and culture for many City residents and the surrounding hill towns. Florence's "village




ENVIRONMENTAL JUSTICE POPULATIONS

center," where homes, businesses, and industry are all within walking distance of each other, is a highly praised feature of the village. This close physical proximity of homes and businesses produces a neighborliness that makes the village one of the most livable places in the Pioneer Valley.

Most of Florence's Main Street retail businesses serve local needs, such as pizza and groceries. Many businesses, however, also serve clients throughout Northampton and the region. Florence's successful village center fills a critical economic and social niche not provided in downtown Northampton (where rents and density are too high) or on highway strip commercial areas. As in other village centers, Florence's businesses face stiff competition from regional commercial centers and strip commercial areas, such as King Street. Florence Center businesses have maintained a tradition of serving the commercial needs of local shoppers. That niche complements other commercial areas rather than competing with them.

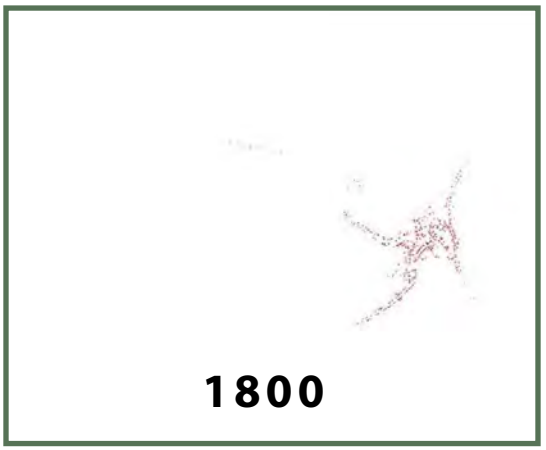
Residents believe that Northampton has a rich history, and they are confident that its future will be built on its diverse population base, solid economy, and abundant resources.

## History of Northampton

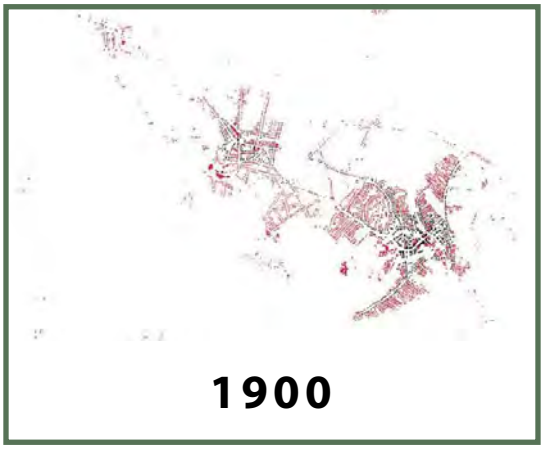
For thousands of years, Native Americans camped and fished along the rich floodplains of the Connecticut River in what is now called the Pioneer Valley.

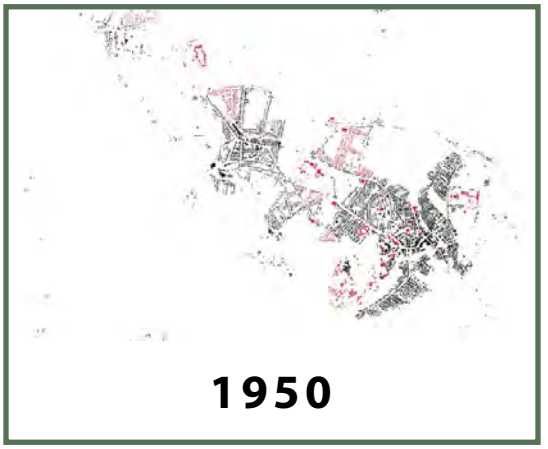
Northampton's founders, though strongly Puritan in conviction, were drawn to the area more by accounts of abundant tillable land and ease of trade with the Indians than by the religious concerns that characterized their brethren in eastern Massachusetts. In May 1653, 24 persons petitioned the General Court for permission to plant, possess, and inhabit the land called "Nonotuck." Northampton was settled in 1654 on a low rise above the rich meadowlands by the Connecticut River. Relations between settlers and Native Americans, though initially cooperative, became increasingly strained, culminating in King Philip's War in 1675.

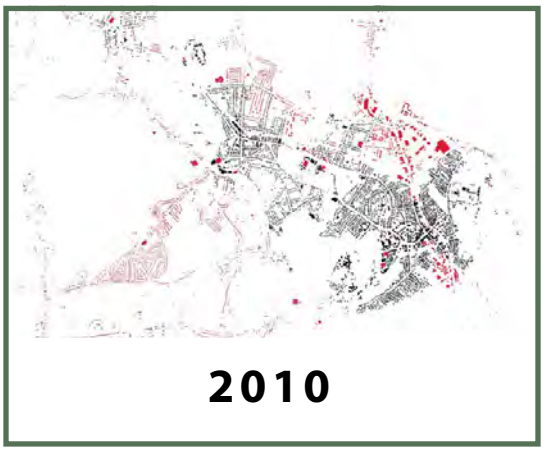
# HISTORICAL PATTERNS (1800–2010)








Though Northampton grew as a trade and marketing center in the 18th century, the ministry of Jonathan Edwards, whose preaching sparked the religious revivals of the Great Awakening in the 1740s, quickened religious fervor. The Revolutionary War produced heroes like General Seth Pomeroy. The economic upheavals in the wake of the war moved Daniel Shays and his followers into open rebellion on the eve of the Constitutional Convention. A delegate to the Convention, Caleb Strong became Massachusetts's first senator and an 11-term governor.

In the early 19th century, great hopes were raised by the prospect of the Northampton-New Haven Canal, but shareholders never recouped their investment and the coming of the railroad signaled the end of the company. Other industries grew and prospered, including the utopian community of the Northampton Association, which combined radical abolitionism with a communally owned and operated silk mill. Sojourner Truth was, at one time, a member of that community which included William Lloyd Garrison and Frederick Douglass among its circle of supporters. Other reformers included Sylvester Graham, diet and health food enthusiast and inventor of the Graham cracker, and abolitionist Lydia Maria Child.

19th century Northampton drew visitors like Timothy Dwight, the Marquis de Lafayette, Henry James, Ralph Waldo Emerson, and Jenny Lind who proclaimed it to be the "paradise of America." Indeed, artists like Thomas Cole thought the environs of Northampton to be the epitome of the "picturesque"—the ideal middle landscape between the sordid city and wild nature.

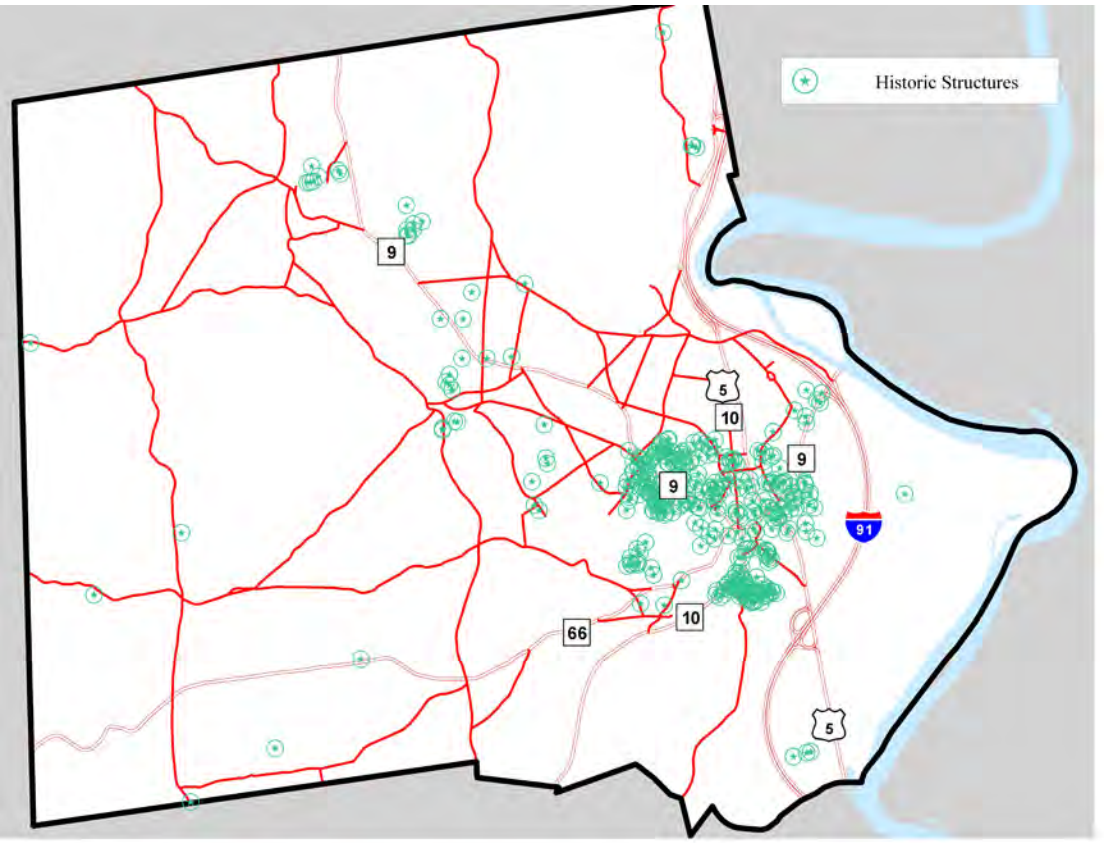
| | Population in 1970 (# of people) | Population in 1980 (# of people) | Population in 1990 (# of people) | Population in 2000 (# of people) |
|---|---|---|---|---|
| Massachusetts | 5,689,377 | 5,737,037 | 6,016,425 | 6,349,097 |
| Hampshire County | 123,997 | 138,813 | 146,568 | 152,251 |
| Northampton | 29,664 | 29,286 | 29,289 | 28,978 |

Northampton was the site of a number of schools and educational institutions. Historian George Bancroft established the Round Hill School in 1823, and Smith College opened its doors in 1871. Author George Washington Cable founded the Home Culture Clubs in 1892, and the Hill Institute sponsored one of the earliest kindergartens in America. The Northampton Law School sent one of its students, Franklin Pierce, on to the Presidency. Northampton was also the home of Calvin Coolidge, who became President in 1923.

The 19th century diva, Jenny Lind, did not call this city "paradise" for nothing. Jenny dubbed Northampton "paradise" after a long stay here, and ever since then, some residents, with little humility and a dash of booster enthusiasm, have decided to keep the moniker, calling the community "Paradise City."

Northampton's streets follow, essentially, the same paths that were laid out in the 17th century, and

## HISTORIC & ARCHEOLOGICAL RESOURCES



# TABLES

| | Northampton 2000 | Northampton 1990 | Commonwealth Current |
|---|---|---|---|
| Total Households | 11,880 | 11,164 | 2,443,580 |
| Median Age | 37 | 30 to 34 | 37 |
| Median Household Income | $41,808 | $41,954 | $50,502 |
| Per Capita Income | $24,022 | $19,2443 | $25,952 |

—US Census Bureau, 2000 Census & 2004 Population EstimatesTable from Northampton Community Indicators, March 2006 PVPC

| Year | Community | Labor force | Employment | Unemployment | Unemployment rate |
|---|---|---|---|---|---|
| 1999 | Northampton | 15,852 | 15,480 | 372 | 2.3 |
| | Massachusetts | 3,355,324 | 3,245,761 | 109,563 | 3.3 |
| 2000 | Northampton | 17,119 | 16,777 | 342 | 2 |
| | Massachusetts | 3,366,582 | 3,276,737 | 89,845 | 2.7 |
| 2001 | Northampton | 17,154 | 16,726 | 428 | 2.5 |
| | Massachusetts | 3,400,624 | 3,274,561 | 126,063 | 3.7 |
| 2002 | Northampton | 17,298 | 16,742 | 556 | 3.2 |
| | Massachusetts | 3,427,900 | 3,247,094 | 180,806 | 5.3 |
| 2003 | Northampton | 17,248 | 16,581 | 667 | 3.9 |
| | Massachusetts | 3,413,782 | 3,215,624 | 198,158 | 5.8 |
| 2004 | Northampton | 17,259 | 16,623 | 636 | 3.7 |
| | Massachusetts | 3,393,122 | 3,219,487 | 173,635 | 5.1 |

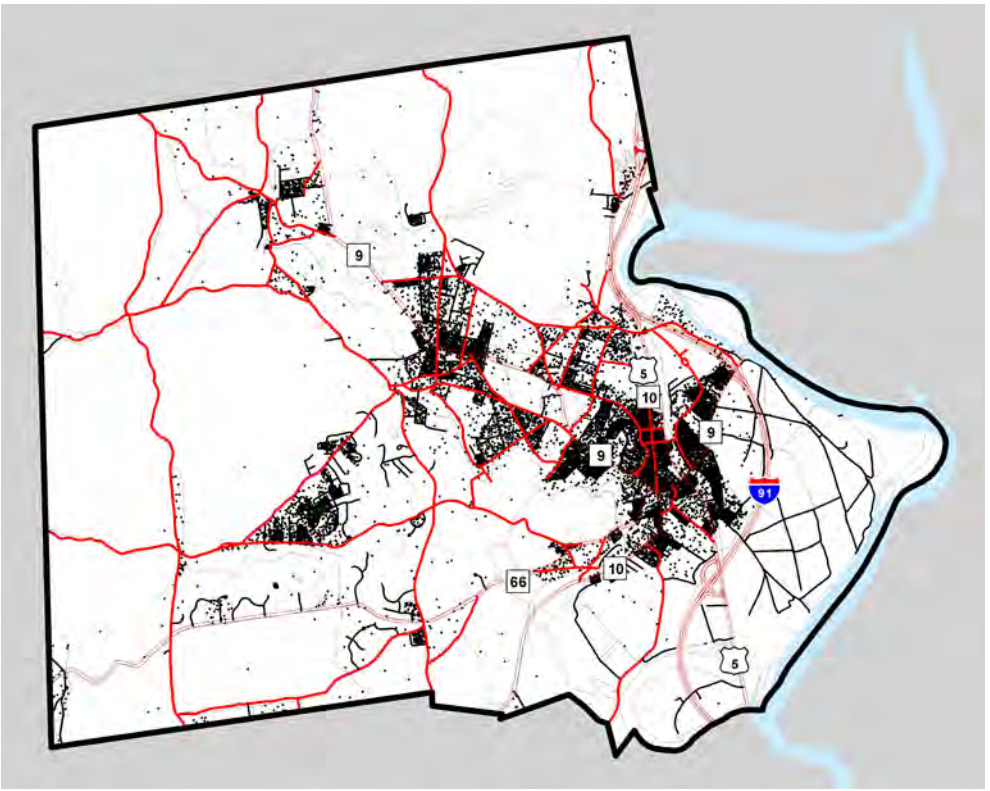
—Northampton Community Indicators, March 2006 PVPC

## POPULATION 2000 (AS % OF CITY)

| Area | Population | % of City Population |
|---|---|---|
| City of Northampton | 28,978 | 100% |
| Live within one mile of center of downtown | 11,235 | 38.8% |
| Live within one-half mile of center of downtown | 5,674 | 19.6% |
| Live in or abutting Central Business District | 935 | 3.2% |
| Live within one mile of Florence Center (based on historic destination) | 5,106 | 17.6% |
| Live within one-half mile of Florence Center | 3,327 | 11.5% |

—2000 US Census Block Data

## POPULATION DENSITY




there are a number of surviving 18th century structures in and around Northampton. The downtown district retains its 19th century character. The modest fortunes of local merchants and industrialists financed numerous Victorian mansions and picturesque cottages as well as the commercial blocks in the Downtown Historic District. Northampton possesses two fine 19th century residential neighborhoods, Pomeroy Terrace (1850-1885) and Elm Street (1860-1920), where Gothic Revival, Italianate, Second Empire, Queen Anne, and Colonial Revival Styles contribute to the City's diverse architectural heritage.

Northampton's economy has changed significantly since the end of World War II. The industrial component of the economy, once the linchpin, has receded. In its place, the commercial and service sectors of the economy have grown.

The City's economy used to be heavily dependent on two major institutions, the former Northampton State Hospital and the U.S. Veterans Affairs Medical Center. The Northampton State Hospital closed in 1994, and the Veterans Medical

| | Massachusetts Population | | Hampshire County Population | | Northampton Population | |
|---|---|---|---|---|---|---|
| Age Cohort (years) | 1990 | 2000 | 1990 | 2000 | 1990 | 2000 |
| 0–19 | 1,561,017 | 1,675,113 | 39,806 | 40,506 | 6,664 | 6,395 |
| 20–44 | 2,530,390 | 2,394,062 | 66,952 | 59,568 | 13,698 | 11,650 |
| 45–64 | 1,110,013 | 1,419,760 | 22,813 | 33,850 | 4,661 | 6,940 |
| 65+ | 815,005 | 860,162 | 16,997 | 18,327 | 4,266 | 3,993 |

—US Census Bureau, Census of Population & Housing, 1990 & 2000

Center, until recently, had been shrinking over the past 30 years. Smith College, the other large private institution in the City, has remained stable in employment while its physical plant has grown. Nearby, the University of Massachusetts at Amherst has remained relatively stable for the past 20 years.

For an artist, a gourmand, a bicyclist, or a parent, the City just might be paradise. Authors of numerous magazine articles and books have named Northampton one of the best places in the country to raise children, ride bicycles, eat out in restaurants, and make a life as an artist.

While residents of other communities across the nation might quibble with Northampton's self embrace of "the best place" in which to raise a child or "the best small arts town," no one can argue that Northampton is rich in history within the Pioneer Valley.

# Northampton Population Characteristics

### POPULATION FOR NORTHAMPTON, HAMPSHIRE COUNTY, AND MASSACHUSETTS 1970-2000

*—Sources: U.S. Census 1970, 1980, 1990, 2000*

Northampton has a population of approximately 30,000 people, with a population density of 840 people per square mile. The population has remained stable since 1950. While the total population of households has been increasing for the past 30 years, it has been offset by the decrease in the population from the State Hospital and the Department of Veterans' Affairs Medical Center.

Although changes in major institutions, like, Smith College, the U.S. Department of Veterans' Affairs Medical Center, Clarke School for the Deaf, and the Hampshire County Long-Term Care Facility, affect the population characteristics of Northampton, we expect to see a slight growth in Northampton's population — approximately 2.5% per decade — because the household population keeps growing and the viability of the City's major institutions is now stable, except for the Veterans' Affairs Medical Center, which may continue to decline.

Because of enrollment at Smith College, there are significantly more women than men between the age of 17 and 24. From ages of 25 to 65, there is approximately the same number of men as women. After age 65, women outnumber men, because men tend to suffer from significantly higher mortality rates in the 65 and over age bracket.

The Age-Sex Distribution graph, or population pyramid, shows that Northampton, like many regions of the country, has an aging population. There are significantly fewer people per age range in the ranges less than 19 years versus the ranges between 20 and 44.

Although Northampton's overall population has not increased significantly, a dramatic decrease in family size has created a corresponding increase in the number of households and, therefore, the number of housing units. Furthermore, increases in unit size, e.g., two family homes being converted into single family homes, are driving the need for new housing construction without new residents. While this trend exists in most US communities, the combination of this trend and a major decrease in the number of people living in institutions has fueled most of the last 30 years of residential development.

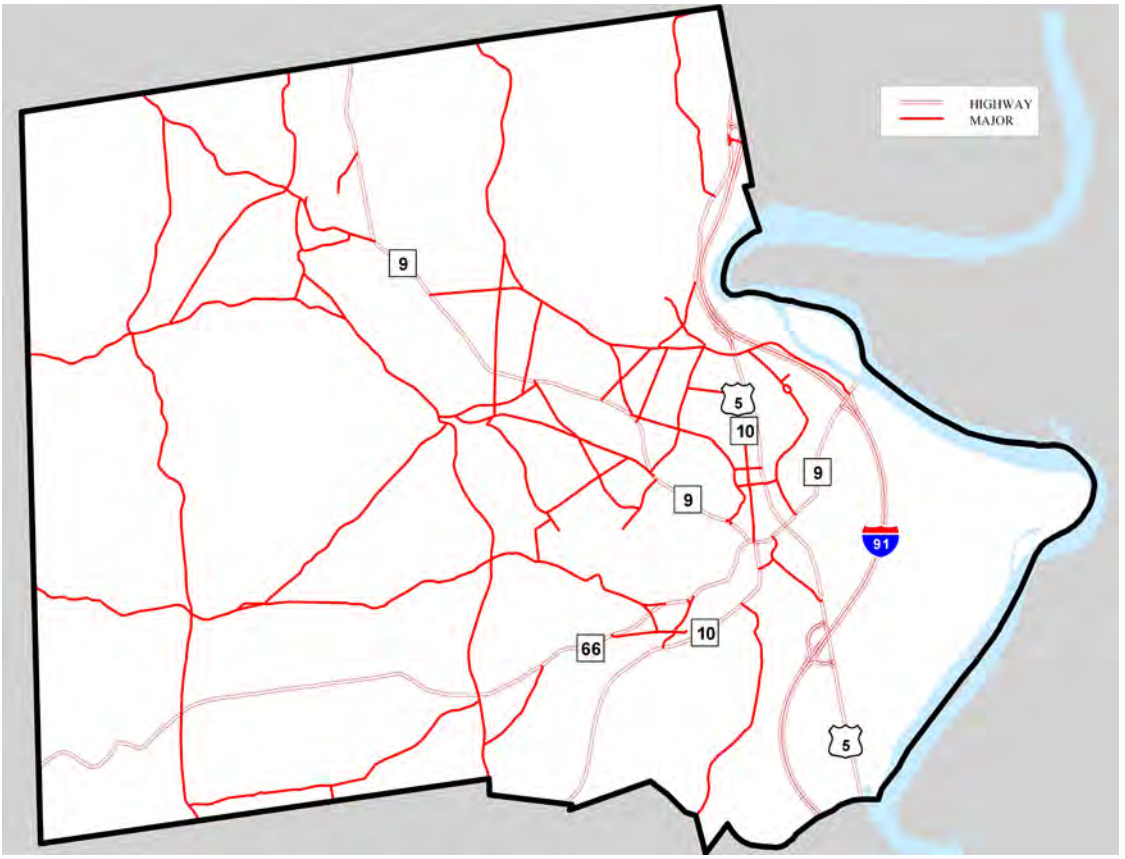
The migration rates of people moving into and out of Northampton are high, but in- and out-migrations are well balanced. College-age students contribute to the population turnover, but there is also a significant amount of turnover at other

| RENTAL HOUSING (AS % OF ALL UNITS) | |
|---|---|
| City of Northampton | 46.5% |
| Within 1 mile of downtown | 68.4% |
| Within 1/2 mile of downtown | 80.8% |

—1990 US Census. The presence of Smith College does skew these figures. These figures include all non-dormitory Smith College housing.

age levels. This turnover potentially reduces the sense of stability or a residents' commitment to their neighborhood, but it also contributes to the vibrancy of Northampton.

ROADS




According to November 2005 figures, Northampton has an unemployment rate of 3.4%, which is a lower rate than 255 of the 351 towns in Massachusetts and is lower than the unemployment rate of the State of Massachusets at 4.4%. The sector with the highest number of employees is the service sector, which includes health care and education (63.5%). It also employs a higher percentage than the State. The next highest is retail/whole trade at 14.6%, which is 8.7% less than the total employment in Northampton in this sector in 2000. Northampton continues to see a decline in the number of people employed in the government, manufacturing, construction, information, and management sectors between 2001 and 2004. Only the construction and government sectors are doing worse than the state average; all other all other sectors fair better than the Commonwealth as a whole. The percentages of people who are self-employed, work from home, and are part time continue to be greater than the State.

Approximately 51% of employed Northampton residents work in Northampton. Most of the remaining 49% of the employed residents commute out of the City, mostly to Amherst and cities and towns in Hampden County. Northampton residents fill slightly over half of the available jobs in Northampton (U.S. Census Bureau, 2000 Journey-to-Work statistics, prepared by PVPC).

The number of people who live within walking distance of downtown is high for a city the size of Northampton. Approximately 39% of Northampton's population lives within one mile of the center of downtown.This downtown population, especially with the wide variety of incomes that exist, may be the most important single factor in allowing for a healthy downtown.

This population provides a base of customers for downtown businesses and helps provide the vibrancy that is critical to the health of downtown. It also generates a need for a variety of housing types and opportunities.

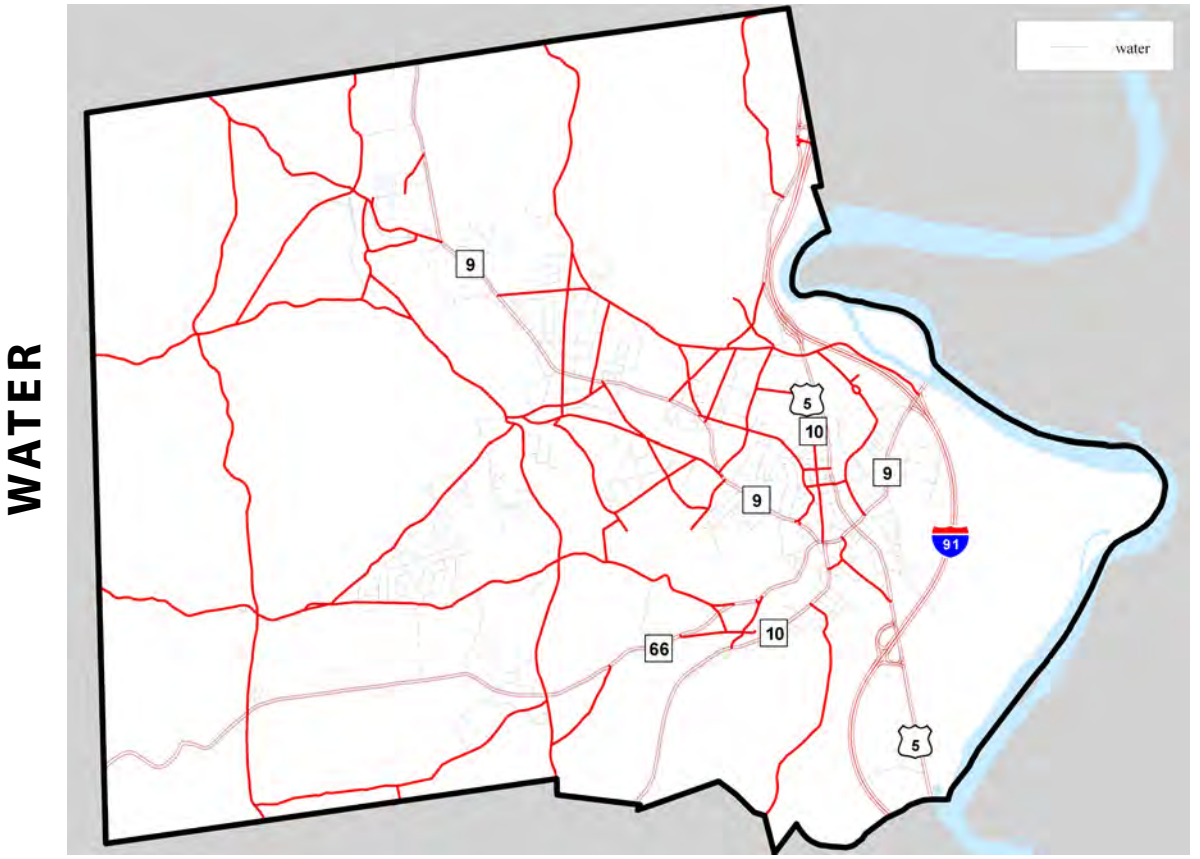
## Growth and Development Patterns

The terrain of Northampton ranges from the flat Mill River and Connecticut River floodplains to the moderately steep hills along its western and northern boundaries. The hills are covered with shallow ledge, soils, and topography poorly suited for development. Most development in Northampton has occurred in the areas bordering the floodplain and below the steeper hills. Although Northampton looks "built-out" from many of the roads, the majority of the City's land area has not been developed.

Most of the City's development occurred in a corridor along the Mill River and other level areas of the city northeast of the Mill River. Downtown Northampton, Bay State, Florence, and Leeds are all located within one mile of the Historic Mill River (in 1939 the Mill River was diverted from downtown to control floods).

### Transportation Systems

Northampton is located in the Pioneer Valley, known as the crossroads of New England because of its strategic position along the Connecticut River and its excellent transportation facilities. The Massachusetts Turnpike connects the region to Boston and to Albany, New York. Interstate 91 provides direct access to Hartford, Connecticut and to Brattleboro and points north in Vermont. The principal highways are US Route 5, which runs north-south, and Interstate Route 91, which runs east-west. Amtrak offers daily bus service between Burlington, Vermont and Springfield,



Massachusetts, which connects up to its Springfield-Washington rail service. Freight rail service is available from the Springfield Terminal Railway. Northampton is a member of the Pioneer Valley Transit Authority (PVTA), which provides fixed route service and offers para-transit service to Springfield, Worcester, Boston, and Hartford. The Franklin Transit Authority also has a bus service that runs from Greenfield to Northampton. Vermont Transit Lines connects to Greenfield, Brattleboro, Vermont and points north, and to Holyoke, Springfield, and Hartford, Connecticut. Peter Pan Bus Lines also offers direct service to 56 destinations, including Boston, New York City, Washington, DC, Baltimore, and Philadelphia.

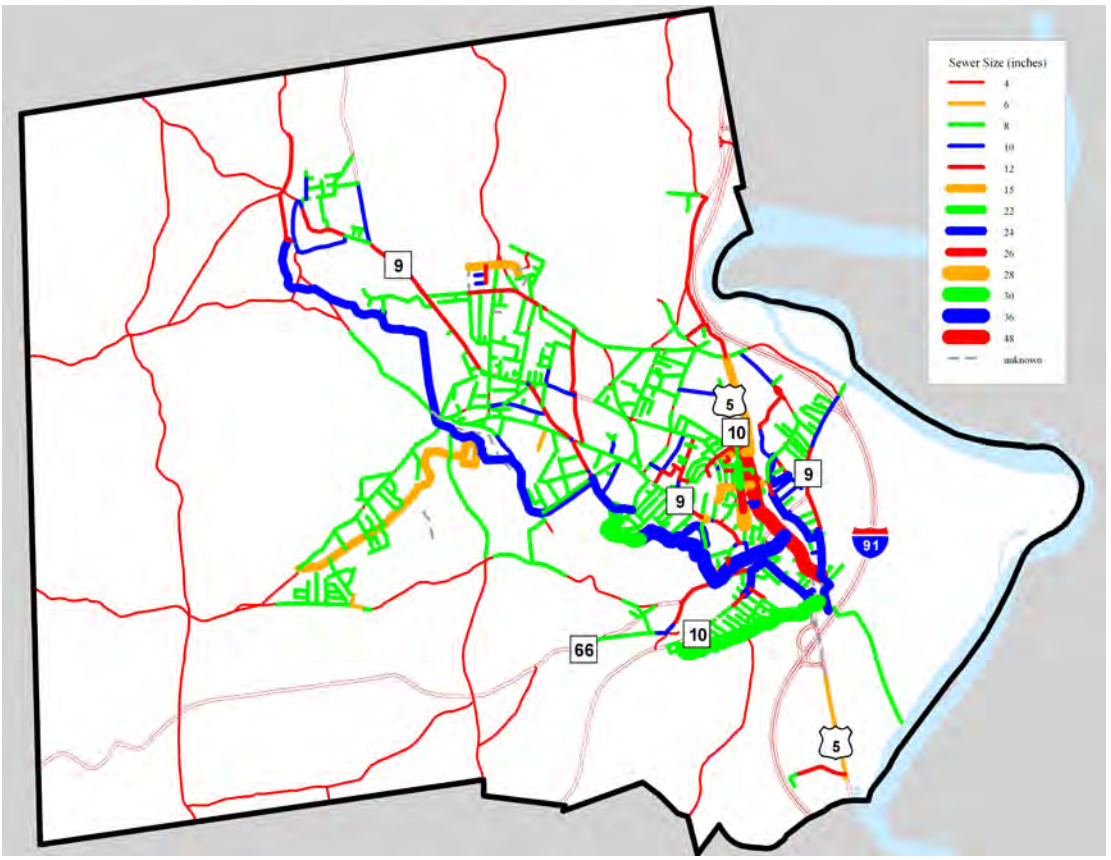
In addition, Peter Pan offers service to Logan Airport from Northampton seven days a week and connects from Springfield to Hartford and Bradley Airport, and to Kennedy and Laguardia Airports in New York City.

Northampton Airport, previously known as LaFleur Airport, is a General Aviation (GA) facility located one mile northeast of downtown Northampton. It has a 3,506-foot by 50-foot asphalt runway. This airport has been in continuous operation since its inception in 1929.

The City of Northampton consists of approximately 150 miles of paved streets, 15 miles of unpaved (gravel) public ways, 70 miles of sidewalks and crosswalks, 20 bridges, and two miles of bicycle paths.

The percent of workers walking to work for Northampton is 13.7%, which is significantly greater than the average for the State of Massachusetts. On the other hand, less people use public transportation to get to work and the percent of occupied dwelling units with no car available is less than the State average.

WASTEWATER TREATMENT




## Water Supply Systems

In 2005, approximately 98% of Northampton's drinking water came from three surface water reservoirs. The system draws unfiltered water from

| Zoning District: | Acres of Developable Land: | Percentage of Total Developable : |
|---|---|---|
| Business Park | 112 | 1 |
| Central Business | 4 | 0 |
| General Business | 6 | 0 |
| General Industrial | 164 | 1 |
| Highway Business | 15 | 0 |
| Medical | 1 | 0 |
| Neighborhood Business | 1 | 0 |
| Rural Residential | 6,232 | 49 |
| Special Conservancy | 1,696 | 13 |
| Special Industrial | 61 | 0 |
| Suburban Residential | 2,378 | 19 |
| Urban Residential A | 949 | 8 |
| Urban Residential B | 311 | 2 |
| Urban Residential C | 119 | 1 |
| Percent 'not in a zone' in the buildout map (4% error) | 557 | 4 |
| TOTAL (another 2% error) | 12,604 | 98 |
| Total Northampton Acres: 22,879 | | |
| Total Developable Acres: 12,604 | | |
| —EOEA Buildout Analysis, 2001 | | |

| Residents | |
|---|---|
| 1990 | 29,289 |
| Current | 28,978 |
| Buildout | 48,062 |
| Additional Residents | 19,084 |
| **Students (K-12)** | |
| 1990 | 3,233 |
| Current | 3,083 |
| Buildout | 5,343 |
| Additional Students | 2,260 |
| **Residential Units** | |
| 1990 | 11,164 |
| Current | 12,405 |
| Buildout | 20,775 |
| Additional Residential Units | 8,370 |
| **Water Use (gallons/day)** | |
| Current | 3,840,380 |
| Buildout | 5,786,366 |
| Additional gallons/day | 1,945,986 |
| **Additional Buildout Impacts** | |
| Additional Solid Waste (tons/yr) | 9,790 |
| Non-Recyclable | 6,961 |
| Recyclable | 2,829 |
| Additional Roadway at Buildout (miles) | 101 |
| —EOEA Buildout Analysis | |

reservoirs located in the hill towns and the water is piped to Northampton through transmission lines.

The water is chlorinated prior to reaching Northampton to prevent dangerous levels of coliform and bacteria from entering the water supply lines. Once the water reaches Northampton, it is treated at the Corrosion Control Facility in Leeds. This treatment includes the addition of Zinc Orthophosphate and Sodium Hydroxide. These chemicals are added because Northampton's source water, like many other drinking water supplies in New England, is naturally corrosive (having a pH of less than 7.0). This means the water supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes, but can also add harmful metals such as lead and copper to the water. For this reason, it is beneficial to add chemicals that protect the pipe coating and make the water's pH neutral or slightly alkaline. Northampton adds Zinc Orthophosphate, which is often referred to as an inhibitor, to coat the inside of the pipe. It contains a small concentration of phosphate.

Northampton also adds sodium hydroxide, which raises the pH to a non-corrosive level. Testing conducted throughout the water system in 2005, has shown that this treatment is effective at reducing lead and copper concentrations.

In 2005, the City of Northampton supplied approximately 1.23 billion gallons of water to the residents. On average, the City supplied 3.38 million gallons of water each day. However, the most water used in one day was 4.86 million gallons. On large water withdrawal days, water is drawn from the two wells located in Florence. The City of Northampton has approximately 150 miles of water pipes, 1000 water valves, 1200 fire hydrants, and 8000 water meters.

In 2003, the Department of Environmental

Protection (DEP) completed a Source Water Assessment Program (SWAP) Report. This report included a review of the watershed lands and aquifer protection zones. The largest threats to the water supply identified in the report were from residential fuel storage and large scale commercial uses.

In December of 2001, the City signed a Consent Order with the Department of Environmental Protection (DEP). The Consent Order required construction of a water filtration plant to begin in the spring of 2003 and to be operational by August of 2005. After many permitting delays, construction began in December 2005. The plant should be completed and operational within two years. Until then, the Department of Public Work's Water Division continues to protect, chlorinate, and monitor the water supply and watershed land in compliance as required.

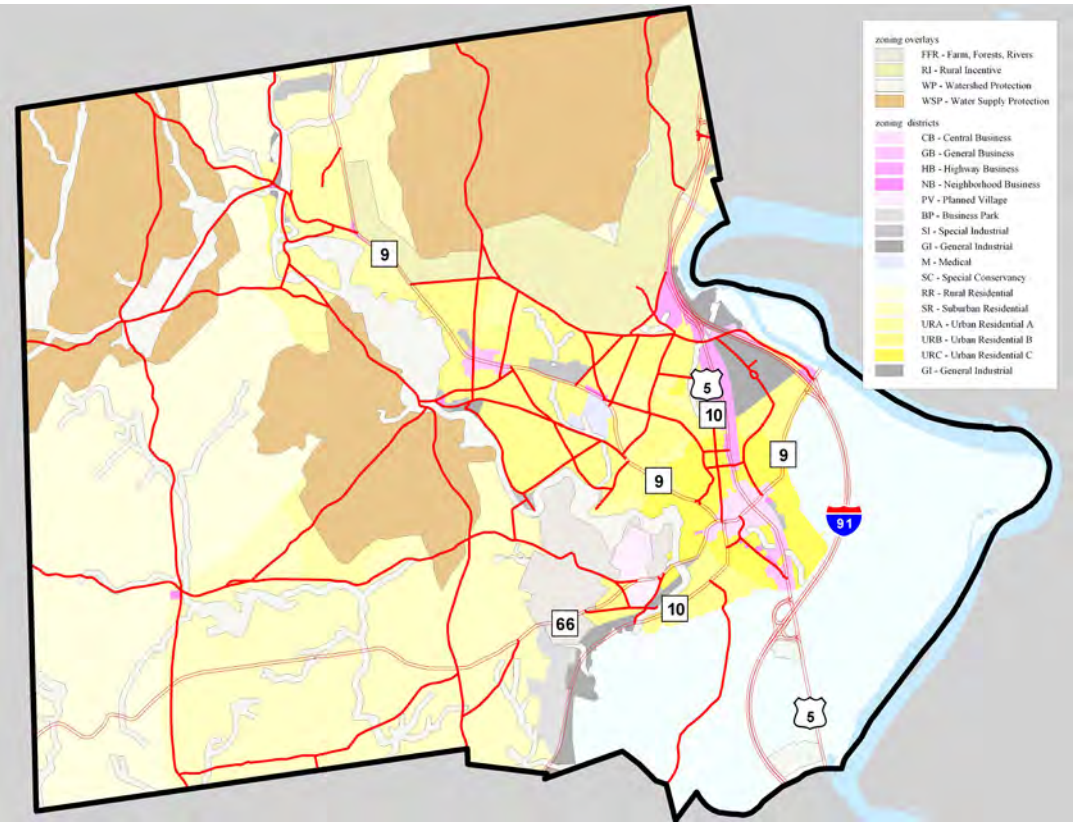
## Wastewater Treatment Plant and Collection Systems

The Northampton Wastewater Treatment Plant is an 8.6 million gallon per day secondary wastewater treatment plant that serves approximately 31,000 people in Northampton and an additional 425 people in the Town of Williamsburg. In addition, there are nine non-categorical, significant industrial users (SIUs) in the sewered community. The Waste Water Treatment Plant consists of the following treatment units:

### PRELIMINARY TREATMENT

- Pre-chlorination
- Bar rack
- Grit tank
- Comminutor
- Parshall flume

OVERVIEW OF CURRENT ZONING



### PRIMARY TREATMENT

- Primary clarifiers (3)
- Lift pumps

### SECONDARY TREATMENT

- Aeration tanks with diffused air
- Secondary clarifiers (3)

### DISINFECTION

- Chlorination with sodium hypochlorite (flow paced)
- Chlorine contact tank

### OUTFLOW

- Discharge to Connecticut River via outfall pipe or Mill River bed during high Connecticut River flows

### SLUDGE TREATMENT

- Sludge holding tanks
- Sludge thickeners
- Gravity belt thickening
- Filter press
- Sludge cake disposal

The discharge normally outfalls to the Connecticut River, but there are occasions when the Connecticut River is in a high flow stage and discharge is sent to the Mill River bed canal prior to being released into the Connecticut River.

The original plant was designed in 1973 (Whitman & Howard Engineers) and upgraded in 1998.

The facility accepts industrial wastewater from nine significant industrial users (SIUs) including:

- The Minute Maid Company (~40,000 gpd: fruit juice)
- Cooley-Dickinson Hospital (~10,000 gpd: hospital wastes)
- Kollmorgen Corporation, Electro-Optical Division (~0-50,000 gpd: submarine periscopes)
- Packaging Corporation of America (~3,000 gpd: manufacturing and printing of corrugated containers)
- Perstorp Compounds, Inc. (~500 gpd: urea and melanine molding compounds)
- Pro-Corporation- PMC (~1,800 gpd- sanitary only: injection molding)
- Saint Gobain/Norton Company (~100 gpd: pumice slurry)
- Techalloy Co./Northampton Wire Plant (~1,400 gpd- sanitary only: stainless steel wire)
- Department of Veterans Affairs Medical Center (65,000gpd: lab wastes)

The Northampton Waste Water Treatment Plant generated 1,127 dry metric tons of sludge in 1999. Sludge is treated by: gravity thickening and gravity belt thickening; belt filter press; chlorination of primary and waste activated sludge is optional; lime stabilization; and sludge cake goes to Northampton Regional Landfill.

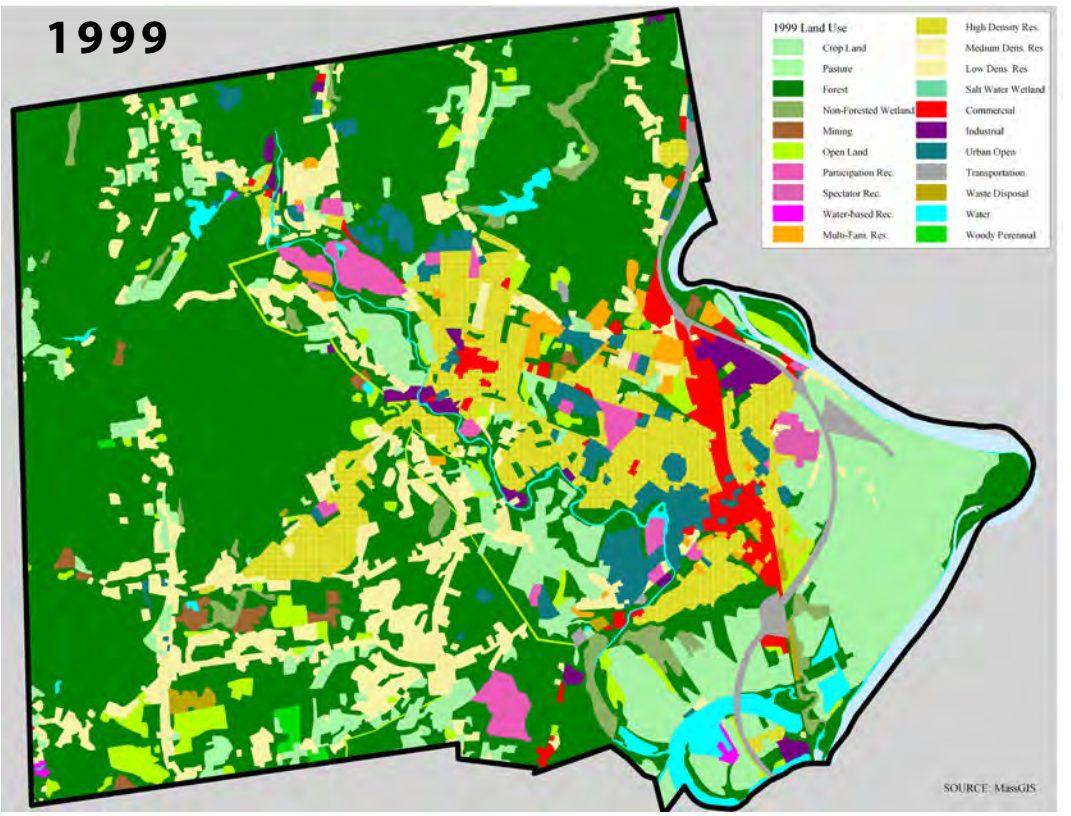
The City of Northampton has approximately 100 miles of sewer pipes and 2,400 manholes.

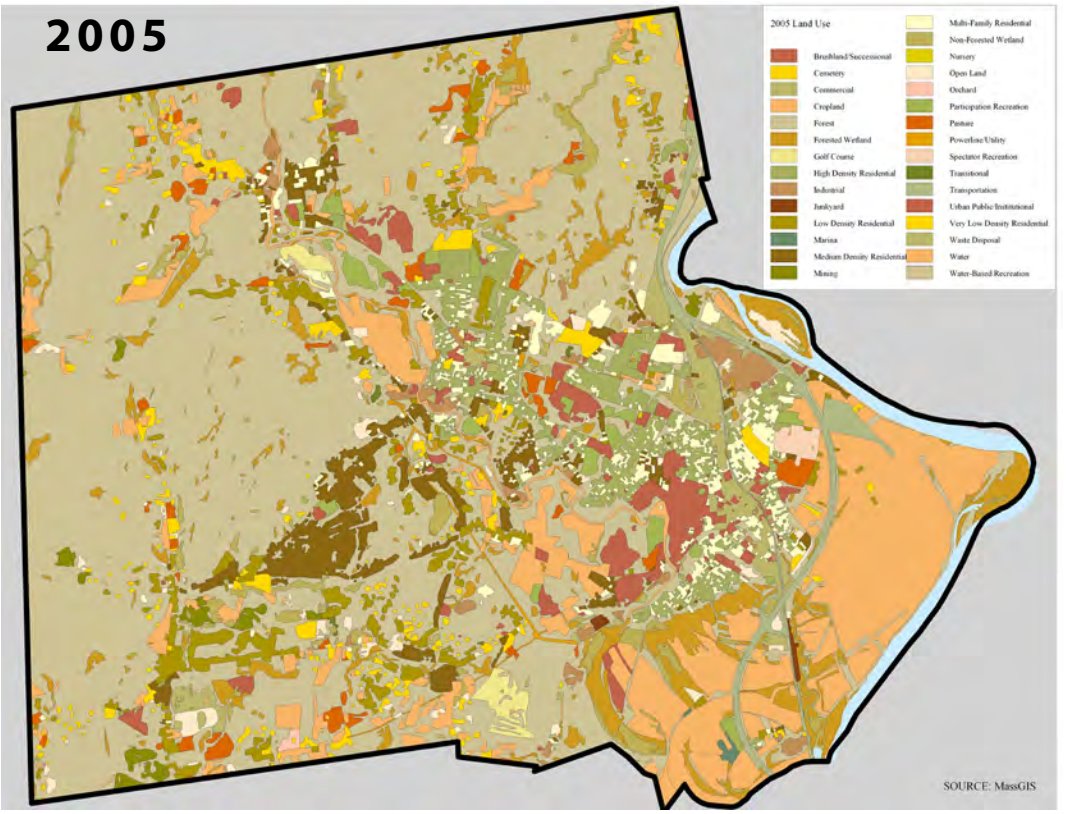
## Potential Development Constraints

Budget constraints and the geographic boundaries of the current infrastructure systems pose a constraint on commercial, industrial, and some residential expansion, especially for large-scale uses. In the absence of sewer lines, development must rely on septic systems for their wastewater treatment needs.The reliance upon septic systems poses a problem in some undeveloped areas of Northampton—shallow soils and bedrock are incapable of absorbing large quantities of effluent.

The potential for Northampton to accommodate new large-scale commercial or light industrial land uses may also be restricted by the City's limited water system infrastructure. Many commercial and light industrial uses require large quantities of water and produce large discharges that must comply with environmental regulations and provide adequate protection for natural resources. Access to adequate water and sewer infrastructure can be particularly critical with respect to industrial uses to prevent hazardous materials from entering the groundwater. The Massachusetts Department

# LAND USE


1999
1999 Land Use
Crop Land
Pasture
Forest
Non-Forested Wetland
Mining
Open Land
Participation Rec.
Spectator Rec.
Water-based Rec.
Multi-Fam. Res.
High Density Res.
Medium Dens. Res
Low Dens. Res
Salt Water Wetland
Commercial
Industrial
Urban Open
Transportation
Waste Disposal
Water
Woody Perennial
SOURCE: MassGIS


2005
2005 Land Use
Brushland/Successional
Cemetery
Commercial
Cropland
Forest
Forested Wetland
Golf Course
High Density Residential
Industrial
Junkyard
Low Density Residential
Marina
Medium Density Residential
Mining
Multi-Family Residential
Non-Forested Wetland
Nursery
Open Land
Orchard
Participation Recreation
Pasture
Powerline/Utility
Spectator Recreation
Transitional
Transportation
Urban Public/Institutional
Very Low Density Residential
Waste Disposal
Water
Water-Based Recreation
SOURCE: MassGIS

of Environmental Protection usually requires most industrial firms to obtain an industrial wastewater discharge permit and to hook up to a wastewater treatment facility.

Upgrading and extending water and sewer lines outside of the currently developed areas to proposed locations for commercial or light development may not be feasible due to the high costs involved. Funding from outside sources such as the Federal Economic Development Administration (EDA) may be necessary to subsidize the development of infrastructure to planned industrial/commercial areas in the City. The improvements to the roadway network, community water system, and wastewater treatment plant and collection system will have a great impact on future development patterns. Upgrades of existing water and sewer lines may encourage infill development for greater concentrations of commercial, industrial, and large scale residential uses near current village center areas, and they may limit large-scale development in agricultural and environmentally sensitive areas. On the other hand, sewer and water line expansion may result in an increase in industrial/commercial corridor development within the City.

**NORTHAMPTON LAND USE**

| Land Use--1985 | Acres | Land Use--1999 | Acres |
|---|---|---|---|
| Forest Land (other than protected land) | 12,306 | Forest Land (other than protected land) | 11,607 |
| Agricultural Land (other than protected land) | 3,385 | Agricultural Land (other than protected land) | 3,176 |
| Developed Land | 1,264 | Developed Land | 1,177 |
| Residential Land | 3,414 | Residential Land | 4,236 |
| Water/Recreational/ Openland | 2,478 | Water/Recreational/ Openland | 2,652 |
| Total | 22,847 | Total | 22,848 |

—MassGIS Data

## Development Patterns

Most non-agricultural development in Northampton is located outside of the Connecticut River floodplain because of the potential for flood damage. During the last two or three decades, the agricultural economy of Massachusetts has declined, resulting in the loss of some marginal farms, both on and off the floodplain.

Since World War II, much of the previously rural areas have been transformed to suburban residential development. Today, development continues along the Northampton-Florence-Leeds corridor and rural areas outside the corridor. Commercial development has spread from the original Northampton-Florence corridor to include extensive strip and shopping plaza development on King Street, a former rail yard, and North King Street. Industrial uses in the Northampton-Florence-Leeds corridor, and especially along the Mill River, have shrunk. That industrial contraction has been offset, in part, by industrial development in the Northampton Industrial Park. Residential development has also changed, with suburban development transforming the Ryan Road, Burts Pit Road, Florence Road, Westhampton Road areas, the development of apartment complexes north of downtown, and scattered housing in every corner of Northampton.

Even with the changes, clear lines still exist between urban, "small town," suburban, and rural areas. Northampton remains a city with a strong sense of both community and place. The development pattern has been shaped by the strength of the urban centers of Northampton and Florence, the King Street shopping areas, the strong character of the residential neighborhoods, and the existence of large tracts of public and quasi-public land, including the Northampton State Hospital, Smith College, Arcadia Wildlife Sanctuary, Smith Vocational and Agricultural School, Look Memorial Park, Northampton Reservoir watershed lands, and the Veteran's Administration Medical

Center.

## Land Use Controls

The City of Northampton has adopted zoning and land use controls to lessen congestion in the streets; to conserve health; to secure safety from fire, flood, panic, and other dangers; to provide adequate light and air; to prevent overcrowding of land; to avoid undue concentration of population; to encourage housing for persons of all income levels; to facilitate the adequate provision of transportation, water, water supply, drainage, sewerage, schools, parks, open space, and other public requirements; to conserve the value of land and buildings, including the conservation of natural resources and the prevention of blight and pollution of the environment; to encourage the most appropriate use of land throughout the City; and to preserve and increase amenities by the promulgation of regulations to fulfill said objectives.

The following are some of the land use controls adopted by the City of Northampton:

1. **Open Space Residential Development:**

   For residential development in a clustered concept, whereby the residences are clustered on a portion of the lot, thereby leaving more of the parcel undeveloped and in open space, the purpose of which is to: a) preserve the rural character of the community by maximizing and preserving expanses of open space in their natural state; b) provide a buffer between developments, and; c) serve a functional relationship to each of the lots in the development.

2. **Planned Unit Development:**

   For mixed residential, business, and institutional developments with extensive open space areas.

3. **Residential Incentive Development Overlay District:**

   To provide housing opportunities that are affordable for low and moderate-income persons.

4. **Planned Village District:**

   To encourage economic diversity and vitality, to foster the creation of a village or campus center with coherent development patterns similar to traditional Northampton development, to provide for an environment conducive to a high quality of life, to avoid unnecessary public expense for the extension of services, and to meet other community goals.

5. **Special Conservancy District:**

   To protect the public health and safety, persons, and property against the hazards of seasonal and periodic flooding; to protect the entire community from individual choices of land use and development which require subsequent public expenditures for public works and disaster relief; to provide that lands in the City of Northampton that are subject to seasonal or periodic flooding as described hereinafter shall not be used for residential or other purposes in such a manner as to endanger the health or safety of the occupants thereof; to assure the continuation of the natural flow pattern of the watercourses within the City of Northampton in order to provide safe and adequate floodwater storage and conveyance capacity, to protect persons and property against the hazards of flood inundation, including damage from erosion and increased flood heights and velocities; to protect, preserve, and maintain the water table and water recharge areas with the City so as to preserve present and potential water supplies for the public health and safety of the residents of the City of Northampton; and to provide for the continued functioning of the river flood plain/wetlands as a natural system. The object is to avoid activities in the flood plain/wetlands that would interfere with natural food chains that support a myriad of living things, recognizing that they serve mankind and all other life in assimilating

waste, producing food, conserving water, and maintaining stability, which has been called the balance of nature. Proper use of the flood plain/wetlands is considered to be such as would secure these benefits to all its users.

6. **Watershed Protection District**

   To preserve and protect the streams and other watercourses in the City of Northampton and their adjoining lands; to protect the health and safety of persons and property against the hazards of flooding and contamination; to preserve and maintain the ground water table for water supply purposes, and protection of adequate base flows of streams and rivers; to protect the community against the detrimental use and development of lands adjoining such watercourses; and to conserve the watershed areas of the City of Northampton for the health, safety, and welfare of the public.

7. **Water Supply Protection District**

   To promote the health, safety and welfare of the community by protecting and preserving the public drinking water resources of Northampton from any use of land or structures which reduce the quality or quantity of its public drinking water resources.

8. **Farms, Forests and Rivers Overlay District**

   To protect sensitive open space and ecologically important features, to preserve the farms, forests and river corridors of Northampton, and to allow landowners the ability to develop their property in a manner that is sensitive to these unique resources.

## Buildout Analysis

The term "buildout" refers to a state reached by a community when no additional development is possible. In other words, the community has reached its maximum potential for additional development since every piece of land is either already developed or permanently protected, or is prohibited from being developed due to constraints on development.

A buildout analysis provides a vision of future growth that the communities are inviting or requiring through their zoning and other land use regulations. The analysis indicates to a community where, what type, and how much growth it can expect at some point in the future.

### BUILDOUT IMPACTS

Additional Developable Land Area (sq ft): 503,335,800

Additional Developable Land Area (acres): 11,555

Additional Commercial/Industrial Buildable Floor Area (sq ft): 6,862,877

The buildouts are designed to illustrate land use decisions to date and the potential maximum development and projected impacts that could occur in the future based on current zoning and other development regulations. Buildouts are one tool to help communities make better decisions about the future. The buildouts can help us determine what we like about our communities and what we would like to change.

At maximum buildout, residents could experience drinking water shortages, new elementary schools would be needed, new roads would need to be built, and fire and police services would have to expand to protect the increased population.

# 4 Environmental Inventory & Analysis

## Topography, Geology, Soils

### Topography

Northampton's land is a three-part geological story. There is the alluvial/ lacustrine floodplain, which includes approximately 3,000 acres of farmland and floodplain forest along the Connecticut River. There is the deep, flat glacial outwash, which underlies much of Baystate, downtown Florence, and downtown Northampton. Finally, there is the rolling glacial till in Leeds and in the areas where most of the recent residential development has occurred and the steeply sloping bedrock-dominated glacial till in the hills on the north and western ends of town where development is much more limited. Elevations range from 99 feet mean sea level (MSL) on the Connecticut River to 890 feet MSL on the hills in the western side of town. The Mount Tom and Mount Holyoke mountain ranges, running in a unique east-west oriented boomerang shape, are to the southeast of Northampton. These mountains define the northerly limit of the Springfield-Chicopee-Holyoke metropolitan area and help define the Northampton area and Hampshire County.

### Geology

The City of Northampton as we know it today is the result of millions of years of geologic history: great upheavals of the earth's crust and volcanics and the sculpting power of moving water, ice, and wind. This distinctive physical base has determined the distribution of the town's water bodies, its soils and vegetation and its settlement patterns, both prior to and since colonial times. Understanding Northampton's current landscape requires a brief journey back in time and a review of some basic geological concepts.

The earth's crust is a system of plates whose movements and collisions shape the surface. As the plates collide, the earth's crust is compressed and forced upward to form great mountain ranges. In the northeastern United States, the plates move in an east-west direction, thus the mountains formed by their collisions run north to south.

The pressure of mountain building folded the earth, created faults, and produced the layers of metamorphosed rock typically found in New England. Collision stress also melted large areas of rock, which cooled and hardened into the granites that are found in some of the hill towns in Massachusetts today. Preceding the collisions, lines of volcanoes sometimes formed, and Franklin County shows evidence of this in bands of dark rock schist metamorphosed from lava flows and volcanic ash.

Hundreds of millions of years ago, a great continent, known as Pangaea, formed through the

collisions of plates. Pangaea began to break apart almost 200 million years ago and continues to do so as the continents drift away from each other today. This "continental drift" caused earthquakes and formed large rift valleys, the largest of which became the Atlantic Ocean. The Connecticut Valley was one of many smaller rifts to develop. Streams flowing into the river from higher areas brought alluvium, including gravels, sand, and silt. At the time, the area that is now the City of Northampton was located south of the equator. The Dinosaur era had begun, and the footprints of these giant reptiles are still visible in the rock formed from sediments deposited on the valley floor millions of years ago.

By the close of the Dinosaur age, the entire eastern United States, including Northampton, was part of a large featureless plain, known as the peneplain. It had been leveled through erosion, with the exception of a few higher, resistant areas. Today, these granite mountaintops, called monadnocks, are still the high points in this region. Local examples include Mt. Wachusett, Mt. Greylock, and Mt. Monadnock in New Hampshire.

As the peneplain eroded, the less resistant rock eroded to form low-lying areas, while bands of schist remained to form upland ridges. By this time, the Connecticut Valley had been filled with sediment while streams that would become the Deerfield, Westfield, and Farmington Rivers continued to meander eastward. The westward-flowing streams would become more significant later on.

A long period of relative quiet in geologic terms followed the Dinosaur era. Then, as the Rocky Mountains were forming in the west eight million years ago, the eastern peneplain shifted upward a thousand feet. As a result of the new, steeper topography, stream flow accelerated, carving deep valleys into the plain. Today, the visible remnants of the peneplain are the area's schist-bearing hilltops, all at about the same 1,000-foot elevation.

Mountain building, flowing water, and wind had roughly shaped the land; now the great glacial advances would shape the remaining peneplain into its current topography. Approximately two million years ago, accumulated snow and ice in glaciers to the far north began advancing under their own weight. A series of glaciations or "ice ages" followed, eroding mountains and displacing huge amounts of rock and sediment. The final advance, known as the Wisconsin Glacial Period, completely covered New England before it began to recede about 13,000 years ago. This last glacier scoured and polished the land into its final form, leaving layers of debris and landforms that are still distinguishable.

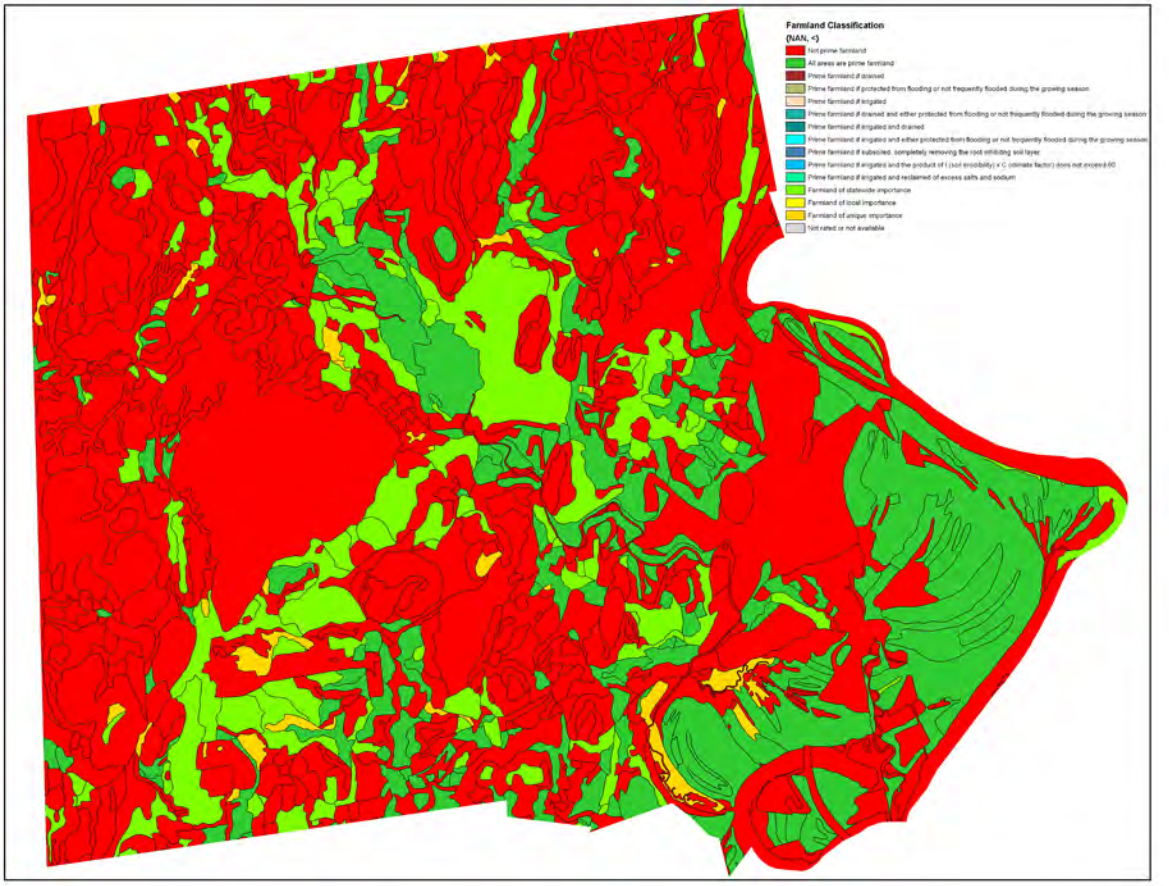
The glacier picked up, mixed, disintegrated, transported, and deposited material in its retreat. Material deposited by the ice is known as *glacial till*. Material transported by water, separated by size and deposited in layers is called *stratified drift* (Natural Resource Inventory for Franklin County, University of Massachusetts Cooperative Extension; May 1976). The glacier left gravel and sand deposits in the lowlands and along stream terraces. Where deposits were left along hillsides, they formed kame terraces and eskers. Kames are short hills, ridges, or mounds of stratified drift, and eskers are long narrow ridges or mounds of sand, gravel, and boulders.

During the end of the last ice age, a great inland lake formed in the Connecticut River Valley. Fed by streams melting from the receding glacier, Lake Hitchcock covered an area approximately 150 miles long and 12 miles wide, stretching from St. Johnsbury, Vermont to Rocky Hill, Connecticut. Streams deposited sand and gravel in deltas as they entered the lake, while smaller silts and clays were carried into deeper waters.

## Soils

Soil is the layer of minerals and organic material that covers the rock of the earth's crust. All soils have characteristics that make them more or less appropriate for different land uses. Scientists classify soils by these characteristics, including topography; physical properties including soil structure, particle size, stoniness, and depth of bedrock; drainage or permeability to water, depth to the water table, and susceptibility to flooding; behavior or engineering properties; and biological

# SOILS AND GEOLOGICAL FEATURES




characteristics such as presence of organic matter and fertility (Natural Resource Inventory for Franklin County, University of Massachusetts Cooperative Extension; May 1976). Soils are classified and grouped into associations that are commonly found together.

The United States Department of Agriculture Soil Conservation Service lists three generalized soil types for Northampton:

1. Hadley-Winooski-Limerick Association: Deep, nearly level, well-drained, moderately well drained, and poorly drained, loamy soils formed in alluvial material; on floodplains. Includes the "meadows," the floodplain of the Connecticut River.
2. Hinckley-Merrimac-Windsor Association: Deep nearly level to steep, excessively drained and somewhat excessively drained, sandy and loamy soils formed in outwash deposits; on outwash plains. Includes most of Downtown Northampton and Florence.
3. Charlton-Paxton-Woodbridge Association: Deep, level to steep, well and moderately well drained, loamy soils formed in glacial till; on uplands. Includes much of the residential area of town, and most of the areas that may be developed in the next 20 years.

Prime farmland soils have contributed to the City's economy throughout its history and Northampton's agricultural sector continues to contribute to the thriving economy of today. The soils that constitute Northampton's prime and unique agricultural land include the Hadley-Winooski-Limerick association and the Hinckley-Windsor- Merrimac soils. The Hadley-Winooski-

Limerick association is found on the floodplains along the entire length of the Connecticut River and in the eastern portions of Northampton.

The soils are generally silty and free of stones. The Hadley soils are well drained and are located on small knolls and terraces. The Winooski soils are moderately well drained and are located in the more level areas, whereas the Limerick soils are located in depressions and are poorly drained. Due to their high nutrient content, these soils are considered the most productive soils for farming in Northampton and the remainder of the Connecticut River Valley in Hampshire County. Due to the location of these soils, they are subject to flooding and are found in areas with a high water table for most of the year.

The Hinckley-Windsor-Merrimac Association is found on the level to rolling terraces parallel to the Connecticut River and is located in the developed urban areas of Northampton. The Hinckley soils, which dominate this association, are droughty and have formed in deep sandy and gravelly deposits. Gravel can be found within a foot and a half of the surface and sometimes on the surface itself. The Windsor soils are droughty and located on deep sand deposits. The Merrimac soils are similar to the Hinckley soils; they are somewhat droughty, but the subsoil is sandy loam with the gravel layer found more deeply-approximately two feet from the surface. The Hinckley-Windsor-Merrimac soils are best suited for development and dairy farms and are also considered important recharge areas for groundwater.

The Charlton-Paxton-Woodbridge soils can be found in the western hills of Northampton. These soils are the most common upland soils found in Massachusetts and were developed on glacial till. The Charlton soils are found on the upper slopes and hilltops and are deep and well drained. Paxton soils are very deep to the bedrock and moderately deep to densic contact. Woodbridge soils were formed from dense glacial till and have large surface and subsurface stones and boulders that may interfere with excavation. These soils are located in the areas where new developments and residential expansion is occurring in Northampton-areas beyond the City's infrastructure limits.

# Landscape Character

The diverse landscape character of the City of Northampton distinguishes it from surrounding communities. The City consists of densely developed urban areas, open farmland, forested hills, numerous streams, wetlands, and an abundance of wildlife patches, corridors, and matrices. The Connecticut River, a dominant landscape feature defines the eastern boundary of the City where much of the City's prime agricultural lands can be found within the Connecticut River floodplain (Northampton Meadows Area). Another outstanding feature in the City of Northampton is the steep forested uplands that define the western border and occupy approximately one-third of the City's landscape.

# Water Resources

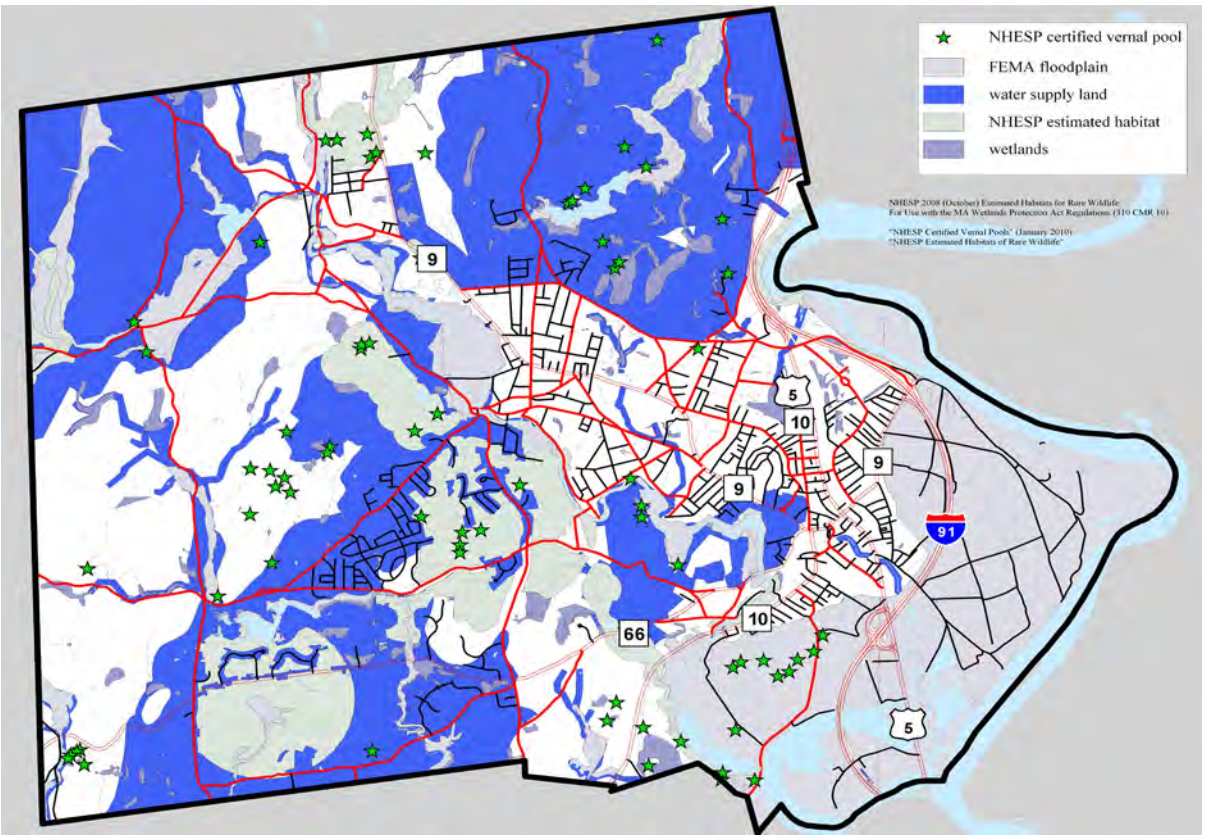
## Watersheds

Northampton is rich in water resources, including brooks, streams, ponds, vernal pools, wetlands, and aquifers *(see the Water Resources Map)*.

Most of the City of Northampton lies in the Connecticut River Watershed. The Connecticut River has a "Class B" water quality designation from the New Hampshire-Vermont border to Holyoke and is classified as a warm water fishery. Class B waters should provide suitable habitat for fish and other wildlife and should support primary contact recreational activities such as fishing and swimming. The water should also be suitable for irrigation and other agricultural uses. The classification of rivers and streams in Massachusetts does not necessarily mean that the river meets that classification; rather, classifications represent the state's goal for each river.

According to the "Connecticut River Basin 1998 Water Quality Assessment Report" published by the Massachusetts Department of Environmental Protection, the Connecticut River is impaired by polychlorinated biphenyls (PCBs) along its total length. A report published in January 1998 by the New England Interstate Water Pollution Control Commission (NEIWPCC) listed bioaccumulation

# WATER RESOURCES




and toxicity as water quality issues for the entire length of the Connecticut River in Massachusetts. Bioaccumulation refers to the concentration of toxins in organisms at higher levels in the food chain. The report specifically identified PCBs in fish. As most recently as April 2004, the Massachusetts Department of Public Health and the Bureau of Environmental Health Assessment issued a public health advisory for certain species of fish contaminated by PCBs in the Connecticut River (Department of Public Health website; 2004). The general public is warned not to eat any affected fish species, which include channel and white catfish, American eel, and yellow perch. Pregnant women and nursing mothers are advised not to eat any fish from the Connecticut River.

Although wastewater treatment facilities constructed throughout the watershed have been treating major pollution discharges for more than 20 years, the Connecticut River is still plagued by pollution from PCBs, chlorine heavy metals, erosion, landfill leachate, storm water runoff, and acid rain. These pollutants come from both point sources, like wastewater treatment plants and manufacturing plants, and non-point sources, including failed residential septic systems, improperly managed manure pits, and stormwater runoff carrying herbicides.

According to the Connecticut River Five-Year Action Plan 2002-2007 developed by the Massachusetts Executive Office of Environmental Affairs, the City of Northampton lies in the Central Reach of the Connecticut River Watershed in Massachusetts. Important characteristics of this part of the watershed include agricultural lands, large tracts of forestland, and the presence of the important wildlife habitat areas near the Mt. Tom/ Mt Holyoke Mountain Range and the Rainbow Beach area in Northampton.

The Plan lists the following objectives for the Central Reach:

- Increase awareness of the importance of

riparian buffers along the mainstem of the Connecticut River and its tributaries;

- Reduce human-influenced erosion along the mainstem and its tributaries;
- Restore vegetative riparian buffers where appropriate;
- Protect water quality through the implementation of growth management strategies;
- Obtain additional water quality and quantity data;
- Assist communities with the protection of drinking water resources;
- Improve fish passage;
- Encourage the protection of important wildlife habitat;
- Complete an updated inventory of existing boat access points;
- Implement an education program for boaters; and
- Control invasive plant species within the riparian buffers of the Central Reach.

Although never as polluted as the section of the river below the Holyoke Dam, the water quality in the Connecticut River in Northampton has improved since 1972, when the federal Clean Water Act was passed. Improved sewage treatment plants, expansion of areas served by sanitary sewers, and the ending of combined sanitary and storm water sewers (CSOs), have combined to improve water quality in the Connecticut River and Mill River. Northampton's Hockanum Road wastewater treatment plant was upgraded to secondary treatment in the early 1980s and currently services approximately 85 percent of houses in Northampton. There have also been some improvements in pollution from stormwater runoff. That source, though, remains the most significant threat to water quality.

## Flood Hazard Areas

Federal and local flood programs establish a 100-year floodplain, which is divided into two zones: a "floodway" and a "flood fringe." The "floodway" is defined as the channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water elevation more than one foot. Floodways that are depicted on National Flood Insurance Program maps are more highly hazardous areas. They are areas where, if construction occurs, it places structures at significant risk in terms of depths and velocities of floodwaters. Northampton zoning prohibits structures in these areas.

The "flood fringe" is the area of the floodplain lying outside of the floodway but subject to periodic inundation from flooding. Development may be permitted in such areas if it satisfies conditions and requirements regarding the height of the structure's first floor above the projected 100-year flood elevation, "flood proof" construction, displacement of flood waters, and related concerns. The State Building Code requires that all new living space be constructed at or above the projected 100-year flood level within the 100-year "flood fringe" area and that there be equal space for water to come into and go out of a foundation.

Floodplain boundaries are delineated on FEMA's Flood Insurance Rate Maps (FIRMs). This delineation also includes a 500-year flood area. In Northampton, the 500-year floodplain does not generally extend significantly beyond the 100-year flood area. The 500-year floodplain is not subject to local regulation. Major floods, such as those caused by heavy rains from hurricanes, and localized spot flooding can exceed the 100- and 500-year flood levels. In addition, many small streams are not mapped for their flood hazard.

Northampton can experience flooding in any part of the City. One great misunderstanding is the belief that floods only happen in the floodplain. With sufficient rain, almost any area will experience at least pockets of surface flooding or overland flooding. Overland flooding in rural areas can result in erosion, washouts, road damage, loss of crops, and septic system back-ups. Heavy rain in the more urbanized parts of the City with extensive paved and impervious surfaces can easily overwhelm stormwater facilities resulting in localized flooding and basement damage. Stormwater flooding also contributes to water

pollution by carrying silt, oil, fertilizers, pesticides, and waste into streams, rivers, and lakes.

The following table represents existing mitigation strategies for flood mitigation in the City of Northampton.

## Wetlands

Wetlands are transitional areas where land-based and water-based ecosystems overlap. Inland wetlands are commonly referred to as swamps, marshes, and bogs. Technically, wetlands are places where the water table is at or near the surface or the land is covered by shallow water. Sometimes, the term wetland is used to refer to surface water as well.

Historically, wetlands have been viewed as unproductive wastelands, to be drained, filled and "improved" for more productive uses. Over the past several decades, scientists have recognized that wetlands perform a variety of extremely important ecological functions. They absorb runoff and prevent flooding. Wetland vegetation stabilizes stream banks, preventing erosion, and trap sediments that are transported by runoff. Wetland plants absorb nutrients, such as nitrogen and phosphorus, which would be harmful if they entered lakes, ponds, rivers, and streams. They also absorb heavy metals and other pollution. Finally, wetlands are extremely productive, providing food and habitat for fish and wildlife. Many plants, invertebrates, amphibians, reptiles, and fish depend on wetlands to survive. Wetlands have economic significance related to their ecological functions: it is far more cost-effective to maintain wetlands than build treatment facilities to manage stormwater and purify drinking water, and wetlands are essential to supporting lucrative outdoor recreation industries including hunting, fishing, and bird-watching.

In recognition of the ecological and economic importance of wetlands, the Massachusetts

Wetlands Protection Act is designed to protect eight "interests" related to their function: public and private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, and protection of land containing shellfish, fisheries, and wildlife habitat. To this end, the law defines and protects "wetland resource areas," including banks of rivers, lakes, ponds, and streams; wetlands bordering the banks; land under rivers, lakes, and ponds; land subject to flooding; and "riverfront areas" within 200 feet of

| Type of Mitigation | Description | Area Covered | Effectiveness and/or Enforcement | Options for Improvements or Changes |
|---|---|---|---|---|
| **Federal, State, and Local Regulations** | | | | |
| NPDES Phase II | Federal stormwater regulations | Any project w/n City w/ one or more acres of land disturbed | In effect since 7/30/03 | DPW in process of implementing Phase II Plan |
| Wetland Protection Act, Northampton Wetlands Ordinance, & Rivers Protection Act | State & local laws regulating development w/n buffer zones of wetland resource areas & w/n riverfront area | 100 foot buffer around wetlands & wetland resource area itself; 200 food resource area on both sides of every perennially flowing river & stream | Effective;<br>Building permits cannot be issued w/o review by Conservation Commission | Strengthen Wetland Ordinance; establish no disturbance area adjacent to wetlands in less developed areas |

| Type of Mitigation | Description | Area Covered | Effectiveness and/ or Enforcement | Options for Improvements or Changes |
|---|---|---|---|---|
| Stormwater Management Standards | State regulation under Wetland Protection Act to regulate stormwater & other point source discharges | New residential subdivisions; alterations to non-residential structures subject to site plan review; roadway projects | Effective;<br>Enforced by Conservation Commission & Planning Board | City in process of adopting stormwater managemetn ordinance for DPW administration |
| Northampton Stormwater Mangement Ordinance | Local regulation to ensure that erosion & sedimentation is managed & post construction runoff rates & volumes are controlled | Any new development or construction that disturbs over one acre of land & will discharge directly/ indirectly into City's stormwater system | Effective since 6/17/2004;<br>Administered & enforced by DPW | One of main purposes of this new ordinance is to minimize damage to public & private property from flooding |
| MA State Building Code | Requires flood-proofing of new construction w/n 100-yr floodplain | All new/improved structures that require building permit | Effective;<br>Enforced by Building Inspector | Improve outreach to floodplain residents about state regulations for property upgrades |
| Title V Regulations & Northampton Regulations | Minimum requirements for subsurface disposal of sanitary sewage | Areas of City not serviced by municipal sewers | Very effective;<br>Enforced by Board of Health | Develop policy (Conservation Commission) on compensatory storage requirements for septic system repairs in floodplain |
| **Local Zoning** | | | | |
| Special Conservancy District, per current Northampton Zoning Ordinance | Floodplain zoning that regulates development | Majority of area contained w/n floodplain of CT River (see Appendix A) | Very effective;<br>Enforced by Building Inspector & Conservation Commission | Work w/ residents, land & business owners to develop land use plan<br>Discussions should help determine rules for new development that will not damage resource areas while encouraging investment in existing properties |
| Watershed Protection Overlay District, per current Northampton Zoning Ordinance | Overlay District that regulates development | Land adjoining streams & rivers (see Appendix A) | Very effective;<br>Requires special permit from Planning Board;<br>Enforced by Building Inspector & Conservation Commission | |

| Type of Mitigation | Description | Area Covered | Effectiveness and/or Enforcement | Options for Improvements or Changes |
|---|---|---|---|---|
| National Flood Insurance Program & Community Rating System | Federal Law regulating new & substantially improved construction in floodplain | 100-year floodplain (Zone A) as shown on Flood Insurance Rate Map | Effective;<br>Enforced by Building Inspector; CRS participation can reduce insurance premium up to 45% | Reduce insurance premiums by 15% through CRS by passing Flood Mitigation Plan |
| **Open Space Preservation** | | | | |
| State & local land preservation w/n floodplain | APR & CR lands, Arcadia Wildlife Sanctuary, Rainbow Beach (state & City), Shepard's Island, Elwell Island, CT., River Greenways State Park, Mill River Greenway | 1,251 acres w/n floodplain | Very effective;<br>Permanently preserves floodplain area | Pursue federal & state grants to buy repetitive loss properties, & APRS & CRs on properties posing environmental risks, & on land w/ valuable habitat, all on willing buyer-willing seller basis |
| State, local & non-profit land preservation outside floodplain | Conservation areas, APR lands, parks, playgrounds, buffer areas | 3,134 acres throughout City | Incrementally effective, limits development in watershed areas | Make land acquisition a priority in City budget |
| **Structural Projects** | | | | |
| Dikes | Man-made physical barriers to floodwaters | Surrounding downtown | Extremely effective up to 100-year flood level | On-going maintenance |
| Dam maintenance | Necessary to prevent dam failure & flooding downstream | Area downstream of each dam | Fairly effective;<br>Records kept by Northampton DPW, OPD, & by MA Dam Safety | Study possibility of removing obsolete dams along Mill River |
| Water Retention & Detention Ponds | Man-made ponds collect or diffuse stormwater runoff | New devleopment (commercial, industrial, & residential when under subdivision control), City-wide | Effective;<br>Part of site review process; inspected by DPW (public & private structures) | Improve monitoring & enforcement; develop design manual for "green" solutions to reducing run-off rates & volumes in new development |
| Maintenance & repair of City Stormwater Management Infrastructure | Storm drains & sewers | City-wide | Case-by-case as done, could be very effective in certain areas | Ongoing, develop plan; identify & implement funding stream, such as dedicated fee for service |

any stream that runs all year. Local Conservation Commissions are responsible for administering the Wetlands Protection Act; Northampton also has its own local wetlands regulations.

Many of Northampton's wetlands are mapped by the National Wetlands Inventory (NWI) (*see the Water Resources Map*).

## Vernal Pools

Vernal pools are temporary bodies of fresh water that provide critical breeding habitat for many vertebrate and invertebrate wildlife species. They are defined as "basin depressions where water is confined and persists for at least two months during the spring and early summer of most years, and where reproducing populations of fish do not survive." Vernal pools may be very shallow, holding only five or six inches of water, or they may be quite deep. They range in size from fewer than 100 square feet to several acres (Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, *Massachusetts Aerial Photo Survey of Potential Vernal Pools,* Spring 2001). Vernal pools are found across the landscape, anywhere that small woodland depressions, swales, or kettle holes collect spring runoff or intercept seasonal high groundwater and along rivers in the floodplain. Many species of amphibians and vertebrates are completely dependent on vernal pools to reproduce. Loss of vernal pools can endanger entire populations of these species.

The state's Natural Heritage and Endangered Species Program (NHESP) has predicted the location of vernal pools statewide based on interpretation of aerial photographs. NHESP believes that its method correctly predicts the existence of vernal pools in 80 to 90 percent of cases. They acknowledge, however, that the method probably misses smaller pools. The NHESP has identified approximately 60 potential vernal pools throughout Northampton with several clusters especially in the northwestern part of town. According to NHESP, clusters indicate particularly good habitat for species. Also, with clusters, there are alternate habitats if something happens to one pool, and slightly different conditions in each may provide different habitats for species dependent upon the pools.

In addition to identifying potential vernal pools, NHESP certifies the existence of actual vernal pools when evidence is submitted to document their location and the presence of breeding amphibians that depend on vernal pools to survive. Certified vernal pools are protected by the Massachusetts Wetlands Protection Act and by additional state and federal regulations. In Northampton, there are 72 Certified Vernal Pools.

## Potential Aquifers and Recharge Areas

Aquifers are composed of water-bearing soil and minerals, which may be either unconsolidated (soil-like) deposits or consolidated rocks. Consolidated rocks, also known as bedrock, consist of rock and mineral particles that have been welded together by heat and pressure or chemical reaction. Water flows through fractures, pores, and other openings. Unconsolidated deposits consist of material from the disintegrated consolidated rocks. Water flows through openings between particles.

As water travels through the cracks and openings in rock and soil, it passes through a region called the "unsaturated zone," which is characterized by the presence of both air and water in the spaces between soil particles. Water in this zone cannot be pumped. Below this layer, water fills all spaces in the "saturated zone." The water in this layer is referred to as "groundwater." The upper surface of the groundwater is called the "water table" (Masters, Gilbert. *Introduction to Environmental Engineering and Science, Second Edition*; 1998).

The route groundwater takes and the rate at which it moves through an aquifer is determined by the properties of the aquifer materials and the aquifer's width and depth. This information helps determine how best to extract the water for use, as well as determining how contaminants, which originate on the surface, will flow in the aquifer.

Aquifers are generally classified as either unconfined or confined (EPA and Purdue U.; 1998). The top of an unconfined aquifer is

identified by the water table. Above the water table, in the unsaturated zone, interconnected pore spaces are open to the atmosphere. Precipitation recharges the groundwater by soaking into the ground and percolating down to the water table. Confined aquifers are sandwiched between two impermeable layers (Masters; 1998). Almost all the public wells in Massachusetts, including those in Northampton, and many private wells tap unconfined aquifers (Mass. Audubon Society; 1985). Wells that rely on confined aquifers are referred to as "artesian wells."

The Northampton Water District also has three delineated Zone II recharge area. A Zone II is that area of an aquifer that contributes to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield with no recharge from precipitation). The Zone II areas are located in the southwestern section of the City and the northeastern section of the City. Threats to the District's Zone II recharge area contributing to a designation of "high" threat of contamination include residential use, roadways, potential hazardous materials storage and use, presence of an oil contamination site as noted by DEP, and agricultural uses.

# Vegetation

Northampton has diverse natural habitats that support a variety of plants and animals. Approximately 50 percent of Northampton is covered by a mixed deciduous forest, including oak, maple, and beech, with smaller coniferous forests, including spruce, pine, and hemlock. Several thousand more acres of land are in agriculture, abandoned fields, and wet meadows.

| Water Resource Type: | |
|---|---|
| Water bodies (rivers, streams, ponds) | 1,200 acres |
| Floodplain (100 year flood) | 4,800 acres |
| Wetlands (swamps, marshes) | approx. 3,000 acres (2,000 acres mapped) |
| Drinking Water Supply Watersheds & Acquifers in Northampton | 5,000 acres (includes water and wetlands) |
| *Note: Water supply land is not open for public recreation and some land may show up in more than one category in this table.* | |
| —MassGIS Data | |

In 1993 the Conservation Commission hired a trained naturalist to do an ecological assessment of the Conservation Commission's properties, the lands abutting those properties, and several other sensitive sites in the city. This information, summarized in a report entitled, *Rediscovering Northampton, The Natural History of City-Owned Conservation Areas,* was collected to provide greater data with which to make land management and land acquisition decisions. Major findings have been incorporated into this plan.

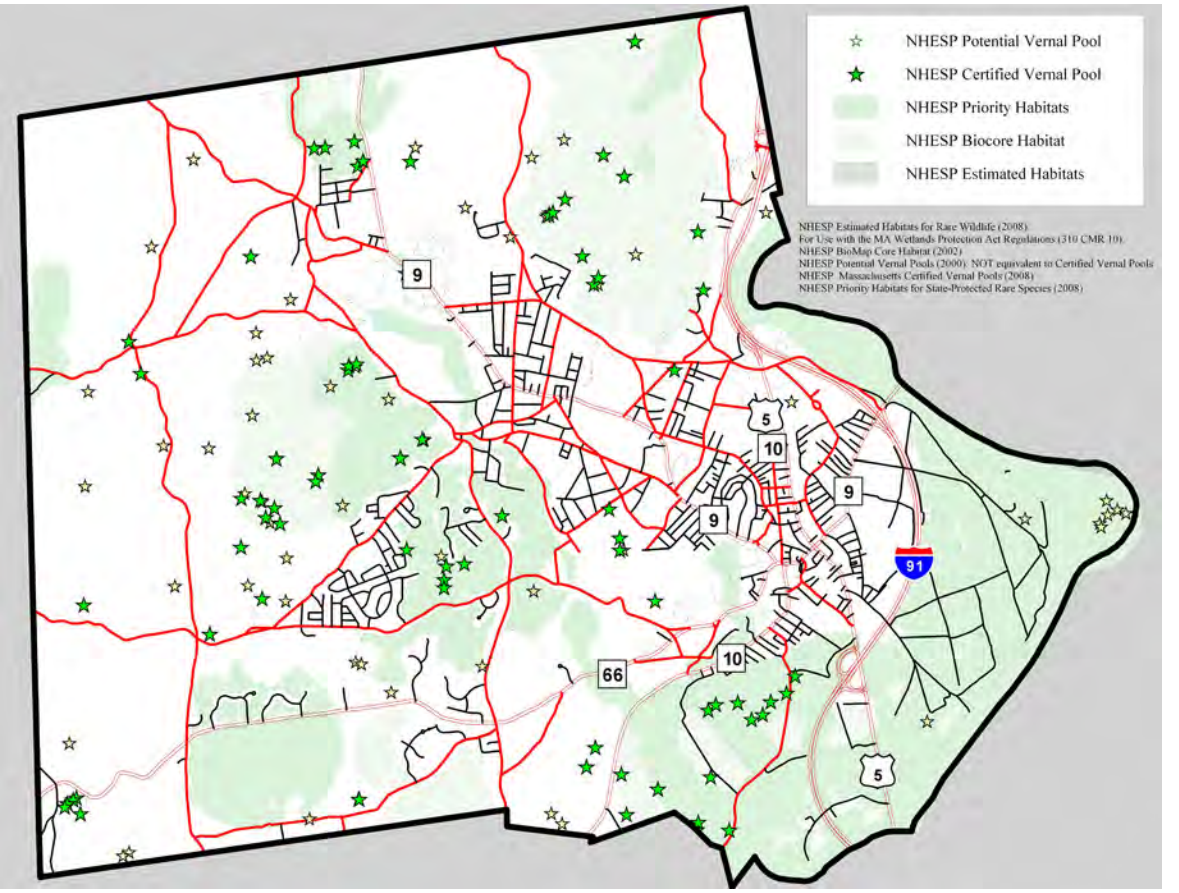
Unfortunately, non-native invasive plants are threatening to these resources. These plants can take over part of the indigenous habitat and decrease the ecological value for native animals.

## Forests

Plants are a critical component of ecosystems in Northampton. Plants convert solar energy into food, which supports all animal life. Plants cycle energy through the ecosystem by decaying, by removing carbon from the atmosphere, and by shedding oxygen. Plants help moderate temperatures and act as shelter and feeding surfaces for herbivores, omnivores, and carnivores. Plants and animals together make up *natural communities*, defined as interacting groups of plants and animals that share a common environment and occur together in different places on the landscape (NHESP; 2001). Over the past decade, ecologists and conservationists in Massachusetts have devoted increasing effort to studying and protecting these natural communities, rather than focusing on individual species.

Forests are one of the City's most important

# VEGETATION, FISHERIES & WILDLIFE




renewable natural resources. The City's forests are diverse, including unusual communities such as major river floodplain forests. This section describes vegetated areas in town and their ecological and economic significance.

## MAJOR-RIVER FLOODPLAIN FOREST

Major-River Floodplain forests occur along large rivers such as the Connecticut River.

The soils found within this environment are predominantly sandy loams without a surface organic layer. Flooding occurs annually and is usually severe. The "island variant" occurs on elevated sections of riverine islands and riverbanks where there are high levels of disturbance from intense flooding and ice scour. The dominant species of this floodplain forest is the silver maple (*Acer saccharinum*), covering the majority of the overstory with lesser amounts of cottonwood (*Populus deltoides*). American elm (*Ulmus americana*) and/or slippery elm (*Ulmus rubra*) can be found in the subcanopy. Shrubs are lacking and the herbaceous layer primarily consists of stinging nettles (*Laportea canadensis*). Ostrich fern (*Matteuccia struthiopteris*) also occurs and whitegrass (*Leersia virginica*) is found in small amounts. The "island variant" has similar species, but cottonwood, sycamore (*Platanus occidentalis*), and American ash (*Fraxinus americana*) are also present in the canopy. Box elder (*Acer negundo*), staghorn sumac (*Rhus typhina*), bittersweet (*Celastrus orbiculata*), riverbank grape (*Vitis riparia*), and Virginia creeper *Parthenocissus quinquefolia*) are also present.

Floodplain forests are insect-rich habitats that attract many species of songbirds. Raptors such as bald eagles and red-shouldered hawks also use riverbank trees as perch sites. Wood ducks and hooded mergansers are found along the shady edges of the riverbanks, as are Eastern comma butterflies

and several species of dragonflies. Floodplain forests also provide sheltered riverside corridors for deer and migratory songbirds. Many state protected rare animal species use the floodplain forest as an important component of their habitat.

## Rare, Threatened, and Endangered Plant Species

Vascular Plant Lygodium palmatum Climbing Fern SC

Vascular Plant Ophioglossum pusillum Adder's-tongue Fern T

Vascular Plant Panicum philadelphicum Philadelphia Panic-grass SC

Vascular Plant Eragrostis frankii Frank's Lovegrass SC

Vascular Plant Eleocharis diandra Wright's Spike-rush E

Vascular Plant Eleocharis intermedia Intermediate Spike-sedge T

Vascular Plant Carex typhina Cat-tail Sedge T

Vascular Plant Carex bushii Bush's Sedge E

Vascular Plant Arisaema dracontium Green Dragon T

Vascular Plant Salix exigua Sandbar Willow T

Vascular Plant Waldsteinia fragarioides Barren Strawberry SC

# Fisheries and Wildlife

Deer, bear, and other mammals thrive in the woodland and forest edge, especially in the northern and western sides of Northampton. Game birds, such as pheasants, native grouse, woodcock, and turkey are also present in large numbers, along with raccoons, muskrats, and fox. For several years, there have been increases in the numbers of otter, opossum, and beaver. Arcadia Wildlife Sanctuary, which conducts detailed biological assessments and bird counts, has counted upwards of 200 species of birds in or passing through the sanctuary, including the Bald Eagle, Redtail Hawk, and Screech Owl.

The various lakes, streams, and rivers in Northampton provide environments for a variety of fish, such as trout, salmon, bass, pickerel, northern pike, shad, and walleye. The Connecticut River, the Ox-Bow, and the Mill River in the Arcadia Wildlife Sanctuary are especially significant aquatic habitats.

Although Northampton has diverse plant and animal habitats, the habitat is not as productive as it once was. Like most areas in New England, wetlands were filled to allow development, prior to federal and state wetlands protection acts. Even with the passage of those acts, small amounts of wetlands, especially isolated wetlands, continue to be lost or degraded because of nearby development. As development extends up valley corridors and increasingly up hillsides, habitats are being fragmented. This fragmentation is degrading the range and productivity of the flora and fauna in those areas.

The City's Wildlife Committee (formed under the auspices of the Conservation Commission) is currently running transects and working to better define wildlife population and corridors. This data will inform this and future plans.

## Rare, Threatened, and Endangered Wildlife Species

Amphibian Ambystoma jeffersonianum Jefferson Salamander SC

Amphibian Ambystoma opacum Marbled Salamander T

Amphibian Hemidactylium scutatum Four-toed Salamander SC

Amphibian Scaphiopus holbrookii Eastern Spadefoot T

Beetle Cicindela duodecimguttata Twelve-spotted Tiger Beetle SC

Bird Botaurus lentiginosus American Bittern E

Bird Ixobrychus exilis Least Bittern E

Bird Haliaeetus leucocephalus Bald Eagle E T

Bird Accipiter striatus Sharp-shinned Hawk SC

Bird Vermivora chrysoptera Golden-winged Warbler E

Bird Pooecetes gramineus Vesper Sparrow T

Bird Ammodramus savannarum Grasshopper Sparrow T

Bird Ammodramus henslowii Henslow's Sparrow E

Butterfly/Moth Satyrium favonius Oak Hairstreak SC

Dragonfly/Damselfly Gomphus ventricosus Skillet Clubtail SC

Dragonfly/Damselfly Gomphus abbreviatus Spine-crowned Clubtail E

Dragonfly/Damselfly Ophiogomphus aspersus Brook Snaketail SC

Dragonfly/Damselfly Aeshna mutata Spatterdock Darner SC

Dragonfly/Damselfly Boyeria grafiana Ocellated Darner SC

Dragonfly/Damselfly Neurocordulia yamaskanensis Stygian Shadowdragon SC

Dragonfly/Damselfly Stylurus amnicola Riverine Clubtail E

Dragonfly/Damselfly Stylurus scudderi Zebra Clubtail E

Dragonfly/Damselfly Stylurus spiniceps A Clubtail Dragonfly T

Fish Acipenser brevirostrum Shortnose Sturgeon E E

Fish Hybognathus regius Eastern Silvery Minnow SC

Fish Catostomus catostomus Longnose Sucker SC

Fish Lota lota Burbot SC

Mussel Alasmidonta heterodon Dwarf Wedgemussel E E

Mussel Alasmidonta undulata Triangle Floater SC

Mussel Lampsilis cariosa Yellow Lampmussel E

Mussel Ligumia nasuta Eastern Pondmussel SC

Mussel Strophitus undulatus Creeper SC

Reptile Glyptemys insculpta Wood Turtle SC

Reptile Terrapene carolina Eastern Box Turtle SC

Snail Ferrissia walkeri Walker's Limpet SC

# Scenic Resources and Unique Environments

Expanding on the Department of Conservation and Recreation (DCR) Scenic Landscape Inventory, significant scenic resources and unique environments were mapped for Northampton. These resources include the notable "viewsheds," or vistas, from public roads, water bodies, and permanently protected open space. The assessment also shows historic districts. Known archaeological sites are **not** specifically identified in order to protect them. They are, however, primarily concentrated on the Connecticut River and, to a lesser extent, on the Mill River.

As development occurs, especially development with little sensitivity to the community's views, some scenic views are being lost. In addition, as farmland has been abandoned, closed forests are replacing formerly pastoral views.

## Cultural and Historical Areas

### THE NORTHAMPTON STATE HOSPITAL

The Northampton State Hospital (NSH) and its burial ground are on the National Register of Historic Places. An independent listing of the hospital cemetery is currently being sought. The following description is from the *Preservation Guidelines for Municipally Owned Historic Burial Grounds and Cemeteries* produced by the Department of Environmental Management Historic Cemeteries Preservation Initiative in May

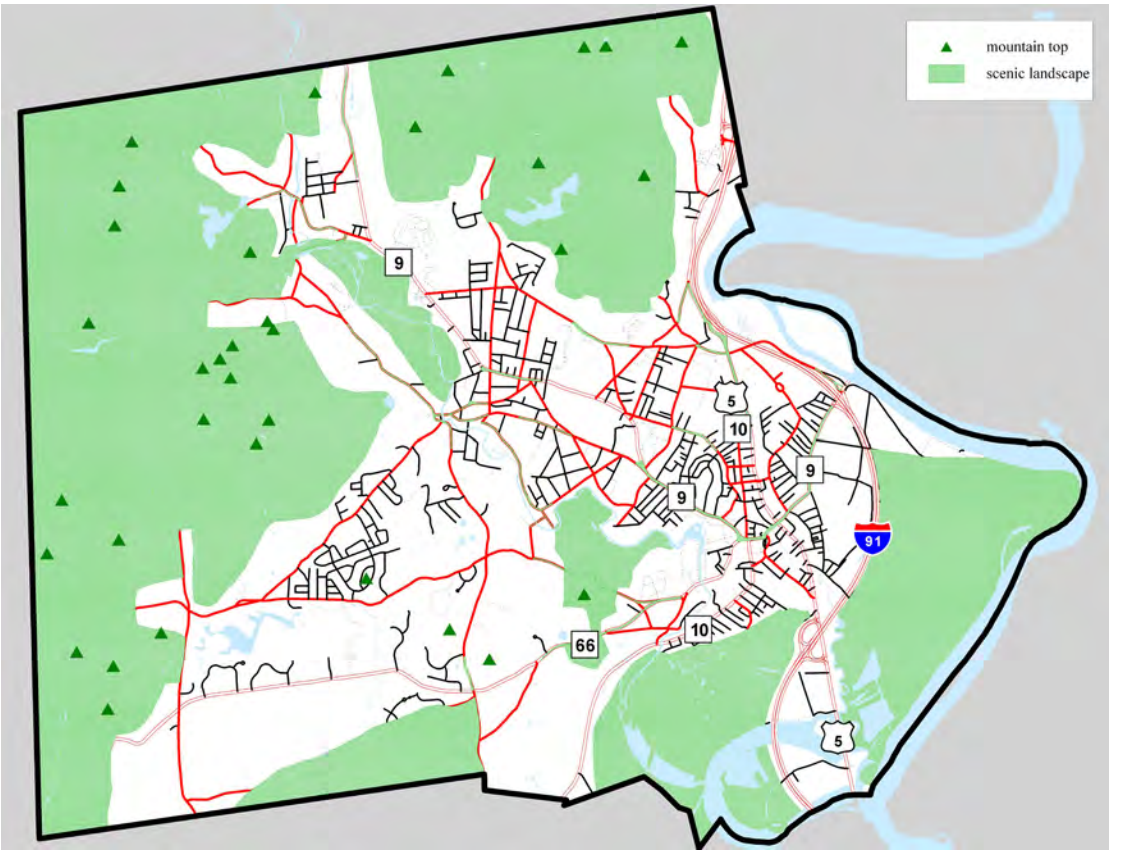
2000.

At its opening in 1858 as the second state hospital, it was called the Northampton Lunatic Asylum. The institution was co-founded by Dorothea Dix, who led the reform movement to found asylums for the more humane treatment of the insane. In a field survey of conditions in Massachusetts, she found the insane were chained or caged in basements or attics and often beaten or otherwise mistreated. She successfully campaigned for state asylums where the insane would be treated with more humane methods (Brown 1998).

The Northampton State Hospital burial ground was in use from the founding of the institution in 1858 until 1921. Patients who died and were not claimed by family or friends for burial elsewhere were buried there. The institution mortuary slip books contain several direct references to the "hospital cemetery" (12/25/1914; 6/11/1916), "hospital burial ground" (7/23/1915), or "hillside cemetery" (6/11/1916) in the section for the disposition of the body. Research by Elizabeth Kroon for the Department of Mental Health (DMH) in June 1997 confirmed the presence of 181 burials on the hospital grounds by cross-referencing death records in hospital casebooks with extant mortuary slips, death registers of the City of Northampton, and local cemetery records. She further found 413 burials with unlisted or unclear dispositions such as "Northampton," which also could have been buried on the grounds of the State Hospital. In the later 19th century, between one half and one third of patients who died in the hospital were buried on the grounds (McCarthy 1974: 70). After 1921, patients not claimed for burial by family or friends were listed as "Chapter 113 of general law" or "Chapter 77 of regular law," which were new state laws permitting citizens who die in state hospitals, asylums, or prisons to be sent as cadavers to medical schools. These laws are still in effect.

The location of the Northampton State Hospital

UNIQUE AND SCENIC FEATURES IN NORTHAMPTON



burial ground was primarily identified through a strong oral tradition among grounds-keepers at the institution. The primary keeper of the oral history is Bob Mielke, who currently works in the DMH business office and was a groundskeeper at the hospital for many years. He first heard that the site was a cemetery from groundskeepers in the 1950s when he and friends played there as children. During his childhood, Mr. Mielke remembers that he and his friends found two rectangular stones that he believes were marker stones of some sort. He describes them as small squares with no legible inscriptions on them, but he is not sure. When Mr. Mielke was employed at NSH, he remembers that the plot was always referred to as a cemetery. He further remembers a room at the hospital with records of burials and the layout of the cemetery. These records have disappeared.

The cemetery's location is verified by the one documentary reference to the burial ground found to date in the institution's records. A November 1933 entry in the Superintendent's Reports 1932-1936 described land that need draining as "land at the foot of what used to be the hospital cemetery which borders on Mill River and runs up towards the spring in the back of the barn" (NSHHR 1993). This referenced piece of land is now called "the pumpkin patch" and is still known for its poor drainage. The location of the hospital cemetery specified in the hospital record is congruent with the oral history of its location.

The burial ground is accessed by a series of dirt roads that start at Burts Pit Road and extend toward the Mill River. The burial ground is an open field surrounded by a dirt road except on the south side, where the field ends in a wood. In the field there are no gravestones, paths, entranceways, or fences indicating the locations of graves or the boundaries of the cemetery. There is an unmarked gravestone in woods just across the dirt road to the north of the field. A cobblestone-covered north-south mound marks the grave with a small upright gravestone at the south end that is flat on the north side but is not engraved. Mr. Mielke stated that until recently an old woman had periodically visited and placed trinkets on the grave. A bit to the west, there was another north-south cobblestone-covered mound that might also be a grave although it lacked a gravestone.

Archaeological reconnaissance survey of the site confirmed the location of the burial ground that was previously identified through oral history. Squarish soil deflations were found extending in two to three fairly straight, nearly north-south rows from the woods on the south edge of the field northerly along the top of the hill. Further, very distinctive squarish to rectangular patches of very green mound cover about one inch high were found where the taller straw-colored hay in the rest of the field did not grow. The long axis of the patches of low green vegetation extended roughly east to west, which is the traditional direction for Christian burials. Further, the patches were roughly formed rows running north-south as is typical in Christian cemeteries.

There is little indication of underground disturbance in the pattern of deflations and patches of low green vegetation, except that some vegetation patches were no longer or shorter than a typical adult burial would be. Historic tilling of the field may have caused some disturbance of the vegetation patches. A 1916 map labels the burial ground parcel as "Tillage" (Davis 1916). In addition, Alan Scott recently heard from groundskeeper Bud Warnock that he planted corn in the field c. 1943. Mr. Warnock had heard that the field was a cemetery from his father and uncle who were groundskeepers in the 1920s. Since the 1950s, the parcel has changed hands between various state departments and, at one point in the 1950s, was used for instruction in haying by the University of Massachusetts agricultural department. The current proprietor of the parcel is the Department of Agricultural Resources (DAR), from whom the City of Northampton holds a 99-year lease. Northampton leases the property to the Smith Vocational School, which uses it for instruction in haying (above ground), which is beneficial for maintenance of the field.

A small cluster of overgrown bushes was prominently visible near the dirt road at the top of the hillside burial ground. Within the cluster of bushes were two large stones that could be mistaken for large gravestones but were shown to be the remnants of a bench. Mr. Mielke recounted

a story he heard about how the bench was built and the bushes planted as a result of research of the burial site by Bill Goggins, who became involved with the Northampton State Hospital Board of Directors in 1958. Using his political connections and influence, Mr. Goggins was able both to confirm a story that four veterans were buried in the hillside and to erect a monument at the top of the hill, including the bench and the bushes. Each Veteran's Day thereafter NSH employees planted a flag near the memorial as noted in the 1967 NSH newsletter for the employees.

### HISTORIC NORTHAMPTON

Historic Northampton is a museum of local history in the heart of the Connecticut River Valley of western Massachusetts. Its collection of approximately 50,000 objects and three historic buildings is the repository of Northampton and Connecticut Valley history from the Pre-Contact era to the present.

Historic Northampton constitutes a campus of three contiguous historic houses, all on their original sites. The grounds themselves are part of an original Northampton home lot laid out in 1654.

The **Damon House** (1813), built by architect, Isaac Damon, contains Historic Northampton's administrative offices and a Federal era parlor, featuring Damon family furnishings and period artifacts. A modern structure, added in 1987, houses the museum and exhibition area. It features changing exhibits and a permanent installation, *A Place Called Paradise: The Making of Northampton, Massachusetts*, chronicling Northampton history.

The **Parsons House** (1730) affords an overview of Colonial domestic architecture with its interior walls exposed to reveal evolving structural and decorative changes over more than two and a half centuries.

The **Shepherd House** (1796) contains artifacts and furnishings from many generations, including exotic souvenirs from the turn-of-the-century travels of Thomas and Edith Shepherd and reflects one family's changing tastes and values.

The depth and breadth of Historic Northampton's collections attract historians, scholars and students of New England material culture from around the world. The museum's wide-ranging collection includes more than 10,000 photographs, documents, and manuscripts from the 17th to the 20th centuries, fine art, furniture, ceramics, glass, metals, toys, tools and implements, and an important collection of textiles and costumes.

### SMITH COLLEGE MUSEUM OF ART

A spectacular, renovated and expanded Brown Fine Arts Center opened to the public in April 2003. Managed by the New York architecture firm Polshek Partnership, the $35 million project dramatically reshaped the three components of the complex: the Smith College Museum of Art, art department, and art library.

### THE CALVIN COOLIDGE PRESIDENTIAL LIBRARY AND MUSEUM

The Calvin Coolidge Presidential Library and Museum contains materials documenting the private life of Calvin Coolidge (1872-1933), beginning with his birth and formative years in Vermont, his student days at Amherst College, and his years as a young lawyer in Northampton. Exhibits and manuscripts, written and pictorial, cover his political career from Northampton to Boston to the White House and his post-presidential years as a Northampton resident. The Collection also includes materials of a similar nature related to the life of Grace Goodhue Coolidge (1879-1957).

## Areas of Critical Environmental Concern

Areas of Critical Environmental Concern (ACEC) are places in Massachusetts that receive special recognition because of the quality, uniqueness, and significance of their natural and cultural resources. These areas are identified and nominated at the community level and are reviewed and designated by the state's Secretary of Environmental Affairs. ACEC designation creates a framework for local and regional stewardship of critical resources and ecosystems.

There are currently 28 ACEC identified in the Commonwealth of Massachusetts. There are no ACEC in the City of Northampton.

## Areas with Unusual Geologic Features

### MOUNT HOLYOKE AND MOUNT TOM RANGES

The City of Northampton has many areas with unusual geologic features such as: glacial outwash plains and deltas (i.e. sandplains/pitch pine habitats), drumlins, ravines, woodlands on glacial tills (no bedrock exposed), and rocky uplands. The most unusual geologic feature connected to the City of Northampton is the Mt. Holyoke and Mt. Tom ranges to the east and south.

The Mt. Holyoke Range/Mt. Tom Range formed some 200 million years ago when lava flowed from the valley floor, cooled, and was upended. More recently, glaciers left their signature, scouring the ridges' jagged edges smooth in some places, exposing bedrock, or depositing till, sand, clay, or muck in others. Since the early days, settlers used all but the sheerest inclines for woodlots and pastures. Now mostly wooded, the ridge's steep slopes and east-west orientation create a number of forest types, including birch-beech-hemlock on the north side and oak-hickory on the south. Thickets, streams, ponds, and wetlands add to the diversity.

The Ranges run east to west (one of very few mountain ranges that do so) for almost 20 miles across the Connecticut River Valley, rising up to 900 feet from the valley floor. They are laced with hiking trails including the Metacomet-Monadonock Trail, a section of which runs the length of the Ranges and was recently designated a National Recreational Trail. The ranges are the single most prominent natural feature of the Pioneer Valley and provide a backdrop to the daily lives of citizens throughout the region. The Mt. Holyoke Range borders the towns of Hadley, South Hadley, Amherst, Granby, and Belchertown to the east of the Connecticut River and rises again to the west of the river as the Mt. Tom Range, bordering Northampton, Holyoke, and Easthampton. The Mt. Holyoke and Mt. Tom Ranges together were named one of 10 'Last Chance Landscapes,' defined as natural wonders with both pending threats and potential solutions for the year 2000 by the National Scenic Organization.

### TURKEY HILL QUARRY

The Turkey Hill Quarry possesses unique exposures of bedrock. The quarrying operations have uncovered a glacially smoothed surface that displays folded metamorphic rocks intruded by Williamsburg Granodiorite, an igneous rock. Geologists from the Five Colleges study this unusual natural feature and have pledged to protect this area for future scientists.

# Environmental Challenges

Much of Northampton has sensitive ecological resources, especially water resources such as wetlands, streams, floodplain, and drinking water aquifers and watersheds. Much of the richest wildlife habitat in Northampton is at some risk, and some surface water and wetland resources are slowly being degraded. This occurs for the obvious reasons: wildlife habitat is converted to urban and suburban land, and development cuts into ranges and habitat types.

This loss of habitat and natural flood buffering areas is Northampton's most serious environmental problem. Non-point source pollution (rain and snow runoff laden with pollutants) also poses significant water quality problems.

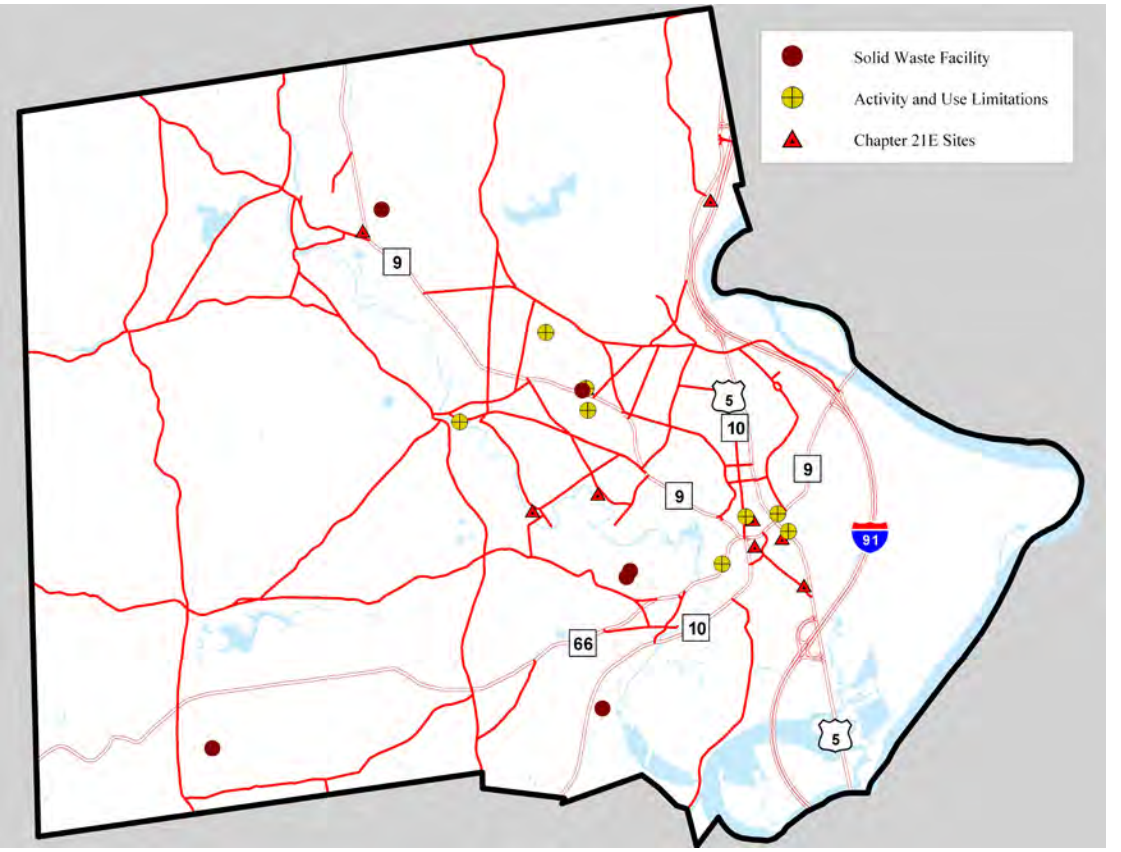
Over the past 40 years, tougher environmental rules and policies, including separation of combined sanitary and storm sewers, construction and expansion of the waste water treatment plant, pretreatment standards for sanitary waste, lined landfills, wetlands regulations, erosion control standards, and improved forest management practices, have all softened the impacts of development on natural and ecological resources. Air pollution continues to present a health hazard, especially during the summer months, to Northampton and the rest of the Pioneer Valley. During the summer, ozone pollution builds up and

blows in from the south. The pollution levels far exceed federal ozone standards.

## Non-Point Source Pollution

The pollution of Northampton's water and groundwater resources is important to identify and manage for residents and wildlife that reside there. Non-point source pollution (NPS) is runoff that has been altered and contaminated by outside sources like salt and sand from roadways, failing septic systems, underground storage tanks, landfills, gas stations, agricultural runoff, and fertilizer from lawns and other areas. These pollutants may enter into water bodies from where they originate or due to snowfall and rainfall thereby harming water quality. The challenge is to find a balance for these man-made pollutants and nature and to reduce the negative impact to a minimum or eliminate it completely. Part of that process is to have an appropriate monitoring and management in place to identify when levels are of concern and what measures should be taken to get them back to a healthy level. Non-point source pollution is a contributor to the degraded water quality of the Mill River for example.

Fortunately, there are ways to reduce the affects of NPS. Keeping storm drains that connect to our lakes, streams, and rivers clear of debris, apply any lawn chemicals sparingly if at all, control soil erosion, minimize the amount of salt and sand added to roadways in winter months, encourage the development of construction/sediment ordinances in the City, have septic systems pumped and inspected every three to five years, conduct further outreach and education to local residents about NPS, and purchase environmentally friendly household cleaner



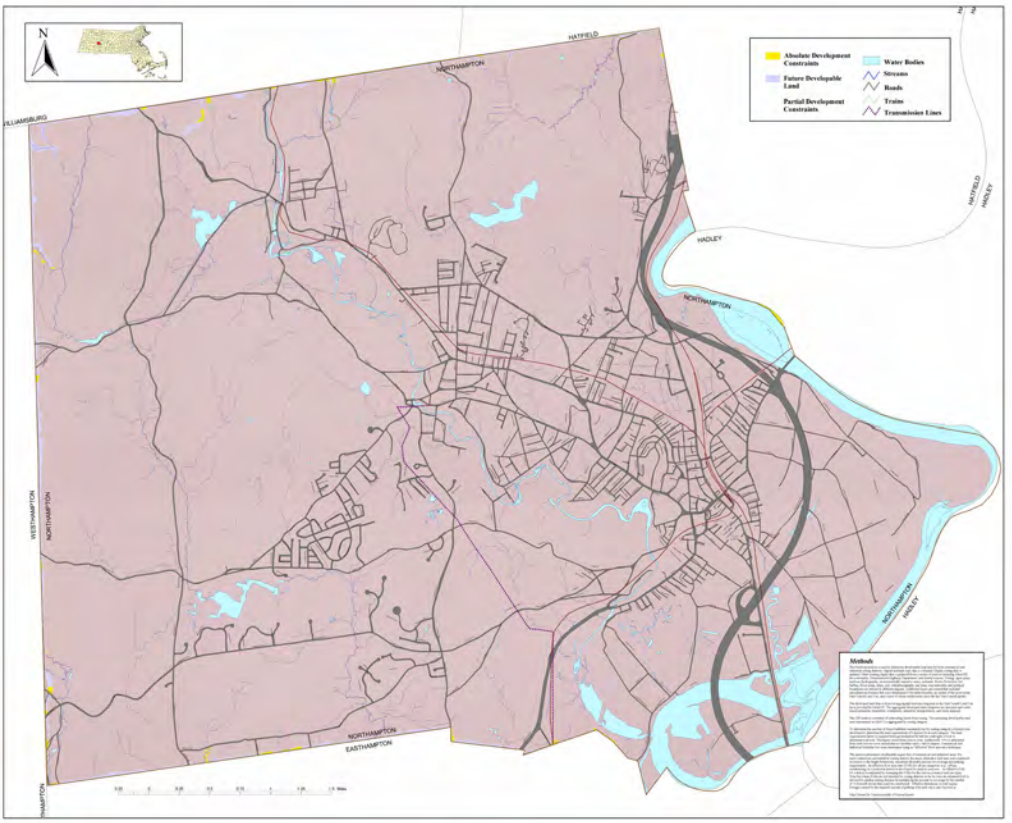

## Hazardous Waste Lands

Massachusetts General Law, Chapter 21E, the state Superfund law, was originally enacted in 1983 (and amended in 1992, 1995, and 1998), and created

the waste site cleanup program. Contaminated properties regulated under this law are often called "21E sites." The regulations adopted to implement c. 21E are called the Massachusetts Contingency Plan (MCP).

Soon after the waste site cleanup program started, it became clear that DEP could not oversee cleanup of thousands of sites and do it at an expeditious pace. As a result, 1992 amendments to c. 21E privatized the program, meaning that those responsible for cleaning up contamination (potentially responsible parties or PRPs) hire licensed site professionals (LSPs) to oversee most cleanups (with limited DEP oversight) to ensure compliance with the MCP. This allows DEP to focus its resources on key stages of assessment and cleanup at specific sites as conditions warrant.

ZONING BUILDOUT




Major program components include:

- Requiring that DEP be notified about contamination that exceeds specific levels. DEP maintains a searchable database (http://www.mass.gov/dep/bwsc/sitelist.htm) to track the cleanup progress of reported sites. Once a site is reported to DEP, regulatory deadlines are triggered for submitting site information and conducting the cleanup so that, within six years, the site no longer poses an unacceptable health or environmental risk. The graphic on page 4 depicts the cleanup timeline.
- Responding to emergencies when oil and/or hazardous material are no longer contained and present a risk to people and the environment. These situations trigger immediate response actions. If the person responsible for the contamination cannot or will not clean it up, then DEP brings in its own cleanup contractors to carry out rapid responses at the PRP's expense.
- Encouraging early risk reduction cleanup actions. For serious problems, such as sudden releases, imminent hazards, and other time-critical conditions, early

actions are required to reduce risks. When the situation poses a lesser threat, limited cleanup actions may be performed voluntarily to reduce risks or lower the cost of future comprehensive cleanups. Sites may not have to tier classify (see the next bullet and the graphic) or be subject to cleanup deadlines if early actions performed before the one-year tier classification deadline are sufficient to meet cleanup standards that are not cleaned up within one year of being reported. Sites are ranked by complexity, the number of sources, and how serious a potential threat the contamination poses: Tier I (serious, with Tier 1A the most serious) or Tier II (less serious).

- Allowing varying levels of cleanup based on land use. The MCP requires contamination to be cleaned up to a level that protects people and the environment based on how the site is being or will be used, such as for housing or commercial purposes. The regulations also allow land use controls, called activity and use limitations (AULs), to be used as cleanup strategy components.
- Assessing fees for sites that have not completed and documented a cleanup within a year of being reported. All sites are assessed a fixed annual compliance fee while work continues. These fees are assessed each year the site is being addressed until DEP receives documentation that the site has been cleaned up consistent with MCP standards.
- Facilitating redevelopment and reuse of contaminated sites. State and federal "Superfund" laws place the burden of cleanups on owners and anyone else who caused or contributed to the contamination. To encourage these sites to be reused, the Brownfields Act, which amended c. 21E in 1998, created protections for people who did not own or operate the site at the time of the release and did not cause or contribute to the contamination and who complete the cleanup. This relief ends liability for third party costs, property damage claims, and state reimbursement actions. People not qualifying for this protection may apply to the Attorney General for a negotiated "covenant not to sue" for cleanup costs. The Brownfields Act also created exemptions and defenses for other entities such as tenants, banks, community development agencies, and downgradient property owners.
- Ensuring compliance through use of several mechanisms created, so the program works correctly without direct DEP involvement. PRPs/LSPs send reports to DEP that they develop while working to clean up sites. They must also submit a wide range of information about cleanup process activities. DEP conducts audits and has the authority to reopen cases not complying with the MCP.
- Providing direct oversight during key stages of assessment and cleanup at specific sites, as conditions warrant, thereby limiting DEP staff involvement at most sites. Direct oversight is reserved for time-critical situations, sudden releases, and other serious conditions when a PRP cannot or will not perform required work. When a PRP cannot or will not perform required work, DEP may hire its own contractor to conduct the cleanup and bills the PRP for the costs.
- Involving the public throughout the site cleanup process. People responsible for cleaning up sites must publish notices in local newspapers at major milestones (see graphic), informing the public about their activities and providing an opportunity for public involvement. People with a high level of interest in a site can petition to make it a "public involvement plan" site. Plans are developed by conducting interviews to identify public concerns, and they include opportunities for the public to comment on the cleanup process. The person conducting the cleanup is responsible for providing these public involvement opportunities.

Ranging from slight oil contamination to severe hazardous material contamination, the City of Northampton currently has 173 "21E" sites registered with the Department of Environmental Protection.

## Solid Waste Sites

The City of Northampton's regional landfill is a solid waste collection facility that was opened in 1969 and serves over 40 communities with a design capacity of 2,800,000 tons. The landfill is fully lined with a leachate collection system and consists of a methane to electricity conversion system. The annual acceptance of waste is 50,000 tons, and the current landfill area is 52 acres with a maximum depth of 90 feet. The landfill gas generation system has 13 extraction wells and one active flare. The landfill gas generation flow to flare is approximately 400 to 500 cubic feet per minute with 50% methane content. The E-Plus model estimation is 760 cubic feet per minute. Potential end users of the electricity produced from the methane gases are Smith College, Hampshire County Correctional Facility, and the Tennessee Gas Pipeline Company. The landfill is currently proposing an expansion that will allow continued operation for approximately 20 more years.

The Northampton Landfill also has a recycling center that accepts:

- Materials currently collected as "mixed paper," including corrugated cardboard, boxboard, white and colored office paper, computer paper, copy paper, telephone books, paperback books and workbooks, newspapers and inserts, magazines and catalogs, manila file folders, manila envelopes, and mail (without plastic windows).
- Metals and white goods.
- Tires.
- Paint and paint related products.
- Materials currently collected as "mixed containers," including glass, metal, plastic, and aseptic food and beverage containers. Rinsed milk and juice cartons from school lunch programs may be included in the future.
- Compostables: Materials potentially to be collected include leaf and yard waste, food waste, and non-recyclable paper products.
- Electronics and batteries.
- Mercury bearing waste.

# 5 Conservation and Recreation Inventory

Open space in the City of Northampton consists of farms, forests, parks, and recreation areas under both public and private ownership and management. This section provides a summary of lands that provide open space, wildlife habitat, agricultural and forest products, watershed protection, scenic landscapes and recreational opportunities that have some level of protection from development. In general terms, 'open space' is defined as undeveloped land. In an Open Space and Recreation Plan, the focus is land that is valued by residents because of what it provides: actively managed farm and forestland; wildlife habitat; protection and recharge of groundwater; public access to recreational lands and trail systems; important plant communities; structures and landscapes that represent the community's heritage; flood control; and scenic value. The term 'natural resource' describes the biological and physical components of an ecosystem that people depend on for their existence and for some, their livelihood. These components are air, surface and ground water, soil nutrients, vegetation, fisheries, and wildlife. Recreational facilities can include open space, parks, and developed areas like tennis courts and swimming pools. Open space and recreation plans typically identify areas of land that contain precious natural and recreational resources and prioritize them for protection.

Open space can be protected from development in several ways that differ in the level of legal protection they provide, the method by which they are protected, and by the type of landowner. When land is "protected," it is intended to remain undeveloped in perpetuity. This level of protection is ensured in one of two ways: ownership by a state conservation agency, a not-for-profit conservation land trust, or the City through the Conservation Commission, or attachment of a conservation restriction or similar legal mechanism to the deed.

A conservation restriction is a legally binding agreement between a landowner (grantor) and a holder (grantee) - usually a public agency or a private land trust; whereby the grantor agrees to limit the use of his/her property by forfeiting interests in the land (development being one type of interest) for the purpose of protecting certain conservation values. The conservation restriction may run for a period of years or in perpetuity and is recorded at the Registry of Deeds. Certain income, estate or real estate tax benefits may be available to the grantor of a conservation restriction.

There are several types of conservation restrictions. Some protect specific resources, such as wildlife habitat, or farmland. Actively farmed land with prime soils or soils of statewide importance may be eligible for enrollment in the state's Agricultural Preservation Restriction (APR) Program. The APR program purchases the development rights and attaches a restriction to the deed, which legally bars development, keeping land "permanently" available for agriculture.

The development of any parcel of land that is in the APR Program, protected with a conservation restriction, owned by a state conservation agency, or owned by a land trust or a city for conservation purposes, would require a vote by two thirds of the State Legislature as outlined in Article 97 of the Amendments to the Massachusetts State Constitution.

This "protection" conveyed by Article 97 does have its limits. The state legislature has voted to release this protection at the request of local communities, so that conservation land can be used for schools, roads, economic development, or other public projects not related to resource protection.

Some land in Massachusetts owned by cities or water districts may be considered to have limited protection from development. If a city-owned parcel of land is under the legal authority of the City Council rather than the Conservation Commission, it is considered to have limited protection from development. The parcel could be called a wildlife sanctuary or a City forest, but not have the long-term protection afforded by lands owned and managed by the Conservation Commission. In this case, converting a City forest to a soccer field or a school parking lot could be decided by the City Council. A parcel of land used for the purposes of water supply protection is considered in much the same way. Unless there is a legal restriction attached to the deed or if the deed reads that the land was acquired expressly for water supply protection, the level of protection afforded these types of parcels varies depending on the policies of each community. In many cases, the City water district would be required to show the Massachusetts Department of Environmental Protection just cause for converting the use of the land. However, this is not an insurmountable hurdle.

Parcels enrolled in Massachusetts Chapter 61 tax abatement programs are "temporarily protected" from development. This program offers landowners reduced local property taxes in return for maintaining land in productive forestry, agricultural or recreational use for a period of time. These "chapter lands" provide many public benefits, from maintaining wildlife habitat and recreational open space to sustaining rural character, and local forest and farm-based economic activity. Another benefit of the Chapter 61 programs is that they offer cities the opportunity to protect land. When a parcel that has been enrolled in one of the chapter programs is proposed for conversion to a use that would make it ineligible for the program, the town is guaranteed a 120-day waiting period during

**NORTHAMPTON OPEN SPACE AREAS**

| Type of Open Space | Areas 2000 | Acres 2000 | Areas 2005 | Acres 2005 |
|---|---|---|---|---|
| Chapter 61 | 28 | 951.81 | 16 | 585.4 |
| Chapter 61A | 171 | 2085.9 | 129 | 1672.4 |
| Chapter 61B | 55 | 1680.11 | 44 | 1172.6 |
| Agricultural Preservation Restrictions | 9 | 237.87 | 8 | 198.5 |
| Conservation Areas | 29 | 944.84 | 43 | 1528.2 |
| Conservation Restrictions | 8 | 82.56 | 29 | 198.6 |
| City Parks | 5 | 47.15 | 7 | 158.4 |
| State Protected by DAR, DCR, & DFW | 14 | 363.6 | 14 | 373.3 |
| Massachusetts Audubon Society | 9 | 491.37 | 13 | 592.2 |
| Northampton Water Supply | N/A | N/A | 11 | 515.8 |
| Recreation | N/A | N/A | 14 | 67.7 |
| School | N/A | N/A | 11 | 357.2 |

*—Northampton GIS/MassGIS Data*

## OVERVIEW


## LEGEND TO MAPS

Feature

- certified vernal pool
- beaver deceiver
- bird blind
- boardwalk
- bridge
- cistern
- dam
- fence
- gate
- kiosk
- monument
- parking
- rocks
- sign
- trail
- trails

Open Space

- APR
- CONS&MAS
- CONSERVATION
- CR
- NORTHAMPTON
- PARK
- RECREATION
- RIGHT-OF-WAY
- PARK
- STATE and FEDERAL
- Water Supply
- PENDING

which it can exercise its right of first refusal to purchase the property.

This section provides a detailed inventory open space and recreation land in the City of Northampton. Privately owned land provides many public benefits, but it is important to respect the property rights of landowners. While many landowners choose to keep their property in farms and forests, not all landowners allow public access.

**NORTHAMPTON PERMANENTLY PROTECTED OPEN SPACE AREAS**

| Type of Open Space | Acres 2005 |
|---|---|
| Agricultural Preservation Restrictions | 466.3 |
| Conservation Areas | 1528.2 |
| Conservation Restrictions | 198.6 |
| City Parks | 158.4 |
| State Protected by DAR, DCR, & DFW | 373.3 |
| Massachusetts Audubon Society | 592.2 |
| Northampton Water Supply | 515.8 |
| Recreation | 67.7 |

*—Northampton GIS/MassGIS Data*

**267.8 acres from the Northampton State Hospital Agricultural Preservation Restriction is used in both the Agricultural Preservation Restrictions category and the State Protected by DAR, DCR & DFW category*

| CR# | Grantor | Holder | Acres | Name/Comments |
|---|---|---|---|---|
| CR# 1 | Smith College | Mass Audubon Society | | Arcadia Wildlife Sanctuary |
| CR# 2–8 | | | | Cancelled |
| CR#9 | Mass Audubon Society | Pascommuck Cons. Trust Inc. | 10.0 | Arcadia Wildlife Sanctuary |
| CR#10 | Commonwealth of MA (Food & Ag) | City | 37.0 | Adjacent & part of APR |
| CR#11 | Millbank II Condominium Trust | City | 0.9 | Mill River, Historic Mill River |
| CR#12 | Lathrop Community, Inc. | Conservation Commission | 13.5 | Fitzgerald Lake, Boggy Meadow |
| CR#13 | Gothic Street Development Parternship | Recreation Commission | 0.15 | Common law easement (no state approval in time) |
| CR#14 | Armand R. & Rosel A. LaPalme | City | 88.0 | Cancelled, donated to City w/ APR |
| CR#15 | Nancy Hughes | Conservation Commission | 3.6 | Fitzgerald Lake, Coles Meadow, adjacent to Fitzgerald Lake conservation area |
| CR#16 | Conservation Commission | Broad Brook Coalition | 5.5 | Adjacent to Fitzgerald Lake |
| CR#17 | Conservation Commission | Mass Audubon Society | 38.0 | LC 970010110 |
| CR#18 | City | Celico Partnership | 11.7 | |
| CR#19 | Edward Sheldon III | Broad Brook Coalition/ Conservation Commission | 10.0 | Recreation area |
| CR#20 | Commonwealth of MA (DCAM) | Conservation Commission | 8.1 | Meadows, Atwood Drive, O&S Partnership |
| CR#21 | City (through Conservation Commission) | Elaine G. Boettcher | 2.2 | Protect wetland & wildlife |
| CR#22 | City (through Conservation Commission) | Mass Audubon Society | 66.1 | In conjunction with SH city's applic./Conn. River |

| CR# | Grantor | Holder | Acres | Name/Comments |
|---|---|---|---|---|
| CR#23 | Gail M. Schramm, Jance C. Primm, Suzanne S. Russin, Carolyn Gray, & George Peppard | Conservation Commission | 23.0 | Park Hill Road, Parsons Brook, lies adjacent to APR/wildlife corridor |
| CR#24 | Millbank II Condominium Trust | Conservation Commission | 0.3 | 400' Mill River, restore river & create walking trail that links to downtown area |
| CR#25 | Lathrop Community, Inc | Conservation Commission | 11.2 | Park Hill Road, Parsons Brook |
| CR#26 | Sabra Partnership | Conservation Commission | 3.1 | Protects Broad Brook & Lake Fitzgerald, provides for public trail |
| CR#27 | TCB Hospital Hill, LLC (through Community Builders, Inc) | Conservation Commission | 3.2 | State Hospital/Village Hill |
| CR#28 | Oak Ridge Road, LLC | Conservation Commission | 38.0 | |
| CR#29 | Joseph Kielec | Broad Brook Coalition | | |
| CR#30 | Tofino Association, Inc (Rocky Hill Conservation Area) | Conservation Commission | 10.3 | Cluster subdivision |
| CR#31 | Seven Bravo Two, LLC | Conservation Commission | 0.8 | Meadows, Conn. River, Airport, special permit, protects wildlife |
| CR#32 | Stephen & Heidi Robinson | Conservation Commission | 4.5 | Fitzgerald Lake, Coles Meadow Road |
| CR#33 | Bridge Street, LLC | Conservation Commission | 4.6 | Cluster subdivision |
| CR#34 | Sweet Meadow Properties | Consrevation Commission | 1.3 | |
| CR#35 | John & Diane Clapp | Conservation Commission | 20.0 | |
| CR#36 | Patrick Melnick (Beaver Brook) | Conservation Commission | 41.0 | |
| CR#37 | Conservation Commission, Charles Douglas Hinckley, & Jennifer E. James | The Clarke School for the Deaf | 0.4 | |
| CR#38 | Miriam Clapp | Conservation Commission | 57.9 | Mineral Hills |
| CR#39 | Benjamin G. James & Oona Mia Coy | Conservation Commission | 1.8 | Meadows, Venturers Field Road |
| CR#40 | John & Diane Clapp | Northampton BPW | 35.7 | Mineral Hills, Marble Brook, Nonotuck |
| CR#41 | John & Diane Clapp | Conservation Commission | 11.1 | Mineral Hills |
| CR#42 | Jane Hill | Conservation Commission | 9.8 | Roberts Meadows, Reservoir watershed |
| CR#43 | Benjamin G. James & Oona Mia Coy | Conservation Commission | 3.6 | Meadows, Venturers Field Road |
| CR#44 | Guyett & Anderson | Nonotuck Land Fund | 168.4 | Priority wildlife habitat |

| CR# | Grantor | Holder | Acres | Name/Comments |
|---|---|---|---|---|
| CR#45 | Joseph & Kira Jewitt | Conservation Commission | 5.6 | Parsons Brook, Westhampton Rd |
| CR#46 | Robert Zimmerman (Broad Brook Coalition) | Pending | 36.0 | Fitzgerald Lake/North Farms, protects forests, wetlands, soils |

**CONDITION**

| | |
|---|---|
| 1 | Excellent |
| 2 | Good |
| 3 | Fair |
| 4 | Poor |

**RECREATION POTENTIAL***

| | |
|---|---|
| 1 | Excellent |
| 2 | Good |
| 3 | Fair |
| 4 | Poor |

**Context sensitive from standpoint of type of recreation available (active,passive)*

| | Type | Acres | Condition | Recreation Potential |
|---|---|---|---|---|
| **5.1: PERMANENTLY PROTECTED** | | | | |
| **A. Conservation & Agriculture—Public & Non-Profit** | | | | |
| Arcadia Wildlife Sanctuary | 2 | 650 | 1 | 1 |
| Brookwood Marsh Conservation Area | 1 | 28 | 2 | 3 |
| Barrett Street Marsh | 1 | 24.7 | 3 | 2 |
| Mary Brown's Dingle | 1 | 1.56 | 2 | 2 |
| Clark Street Well/Aquifer Area | 8 | 8.18 | 1 | 3 |
| Connecticut River Greenway/James H. Elwell Conservation Area | | 100 | | |
| Conte Fish & Wildlife National Refuge | | 230.38 | | |
| Fitzgerald Lake/Beaver & Broad Brook Conservation Areas | | 772 | | |
| Florence/Garfield Conservation Area | 1 | 4.097 | 4 | 4 |
| Ice Pond Conservation Area | 1 | 22.272 | 2 | 1 |
| Manhan Rail Trail Buffer | 1 | 0.79 | 3 | 1 |
| Meadows Conservation Area | 1 | 16.2 | | |
| Meadows-Arcadia Wildlife Sanctuary Joint Ownership | 1 | 103 | 2 | 3 |
| Mill River Greenway | 1 | 38.25 | | |
| Mineral Hills Conservation Area | 1 | 297.2 | 1 | 1 |
| Mineral Hills/Turkey Hills Conservation Restriction | | 29.4 | | |

| | Type | Acres | Condition | Recreation Potential |
|---|---|---|---|---|
| Parson's Brook Conservation Area | 1 | 27.603 | 2 | 2 |
| Rainbow Beach Conservation Area | 1 | 55 | 1 | 4 |
| Rainbow Beach/Shepard's Island | 5 | 46 | 1 | 4 |
| Reservoir Complex | 8 | | 1 | 3 |
| Roberts Hill Watershed Conservation Area | 1 | 12.553 | 1 | 2 |
| Roberts Reservoir | 8 | 57 | 1 | 3 |
| Saw Mill Hills Conservation Area (includes Roberts Hill Conservation Area) | 1 | 639 | 1 | 1 |
| State Hospital Agricultural Land—Drumlin & Mill River | 3 | 309.9 | 2 | 1 |
| Spring Street Well/Aquifer Area | 8 | 31.56 | 1 | 3 |
| West Farms Conservation Area (includes Ridge Conservation Area) | 1 | 55.4 | 1 | 2 |
| **B. Conservation & Agriculture—Private** | | | | |
| Atwood Drive Conservation Restriction | 3 | 8.019 | 1 | 4 |
| Audubon Road Conservation Restriction | | 9.75 | | |
| Bear Hill Recreation Area | 3 | | 2 | 2 |
| Beaver Brook Conservation Restriction | | 40.95 | | |
| Burt's Pit Road Conservation Restriction | 3 | 2.16 | 1 | 4 |
| Dunphy Drive/White Oak Easement | 3 | 0.1 | 2 | 1 |
| Fitzgerald Lake Conservation Restriction | 3 | 58.5 | 1 | 3 |
| Ice Pond Conservation Area Conservation Restriction | 3 | 3.2 | 1 | 3 |
| Meadows Conservation Area Restrictions | | 5.36 | | |
| Mill River Greenway Conservation Restriction & ROW | 3 | .3 | 2 | 2 |
| Mineral Hills/Marble Brook Conservation Restrictions | | 292.8 | | |
| Northampton Housing Authority/HAP, INC Easement | | 102 | | |
| The Oaks Conservation Restriction & ROW | | 30.28 | | |
| Park Hill/Parson's Brook Conservation Restriction | | 227 | | |
| Round Hill Conservation Restriction | | 15,000 $ft^2$ | | |
| Rocky Hill Cohousing Conservation Restriction | 3 | 10.27 | 1 | 4 |
| State Hospital Agricultural Land—Drumlin & Mill River | | 332 | | |
| State Hospital/Hospital Hill | 3 | 20.1 | 2 | 1 |
| State Hospital/Mill River | 3 | 8.1 | 2 | 1 |
| Seven Bravo Two/Northampton Airport Conservation Restriction | 3 | 3.82 | 1 | 4 |
| **C. Parks & Recreation—Public** | | | | |
| Agnes Fox Field | 4 | 1.61 | 2 | 1 |
| Arcanum Field Recreation Area | 4 | 8.49 | 1 | 1 |
| Childs Park | 2 | 30 | 1 | 1 |
| Childs City Park | 4 | | 1 | 1 |
| Community Gardens, Northampton State Hospital | 4 | 8.086 | 1 | 1 |
| Elwell State Park | 5 | 3.2 | 2 | 2 |

| | Type | Acres | Condition | Recreation Potential |
|---|---|---|---|---|
| Gothic Street Pocket Park | 4 | 0.15 | 1 | 3 |
| Halligan-Daley Historical Park, Northampton State Hospital | 4 | 0.5 | 1 | 3 |
| Look Park | 4 | 157 | 1 | 1 |
| Main Street Streetscape Park | 4 | 2,328 $ft^2$ | 1 | 3 |
| Maine's Field Recreation Area | 4 | 14.47 | 4 | 1 |
| David B. Musante, Jr. Beach | 4 | 7.46 | 2 | 1 |
| Nagle Downtown Walkway | 4 | 2.5 | 4 | 1 |
| Pulaski Park (formally known as Main Street City Park) | 4 | 1 | 3 | 1 |
| Sheldon Field Recreation Area | 4 | 12.848 | 3 | 1 |
| Veterans Memorial Field Recreation Area | 4 | 7.84 | 4 | 1 |
| **D. Rail Trails** | | | | |
| Manhan Rail Trail in Northampton | 6 | 3.4 miles | | 1 |
| Manhan Rail Trail Spur—Florence Road Spur | 6 | 48,529 $ft^2$ | | 1 |
| Norwottuck Rail Trail (City) | 6 | 8 acres/5 miles | | 1 |
| Norwottuck Rail Trail (State) | 6 | 6 acres | | 1 |
| **5.2: NON-PERMANENTLY PROTECTED** | | | | |
| Bridge Street School | 11 | | 2 | 1 |
| Burts Pit Road Recreation Area, Parcel C | 7 | 15.49 | 2 | 1 |
| Clear Falls Recreation Center | 10 | 73 | 1 | 1 |
| Driving Range | 10 | | 1 | 1 |
| Robert K. Finn Ryan Road School | 11 | 18.2 | 1 | 1 |
| Florence Community Center (former Florence Grammar School) | 11 | 2.5 | 1 | 1 |
| Hampshire YMCA | 10 | 4.3 | 1 | 1 |
| Keyes Field | 10 | | 1 | 1 |
| Jackson Street School | 11 | 7.2 | 2 | 1 |
| JFK Middle School | 11 | 15 | 2 | 1 |
| Edmond J. Lampron Memorial Park | 7 | | 2 | 3 |
| Leeds Memorial | 7 | 1.6 | 1 | 1 |
| Leeds School | 11 | 9.3 | 1 | 1 |
| Northampton Community Music Center (formerly South Street School) | 11 | 124 | 1 | 1 |
| Northampton Country Club | 10 | | 1 | 1 |
| Northampton High School | 11 | 23 | 2 | 1 |
| Northampton Revolver Club | 10 | 34.3 | 1 | 1 |
| Oxbow Marina | | 56.1 | | |
| Peoples Institute | 10 | 1.5 | 1 | 1 |

| | Type | Acres | Condition | Recreation Potential |
|---|---|---|---|---|
| Pine Grove Gulf Course | 10 | 132.3 | 1 | 1 |
| Smith College Mill River, Paradise Pond, Arboretum, & Athletic Fields | 10 | 126 | 1 | 1 |
| Smith School V.A. Parcel/Forestry Studies | 7 | 182.1 | 1 | 1 |
| Smith Vocational & Agricultural High School | 11 | 78.9 | 1 | 1 |
| South Main Street & Berkshire Terrace | 7 | | 2 | 3 |
| Trinity Row | 7 | 0.5 | 2 | 2 |
| Tri-County Fairgrounds | 10 | 42 | 1 | 1 |
| Former Vernon Street School | 11 | | 1 | 1 |
| V.F.W. Memorial | 7 | | 2 | 4 |
| **5.3: PRESERVATION & HISTORICAL RESTRICTIONS** | | | | |
| Academy of Music | | | | |
| David Ruggels Center | | | | |
| Hatfield Street School | 12 | | 1 | 1 |
| The Manse | 12 | | 1 | 1 |
| Masonic Street Fire Station | 12 | | 1 | 1 |
| West Farms Chapel | 12 | | 1 | 1 |

# *Conservation & Recreation Inventory Contents*

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# 5.1: Permanently Protected

## A. Conservation & Agriculture—Public & Non-Profit

All City, Conservation Commission, and State owned properties are permanently protected. Any disposal of land, including easements and less than fee interests, requires Conservation Commission and City Council approval or State approval. In accordance with Article 97 of the Constitution of the Commonwealth of Massachusetts, also requires a two-thirds roll call vote of the state legislature.

### Arcadia Wildlife Sanctuary — 650 acres

**Ownership:** Massachusetts Audubon Society

**Zoning:** SC-Flood Zone

**Location:** Connecticut River Ox-Bow

**Parcel ID:** 38D-70, 38D-73, 38D-77, 38D-75, 45-63, 45-65, 45-67, 45-10, 45-20, 45-45, 45-1, 45-3, 45,4, 45-5, 45-6, 45-7, 45-8, 45-9, 45-10, 45-11, 45-12, 45-22, 45-55, 45-56, 38C-68

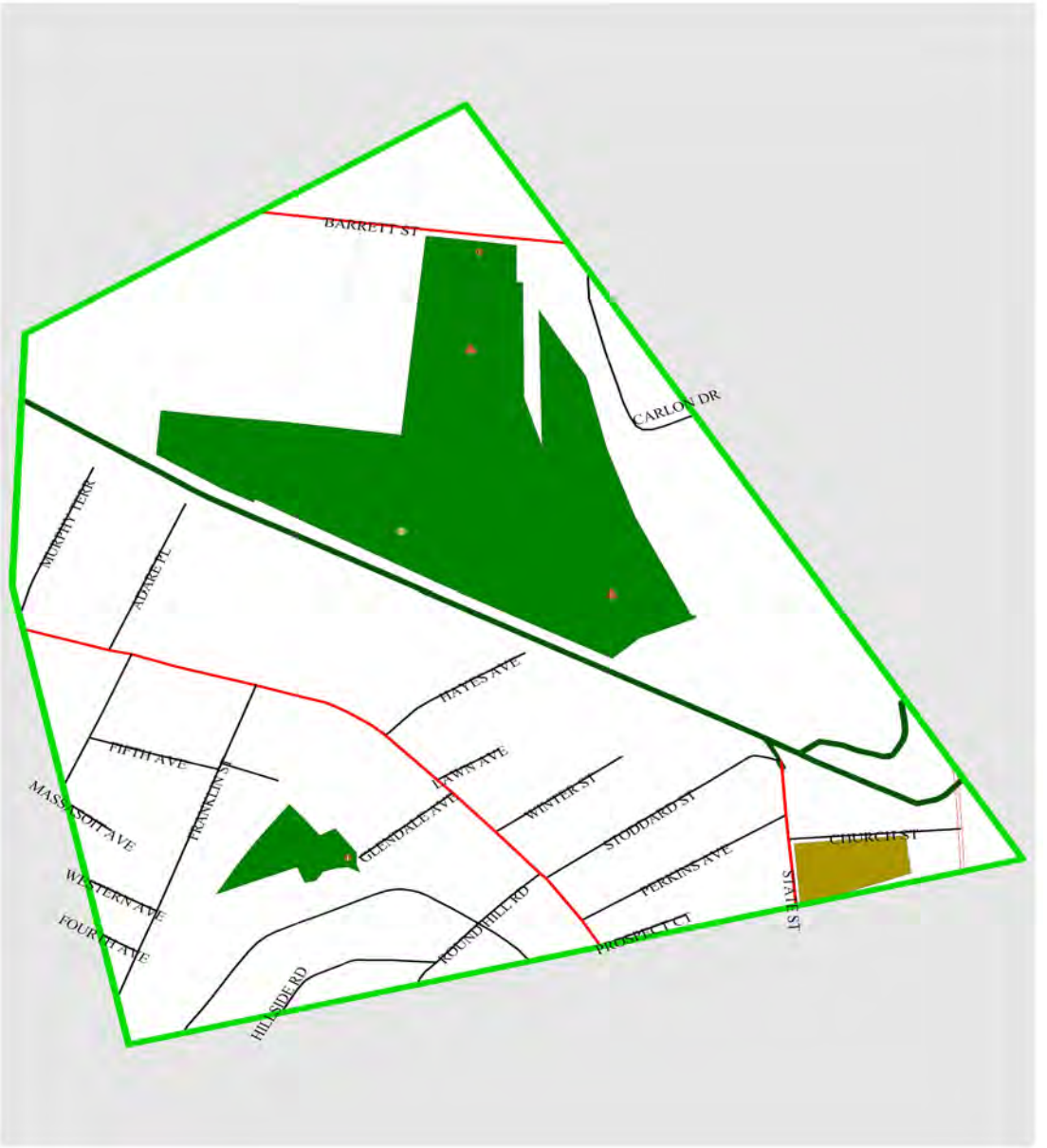
**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B12, p44 | 45-67 | |
| 11/1/1966 | B1497, p25 | 45-10 | |
| 9/13/1968 | B1538, p277 | 52-01 | |
| 5/17/1974 | B1772, p199 | 45-10; 45-63; 45-65 (bridle path) | |
| 4/17/1979 | B2091, p126 | 38D-75 | |
| 1/14/1982 | B2260, p100 | 45-10 | |
| 4/13/1986 | B1880, p241 | 38D-75 | |
| 6/23/1988 | B3199, p238 | 38D-75 | |
| 4/13/1986 | B1880, p241 | 38D-73 | |
| 12/31/1987 | B3114, p29 | 38D-77 | |
| 12/31/1987 | B3114, p29 | 38D-70 | |
| 1/6/1988 | B3316, p1 | 38D-70 | |
| 12/31/1987 | B3114, p29 | 45-10 | |
| 1/23/2004 | B7662, p85 | From Mitchell G. Watras, Jr for $218,725 | |

**Description:**

Arcadia Nature Center and Wildlife Sanctuary has varied habitats, wetlands, and the last mile of the Mill River before it connects with the Connecticut River. Arcadia offers nature study, courses and workshops, hiking (over five miles of trails), guided tours, slide presentations, a natural science library, vacation day camps, and a 100-seat auditorium with audiovisual equipment. It receives heavy regional use throughout the year. The former Easthampton Trolly Line was donated by Smith College to Mass. Audubon and is now part of Arcadia (Conservation Restriction on trolley line merged with fee ownership). Conservation Restriction on Map ID 38D, Parcel 70 held by Pascommuck Conservation Trust).

## OVERVIEW OF BARRETT STREET MARSH CONSERVATION AREA




## Barrett Street Marsh — 24.7 acres

**Ownership:** City/Conservation Commission

**Zoning:** URA-Flood Zone

**Location:** Barrett St. & bicycle path

**Parcel ID:** 24B-42

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/21/1976 | B1939, p321 | Transfer from City | |
| 12/29/1978 | B2075, p28 | Private donations | |
| 2/8/1990 | B3518, p204 & 206 | Land swap | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 2/8/1990 | PB165, p70 | | |
| 12/31/1993 | PB176, p133 | | |
| 2/9/1994 | B4420, p243 | Donation in settlement of lawsuit of Carlon Dr. | 4.978 |
| 2/10/1998 | B5309, p206 | Right of Way Easement from Carlon Dr. | |

**Permit history:**

| Date | Description |
|---|---|
| 1990/1991 | Walkway permits (wetlands & building) |
| | Wetlands 246-114, Stop & Shop's responsibility to clean up trash |

**Partners:** Formerly Barrett Brook Advisory Committee, currently none.

**Description:**

This meadow and wetland serve as important stormwater detention and filtration facilities. They also provide critical wildlife habitat. They are surrounded by heavily developed residential and commercial properties. The area provides opportunities for nature viewing and urban wildlife habitat studies. A city drainage easement runs through the site. The area includes a right-of-way from Carlon Drive.

A 600-foot (375' Trap Rock Gravel/sone dust & 200' wooden boardwalk completed in 1992) wheelchair accessible walkway extends from the bikeway into the marsh. The Commission, Smith Vocational School, and volunteers built the boardwalk. The Jackson Street Parent Teacher Organization and the Community Development Block Grant provided the materials.

The Conservation Commission has managed the property to maintain a beaver population while preventing local flooding. Beaver deceiver pipes have been installed on several successive beaver dams, the most recent in 2009-2010 with Community Preservation funding.

History: Barrett Street Marsh was originally part of a larger wetland system. In the early nineteenth century it was used for agricultural purposes. Ditches were put in place to dewater the marsh. In 1905 Northampton sewer commissioners diverted the flow of King Street Brook away from "the mouth of the State Street River." The Brook was diverted into what is known today as Barrett Street Marsh.


Hampshire and Hampden Canal at Barrett Street Marsh

The history of the Barrett Street Marsh is well documented and shows that the entire area has been highly altered since the early 1800s, when transportation corridors began to be established nearby and development spread northward from the center of Northampton. The area now known as the Barrett Street Marsh was originally part of a much larger wetland system that extended to the east, having been severed from the larger system by development. Reportedly, the Barrett Street Marsh was used as agricultural land from the early 19th century, having been dewatered by a system of drainage ditches that were dug throughout the low-lying area.

The Hampshire and Hampden Canal (reorganized as the New Haven and Northampton Canal) was built through the Barrett Street Marsh (1829-1847). The canal changed the area drainage patterns and gave Northampton a permanent liability to maintain the waterway (something that does not happen from a natural flowing stream). This led to a lawsuit against the City for lack of maintenance over 180 years after the canal was abandoned (referred to in liability circles as a long liability tail). Human-built drainage was developed on the site to allow much of the site to be used as farmland. Portions of the site were farmed until the early to mid 1960s.

The main flowage into the marsh is a perennial stream known as King Street Brook that consists of drainage from the Round Hill/Prospect Street area. The brook enters the southern-most point of the marsh, through a culvert under the bike trail that runs along an abandoned railroad embankment. Until the early 1900s, King Street Brook did not flow into the Barrett Street Marsh but instead flowed in a more southeasterly direction towards State Street and the center of Northampton. As recorded at the Hampshire County Registry of Deeds (Book 596, Page 375), in 1905 the Northampton Sewer Commissioners voted to divert the flow of King Street Brook away from "the mouth of the State Street sewer," for the purposes of "public health and convenience". The brook was to be diverted to the "center of an old ditch" which then existed northeast of the railroad embankment and presumably ran through what is now known as the Barrett Street marsh. The City proceeded with the taking of a strip of land almost 1,800 feet long and 15 to 25 feet in width to encompass the old ditch and hence the brook along its diverted course to the Connecticut River. The ditch was thereafter known as the King Street Brook Diversion. Also in 1905, the City was granted an easement from the New York, New Haven, and Hartford Railroad Company to construct "a box culvert four feet deep by four feet wide suitable for carrying through the waters now running in King Street Brook, so-called" (HCRD, Bk 597, pg 202), which is the now-existing culvert under the bike trail.

The character of the King Street Brook Diversion was thus established almost one hundred years ago. The configuration of the ditches within the Barrett Street Marsh at the time of the diversion is not known. Anecdotal information indicates that the marsh area was used for agricultural purposes into at least the 1970s. Aerial photographs from the 1960s and '70s clearly show the ongoing agricultural use and the diversion channel in it original (1905) location with a geometric array of ditches leading to the diversion from many areas of the marsh. In a photograph taken on April 20, 1971, the water within the diversion appears to be 8-10 feet in width, and the most upgradient half of the diversion channel within Barrett Street marsh appears to have been recently maintained prior to the photograph being taken.

Coincident with the advent of restrictive environmental regulations and changing attitudes regarding the value of wetland areas, maintenance of the diversion channel and system of ditches waned in the 1970s, and use of the land for agriculture altogether ceased over twenty years ago. The date of the last maintenance dredging of the King Street Brook Diversion is not known. While records of ditch construction and effectiveness are not available, considerable evolution of the marsh's hydrology has taken place in the recent past since the ditches were last maintained.

## Brookwood Marsh Conservation Area — 28 acres

**Ownership:** City/Conservation Commission

**Zoning:** URA

**Location:** Ellington Rd, Crestview Dr, Sandy Hill Rd, Brookwood Dr., Indian Hill, & Florence Rd

**Parcel ID:** 29-484, 29-414, 29-418, 29-550, & 30C-48

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 9/12/1986 | PB141, p18 | Survey of Indian Hill | 7.065 |
| 3/21/1990 | B3536, p85 & 95 | Deed for Brookwood Marsh (for abatement of back taxes) | 15 |
| 3/22/1990 | B3535, p234 | Indian Hill | |
| 1990 | | Acquisition of Indian Hill via donation cluster | |
| 7/25/1994 | B4521, p248B4521, p259B4531, p302B4539, p153 | Deed for Brookwood Marsh, Gutowski donation | 5 |

**Permit history:**

| Date | Description |
|---|---|
| 1992 | Waterline Easement B3994, p162 for Brookwood Marsh |
| 1992 | Determination of Applicability & Fish & Wildlife permits for Brookwood Marsh |

**Description:**

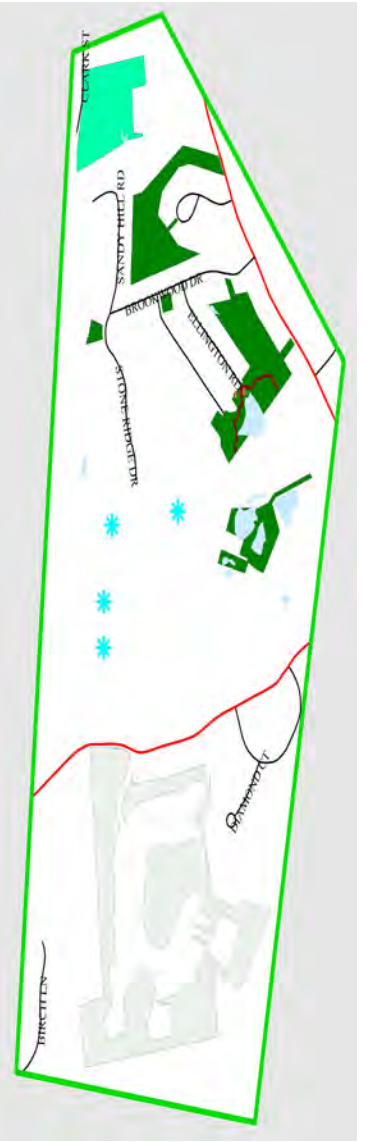
This parcel provides critical wetland habitat and filtration of pollutants. It also protects the City's drinking water aquifer (Zone III). Beavers are very active in the area.

History: The Gutowskis donated some of the richest wetlands in the area in 1994. This site contains the original "Burts Pit." The land was formerly owned by the Northampton State Hospital and was used for mining peat and other non-decayed organic material for their gardens. Norman Keedy owner of KV Homes was developing the land at the time the Massachusetts Wetlands Act was passed. His development was shut down by the City as soon as the wetlands regulations went into effect.

In 1990, the City of Northampton acquired the 16 acre Brookwood Marsh, with a deed in lieu of foreclosure for back taxes, in an effort to preserve and restore critical wetlands habitat within the City. The site of the proposed wetland restoration is located between Ellington Road and Crest View Drive along the northwest side of the Brookwood Marsh Conservation Area. These areas were filled approximately 25 years ago during the house and road construction work in the area, and prior to the adoption of the Massachusetts Wetlands Protection Act.

The Indian Hill parcel contains an attractive stream and protects the City's drinking water aquifer Zone II and III.

OVERVIEW OF BROOKWOOD MARSH CONSERVATION AREA




## Mary Brown's Dingle
## 1.56 acres

**Ownership:** City/Conservation Commission

**Zoning:** URB

**Location:** Glendale Ave, between Franklin St & Crescent St

**Parcel ID:** 24D-334

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/17/1983 | B2407, p270 | Donation from Mary Brown | 1.56 |

**Partners:** None

**Description:**

This area is comprised of small trees and shrubs. It serves as a natural open space and bird habitat in a residential neighborhood. A City storm sewer easement runs through the middle of this area. Over the years, fill from abutting properties has altered this area.

## Clark Street Well/Aquifer Area 8.18 acres

**Ownership:** City, Department of Public Works

**Zoning:**

**Location:**

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 9/27/1950 | B1079, p73 | | |
| 1/24/1952 | B1110, p303 | | |
| 5/28/1952 | B1118, p275 | | |

**Description:**

This parcel includes the Clark Street wellhead and much of the Zone I buffer zone. This parcel is owned for water supply protection purposes.

## Connecticut River Greenway/James H. Elwell Conservation Area 100 acres

**Ownership:** City/Conservation Commission

**Zoning:** SC

**Location:** Damon Rd, Connecticut River

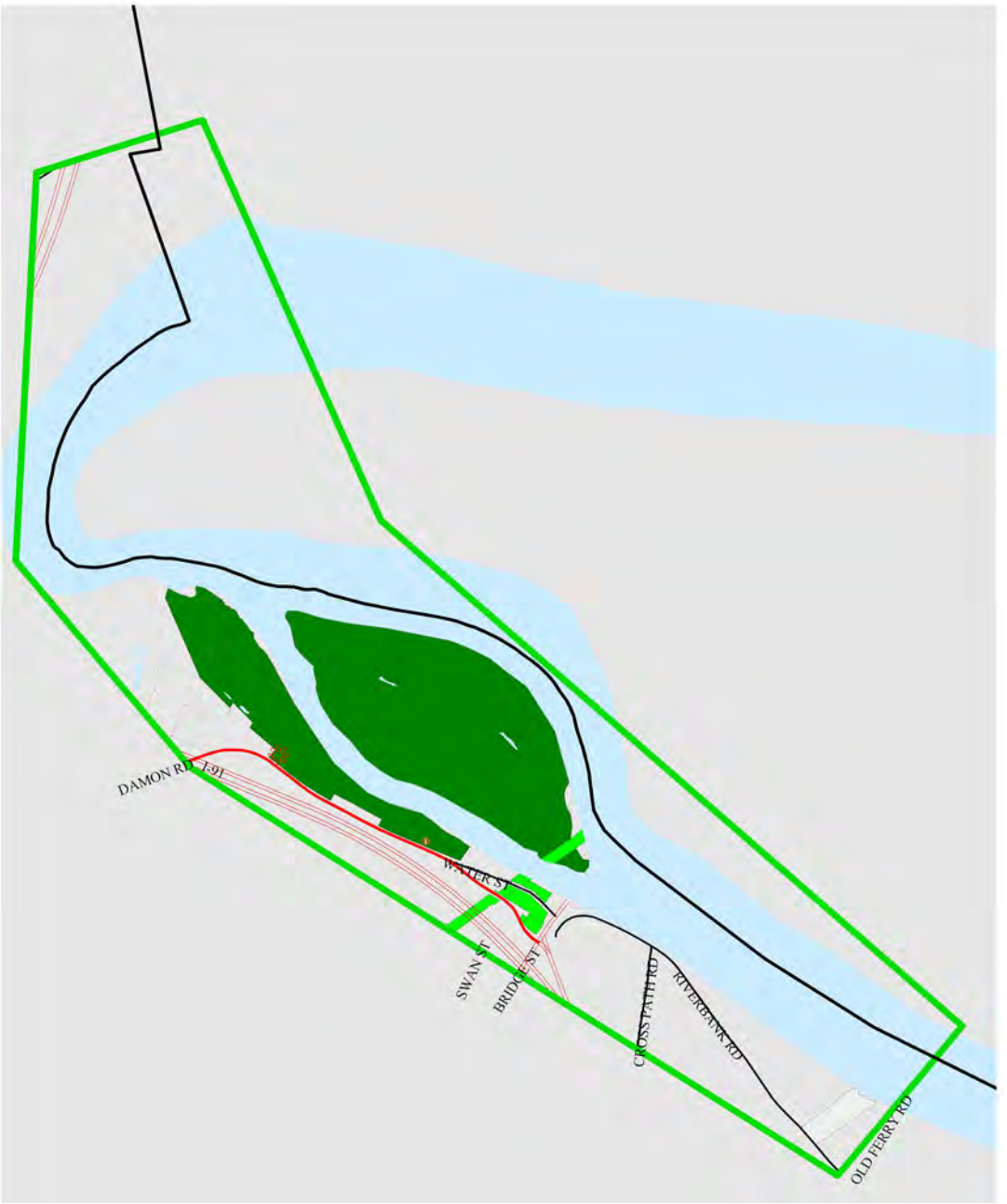
**Parcel ID:** 19-1, 19-10

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/30/1981 | B2220, p339 | Deed for James H. Elwell Conservation Area (total project cost: $65,350; urban self-help grant $52,280; & LWCF grant $6,500) | 100 |

**Signage:** "In cooperation with…" sign installed by Commission on Damon Rd in 1992; sign includes Land & Water Conservation Fund logo; built by DCR

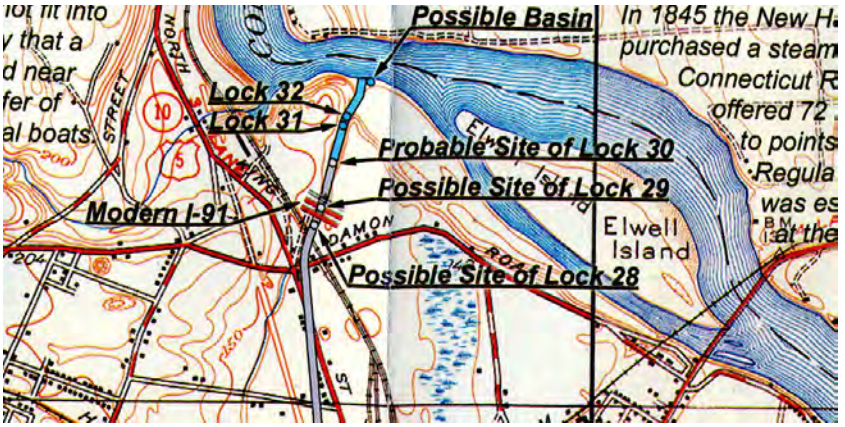
## OVERVIEW OF ELWELLL CONSERVATION AREA




**Partners:** Memorandum of Agreement with DCR for joint management (first signed 7/7/1989)

**Description:**

This area is compromised of the 60-acre Elwell Island and 40 acres of adjacent riverfront land. The island provides habitat for endangered floodplain plans and animals. The eastern edge of the island provides an excellent beach and is very heavily used by motor boaters (and even for unauthorized camping). A local farmer, in accordance with a Farm Use License, utilizes approximately 15.5 acres of prime farmland on the mainland. In 2004 and 2005, the farmland was lying fallow to allow the conversion of traditional farming to organic farming in 2006. This property is managed in cooperation with the Department of Conservation and Recreation in accordance with a join management agreement and in conjunction with the adjacent Greenways State Park. The Environmental Police provide limited assistance in patrolling the area.




Hampshire and Hampden Canal at Elwell Conservation Area

Elwell Island has been growing from river sedimentation (accretion) at a faster rate than it has been eroding for over a century. According to the Daily Hampshire Gazette (7/24/1980), "In the early 1980s, what now is Elwell Island was nothing more than a sandbar. Then, in 1830, Levi Elwell...plant[ed] rocks and willow shoots on the sandbar... By 1904, the sandbar had grown to an island of 24 acres, and Levi's grandson, James Elwell, began farming the island, using a cable ferry to get his crops and equipment back and forth to the mainland."

Using historic maps and what scientists know in 1982 they discovered that the island grew 9.7' to 18.2' per year from 1884 to 1939 and 12.3' per year from 1939 to 1977. It is likely that the island is now larger than its official 60 acres. New layers of silt are added each year, creating an extremely lush interior, but one in which trees have a difficult time colonizing in.

## Conte Fish & Wildlife National Refuge — 230.38 acres

**Ownership:** USA, managed by USF&W

**Zoning:** SC

**Location:** Hockanum Rd, Mt. Tom Rd

**Parcel ID:** 39-31, 39-40, & 39A-46 (Parcel 4); 46-60, 39-37, 46-61, 46-62 (Parcel 19B.1); 46-16 (Parcel 4a); 46-59 (Parcel 4b)

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/28/2006 | B8961, p348 | Parcel 4 (Hockanum Rd), donation from Joseph M. McNerney | 19.52 |
| 2008 | B9429, p236 | Taking to City, donation | |
| 11/16/2006 | | Site assessment by OTO | |
| 6/19/2008 | B9518, p66 | Deed to USA ($25,000) | |
| 10/19/2007 | B9299, p242 | Parcel 19B.1 (Hockanum Rd), includes 16.0 acres transfer from City to Valley Land Fund ($25,000) | 197 |
| | B5738, p221 | Sheldon CR to Broad Brook Coalition | |
| 8/17/2007 | B9238, p229 | Parcel 4a, taking to City ($13,860) | 13.86 |
| 6/19/2008 | B9518, p62 | Deed to USA ($19,000) | |
| 10/8/2008 | B9615, p174 | Parcel 4b ($9,000) | |
| 10/9/2008 | B9616, p97 | Confirmatory deed from Wodicka ($9,000) | |
| | | Eventual sale to USA Conte expected in 2009 | |

**Description:**

The Mill River was once an indispensable factor in the establishment of manufacturing businesses in Northampton. In 1936 and 1938 there were back-to-back floods which turned the city streets into canals causing a large amount of water damage. The U.S. Army Corps of Engineers took on a major flood control project from 1939 to 1940. This project included cutting off the flow of the Mill River through the downtown area.

## Fitzgerald Lake/Beaver and Broad Brook Conservation Areas
## 772 acres

**Ownership:** City/Conservation Commission (some conservation restrictions may be privately owned)

**Zoning:** RR & SR with WSP & WP overlays

**Location:** North Farms Rd, Marian St, Boggy Meadow Rd, Haydenville Rd (Rt 9), & Leeds

**Parcel ID:** 2-12, 2-18, 6-13, 7-35, 12C-93, 18-42

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1/28/1993 | B4138, p271 | AbuzaBargain sale by Richard Abuza ($33,200 owner donation), Land & Water Conservation Fund (#25-00427, $37,500) & City ($5,000) | 86 |
| 4/30/1998 | B5360, p15 | Swayze purchaseBroad Brook Coalition ($2,000); Wharton Trust ($6,000) & City (closing costs), approved by City Council 2/5/1998 | 10 |
| | First American Title Insurance Company | 20301162, on file w/City Clerk | |
| 10/13/1994 | B4570, p294, 298, 300, & 302 | New England Telephone release, donation | |
| 2/9/1996 | B4822, p184PB179, p98 | Nancy Hughes donation, donation required by cluster special permit | 8.876 |
| | Lawyers Title Insurance Corp. | Title insurance policy 136-00-110653 on file w/City Clerk | |
| 5/9/1996 | B4880, p192 & 203PB179, p235 | Nancy Hughes CR, required by cluster special permit | 3.481 |
| 12/19/2000 | B6090, p202 | Helen Kabat donation | 17 |
| 10/5/2004 | B8013, p326 | Morin purchase, BBC ($3,560), City ($1,040) | 5.75 |
| 11/27/2002 | B6908, p173 | Stoddard family donation, taking | 7.5 |
| 3/17/2003 | B7097, p156 | Confirmatory deed, land donation from Anita Stoddard Packar, Laurence Stoddard, George Barrett, Ruth B. Drury, Peter Hehey, Jason Charlton, & Monica Doyle Lynch; BBC ($500) | |
| 6/29/2007 | B9035, p312B9182, p5 | Dryzgula friendly taking | 3.6 |

## BEAVER BROOK/BROAD BROOK SECTION — 102.4 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 01/27/2010 | B10085, p232 | Purchase from McLoughlin, Watson, Culver, Culver and Culver($550,000 of which $364,000 from LAND grant and $10,000 from Broad Brook Coalition donation. Remainder of acquisition and soft costs from Community Preservation $364,000 contribution.) | 102 |
| 01/27/2010 | B10085, p239 | LAND grant agreement and permanent conditions | |
| 01/27/2010 | First American Title MAEOe-560057116 | Title Insurance with $550,000 principal | |

## JOHN A. CIMEK SECTION — 38 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/10/1993 | B4223, p145 | City ($25,000), Broad Brook Coalition ($5,250) w/ Land & Water Conservation Fund covenants | 38 |

## BURKE SECTION — 4.72 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1984, 3/13/1989 | B3344, p284 | Dorothy Burke donation | |
| 1/17/2008 | B9373, p58 | Sullivan purchase ($103,000 in back taxes) | 3.9 |

## COOKE'S PASTURE — 190.95 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/30/1994 | B4595, p134 | Cooke's Pasture, City ($39,540), self-help ($112,200), Broad Brook Coalition ($31,000, includes Wharton Trust $5,000) & Sweet Water Trust ($10,000) | 161.1 |
| | Common-wealth Land Title insurance policy | On file w/City Clerk | |
| 1/15/2001 | B6100, p313 & 320 | Finn, "friendly" taking, City ($2,000), Broad Brook Coalition ($10,000) | 15 |
| 1/22/01 | Land Court B18, p107 | Paasch Flag Lot, donation required by flag lot permit; temporary right-of-way to Coles Meadow Rd also provided | 3.074 |
| 12/18/1984 | B2521, p1 | Marian St Section, self-help w/34% match donations from neighbors | 11.85 |

## FITZGERALD LAKE SECTION — 287.94 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/20/1977 | B1951, p261 | Fitzgerald Lake, self-help ($72,825) & City ($72,826), Land & Water Conservation Fund covenants added in 1993 | 152 |
| | B1993, p11 | Row to dam (may no longer be valid ROW) | |
| 12/20/1995 | B4796, p38 | Warburton Purchase | 5.5 |
| 2/20/1996 | B4826, p170 | CR to BBC | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | Commonwealth Land Title insurance policy | 165-686836 on file w/City Clerk | |
| 6/19/2001 | B6250, p72 | Vaughn, "friendly" taking, BBC ($15,000) | 17 |
| 5/8/1990 | B3557, p148PB166, p52 | Pines Edge, land donations required by Pines Edge comprehensive permit, disclosure 1/1991 | 15.89 |
| | Land Court B17, p208 | Mortgage release | |
| | Land Court B18, p107 | | |
| 9/9/2009 | Special Permit B9948, p228Survey Plan B221, p77 | North King St. | 12.08 |
| | Deed B9961, p111 | ($75,000 including $20,000 CPA & $10,000 BBC) | |
| | First American Title Insurance Policy | $75,000 policy, 5600050443 | |

## OTHER ACQUISITIONS

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Lathrop CR (see separate entry under conservation restrictions) | 14 |
| | B9182, p5 | Laverdiere confirmatory deed | |
| | | Anciporch USFS Forest Legacy CR | |
| 6/10/2003 | Pedestrian Easement B7253, p94 | Sabra ROW & CR | 3 |
| | Conservation Restriction B7407, p172 | | |
| 8/22/2003 | B7407, p201 | Related mortgage subordination, all as condition of special permit/subdivision approval | |
| 5/18/2005 | Decision B8181, p292;B205, p11;Eminent Domain Order of Taking B8265, p80 | Michalski/Stewart section, purchase price $17,000-$15,000 from Broad Brook Coalition & entire amount went to pay off back taxes | 33.5 |
| 11/2/2006 | B8953, p349 | Bereska Taking, ID 2-12 | 8.1 |
| 12/4/2006 | B8967, p324 | Confirmatory deed | |
| 8/28/2006 | B8854, p77 | Owner Unknown/Porter section, eminent domain of tax title parcel | 8.8 |
| | B8688, p315B8688, p320 | Private William Adams Memorial section, formerly map ID 2-18 | |

**Permit history:**

| Date | Description |
|---|---|
| | Order of Conditions 246-224 (trails & dam, expired 4/1995) |
| | Certificate of Compliance 246-149 (road) |
| | Order of Conditions 246-322 (accessible trail & parking lot) |
| | Order of Conditions 246-325 (herbicide on dam) |
| | Order of Conditions for Cooke's Pasture (expired 6/1997) |
| 7/6/1993 | DigSafe, 93274641 (no buried cables by dam or old telephone line) |

**Partners:** Memorandum of Agreement w/Broad Brook Coalition for join management, last

amended 4/1/2001. The Broad Brook Coalition conducts routine maintenance of conservation area, including trash pickup, boardwalk maintenance, trail maintenance, & dam brush clearance.

**Trails:** Lake Trail, Hillside Trail, Old Telephone Line Trail, Boggy Meadow Rd, Cooke's Pasture Trail, Marian St Trail, & Halfway Brook Trail

**Improvements:** Parking lot & paved trail from parking lot to Broad Brook completed in 1996 for $19,977 ($3,500 from MA Lakes & Ponds Grant; $16,477 from CDBG Handicap Access)

**Dam:** Dam & access road to dam reconstructed in 1999 for $305,967 ($199,288 state self-help funds & $136,000 City funds)

**Public Info:** Fitzgerald Lake Conservation Area brochure describes area. Fitzgerald Lake Conservation sign and other information have been installed at North Farms Rd and Cook Ave. Self-guided nature trail brochures are available at trail off of North Farms Rd. Also, there is small box for maps at Marian St entrance.

**Wildlife:** Otter & extensive number of turtles have been seen in lake. There is large amount of beaver activity in northern and eastern sections of conservation area. Great blue herons & winter wrens rely on site for critical habitat. Several rare species have been identified in wetlands bordering Lake & in Cookes Pasture. Elderberry Longhorn, or Elder Borer (Desmocerus palliates, large, showy, black & yellow beetle) and Wood Turtle (Clemmys insculpta) are two of state-listed species that have been identified at FLCA. Several vernal pools exist in conservation area.

**Description:**

This is the largest city-owned conservation area in Northampton. At its core is the 40-acre Fitzgerald Lake, created by an earthen dam. The lake is surrounded by pine, hemlock, hardwood forest uplands, wooded wetlands, and meadows. Its wet and rocky setting offers excellent hiking trails, nature study, fishing, canoeing, and skating.

The Fitzgerald Lake, Cookes Pasture, and the surrounding areas are one of the most diverse and richest ecological resources in Northampton. Fitzgerald Lake and Cookes Pasture contain rare plant and animal species.

Broad Brook flows through the Burke section, the center of Fitzgerald Lake (created by damming the brook), Cookes Pasture (where it becomes a large beaver meadow) and the edge of the Abuza and the Cimek sections. Hunting is allowed only in the Abuza section, in the area north of the Hillside Trail and the west of the Beaver Trail (and then no within 200 feet of the trail). Trapping is not allowed.

The Beaver Brook/Broad Brook section includes Broad Brook along Route 9 on the west side of the property and the headwaters of Broad Brook on the east side. The Forest Stewardship Plan (prepared 2010) included in the management plan section of this plan provides more detail on the property.

O'Reilly Talbot and Okun preformed and environmental site assessment and witnessed the removal of the oil tank on the Beaver Brook/Broad Brook property and did not identify any significant environmental problems. The two homes on the property were demolished and removed by the seller prior to the City taking title.

A wheelchair accessible path from the parking lot to Fitzgerald Lake (120 feet of asphalt path, 360 feet of boardwalk, 60 feet of gravel, and a boardwalk dock/platform) was installed in 1993.

The Fitzgerald Lake Dam, which is classified as a low hazard dam, is inspected periodically by the Dam Safety Office of the Department of Conservation and Recreation (DCR) . DCR makes


# OVERVIEW OF FITZGERALD LAKE/BEAVER & BROAD BROOK CONSERVATION AREAS

recommendations as to needed improvements (see action plan section of this plan). The City did a massive reconstruction of the dam in 1998.

The old telephone right-of-way on the property, which (long since discontinued and formally quitclaimed in 1994) has been blazed as a trail where it crosses the Abuza and John A. Cimek sections of the Fitzgerald Lake Conservation Area (FLCA).

## Florence/Garfield Conservation Area — 4.097 acres

**Ownership:** City/Conservation Commission

**Zoning:** URB

**Location:** Garfield Ave.

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/15/2005 | B8557, p106 | Montgomery friendly taking (included in deed to conservation commission below) | |
| 3/1/2006 | B8632, p77 | Montgomery confirmatory deedPurchased as settlement for former landfill on site & part of limited development project. Additional land bargain sold by Montgomery. | |
| 1/4/2010 | B10067, p301PB 222, p10-11 | Deed from City to Northampton Conservation Commission and supporting plans | 4.097 |

**Partners:** None

**Description:**

At end of Garfield Avenue. DPW has a permanent right and responsibility to maintain the cap on the former landfill on the site. Land is westerly and northerly of last three homes on Garfield. This is part of a limited development project that includes the old landfill, five Habitat for Humanity developed affordable houses, and one market rate house lot.

History: The City originally purchased the parcel as a settlement of litigation around a former landfill/ dump on the site. The dump was privately owned in an old quarry, but in the early twentieth century the City allowed dumping on the site. With all responsible parties gone, the Board of Health maintains responsibility for the landfill and holds an easement on the Conservation Commission Property to maintain the cap in perpetuity.

## Ice Pond Conservation Area 22.2722 acres

**Ownership:** City/Conservation Commission

**Zoning:** SR & FFR

**Location:** Ice Pond Dr & Rt 66

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/20/2003 | B7534, p333 | Deed, donation as permit condition for cluster subdivision | 22.2722 |
| 10/20/2003 | B7535, p1 | Mortgage release | |

**Permit history:**

| Date | Description |
|---|---|
| | State Hospital agricultural lands (protected by city-held APR) |
| | Ice Pond Conservation Area CR |
| | Pathways Co-Housing bike path (City-held right-of-way) |

## Manhan Rail Trail Buffer 0.79 acres

**Ownership:** City/Conservation Commission

**Zoning:** HB

**Location:** Easthampton Rd (Rt 10)

**Parcel ID:** 44-39

**Acquisition history:**

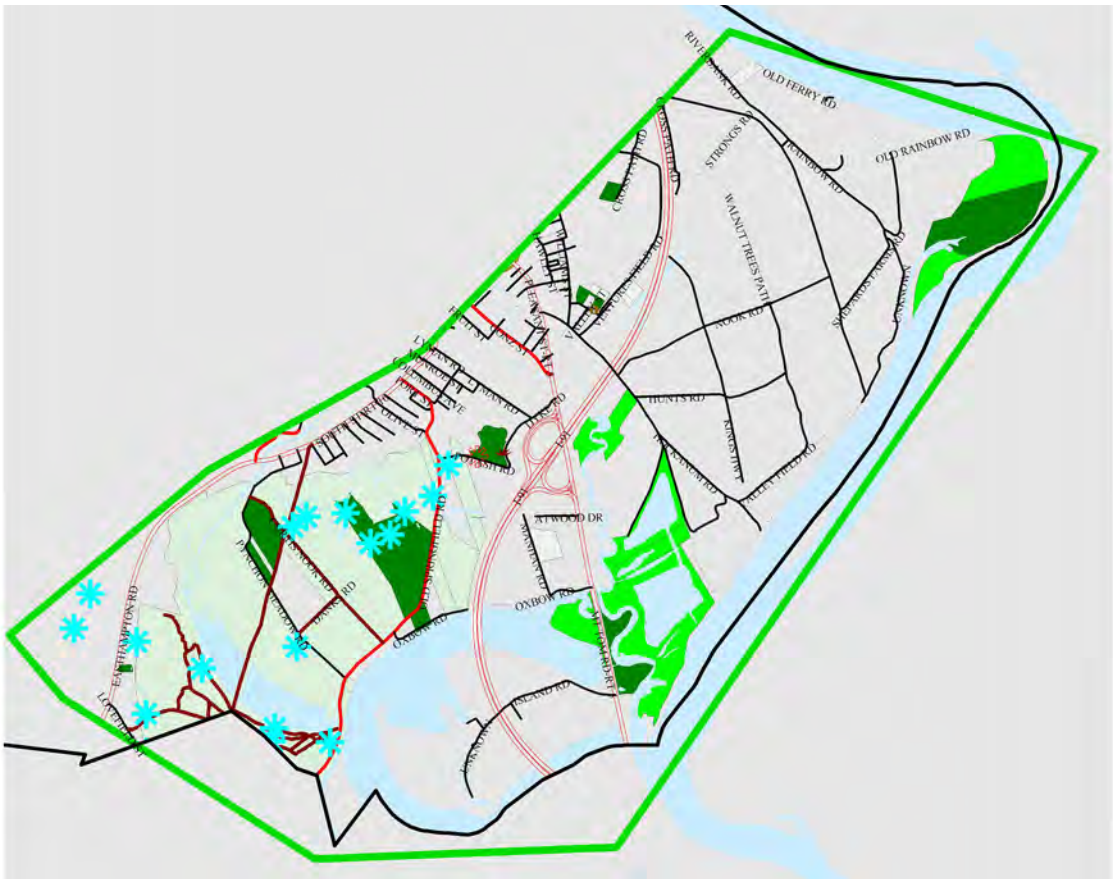
| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/18/1999 | B5842, p281 | $1,000 Eminent domain by City Council approval | 0.79 |

**Partners:** None

**Description:**

This land was purchased possibly to provide a small parking lot and access to the planned Manhan Rail Trail. The parcel contains remnants of the 18th-century New Haven and Northampton Canal.

OVERVIEW OF MEADOWS CONSERVATION AREA




## Meadows Conservation Area — 16.2 acres

**Ownership:** City/Conservation Commission

**Zoning:** URA/URB/WP/SC

**Location:** Crosspath Rd, Montview Ave, Manhan Rd, & Potash Rd.

**Parcel ID:**

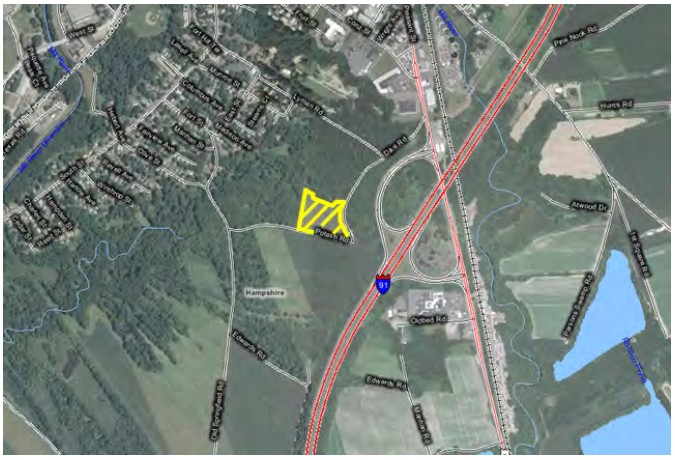
**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 2/5/2001 | B6120, p19 | Kossakowski, 3 acres w/right-of-way | 3 |
| | PB188, p1 | | |
| | First American Title Insurance Policy | 100367887 on file w/City Clerk | |
| 3/24/2000 | B5905, p298 | Montview donation | 3.246 |
| | PB186, p131 | | |
| | First American Title Insurance Policy | 20329816 on file w/City Clerk | |
| 8/24/2009 | B9942, p188 | Bleiman donation, includes covenant to maintain field & not allow trees to grow, $1 | |
| | PB221, p67 | | |

**Partners:** Informal neighborhood group for Montview. Use Committee forming for Bleiman donation.

**Description:**

In 2009, Rita M. Bleiman and Bruce S. Bleiman donated the property to the City of Northampton for the purpose of conservation and agriculture. In recent years, the property had been minimally cultivated, including haying, tillage and establishment of winter rye as a cover crop.




The property consists of 9.95 acres on the corners of Potash Rd and Dike Rd. A five acre field comprises a portion of the property, while the remainder is wooded. This plan covers the five open acres located to the southeast corner. Other areas of the site are not part of this plan.

A wooded area bounds the northern and western field edges, while a hedgerow bounds the southern and eastern sides. One access point from Potash Rd and one from Dike Rd interrupt the hedgerow.

The site is located in an area primarily composed of conserved fields, woods, and wetlands. The historic Mill River bed forms the Bleiman property's northern boundary. There is a certified vernal pool that runs the length of this boundary. Soils are primarily Hadley Silt Loam, and Winooski Silt Loam, some of the highest quality agricultural soils, extremely suitable for agriculture. Privately farmed fields are also adjacent to the property. The immediate area is primarily undeveloped, and the closest residential neighborhoods are off of South Street, east of the property.

**Restrictions:**

Uses of the property are limited to minimal infrastructure agricultural endeavors for multiple reasons, including floodplain location and donation of the property to the City for the purpose of agriculture and conservation. The agricultural use options for the site are broad based on the soil type. Floodplain regulation, the conservation purpose of the property, and City goals are the factors guiding use and restrictions.

Specifically, the City has noted the following site limitations: (1) prevention of encroachment on the vernal pool; (2) location of the property in the floodplain; (3) desire for organic and/or reduced environmental footprint agricultural practices on city owned agricultural land; (4) absence of public water supply or appropriate conditions for a well; (5) absence of electricity; (6) security limitations; and (7) the presence of many mosquitoes.

Limitation (2), floodplain restrictions dictate that structures are mostly not practical or possible, except for possibly a small shed, which may then present security concerns.

**Soils:**

| Hampshire County, Massachusetts, Central Part (MA609) | | | |
|---|---|---|---|
| **Map Unit Symbol** | **Map Unit Name** | **Acres in AOI** | **Percent of AOI** |
| 8A | Limerick silt loam, 0 to 3 percent slopes | 0.3 | 6.7% |
| 96A | Hadley silt loam, 0 to 3 percent slopes | 1.8 | 36.3% |
| 98A | Winooski silt loam, 0 to 3 percent slopes | 2.9 | 57.2% |
| **Totals for Area of Interest** | | **5.1** | **100.0%** |

Of 5.1 total site acres, 2.9 acres are Winooski Silt Loam, 1.8 acres are Hadley Silt Loam, and .3 acres are Limerick Silt Loam.

Hadley Silt Loam is a well-drained flood plain soil, with slopes 0-3%. Land Capability Class is a measure of the appropriateness of a soil type for particular human activities, including agriculture. Hadley Silt Loam measures a land capability class of 1, and is therefore highly suited for agricultural use.

**BLEIMAN PARCEL SOILS**


Winooski Silt Loam is a moderately well drained flood plain soil, with slopes 0-3%. The land capability class is 2w, indicating that it is suitable for agriculture, but it has less than perfect drainage and may retain spring moisture longer than other soils, such as the Hadley Silt Loam.

Limerick Silt Loam is a poorly drained flood plain soil, with slopes 0-3%. The land is capability class 3w,indicating that it is less than suitable for agriculture. The depth to water table is 0-18 inches, and the drainage class is "poorly drained." It is worth noting that although Limerick soils make up only .3 acres of the site, the north side and northern-most two thirds of the east side of the site are bordered by wet Limerick Soils.

**Agricultural Uses:**

Recent agricultural uses include haying, plowing and cover cropping with rye. Comments from a recent

site farmer indicated wet portions of the site can significantly impeded germination and cultivation of crops at certain times of year, although currently the site is established with a rye/grassy mixture without issue. More intensive cultivation of vegetable row crops or animals has not been part of the recent site history.

**Access and Vehicle Use:**

Access is currently limited to two overgrown entry points in the hedgerow. There is no signage upon approaching or entering the site, no designated parking, and no designated location for delivery of materials (such as compost) or supplies (such as farm tools and implements being delivered or retrieved). Existing access patterns consist of a grassy field road around the exterior of the field, running past each of the access points and along the inside of the hedgerow. Procedures and expectations for accessing the site by vehicle or other means are currently lacking.

In addition, the condition of Dike Rd. is an access concern. Unpaved dirt with deep potholes, the road is seasonally extremely wet and possibly impassible for pedestrians, cyclists, and vehicles. The beginning of Dike Rd intersects with Rte 5/Pleasant Street in a busy location without sidewalk improvements and adjacent to a highway onramp. Despite impassability issues, or because of them, Dikes Rd and the surrounding woods and wetlands are frequent dumping sites. The dumping is of concern to neighbors and community members interested in site stewardship.

## Meadows-Arcadia Wildlife Sanctuary Joint Ownership 103 acres

**Ownership:** City/Conservation Commission;
Conservation Restriction by Mass. Audubon Society, which includes management rights

**Zoning:** SC

**Location:** Old Springfield Rd.

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/3/1997 | B5115, p113 | Sparko, funding self-help ($84,480) & Mass. Audubon Society ($43.520) | 38 |
| | CR B5115, p127 | | |
| | Ticor Title Insurance | 22-2620-106-00000151 on file w/City Clerk | |
| 4/6/2001 | B6167, p282 | Burt, taking | 65 |
| | B6192, p112 | Confirmatory deed | |
| | CR B6192, p112 | | |

**Partners:** Arcadia Wildlife Sanctuary

**Description:**

These 103 acres were purchased by the City to preserve grassland bird habitat. Massachusetts Audubon Society at Arcadia holds a Conservation Restriction and is responsible for day-to-day management of the property. Arcadia census data for the grassland nesting species shows an increase in the numbers of Bobolinks and Savannah sparrows since the property was purchased. Peter Vickery, the Massachusetts Audubon ornithologist who manages its grassland bird project, reports that the Sparko piece provides good Meadowlark habitat. Mass. Audubon will be watching over the next several years to see if this or the other grassland species are able to establish themselves.

Arcadia is also conducting butterfly surveys. Butterflies appear to be less plentiful on these hayfields than expected. Arcadia is allowing their field on the north side and abutting the Sparko parcel to grow milkweed to encourage butterflies.

While flood plain forests are rare, Arcadia will manage the hayfields (and eventually other Massachusetts Audubon fields in Northampton now under cultivation) for grassland species. While other areas of the sanctuary have been allowed to grow up into brush, these fields are very wet and are better not cultivated and some "weedy" areas provide food and shelter for migrating species particularly in the fall. Arcadia's ecological management goal is to encourage native diversity.

While Mass. Audubon generally inventories land it acquires or manages, the hayfield is primarily non-native agricultural plants that have been cultivated for hay production. For that reason, we do not anticipate conducting a botanical inventory on this site at this time.

The "fields" may not appear the way a skilled farmer would be accustomed to seeing them or the way our aesthetic sense might expect to see them. The land in the meadows, owned and/or managed by Audubon, is increasingly being used by wildlife. Hay cutting is delayed until the birds complete their nesting cycle. The hay is not a prime sweet crop. Some bird species require thinner grasses for nesting sites. Arcadia staff will not feed the land to produce a more abundant crop of hay. Bare spots are just fine. Plants going to seed may be great for migrating species.

Arcadia will be conducting educational programs and producing written materials to help people understand management practices for wildlife on land which was formerly devoted exclusively to agriculture. Arcadia's regular bird walks will be visiting the meadows during nesting season in future years. And of course, one of the best birding (and other wildlife observation opportunities) for those who have mobility problems is available from Old Springfield Road.

The City of Northampton reserves the right to treat this area for mosquitoes.

## Mill River Greenway — 38.25 acres

**Ownership:** City/Conservation Commission

**Protection:** Beaver Brook—Conservation restriction, Conservation Commission

**Zoning:** Bay State Section, Leeds—URB

Bay State & Florence—GI

Beaver Brook, Baystate & Florence—SR

Historical Mill River—URC

Leeds—RR, WP

**Location:** All on Mill River—Riverside Dr, Bay State, Route 9, Grove Ave, Baystate, & adjacent to Veterans' Field (off West St)

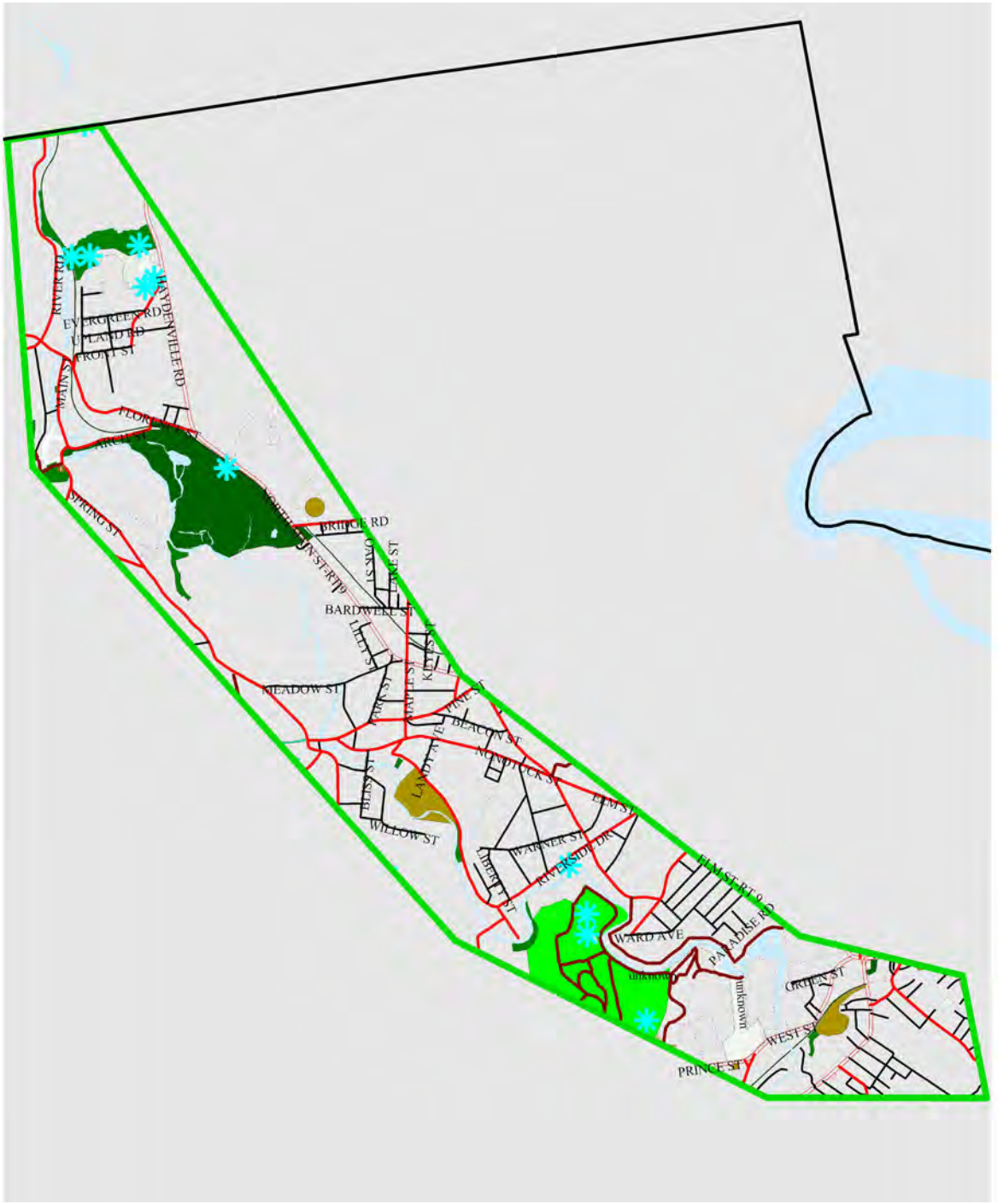
**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/19/1975 | B1837, p222 | Baystate & Florence, donation by Vistron corporation | 5.1 |
| 7/14/1989 | B3407, p304PB162, p67 | Baystate & Florence, Yankee Hill section, donation by James Graham, Yankee Hill Machine Co. | |
| 2/4/2000 | B5879, p156 | Bay State Section, deed (donation from Cutlery Building Associates) | 1.726 |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B2163, p236 | Bay State Section, sewer easement on property | |
| 3/29/2001 | PB186, p230 | Leeds, donation by Myette | 0.1 |
| | Mortgage Release B6158, p40 | Leeds, mortgage release | |
| 3/16/2004 | B7729, p130 | Historical Mill River, donation from Steven Berlin-Chavez and Reginal Chavez-Berlin | 1.439 |

OVERVIEW OF MILL RIVER GREENWAY



| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/28/2006 | B8854, p82 | Historical Mill River, eminent domain of tax title parcel, owner unknown/historic Mill River | 0.4 |
| 2/9/2009 | PB220, p26 | Survey of Beaver Brook section | |
| 12/11/2009 | B10047, p233 and 237 | Beaver Brook, right-of-way easement for rail trails and fee ownership of conservation land, through open space requirement for cluster project. | 25.435 |
| 4/28/2010 | B10160, p233 | Mill River Greenway, Bean Farm (donation related to permit condition) | 1.184 |
| 4/30/2010 | B10164, p119 | Mill River Greenway, Leeds from Roman Catholic Church ($35,000 CPA & Rail Trail funding) | 4.051 |
| 4/21/2010 | PB222, p124 | Beaver Brook, survey of Mill River Greenway from Roman Catholic Church | |

**Signage:** Baystate & Florence—"Mill River Greenway, Yankee Hill Section"

**Partners:** Bay State Section—informal w/Baystate Village Association

Leeds—Informal w/Leeds Civic Association

**Description:**

The Mill River was once an indispensable factor in the establishment of manufacturing in Northampton. In 1936 and in 1938, there were back-to-back floods, which turned City streets into canals, causing a large amount of water damage. The US Army Corps of Engineers took on a major flood control project in 1939–1940. This included cutting off the flow of the Mill River through the downtown area.

The Mill River, including the by-pass channel, in the vicinity of the Historic Mill River, is a degraded waterway in an urban setting, with impediments to fish passage, degraded instream habitat, and insufficient buffers. Diversion of flow through the by-pass channel, construction of a dam and drop structure, and development along the banks of the former riverbed have severely reduced the quality of fisheries in the river segment and upstream reaches. The former river channel represents approximately 1.6 miles of fish habitat that has been lost altogether from the Corps flood control project.

The City is working with the Corps of Engineers to select and evaluate feasible alternatives to restore a riverine migratory corridor to the Mill River and improve the quality of its ecosystem. The objectives of the study are:

- Select a plan to restore a riverine migratory corridor and open up high value habitat to aquatic species.
- Restore flow to the historic river channel, thereby recreating aquatic habitat.
- Enhance or restore riparian buffers.
- Increase recreational use of the river.
- Create or increase public access to the river.
- Provide aesthetic improvement to the location of the historic river channel.

The Bay State Section is a very thin but attractive parcel along the Mill River with a trail along the river. Parcel extends north from the north side of the Mill raceway to Maines Field. It does not contain any portion of the old raceway, where some debris was dumped by the former cutlery and possibly by other entities.

The Beaver Brook land contains rare species habitat. See also rail trail easement under rail trail entry and conservation restriction under conservation restrictions entry.

# OVERVIEW OF MINERAL HILLS CONSERVATION AREA

The Beaver Brook parcel would help allow an eventual restoration of the Historic Mill River in downtown and allow a trail access from Pleasant Street to Veterans' Field.

Within the Baystate and Florence section, Vistron is a small isolated parcel on the Mill River with an intensive amount of invasives. Yankee Hill is a steep hillside between the Mill River and the permanently protected agricultural lands at the former State Hospital land.

## Mineral Hills Conservation Area 297.2 acres

**Ownership:** City/Conservation Commission

**Zoning:** RR

**Location:** West side Sylvester Rd, north side Turkey Hill, north & south side

**Parcel ID:** 28-70

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/12/1994 | B4570, p97 | LaPalme, bargain sale, City & neighborhood donations | 85 |
| 4/7/1994 | Title Insurance Policy | Filed w/City Clerk | |
| 11/13/1995 | | Commission voted to name permanently the area Mineral Hills Conservation Area as requested by LaPalme | |
| 9/30/1994 | PB177, p164 & 167 | Sylvester Rd | |
| | B4570, p102 | Right-of-way to building lots | |
| 12/27/1994 | B4607, p172 | APR | |
| | | Drainage & utility easements of record | |
| 12/11/2003 | B7616, p95 | Turkey Hill, donation | 16.1 |
| | PB198, p23 | | |
| | | Disclosures filed DSPO | |
| | PB211, p12 | Survey for Turkey Hill Rd parcel south of Turkey Hill | |
| 1/12/2007 | B9009, p36 | Turkey Hill¾$685,000 (Self-help, City, Wharton Trust, Highland Communities Initiative, & $200,000 in community fundraising) | 120 |
| | First American Title Insurance Company | 102758222 | |
| | B9013, p31 | Walking easement between Turkey Hill section & LaPalme section | |
| | B9013, p35 | Mortgage subordinations | |
| | | Authorization in City Council resolution recorded w/ Turkey Hill section | |
| 2/9/2009 | B9700, p64 | Turkey Hill Rd, Bosworth purchase | 15 |
| 5/9/2008 | PB218, p38 | Kohl survey purchase | |
| 6/4/2008 | Warranty Deed, B9503, p293 | Purchase, self-help & CPA ($900,000) | |
| | B9503, p296 | Self-help agreement | |
| | Owner's Policy of Title Insurance | Kohl addition, 106544301 | |
| 7/18/2008 | B9547, p40 | Wilhelm/Mineral Hills Trust | 15.1 |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/10/2009 | PB220, p46 | Survey of all of Mineral Hills | |

**Permit history:**

| Date | Description |
|---|---|
| | Special permit for reduction of frontage for building lots, B4570, p93 |
| | Sylvester Rd driveway Wetlands Permit, B4570, p87 |

**Description:**

A diverse piece of conservation property consisting of wooded uplands, wetlands, and a small field in active agriculture. A small parking lot is on the Sylvester Road side of the parcel.

The Mineral Hills Conservation Area is one of Northampton's natural resource gems. The 293-acre tract of undeveloped, contiguous woodland contains numerous important habitat areas, supports a wide diversity of wildlife species and provides a variety of recreation opportunities for the citizens of Northampton. Furthermore, the natural amenities in this area have attracted and inspired many past and present and have become a part of the City of Northampton's cultural fabric. Famous writer and Northampton native Brian Kitely aptly captures the spirit of the conservation land in his journal 1852: The Sage of Mineral Hill:

> *…Northampton below from Mineral Hill is as remote as the Northwest Passage. We live on what we find, the dog and me-service berries in June, tart strawberries, carrots that taste of metal. What is any man's discourse to me, if I am not sensible of something in it as steady and cheery as the creak of crickets? In it the woods must be relieved against the sky. Men tire me when I am not constantly greeted and refreshed as by the flux of sparkling streams. Surely joy is the condition of life.*

By maintaining the quality of the conservation land and habitat, especially the forested uplands, wetlands, and vernal pools, the City of Northampton is preserving a piece of the natural heritage of the Pioneer Valley and helping to protect a relatively undisturbed complex ecosystem in the foothills of the Berkshires. And, by providing and encouraging outdoor recreational opportunities, the City of Northampton is actively promoting the link between parks and recreation and improved mental, physical and societal health of individuals and the community.

It is understood by the City of Northampton that any property acquired with Self-Help Grant Assistance funds is open for us by all citizens of the Commonwealth, and that no major alteration of this property, or changes in the proposed uses can take place without the prior approval of the secretary of the Executive Office of Environmental Affairs, and possibly the General Court.

Therefore, the Mineral Hills Conservation Area will be permanently protected against conversion to another use, or disposal by the city through:

Designation by the City as conservation land and assignment to the City of Northampton Conservation Commission

- The covenants entered into by the City as conditions of the grant offer
- The provisions of Article 97 of the Commonwealth of Massachusetts Constitution
- The Self-Help Program Project Agreement, which is adjunct to the deed

The City of Northampton Conservation Commission owned properties are considered permanently protected open space parcels. Any disposal of Conservation Commission owned properties, including easements and less than fee interests, would require Conservation Commission and City Council approval

and, in accordance with Article 97 of the Commonwealth of Massachusetts Constitution, a two-thirds roll call vote of the state legislature. Any disposition of Article 97 property also requires the filing of an Environmental Notification Form with the Massachusetts Environmental Policy Act Office, as approved by the Secretary of the Executive Office of Environmental Affairs.

Also, the 87-acre Middle Connector Section added to the Mineral Hills Conservation Area in 2008 is subject to the Self-Help Project Agreement. Any sale or conversion of this land would require: approval by the Massachusetts Executive Office of Energy and Environmental Affairs, Division of Conservation Services, and the replacement of any converted land with land of equal or greater monetary value, and conservation utility.

The City of Northampton Open Space and Recreation Plan 2005-2010 provides guidance on how the City of Northampton can best utilize limited resources to meet the City's open space, conservation, and recreation needs. Building on extensive participation of citizens and municipal boards, the Northampton Conservation Commission, Recreation Commission, and the Planning Board have identified critical steps the City should undertake to fulfill those needs. The City, in cooperation with state and federal funding sources, shall:

1. Make capital improvements and improve maintenance of recreation facilities
2. Manage conservation properties to preserve and restore plant and animal habitats.
3. Acquire land for future conservation, recreation, and open space needs, preservation of habitats, scenic vistas, public enjoyment, and enhance the character and sustainability of the community.
4. Take regulatory and non-regulatory measures to protect water supplies and sensitive environmental resources.
5. Preserve environmental, cultural and natural resources through land and easement acquisitions and regulation changes.
6. Inform citizens about public and private open space and recreation resources and potential land use options.
7. Identify and examine means for augmenting financial and other resources available for carrying out the goals and objectives laid out in the plan.

With guidance from the Open Space and Recreation Plan 2005-2010, the City of Northampton has worked with numerous partners to continue to protect open space parcels in the Mineral Hills area of Northampton. In addition to the work of numerous municipal boards and departments, the Executive Office of Energy and Environmental Affairs Division of Conservation Services Self-Help Grant Program has granted $470,000 of funding for the acquisition of the three parcel, 87-acre open space addition to the Mineral Hills Conservation Area. Three hundred fifty thousand dollars were granted through Community Preservation Act funds, $15,000 was provided by the City of Northampton, and over $134,000 was raised through community donations. Also, the Broad Brook Coalition, Nonotuck Land Trust and Ward 6 Association have provided strong support for the broader project.

The Mineral Hills Conservation Area totals over 293 acres that is owned by the City of Northampton and managed by the Northampton Conservation Commission. The Mineral Hills are located west of Sylvester Road and north of Turkey Hill Road. The spring 2008 acquisition of three parcels totaling eighty-seven acres is the key connection toward creating an ecologically sustainable and contiguous Mineral Hills Conservation Area in Northampton and Westhampton. The three new parcels are labeled 2008 Conservation Restriction (CR), Middle Connector Section and Northwestern Section.

Seventy-six acres of the eighty seven-acre open space acquisitions was purchased in fee and permanently protected; a Conservation Restriction will protect the remaining eleven acres. The Middle Connector Section consists of sixty-one acres to be purchased in fee. The Northwestern Section consists of fifteen acres to be purchased in fee. And, the 2008 Conservation Restriction (CR) area, located adjacent to the LaPalme Section, was protected by a Conservation Restriction. The Conservation Restriction does not allow public access (see Mineral Hills Conservation Area Section Map).

Forests have been identified as one of the City's most important renewable natural resources in the City of Northampton Open Space and Recreation Plan 2005-2010. The Mineral Hills Conservation Area consists of a forested landscape ripe with natural resources. The diverse forest matrix provides a complex environment of interacting plant and wildlife biodiversity. Babbling brooks flow from the hilltops to the wetlands below and vernal pools can be found teeming with life during the spring and fall.

To qualify the ecological richness, the Northampton Conservation Commission hired accomplished naturalist Laurie Sanders to produce an ecological assessment of Northampton Conservation Commission properties and abutting sensitive lands. The report entitled "Rediscovering Northampton, the Natural History of City-Owned Lands," included the following analyses of the Mineral Hills Conservation Area:

### "A PRELIMINARY ECOLOGICAL OVERVIEW OF MINERAL HILLS AND THE ORCHID SWAMP"

*Laurie Sanders*

The Mineral Hills area has high ecological value. The hills are comprised of hidden wetlands, steep cliffs, narrow ravines, forgotten ponds, floodplain forest fragments and several square miles of undeveloped, forested uplands with a wide variety of habitats and rare plants. The nearby swamp is relatively undisturbed and is contiguous with hundreds of acres of undeveloped land to the north. The area is botanically rich, with many rarities and a unique combination of habitat types.

Mineral Hills forested slopes are covered with hemlock (Tsuga canadensis) and mixed hardwoods. On the western side, broad slabs of lichen-covered bedrock and rocky outcrops offer impressive views into Westhampton and beyond. In these rocky, open sections, soil is only found in narrow crevices and shallow depressions where it supports half a dozen of the hardiest, most drought tolerant plants in our area: red cedar (Juniperus virginiana), blue curls (Trichostema dichotomum), Pennsylvania sedge (Carex pensylvanica), little bluestem (Andropogon scoparius) and several species of panic grass (Panicum spp.). Among the most notable botanical finds on these rocky barrens are two little ferns, rusty woodsia (Woodsia ilvensis) and ebony fern (Asplenium platyneuron), both rarely encountered inside Northampton's borders.

A little further to the north, the outcrops are smaller and more scattered, the soils are deeper and there is a dramatic and abrupt change in the vegetation. But the change is not only in terms of what's there and what's not. This place has a look and feel unlike any other in Northampton. Almost park-like in its appearance, the forest here is a mix of stunted hop hornbeams (Ostrya virginiana), hazelnuts (Corylus cornuta), hickories (Carya sp.) and red oaks (Quercus rubra). Below them is a thick carpet of Pennsylvania sedge and occasional grasses. In the springtime, isolated bunches of wild columbine (Aquilegia canadensis) and early saxifrage (Saxifraga virginiensis) blossom along seepy rock crevices, and at the end of summer, the slopes are graced with the bright pink blooms of wild basil (Satureja vulgaris) and the yellow tops of three different types of goldenrod (Solidago arguta; S. Bicolor; S. caesia). The origin of this anamolous patch of forest was probably a fire, but whatever the cause, the result is aesthetically very pleasing.

Above this section, the slope ends and the hilltop has a gentle up and down topography, characterized by numerous outcrops, small depressions but generally level ground. The composition of the canopy trees shifts again. Chestnut oak (Quercus prinus), red oak, and black oak (Q. velutina) are

the three most common overstory species, but red maple (Acer rubrum) and hickories (Carya spp.) are also fairly common. In the understory, the ground is covered with an irregular patchwork of low-bush blueberries (Vaccinium vacillans; V. angustifolium), huckleberry (Gaylussacia baccata) and near the north end of the hill, acres of mountain laurel (Kalmia latifolia). Herb-free expanses are not uncommon, but in other areas you can find wild sarsaparilla (Aralia nudicaulis), wintergreen (Gaultheria procumbens) and plenty of Pennsylvania sedge. Among the more unusual plants in sunny, rocky areas along the summit are bristly sarsaparilla (Aralia hispida) and pale corydalis (Corydalis sempervirens). Some of the greatest diversity found on Mineral Hill is in the primitive group known as lichens. A lichen is actually a unique combination of two separate organisms, an alga and a fungus, which have evolved together and are now inextricably linked, i.e. one cannot survive without the other. On the top of Mineral Hill, you can easily find more than a dozen different lichens growing on the rocks and tree trunks.

The summit and the western slope are also great places to find sign of turkey, deer and rabbit. Chickadees, robins, tufted titmice and juncos flit through the open canopy, and the "check please" and warble of the scarlet tanager, the police whistle of the great crested flycatcher and the "here me, see me, watch me" tease of the red-eyed vireo are three of the most common summertime songs.

On the eastern side of Mineral Hills, the forest changes again. Unlike the western slope huge, fractured rocks and a small talus slope characterize this half. The piled up rocks create hundreds of nooks and cavities that are used as denning sites by porcupines, raccoons, red fox and coyotes. In addition, the aspect and moisture levels create conditions that support a very different assemblage of plants. In the sunniest patches, one finds several plants known from only one or two locations in Northampton: tick trefoil (Desmodium paniculatum), mountain mint (Pycnanthemum incanum), a native hawthorn (Crataegus sp.) and four-leaved milkweed (Asclepius quadrifolia). Nearby, in moister soil, grow four other Northampton rarities which are known only from Mineral Hill: woodland agrimony (Agrimonia striata) with its tiny yellow blossoms, herb robert (Geranium robertianum) with its redolent foliage, waxy meadow rue (Thalictrum revolutum) with its bluish-gray stems, and the lacy fronds of fragile fern (Cystopteris fragilis). In addition to these, the slope is also covered with great masses of white snakeroot (Eupatorium rugosum), clusters of wild sarsaparilla, panicled dogwood (Cornus racemosa), round-leaved dogwood (Cornus rugosa), and in the rocky soils, marginal fern (Dryopteris marginalis) and polypody (Polypodium virginianum). Because of the rocks, the overstory is spotty. It consists of a mix of hardwoods, primarily linden (Tilea americana), pignut hickory (Cornus ovata), sugar maple (Acer saccharum), red oak and black birch (Betula lenta). Near the base of the slope, the moist, shaded soils support striped maple (Acer pensylvanica) and a rich diversity of herbs, including horse balm (Collinsonia canadensis), downy yellow violets (Viola pubescens), red trillium (Trillium erectum), round-lobed hepatica (Hepatica americana), solomon's seal (Polygonatum pubescens), false solomon's seal (Smilacina racemosa) and rattlesnake plantain (Goodyera pubescens). At least six different ferns are also found near the toe of the slope: Christmas fern (Polystichum acrostichoides), lady fern (Athyrium felix-femina), marginal fern, maidenhair fern (Adiantum pedatum), New York fern (Thelypteris novaeboracensis) and an occasional rattlesnake fern (Botrychium virginiana).

Moving downslope from the talus, the grade is gentle and few rocks are exposed. The overstory species remain the same, but the understory species change. Now, witch hazel

(Hamamelis virginiana), maple-leaved viburnum (Viburnum acerifolium) and beaked hazelnut are common. The herb layer is well developed, and includes, among the more unusual plants two that lack chlorophyll: squawroot (Conopholis americana) and autumn coralroot (Corallorhiza maculata). Squawroot, which grows in clusters of four to ten, parasitizes beech and oak roots for its carbohydrate energy. The pine cone-shaped plants blossom in early spring, but their withered, reddish-brown stalks don't decompose until the following spring. The other chlorophyll-free

plant is autumn coralroot, an orchid, which relies on fungal mycelium to obtain its energy and nutrients. Widely scattered in Northampton, autumn coralroot is most often found in rich, moist woodlands, especially along streams or near the base of boulders. Another plant known in Northampton from this slope alone is ovate-leaved ragwort (Senecio obovatus). Unlike its more familiar relative golden ragwort (S. aureus), this plant does not grow in wetlands but instead on well-drained, wooded slopes.

On this eastern slope, not far from the base of the talus, is the seepy swamp covered with thick, soft layers of saturated sphagnum moss and muck. Mini-upland islands support yellow birch (Betula lutea), red maple, black ash (Fraxinus nigra), tupelo (Nyssa sylvatica), and lots of hemlock. As you explore, you must duck and maneuver around clusters of winterberry (Ilex verticillata), spicebush (Lindera benzoin), witherod (Viburnum lentago) and mountain laurel.

At least three orchids are found in this swamp. Early coralroot (Corallorhiza trifida), a diminutive, yellowish-green orchid, blossoms in early May. One month later, purple-fringed orchid (Platanthera grandiflora) begins to bloom. Up to two feet in height and with a three-inch flower spike composed of dozens of lavender blossoms, this unmistakable orchid is one of New England's most beautiful wildflowers. The last of the three to bloom is the green wood orchid (Platanthera clavellata). Also small and with greenish-white flowers, it grows in sphagnum mats and is easily missed.

In early spring, this large swamp fills with rainwater and snowmelt. Underlain by the 350 million year old schists and gneisses that compose the surrounding hills, this depression is a likely breeding spot for four-toed salamanders, currently listed as special concern in the state and so far, unknown from Northampton.

There is minimal human impact on the Mineral Hills Conservation Area. The only infrastructure present is an established network of about two miles of trails for hiking, and an unfinished portion of Turkey Hill road. The trail system connects the Lapalme Section to the eastern edge of the Turkey Hill Section. Many of the trails follow ridgelines and offer picturesque views of distant summits. One trail follows the perimeter of an abandoned rock quarry with exposed rock faces and unique vantage points of the Holyoke Range. The trail system should be maintained but not be expanded to the habitat rich wildlife corridor on the western side of the Mineral Hills Conservation Area. Parking areas has been reserved at the trailheads on Sylvester and Turkey Hill Road.

The Mineral Hills Conservation Area is an exemplary habitat for wildlife. The dense forest cover of the relatively undisturbed conservation land provides shade and shelter for a plethora of diverse flora and fauna as described in the previous section. The Conservation Commission, by designation of the parcels to conservation land, has pledged to protect this land from any development or uses that would potentially disturb the natural habitat.

The Conservation Commission has set forth several standards for habitat protection of the Mineral Hills Conservation Area:

1. To build no new trails or roads on the western section of the conservation land
2. To acquire and annex more conservation land in order to expand habitat areas, wildlife corridors and passive recreation opportunities
3. To study the population and movement of wildlife within the conservation area, so as to make informed decisions on future land management strategies

The conservation land is designated as a "Natural Succession Forest". There is no formalized Forest Management Plan, rather natural disturbances and variances are allow the forest to evolve into natural habitat. At this time, forest clearing for additional trails or wildlife habitat improvement is not necessary.

Vernal Pools are a particularly sensitive habitat found in the Mineral Hills Conservation Area. There is one Massachusetts Certified Vernal Pool that is located adjacent to the quarry. There are other vernal pools that are located adjacent to the

properties that are either certified or potentially certifiable. The Massachusetts Wetlands Protection Act and the Northampton Wetlands Ordinance protect certified vernal pools at the state and local level. The conservation land protects the upland areas surrounding the vernal pool, areas critical for the survival of reptiles, amphibians and other wildlife. Many species spend most of their lives in the uplands within hundreds of feet of the pool. This particular area of Northampton potentially hosts the rare Jefferson's Salamander.

According to the Connecticut River Five Year Action Plan 2002-2007 developed by the Massachusetts Executive Office of Environmental Affairs, the City of Northampton lies in the central reach of the Connecticut River Watershed in Massachusetts. The property hosts the headwaters for Parsons Brook and the Mill River, which flow into the Connecticut River approximately 7 miles away. As a large tract of contiguous woodland and wetland within the watershed, the Mineral Hills Conservation Area promotes a safer and cleaner water supply. The dense forest cover and rich soils curb erosion and mitigate local flooding by absorbing and filtering rainwater and storing groundwater.

The Mineral Hills Conservation Area provides an opportunity to view and study wildlife amid the hills as well as the variety of forests that cover the property. Most of this benefit to the public is provided through access to the trail system throughout the area that is safe for visitors and economical for the town to maintain. Mineral Hill is the highest point of Northampton and provides a scenic vista overlooking the City, the Holyoke Range, the Connecticut River Valley to the East, and the Berkshires to the West. Passive recreational activities such as bird watching, hiking and nature explorations best describe the intended recreational uses for the Mineral Hills Conservation Area. By encouraging passive recreation within this large tract of wilderness, the Northampton Conservation Commission is providing opportunities to promote social bonds by uniting families and diverse recreation groups, encouraging cultural and ecological sensitivity, and supporting outdoor recreation groups within the City.

Although there are several access points through abutting parcels, the primary public access to the Mineral Hills Conservation Area is located off of Sylvester Road and Turkey Hill Road. To allow safe and convenient public access the Mineral Hills Conservation Area, a six vehicle capacity conservation and recreation use parking area has recently been developed off of Sylvester Road (next to Ryan Road). Additionally, on-street parking is available at the end of the paved area on Turkey Hill Road, providing another point of public access.

As outlined in the City of Northampton Open Space and Recreation Plan 2005-2010, the Northampton Conservation Commission, through the Office of Planning and Development, carries out management activities for conservation land owned by the City. The goals and objectives of the Open Space and Recreation Plan2005-2010 have been incorporated into the Mineral Hills Conservation Area Land Use and Management Plan.

The Northampton Conservation Commission's primary goal for the management of the Mineral Hills Conservation Area is to protect the landscape from development and large-scale human disturbances that would be detrimental to the integrity of the natural ecosystem. Management actions are limited to those that restore sections of the Mineral Hills to their natural state, improve wildlife habitat, or provide for generally non-consumptive enjoyment of the conservation area. The Mineral Hills Conservation Area is open for the use of the general public for non-destructive passive recreational and conservation purposes only. Recreational use of the property will be managed to minimize human impact on the native wildlife that use the property. Use will be encouraged on non-sensitive sites. This will minimize pressure on sensitive sites while accommodating current and projected recreational use.

The Conservation Commission is responsible for annual inspections of the property. At this juncture:

1. All property lines shall be walked and inspected for encroachment
2. All trails shall be inspected for trail

maintenance needs and marked as needed

3. Hazard trees on property shall be removed only if true hazard/liability exists
4. All trash shall be cleaned up
5. All signage shall be inspected and repaired or replaced as needed
6. The Conservation Commission shall create and update a conservation area map containing pertinent information for recreational users
7. The Conservation Commission shall evaluate and update the ecological assessment of the property. The Commission shall consider potential habitat improvements and restoration projects in the update.
8. The Commission shall evaluate the access areas and improve access whenever possible.

Staffing maintenance will average two days per year and total non-staff costs will average less than $500. Existing volunteer and city resources will be used for this work.

In compliance with the Open Space and Recreation Plan 2005-2010, The Conservation Commission has set forth a list of future improvements to enhance and further protect the Mineral Hills Conservation Area. They are as follows:

1. The Conservation Commission should locate and mark boundary lines at all major access points; to help avoid potential land disputes and to facilitate maintenance and wildlife management activities.
2. The Conservation Commission should work with the neighbors of the Mineral Hills Conservation Area to establish a volunteer group that will assist the Commission in managing the conservation area.
3. The Conservation Commission should explore the possibility of cost-sharing programs for trail and habitat improvements in the Mineral Hills Conservation Area.
4. The Conservation Commission should consider and research the option of developing a Forest and Habitat Management Plans for parcels within and abutting the current Mineral Hills Conservation Area.
5. The Conservation Commission and potential neighborhood group should maintain existing trails and create new trails, when appropriate, to facilitate access to and recreational enjoyment of the property. Trail construction shall have a minimum impact on the significant natural resources of the Mineral Hills Conservation Area.
6. The Conservation Commission shall explore the option of purchasing Right-of-Ways for additional trail access so that no single access point is overwhelmed and less vehicle trips are generated.
7. The Conservation Commission shall continue to work with wildlife management groups such as the Northampton Wildlife Committee to identify and protect key wildlife corridors and habitat areas.
8. The Conservation Commission shall work with neighboring communities to connect and preserve contiguous open space across political boundary lines.
9. The Turkey Hill Quarry possesses unique exposures of bedrock-the quarrying operations have uncovered a glacially smoothed surface that displays folded metamorphic rocks intruded by Williamsburg Granodiorite, an igneous rock. The Northampton Conservation Commission shall continue developing partnerships with Geologists from the five area colleges to research the unusual natural features of the quarry and to protect this area for future scientific study.

To encourage, education, recreation, and outreach to new users, trails heads are marked with wooden signs. The signs are consistent with the City of Northampton conservation area signage and are

installed at the Sylvester Road and Turkey Hill Road public access points  Aluminum signs stating "A cooperative project for conservation and outdoor recreation made possible by the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services Self-Help Program, the Citizens of Northampton and the LaPalme Family," have been attached to the wooden conservation area signs.

## Mineral Hills/Turkey Hills Conservation Restriction 29.4 acres

**Ownership:** Jedoron Realty

**CR:** City of Northampton and Town of Westhampton

**Zoning:** RR

**Location:** Turkey Hill, Westhampton

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/26/2007 | B8990, p33PB147, p58 | See also Mineral Hills Conservation Restriction and Mineral Hills Conservation Area | |

**Partners:** None

**Description:**

Public right of way on trail, Westhampton primary enforcement agency, Northampton as backup enforcement role.

## Parson's Brook Conservation Area 27.603 acres

**Ownership:** City/Conservation Commission

**Zoning:** SR

**Location:** The Plantations subdivision

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/20/2002 | | Council Resolution | |
| 7/2/2002 | B6703, p294 | Condition of Cluster Permit | |
| 3/10/2008 | Right-of-way B9415, p180 | | |

**Partners:** None

**Description:**

Small conservation area with opportunity for walking trails and includes frontage on Parsons Brook.

## Rainbow Beach Conservation Area 55 acres

**Ownership:** City/Conservation Commission

**Zoning:** SC

**Location:** Rainbow Rd, Connecticut River

**Parcel ID:** 33-27

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/28/1977 | B1966, p321 | Self-help, City | |

**Partners:** Management in cooperation with Memorandum of Agreement with the Division of Fisheries and Wildlife.

**Description:**

A conservation area covered with river bottomland hardwoods and a narrow beach area of river sediment deposits. This area is located along the Connecticut River and receives moderately heavy summer use (swimming and unauthorized camping) by motor boaters. This area is used for nature study and the floodplain forest and beach provide habitat for endangered plant and animal species.

This site is located between two riverfront parcels owned by the Massachusetts Division of Fisheries and Wildlife (20+ acre Rainbow Beach to the north and 15+ acre Shepard's Island to the south). To prevent illegal use, the Division of Fisheries and Wildlife gated Young Rainbow Road (the Conservation Commission has a key) and the Environmental Police have been active in preventing vehicles from driving in the conservation area. The Division has placed and is maintaining no vehicle and no camping signs.

The City-owned Rainbow Beach is slowly growing from river deposition. Mean accretion (deposition minus erosion) is 15 to 18 square feet per year (Anderson, Anthony. 1973. Vegetation Patterns and Fluvial Processes on a Connecticut River point bar. B.A. Thesis, Amherst College; Doherty, Adrian, Jr., 1974. Stratigraphy and Geomorphology of the Rainbow Beach Point Bar, BA Thesis, Amherst College). (Sheppards Island is also growing, but the state owned Rainbow Beach appears to have more erosion then deposition).

## Rainbow Beach/Shepard's Island 46 acres

**Ownership:** Massachusetts Division of Fisheries & Wildlife

**Zoning:** SC flood zone

**Location:** Connecticut River

**Parcel ID:** 33-30, 33-33

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/11/1974 | B1766, p44 | Shepard's Island, parcel 33-30 | 15 |
| 7/19/1989 | B3410, p194 | State Rainbow Beach, parcel 33-33 | 30.87 |
| 7/19/1989 | PB159, p97 | Survey of State Rainbow Beach | |

**Description:**

State Rainbow Beach: This is the northerly most section of the Rainbow Beach complex. It is managed primarily for endangered species by the Natural Heritage and Endangered Species Program.

City Rainbow Beach: This is the middle section. It includes a heavily used beach. It is managed by a cooperative agreement with the State Division of Fisheries and Wildlife.

State Shepard's Island: This is the southerly most section. It is dedicated to wildlife habitats. Once a former island, it is now a peninsula.

## Reservoir Complex

**Ownership:** City, Department of Public Works

**Zoning:**

**Location:** Various hill towns

**Parcel ID:**

**Description:**

Parcels include the reservoirs and much of the watershed lands. It is a site with future potential.

## Roberts Hill Watershed Conservation Area 12.553 acres

**Ownership:** City/Conservation Commission

**Zoning:** RR

**Location:** Kennedy Rd, Leeds

**Parcel ID:** 5-54

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/19/2004 | B8068, p162 | Lot 2, City Council resolution 11/24/2004 (as a donation of land) | |
| 11/12/2004 | B8062, p89 | Lot 4, City Council resolution 11/4/2004 (as a condition of a special permit) | |
| | PB 202, p24 | | |

**Partners:** Leeds Civic Association (informal arrangement)

**Signage:** None

**Description:**

This parcel includes uplands, wetlands, and a tributary of the Leeds Reservoir.

## Roberts Reservoir 57 acres

**Ownership:** City, Department of Public Works

**Zoning:**

**Location:**

**Parcel ID:**

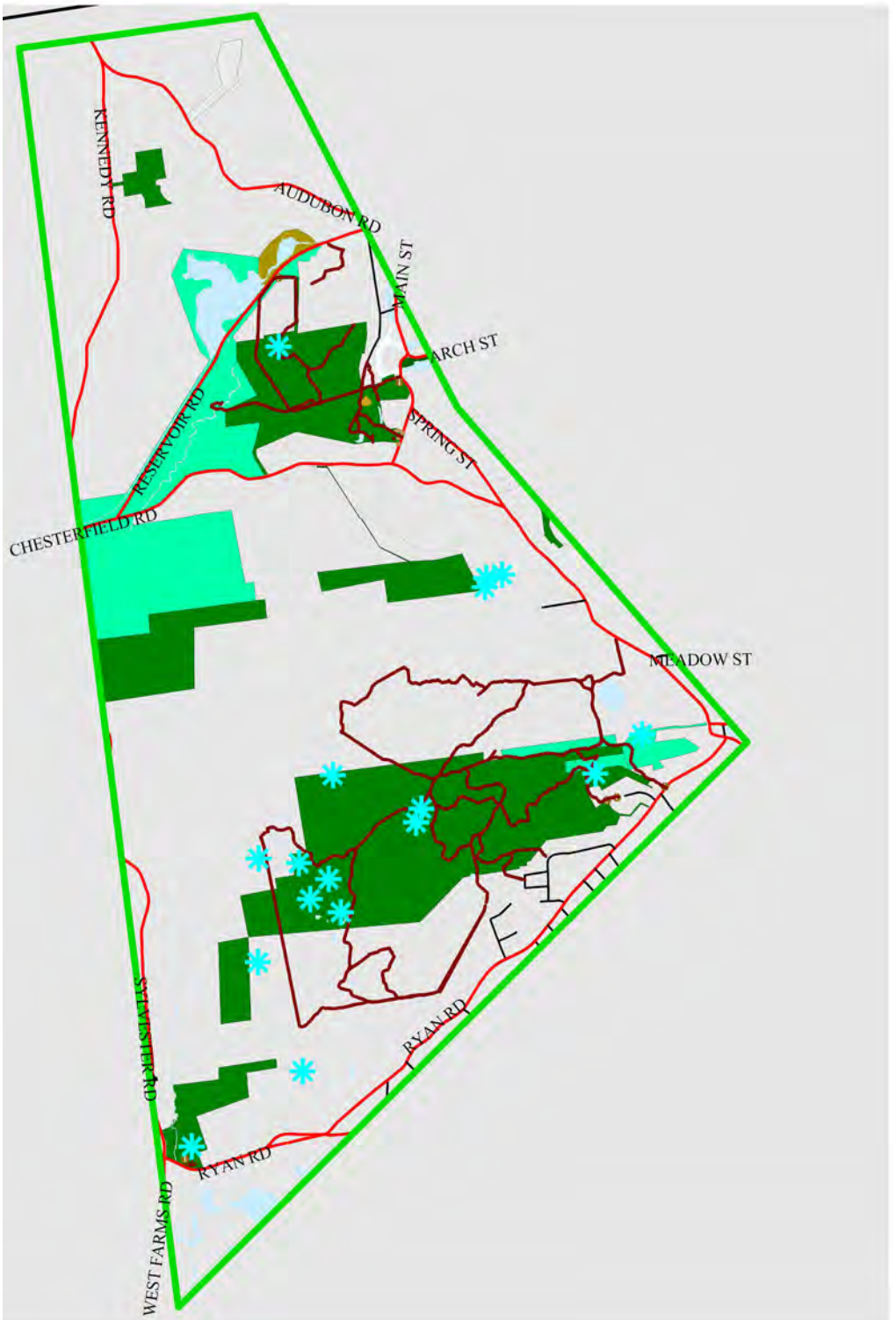
**Description:**

Land includes two “emergency” supply reservoirs (Upper Leeds Reservoir and the Roberts Meadow Reservoir) that are not on-line and much of the watershed.

## Saw Mill Hills Conservation Area (includes Roberts Hill Conservation Area) 639 acres

**Ownership:** City/Conservation Commission

# OVERVIEW OF SAW MILL HILLS CONSERVATION AREA



**Zoning:** RR & URA/WSP

**Location:** Avis Circle, Ryan Rd, Spring St, Chesterfield Rd, Mill River, Old Shepherd Rd, South Main St, Dimock Rd, Reservoir Rd, Kennedy Rd, & Leeds

**Parcel ID:** 5-54, 22-7, 28-55

**Acquisition history:**

### SAW MILL HILLS SECTION

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/20/1995 | B4759, p148 | Avis Circle, Towne donation with Avis Circle subdivision | 23.96 |
| | Laywers Title Insurance | Owner's policy, #13600110645 | |
| 11/28/1995 | B4781, p109 | Towne purchase mortgage release | |
| 7/13/1995 | PB178, 223 | Plan | |
| 2/9/1996 | B4822, p182 | Agreement | |
| 1/5/2000 | PB186, p97 | Plan | |
| 3/13/2000 | B5899, p311 | Donation with Avis Circle subdivision | 16.103 |
| | First American Title Insurance | Owner's policy, #20325612 | |
| 5/26/2000 | B5945, p231 | Cluster permit (Sienkiewicz 88 acres plus right-of-way) | |
| 6/9/2000 | PB187, p25 | Plan | |
| 7/7/2000 | B5979, p75 | Order of Taking, Ryan Rd ROW and Sienkiewicz purchase/cluster ($15,000 City and $5,000 Wharton Trust) | 88 |
| | B5984, p206 | Sienkiewicz purchase | |
| 7/14/2000 | B5984, p203 | Confirmatory deed for Ryan Rd ROW | |
| 12/2001 | B6137, p308 | Hawthorne taking | 44.742 |
| 3/21/2002 | B6641, p1 & 11 | Curran taking | |
| 12/27/2006 | B8991, p221 | Off Ryan Rd, Blobel Section | 22 |
| | B8991, p226 | $17,600 | |
| 1/15/2000 | B5864, p246 | Chesterfield Road, New Harmony donation | 28.079 |
| 8/1/2000 | Land Court B18, p65 | New Harmony donation | 3.93 |
| 3/29/2006 | B4851, p252 | Easement, right-of-way, donation in lieu of c. 61B right-of-first-refusal | |
| 12/2001 | B6492, p1 | Golden Drive, Donavan taking | 13 |
| 1/4/2002 | B6491, p334B6576, p83 | Fungaroli taking | 18.74 |
| 11/23/2004 | B8075, p165 | Boyle donation | 17 |
| 2/9/2007 | B9035, p317 | Sylvester Road, Jeep-Eater/Phone Line Parcel | 55 |
| 1/23/2009 | B9686, p204 | Sylvester Rd, Ryan Rd, Mielke purchase | 11.144 |
| 5/8/2009 | B9801, p177 | Houle purchase ($11,804 taking) | 17 |
| 9/1/2009 | B9953, p187 | Justin West purchase ($18,000) | 18 |
| | PB221, p34 | | |

**Partners:** Informal "Friends of the Saw Mill Hills"

**Description:**

This area has wooded land within Zone II and III of the City's drinking water aquifer, containing rich vernal pools (see Vernal Pools and Rediscovering Northampton). The conservation area includes a right-

of-way to Avis Circle and provides access to an eventual trail system through the Saw Mill Hills, possibly as part of a significantly expanded Saw Mill Hills Conservation Area. The Right-of-way from Chesterfield Road provides access to a detached section of Saw Mill Hills Conservation Area. A Right-of-Way from Spring Street provides additional access. A Forest Stewardship Plan has been prepared for a portion of this area (see management section).

Blobel section: Key portion of wildlife corridor connecting Saw Mill Hills with Parsons Brook and with Mineral Hills. DPW holds a reservation from Article 97 that allows them to develop a water tank on the property on not more than five acres of the site within the next couple of years if they repay the Conservation Fund all of the funds used to purchase the parcel.

### ROBERTS HILL SECTION

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 2/26/1976 | B1840, p162B1874, p21 | Roberts Hill, self-help, City (1976), land swap (1981) | 96 |
| 3/15/1977 | B1939, p323 | | |
| 3/31/1982 | B2265, p190 (except for B2217, p99) | Chesterfield Road land swap | |
| | PB171, p51 | | |
| 11/4/1991 | B3821, p50 | Roberts Hill Overlook, eminent domain (1991) | 8.128 |
| | PB172, p32 | | |
| 6/1/1992 | B3963, p250 | Trail to Reservoir Road (Escrow for taking of Roberts Hill to be released 11/1994, Ledger Land Acquisition Account), bargain sale acquisition (5/29/1992) | |
| | PB173, p119 | | |

**Partners:** Leeds Civic Association

**Signage:** "Roberts Hill Conservation Area, City of Northampton" installed on Main St (1990)

**Description:**

This large wooded hill includes cliffs with spectacular views overlooking the Leeds Reservoir (Roberts Hill Overlook, purchased 1991), large amounts of upland forest, and frontage on the Mill River, Water Street, Main Street, Chesterfield Road, and Reservoir Road. It has two small ponds, a stream and a diverse forest. It provides a linkage between the Leeds Reservoir Watershed and swimming area and the Mill River and Look Memorial Park. In 1986, the area was selectively cut to promote and create preferred wildlife habitats. There are several foot trails on the property. The use of the area is moderate. Snowmobiles are permitted only on marked trails approved for use by the Conservation Commission. Trees on Roberts Hill were damaged by a fire (c. 1985) and are now providing wildlife habitat.

Howard's Ice Pond Dam (DCR No. 2-8-214-8) is classified by the Department of Conservation and Recreation Office of Dam Safety as a "low hazard" dam. The City completed a significant reconstruction of the dam and spillways in 1999, using both City funds and Department of Conservation and Recreation Lakes and Ponds funds. The Department of Conservation and Recreation awarded $8,000 in grant funds and the City of Northampton paid the remaining $8,700. A total of $13,500 was used for construction and the remaining $3,200 was used for design, inspection and permits. On January 14, 2004, the Office of Dam Safety determined that the dam is no longer under DCR jurisdiction under MGL C. 253 s 44-48, as amended in 2002, meaning that there are no on-going reporting requirements, as long as the dam continues to be properly maintained.

### ROBERTS HILL CONSERVATION RESTRICTION 0.6 ACRES

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/18/2006 | B8983, p250 | Donation in return for City, waiving Chapter 61 right-of-first refusal | |
| | Mortgage subordination B8983, p262 | | |
| | PB211, p93 | Survey | |

**Partners:** None

**Description:**

A conservation restriction and public right-of-way on Reservoir Road located near Roberts Hill Conservation Area. CR and ROW does not abut Roberts Hill or Water Street but is close to both and may someday connect to both.

## State Hospital Agricultural Land—Drumlin and Mill River 309.9 acres (37 with conservation restrictions & ROW)

**Ownership:** Fee—Massachusetts Department of Agricultural Resources

Agricultural Preservation Restrictions on entire parcel—City (enforced by Conservation Commission) & DAR (joint ownership)

Management, 25 year lease, renewable 3 times to Smith Vocational School—DAR oversees management

**Zoning:**

**Location:** Mill River, Burts Pit Road

**Parcel ID:** 30D-7, 30D-13, 37-56

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1800s | | Land | |
| 1983 | Chapter 568 | Acts of 1983 | |
| 1984 | | Land transfer to DAR | |
| 9/13/1989 | PB163, p46 & 47 | Plan | |
| 5/7/199<br>05/23/1990 | | APR & CR restrictions donated by state | |
| 5/15/1990 | B3561, p285 | APRO & ROW on main farm | 273.9 |
| 5/30/1990 | B3568, p153 | CR & ROW on drumlin & along river | |
| 2/21/2007 | B9046, p28 | Care & Control Agreement on 36 acre parcel opposite jail | 36 |

**Description:**

The entire property has agricultural preservation restriction (APR) with a conservation easement and public right-of-way within 100 feet of Mill River and south of Burts Pit Road on the "drumlin" above 265 feet mean sea level. Northampton holds and enforces these restrictions. A rich wetland complex exists near the Mill River. Ground-nesting birds, including the Grasshopper Sparrow (listed as a special concern), nest in the spring and summer on the drumlin. The Massachusetts Audubon Society conducted

a bird census to identify nesting birds in 1990. The fields/woods edge provides excellent Bluebird habitat. Arcadia placed one Bluebird box on the drumlin in 1990, which may now be missing. The Conservation Commission placed 10 more Bluebird boxes in the woods in 1993.

## Spring Street Well/Aquifer Area 31.56 acres

**Ownership:** City, Department of Public Works

**Zoning:** HB, GI, & URB

**Location:**

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/19/1952 | PB40, p65 | | |
| 10/15/1952 | PB41, p55 | | |
| 11/6/1990 | PB168, p106 | | |
| 12/31/1990 | B3667, p67 | As well as previous takings and purchases | |
| 1991 | | Disclosure | |

**Description:**

Parcels include the Spring Street wellhead and much of the Department of Environmental Protection aquifer Zone I. It also contains a small part of Zone II. The parcel serves as water supply protection.

## West Farms Conservation Area (includes the Ridge Conservation Area) 55.4 acres

**Ownership:** City/Conservation Commission

**Zoning:** SR (West Farms), RR (The Ridge)

**Location:** Off Glendale Rd, Westhampton Rd (Rt 66), Ridge View Rd, & Drury Ln

**Parcel ID:**

**Acquisition history:**

Taking purchase as part of limited development/landfill buffer; paid by CDBG (affordable housing and cluster related open spaces) and Landfill enterprise (landfill buffer)

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/2/2001 | B6137, p317 | West Farms initial taking | |
| 3/2/2001 | B6137, p327 | West Farms initial confirmatory deed | |
| | B___, p___ | Market rate lot sold (City still retains one building lot for future sale) | |
| 4/8/2003 | B7133, p23 | Comprehensive permit | |
| 4/8/2003 | PB195, p98 | | |
| 5/23/2003 | B7241, p206 | Surplus parcel to Nancy L. Kingsley | |
| 6/2/2003 | B7231, p15 | Surplus parcel to Leona V. Pakutinski | |
| 6/2/2003 | B7231, p19 | Surplus parcel to Maris and Peter Ludwig | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/2/2003 | B7231, p1 | Surplus parcel to Donald and Norma Sadusky | |
| 6/23/2003 | B7271, p216 | West Farms transfer to the Conservation Commission | |
| 6/27/2003 | B7282, p237 | Surplus parcel to Darleen and Edward LaFond | |
| 7/28/2003 | B7347, p320 | Affordable housing to Habitat for Humanity with septic system easement | |
| 5/25/2005 | B8273, p166 | Recreation parcel to Recreation Commission | |

**Description:**

This is Conservation land with a simple trail from Glendale Road to the Recreation Area off Route 66.

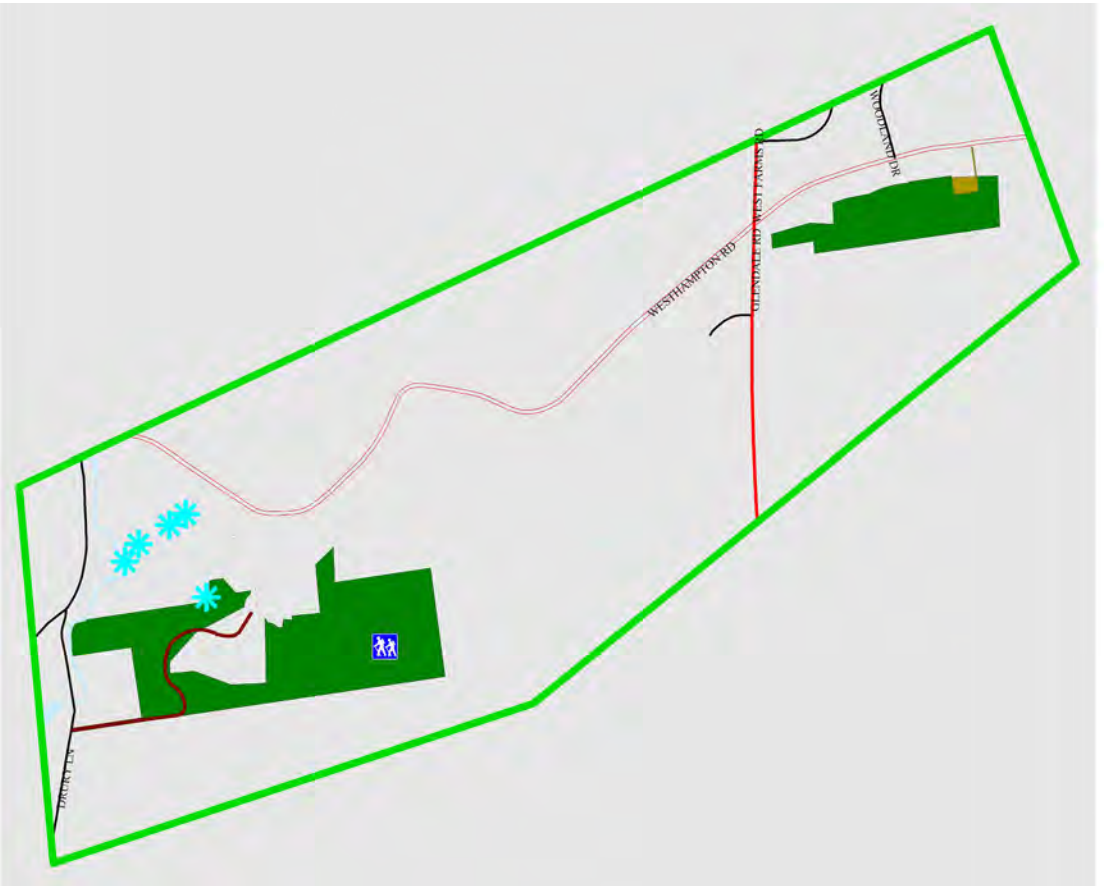
### THE RIDGE CONSERVATION AREA

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/31/2005 | B8281, p88 | Transfer to City, donation as condition of the Ridge cluster subdivision approval | |
| | PB205, p71-86, 205 | | |
| | PB205, p75-77 | Survey of conservation area | |
| 12/9/2005 | B8550, p220 | City Council resolution authorizing transfer | |

**Partners:** None

**Description:**

**OVERVIEW OF WEST FARMS CONSERVATION AREA**



Conservation area includes walking trails that will eventually be linked to abutting property. Developer is responsible for building the trails with the City through the Office of Planning and Development, retaining the right to extend the trail to the easterly property boundary. Subject to City of Northampton, holding the right to build multi-use trail across the property (which is consistent with the City Transportation Plan).

# B: Conservation and Agriculture—Private

## Atwood Drive Conservation Restriction 8.019 acres

**Ownership:** Fee: private (O&S Partnership), no public access

**Protection:** Conservation restriction, City of Northampton through the Conservation Commission

**Zoning:** SC

**Location:** Off Atwood Dr.

**Parcel ID:** 46-012-001

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 9/22/1999 | B5796, p82 | CR retained by City when parcel sold as surplus unnecessary for City needs. | 8.019 |

**Description:**

Property is in the 10-year flood plain of the Connecticut River and contains sensitive wetlands.

## Audubon Road Conservation Restriction 9.75 acres

**Ownership:** Jane (McClellan) Hill

**Protection:**

**Zoning:**

**Location:** Abutting Audubon Rd & Day Book

**Parcel ID:** 05-59

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/2/2009 | B9773, p30 | Jane (McClellan) Hill donated CR | 9.75 |
| | PB220, p63 | | |

## Bear Hill Recreation Area

**Ownership:** Bridge Road LLC

**Zoning:** URA

**Location:** Bridge Rd on west side of JFK Middle School

**Parcel ID:**

**Acquisition history:**


| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/12/2006 | B8791, p28 | Related to permit condition for Bear Hill | |
| | PB211, p51 | | |

**Description:**

Common space managed and controlled by the Northampton Conservation Commission. Active recreation open space managed and controlled by the Northampton Recreation Commission.

Property provides recreation field, sledding hill, and undisturbed natural space. It surrounds the Bear Hill Estates housing project.

## Beaver Brook Conservation Restriction 40.95 acres

**Ownership:** City of Northampton Conservation AND Beaver Brook Nominee Trust

**Protection:** Conservation restriction, Conservation Commission

**Zoning:** URA & SR

**Location:** Route 9 & Grove Ave

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/26/2007 | B9109, p58 | CR acquired through open space requirement. | 40.95 |

**Description:**

Land contains rare species habitat. See also rail trail easement under rail trail entry.

The Beaver Brook Conservation Area (acquired 2009) includes 25.43 acres. The remainder is owned by the Beaver Brook subdivision, although subject to the CR.

## Burt's Pit Road Conservation Restriction — 2.16 acres

**Ownership:** Elaine Boetlcher

**Protection:** Conservation restriction, Conservation Commission

**Zoning:** SR

**Location:** Off Woods Rd & Burts Pit Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/12/2000 | B5981, p388<br>ARE YOU SURE THIS IS RIGHT? I CAN'T FIND IT ON REGISTRY OF DEEDS | CR retained by City when parcel sold as surplus to City needs | 2.16 |

**Description:**

Land contains valuable wetlands.

## Dunphy Drive/White Oak Easement — 0.1 acres

**Ownership:** Private

**Protection:** Conservation restriction, Conservation Commission

**Zoning:** SR

**Location:** Between Dunphy Dr and Westhampton Rd/Rt 66

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/9/2003 | B7245, p275 | Donated as condition of special permit (4/30/2003) | 0.1 |
| | PB196, p10 | | |

**Description:**

Easement is a short walking trail easement to connect these two streets.

## Fitzgerald Lake Conservation Restrictions — 58.5 acres

**Ownership:** Fee: private (Anciporch & Lathrop—no public access; Robinson—limited public access)

**Protection:** Lathrop & Robinson—Conservation restriction, City

Anciporch—Forest Legacy Conservation easement, USFS

**Zoning:** RR

**Location:** Boggy Meadow Rd & Coles Meadow Rd

**Parcel ID:** 18C-141

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/25/1991 | B3696, p9 | CR, Lathrop (permit condition) | 14 |
| 12/4/1995 | B4785, p150 | Conservation easement, Anciporch (held by US Forest Services) | 36 |
| 2/4/2005 | B8155, p50 | Lathrop, boundary line agreement | |
| 2/4/2005 | B8155, p56 | Lathrop, partial bank release | |
| 2/4/2005 | PB152, p36 | Lathrop, partial survey | |
| 1/4/2006 | B8579, p1 | CR #32, Robinson, (donation for waiver of right of first refusal) | 8.54 |
| | PB208, p91 | Robinson, survey | |

**Description:**

Lathrop land remains privately owned with no public access, but the conservation restriction prevents its development. The property protects sensitive stream and riparian environments from development. The Conservation Commission has the right to enforce restriction.

The Robinson CR is primarily intended to preserve Hatfield's water supply and Fitzgerald Lake area wildlife habitat. Parcel is landlocked, but the CR grants the City a right for defined walking trails on the property if the City ever acquires rights for a trail to the edge of the property.

The Anciporch conservation easement on forest and wetland has no public right of way. This parcel is key to the ecological protection of the Fitzgerald Lake Conservation Area. Although in a different drainage basin than most of the conservation area, it contains the headwaters of a stream that has caused serious flooding in the past and contains a large productive wetland.

## Ice Pond Conservation Area Conservation Restriction 3.2 acres

**Ownership:** Fee: Private (various lot owners)

**Protection:** Conservation restriction, City of Northampton through its Conservation Commission

**Zoning:** SR

**Location:** Westhampton Rd (Rt 66) & Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/9/2003 | B7581, p214 | Mortgage subordination | |
| 11/3/2003 | B7581, p183 | Donation as condition of cluster special permit & subdivision | |

**Description:**

Discontinuous holdings fill some of the gaps in the abutting Ice Pond Conservation Area. The public has full rights to cross property, and the Conservation Commission has full rights to build trails without restriction.

## Meadows Conservation Area Restrictions 5.36 acres

**Ownership:** Private

**Protection:** Conservation restriction, City of Northampton through its Conservation Commission

**Zoning:** URB

**Location:** 1 Venturers Field Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/15/2007 | B9234, p324 | Montview/Venturers Field Rd in consideration of an access easement | 2 |
| | B9234, p339 | Easement | |
| | PB215, p91 | | |
| 2/23/2009 | B9712, p317 | Venturers Field Rd CR—North of Dike, east of Venturers Field Rd | 3.56 |
| 5/8/2009 | B9801, p177 | Hockanum Rd—currently held in fee by Conservation Commission, will be surplused & APR/CR only held ($30,358) | 2 |

## Mill River Greenway Conservation Restriction and ROW

**.3 acres**

**Ownership:** Fee: Private (Valley Community Development Corporation)
Bloomberg (right-of-way held by Smith College & public)
Futter

**Protection:** Conservation restriction, right-of-way, Conservation Commission

**Zoning:** URC

**Location:** Off Michelman Ave on historic Mill River

**Parcel ID:** 31C-11, 31C-12, 32C-141

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/20/1975 | B1855, p121 | Right-of-way on private land (parcel 31C-11) | |
| 4/3/1990 | B3541, p87 | Donation, Historic Mill River Greenway | 0.3 |
| 4/3/1990 | PB163, p48 | Survey of Historic Mill River Greenway | |
| 12/3/2002 | B6914, p135 & 137 | Historic Mill River Greenway | |
| 12/3/2002 | PB194, p63 | Survey of Historic Mill River Greenway | |

**Description:**

A right-of-way and conservation restriction was granted for the historic Mill River frontage adjoining Mill Bank II condominiums. Title to the original CR and easement were lost by foreclosure, but a new CR was granted in 2002.

Deed restrictions providing right-of-way exist in some of the properties along the eastside of the Mill River between Federal Street and the Smith College campus.

## Mineral Hills/Marble Brook Conservation Restrictions

### 292.8 acres

Ownership: Private: John & Diana Clapp (55.79 acres); Miriam L. Clapp (57.922 acres); Joanne Bessett (11.11 acres); Christine & George Guyette, Elizabeth & Garry Anderson (168 acres)

**Protection:** Conservation restrictions

Clapp & Bessett: City of Northampton through Conservation Commission

Guyette & Anderson: City of Northampton through Board of Public Works

**Zoning:** RR & water supply protection

**Location:** Chesterfield Rd & Turkey Hill Rd

**Parcel ID:** 20-2 (John & Diana Clapp); 28-067 (Bessett); 20-04 (Miriam L. Clapp); 14-20 (Anderson)

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/11/2006 | B8976, p111 | John & Diana Clapp—consideration $18,000 ($10,185 Nonotuck Land Fund, $7,815 City for Chapter 61 tax Rollback) | 20 |
| | B8976, p128 | Mortgage subordination of John & Diana Clapp | |
| | PB215, p82 | Survey of John & Diana Clapp CR | |
| 8/17/2007 | B9237, p297 | CR #40, $27,500 Nonotuck Land Fund, $4,000 City of Northampton | 35.79 |
| | B9237, p312 | Mortgage subordination of John & Diana Clapp | |
| 6/27/2007 | B9177, p253 | Miriam L. Clapp—$52,129 from contributions & previous grants on hand | 57.922 |
| | B5454, p218 | Fee interest in parcel remains w/Miriam Clapp | |
| 6/4/2008 | B9503, p298 | Kohl CR--$40,000 (self-help & CPA) | |
| | PB218, p38 | Kohl Survey | |
| | B9503, p296 | Kohl self-help agreement | |
| 4/14/2010 | B10147, p238 | Christine & George Guyette, Elizabeth & Garry Anderson to Nonotuck Land Fund—consideration $134,720 ($118,600 from Community Preservation Act) | 168 |
| 4/14/2010 | B10147, p255 | Assignment of Guyette/Anderson CR to City of Northampton Board of Public Works | |

**Description:**

Public access is allowed freely on the Miriam Clapp CR. Very limited public access is allowed by the John and Diane Clapp CR. Conservation Commission regulations should prohibit public access on the John and Dianne Clapp CR because public access on the Miriam Clapp CR has less impact on farming and on the Clapp family.

The Marble Brook (Guyette/Anderson) conservation restriction is north of Chesterfield Road. No public access. Nonotuck Land Fund reserves right to lead public hikes.

## Northampton Housing Authority/HAP, INC Easement

**Ownership:** Private

**Protection:** Easement, City of Northampton/Planning Board

**Zoning:**

**Location:** Along Mill River between West St & Smith College Athletic Fields

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B183, p3 | NOTE: THIS DID NOT SHOW UP ON THE REGISTRY OF DEEDS! | |
| 10/17/2006 | B8915, p106 | Easement | |

**Description:**

Donated as a condition of a Special Permit (7/20/2006). The Housing Authority Board voted on 10/16/2006 to grant an eight-foot easement over the easterly most portion of an existing paved driveway that runs north from West Street.

## The Oaks Conservation Restriction & Right of Way 30.28 acres

**Ownership:** Private

**Protection:** Easement, City of Northampton

**Zoning:**

**Location:** Burts Pit Road

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/3/2007 | B9222, p337 | CR | |
| 8/3/2007 | B9222, p355 | Mortgage subordination | |

**Description:**

Public access allowed. The City has right to develop walking trails anywhere in conservation restriction. The City also has the rights to develop a bike path within the trail easement area. Please see the Conservation Restriction for more information.

## Park Hill/Parson's Brook Conservation Restriction 227 acres

**Ownership:** Fee: Private—no public access

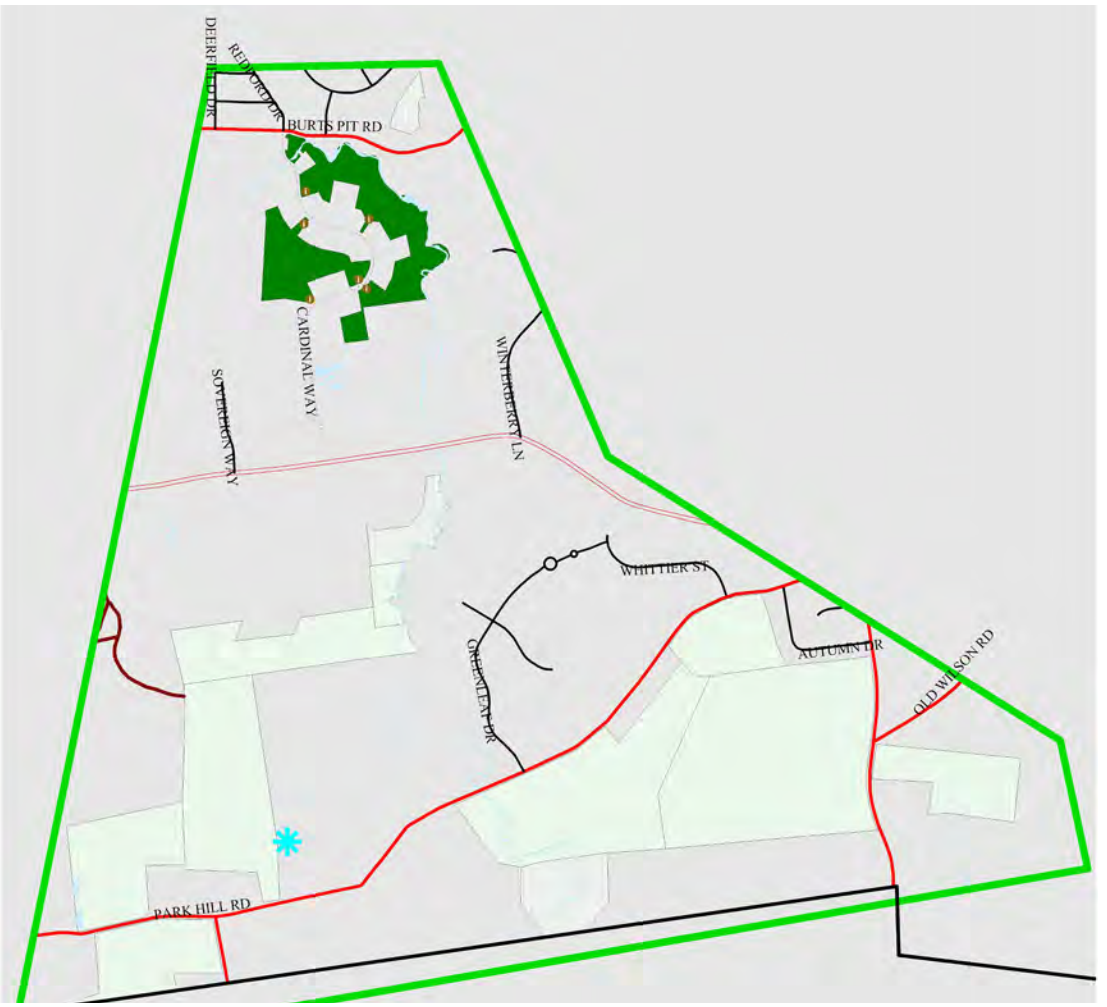
**Protection:** Lathrop, Gray/Peppard, & Jewett/Pinkham—Conservation restrictions, City

Kidder & Micka—Agricultural protection restrictions, jointly by City & Massachusetts Department of Agricultural Resources

**Zoning:** SR

**Location:** Park Hill Rd, Westhampton Rd, & Florence Rd

## OVERVIEW OF PARK HILL/PARSON'S BROOK CONSERVATION AREA




**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | APR, Adams by Department of Agricultural Resources | 72 |
| 3/3/1986 | B2685, p193 & 196 | APR, Kidder | 47 |
| 3/23/1990 | B3535, p323 | Kidder | |
| 8/5/1998 | B5449, p275 | APR, Valley Land Fund & City ($450,500) | 38 |
| 6/24/2000 | B5964, p254 | Assignment VLF to OFA, Department of Agricultural Resources purchased Valley Land Funds interest ($408,450) | |
| 12/22/2000 | B6093, p296 | APR, Gray/Peppard (donation) | 30 |
| | PB187, p253 | Survey, Gray/Peppard | |
| | B6093, p305 | Mortgage, Gray/Peppard | |
| | B6093, p317 | Restrictions, APR & Deed to Gray/Peppard | |
| 1/5/2001 | B6100, p298 | Gray/Peppard, deed & mortgage release, $225,000 | |
| 2/1/2001 | B6119, p264 | APR, Assignment of co-holding to Department of Agricultural Resources | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B6117, p265 | Affidavit & appraisal | |
| 12/20/2001 | B6472, p277 | CR, Gray/Peppard, et al (donation) | 23.203 |
| | PB190, p114 | Survey, Gray/Peppard, et al | |
| 2/4/2005 | B8155, p57 | Lathrop, non-financial consideration (boundary line agreement elsewhere) | 11.215 |
| | PB204, p22 | Survey, Lathrop | |
| 4/21/2010 | PB10153, p116 | CR #45, Jewett and Pinkham (permit condition) | 5.722 |

**Abuts:** Abuts additional acreage in Easthampton

## Round Hill Conservation Restriction — 15,000 square feet

**Ownership:** Private

**Protection:** Conservation restriction

**Zoning:** 46 Round Hill Rd

**Location:**

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/15/2007 | B9234, p343 | CR | |
| | B9235, p1 | Subordination | |
| | PB214, p7 | | |

## Rocky Hill Cohousing Conservation Restriction — 10.27 acres

**Ownership:** Rocky Hill Cohousing (see separate trail easement)

**Protection:** Conservation restriction, City

**Zoning:** SR

**Location:** Off Florence Rd

**Parcel ID:**

**Acquisition history:**

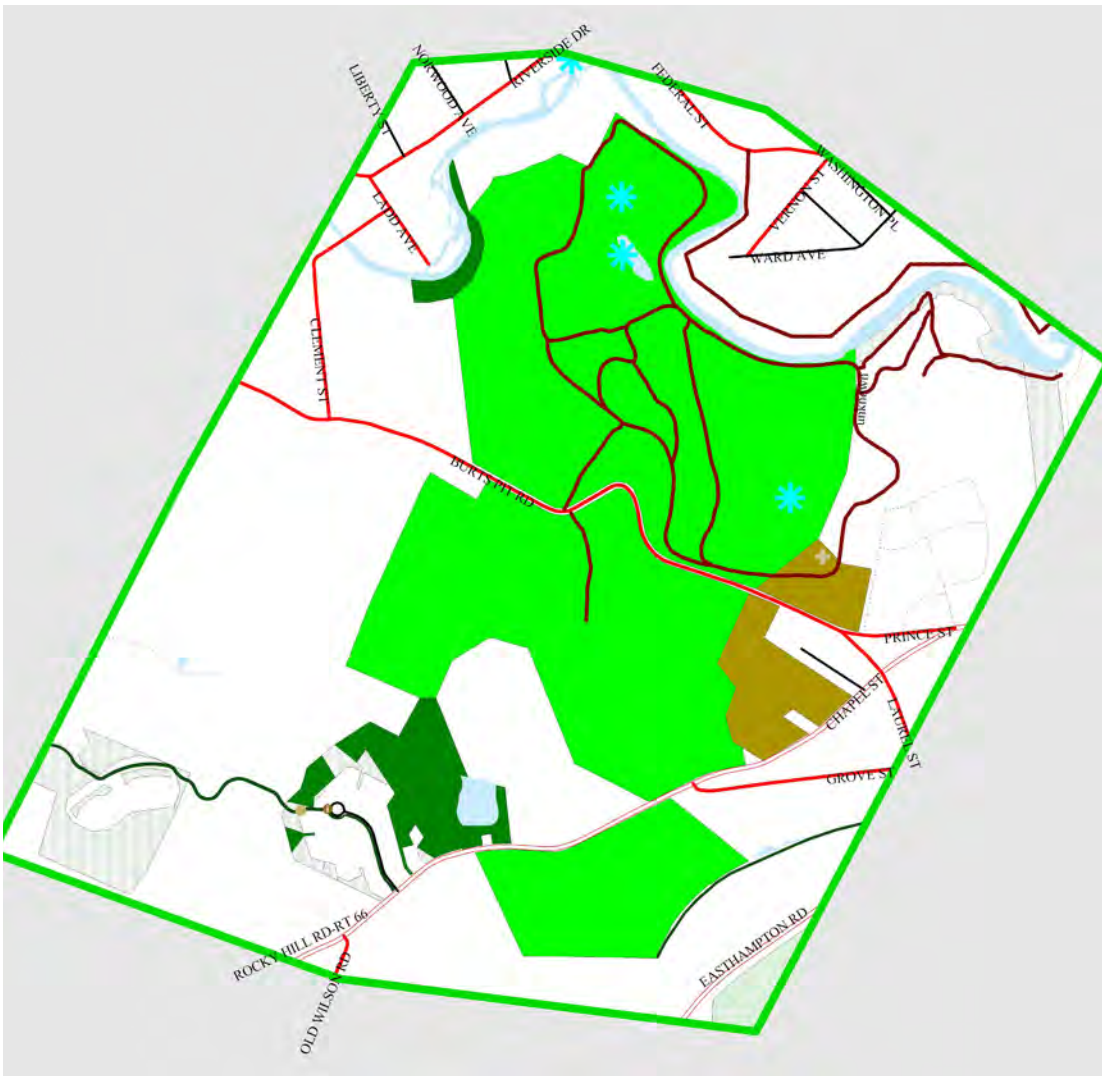
| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/29/2004 | B8082, p261 | Donation as condition of cluster subdivision approval | |
| | B8082, p274 | With subordination | |
| | B8166, p227 | Conservation deed restriction on lot 8 | |

**Abuts:** Pathways Cohousing trail easement

## State Hospital Agricultural Land—Drumlin & Mill River — 332 (37 with conservation restrictions and right-of-way) acres

**Ownership:** Massachusetts Department of Agricultural Resources

## OVERVIEW OF STATE HOSPITAL CONSERVATION AREAS




Trustees of Smith College (Hospital Hill)

**Zoning:**

**Location:**

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/31/1997 | PB183, p1 | Survey of Smith College conservation easement | 20.1 |
| | B5900, p23 | **NO ENTRY RECORDED ON WEBSITE (Smith College)** | |
| 3/29/2000 | B5898, p39 | Conservation restriction on Mill River parcel | 8.1 |
| 3/29/2000 | PB183, p1 | Survey of Mill River parcel | |
| 12/10/2002 | B6925, p302 | Fee interest to Hospital Hill LLC, Mill River parcel | |

**Description:**

Agricultural Preservation Restrictions on entire parcel and conservation restriction and ROW on 37 acres.

City (enforced by Conservation Commission) and DAR (joint ownership).

See full entry under "Permanently Protected Conservation, Park or Agricultural Land—State Land" for more information.

## State Hospital/Hospital Hill 20.1 acres

**Ownership:** Trustees of Smith College

**Protection:** Open-space restriction & right-of-way

**Zoning:**

**Location:** Hospital Hill, West St (Parcel K)

**Parcel ID:**

## State Hospital/Mill River 8.1 acres

**Ownership:** Commonwealth of Massachusetts, Department of Capital Asset Management

**Protection:** Conservation restriction & right-of-way

**Zoning:**

**Location:** Mill River, behind main State Hospital campus, area L-1 & L-2

**Parcel ID:**

**Abuts:** State Hospital agricultural land conservation restriction & Smith College open-space restriction

## Seven Bravo Two/Northampton Airport Conservation Restriction 3.82 acres

**Ownership:** Seven Bravo Two, LLC

**Protection:** Conservation restriction, City/Conservation Commission

**Zoning:** Special conservancy

**Location:** Riverbank Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/5/2005 | B8332, p130 | Boundary line agreement | |
| | B832, p148 | Conservation restriction | |
| | B8332, p162 | Subordination agreement | |
| | PB29 & 204, p83 | | |

**Description:**

There is a conservation restriction on the parcel of land abutting the Connecticut River. Property owner retains the right to build a dock on the river.

# C: Parks and Recreation—Public

Properties acquired for park and recreation purposes are considered permanently protected properties. They can be sold with City Council and, in accordance with Article 97 of the Constitution of the Commonwealth of Massachusetts, state legislature approval. Some of the recreation areas listed below may have been purchased for non-recreation uses and then converted to recreation areas. These areas would not have the protection provided by Article 97 of the Constitution.

## Agnes Fox Field Recreation Area — 1.61 acres


**Ownership:** City

**Management:** Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** URC

**Location:** State St, Church St

**Parcel ID:** 24D-120

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/17/1995 | B1195, p81 | Deed from Bishop of Roman Catholic Church. Property reverts to Church if no longer used for recreation. | |

**Equipment:** Grassed play area, basketball court, restroom building, playground equipment

**Description:**

The grassed play area covers a large part of the site. This area is heavily used by local residents.


## Arcanum Field Recreation Area — 8.49 acres

**Ownership:** City

**Management:** Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** URA

**Location:** Bridge Rd, N. Farms Rd, & Mountain St

**Parcel ID:** 12C-19

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/25/1957 | B1252, p404 | Urban self-help project agreement B | |

**Equipment:** 2 ball diamonds, soccer field, field house, all-purpose paved area used for basketball, street hockey, dances, playground equipment

**Description:**

Arcanum is a heavily used year-round recreational area.

## Childs Park — 30 acres

**Ownership:** Childs Park Foundation, Inc.

**Zoning:** URA

**Location:** North Elm St, Woodlawn Ave, Prospect St

**Parcel ID:** 24C-193

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1951 | B1103, p147 | | |

**Description:**

This heavily used park is located close to downtown and densely populated residential areas. It is beautifully landscaped (trees, shrubs, flowers, rose garden) and has a scenic drive winding through it. There are two large open spaces as well as a large wooded area. There are no picnic or garbage facilities at this site. Except for running, most active sports are prohibited.

## Childs City Park

**Ownership:** City, School Committee

**Location:** Elm St & North Elm St (near Northampton High School)

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Will of Annie Childs, Article Fifth | |
| 8/21/2008 | | City Council Resolution on management of park | |

**Description:**

Small, triangle shaped island between High School and Elm Street. This is owned by the City and is separate from the privately owned Childs Park across Elm Street.

## Community Gardens, Northampton State Hospital 8.086 acres

**Ownership:** City (acquired by Parks & Recreation, subject to Article 97)

**Management:** Northampton Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** RR

**Location:** Burts Pit Rd

**Parcel ID:** 30D-7

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1994 | Ch. 86 & 307 | The acts of 1994, Parcel G, Northampton State Hospital | |
| 12/9/1998 | B5558, p13 | Parcel G, Northampton State Hospital | |
| | PB183, p1 | | |

**Description:**

Heavily used community garden. Site does not have rich agricultural soils, but soils have been worked as gardens for many years (being part of the State Hospital operation prior to becoming a community garden). They provide excellent gardening space. Although most gardeners who request plots can be accommodated, the best plots go very quickly. An easement retained by the Commonwealth would allow the right of access across the community gardens but only in a location approved by the City.


## Elwell State Park 3.2 acres

**Ownership:** Massachusetts Department of Conservation Resources

**Zoning:** HB, GI, & URB

**Location:** Damon Rd, Bates St, & Woodmont Rd

**Parcel ID:** 25A-14, 25A-16, 25A-17, 25A-168

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/30/37 | B926, p285 | Parcel 25A-16 | 0.872 |
| 9/18/1978 | B2055, p145 | Parcel 25A-14 | 1.347 |
| 1/12/1968 | PB92, p64 | Survey of what became Elwell State Park | |
| 3/25/1985 | B2546, p132 | Parcel 25A-168, | 0.055 |
| 12/22/1987 | B3109, p88 | Land lease from Hampshire County to Commonwealth of Massachusetts | |
| 9/15/1988 | B3255, p311 | Parcel 25A-17, order of taking of parcel land situated on corner of Bridge St and Damon Rd | 0 |
| 6/18/1992 | | City Council approval of state eminent domain taking of Cichy parcel | 0.5 |

**Description:**

Includes boathouse, wheelchair accessible dock on the Connecticut River, parking lot, access to the Norwottuck Rail Trail, and access to the Trail's most spectacular feature, the bridge across the Connecticut River.

## Gothic Street Pocket Park — 0.15 acres

**Ownership:** Fee: Gothic Street Condominium Association

**Easement:** Northampton Recreation Commission

**Zoning:** URC

**Location:** Gothic St

**Parcel ID:** 31B-230

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1/27/1993 | B4137, p116 | CR | |
| | Doc #93-02065 | | |
| | | Special permit to Gothic St Development Partnership | |

**Description:**

Recreation Easement allows public to pass through as well as passive recreation during daylight hours. Recreation Commission has no responsibilities except enforcement.

## Halligan-Daley Historical Park, Northampton State Hospital — 0.5 acres

**Ownership:** City, under care & custody of Recreation Commission (acquired for Parks & Recreation, subject to Article 97)

**Management:** Recreation Commission & St. Patrick's Association

**Maintenance:** DPW, Recreation Division, & St. Patrick's Association

**Zoning:** URB/Planned Village

**Location:** Prince St, Rt 66

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1994 | | Acts of 1994 | |
| 12/9/1998 | B5558, p19 | | |

## Look Park — 157 acres

**Ownership:** City (acquired for Parks & Recreation, subject to Article 97)

**Management:** Trustees of Frank Newhall Look Memorial Park

**Maintenance:**

**Zoning:**

**Location:** Rt 9, Mill River

**Parcel ID:** 16A-2, 16B-41

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/4/1928 | B846, p532 | Original grant | |
| 11/20/1973 | B1745, p309 | RR acquisition | |

**Funding:** Core park donated with endowment

Federal Land & Water Conservation Fund (#25-00188 Look Park Comfort Station, #25-00304 & 00326 Look Park Improvements Phase I & II)

Property subject to MA Article 97 & Federal FLWCF Act 6(f)

**Description:**

Look Park is a gift to the City from Mrs. Fannie Burr Look, who donated the land and development funds. She also started a trust fund to maintain the park. Today, it is a beautiful large park maintained under the guidance of trustees and funded by entrance fees and an endowment. There are numerous facilities, including natural land and water areas; picnicking facilities; six tennis courts; many play fields for baseball, volleyball, football, softball, basketball and shuffleboard; train rides; food stands; and marked trails. Other activities available are paddleboats, cross-country skiing, ice-skating, band concerts and theater productions. Some equipment may be rented at the site—lockers, drinking water and bike racks are available. This area receives very heavy recreational use (regional) throughout the year.

The Garden House at Look Park is the area's premier community and banquet facility, providing superior accommodations for public and private parties, meetings, and community events. Located in one of New England's finest parks, the Garden House stands on the site of the former Look Park pool building, a nostalgic Northampton landmark built in 1930. The restoration of the building, now unsurpassed in comfort and convenience, keeps faith with the Mission style architecture of the earlier period.

## Main Street Streetscape Park — 2,328 square feet

**Ownership:** City

**Easement:** First Church of Christ in Northampton (for area in front of church)

**Management:** First Church for Easement I, City for art kiosk

**Maintenance:**

**Zoning:** CBD

**Location:** Main St at Main St & Center St intersection

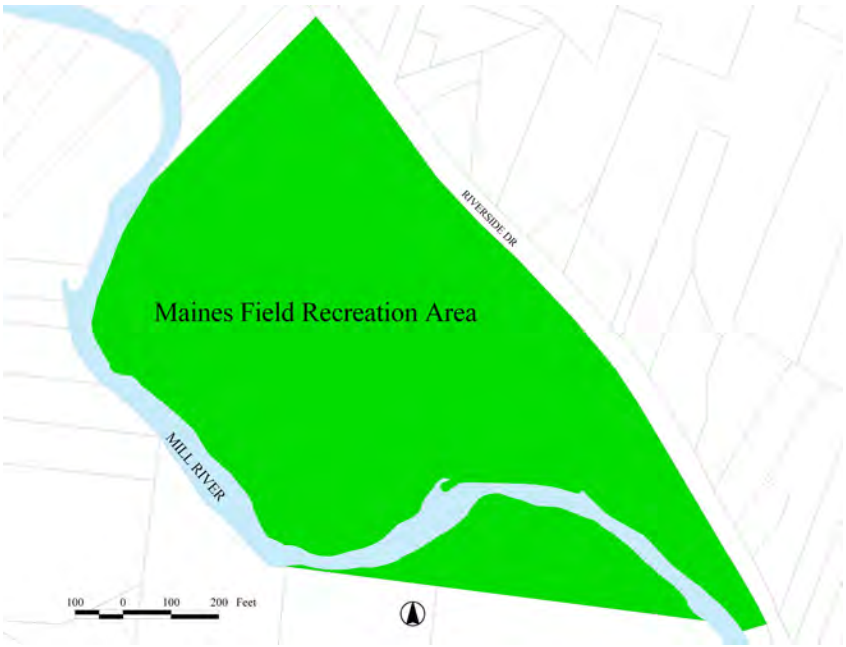
**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/27/2002 | PB195, p26 | Boundary Line Agreement Plan | |
| 10/9/2003 | B7562, p117 | First Church Boundary Line Agreement | |
| 9/10/2004 | B7983, p205 | First Church Boundary Line Agreement (II) | |
| | PB202, p21 | First Church Boundary Agreement Plan | |

**Description:**

This small but heavily used park includes the City's art kiosk installation, which is maintained by the City, and a lawn in front of the First Churches, which is maintained by the Church but for which the public has the right to use.




## Maine's Field Recreation Area — 14.47 acres

**Ownership:** City

**Management:** Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** URB

**Location:** Riverside Dr, Bay State

**Parcel ID:** 23C-31

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B778, p177 | | |

**Equipment:** Lighted ball diamond, two sand volleyball courts, restroom building, storage building, pavilion with tables, paved parking, & playground equipment

**Description:**

This partially wooded recreation area borders the Mill River. It receives extremely heavy spring, summer, and fall usage by residents citywide. This area is subject to heavy spring floods.

## David B. Musante, Jr. Beach — 7.46 acres

**Ownership:** City-DPW, Water Division

**Management:**

**Maintenance:**

**Zoning:**

**Location:** Reservoir Rd


**Parcel ID:** 10-6

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | | |

**Funding** 1989–1991 capital improvements

City ($62,000), CDBG for handicap accessibility ($10,000), MA Urban Self Help Program (1989 award--$152,800), & Federal Land & Water Conservation Funds (1988 award—Project #25-00387 for beach, reservoir, & dam improvements--$200,000)

Property subject to Federal FLWCF Act 6(f)

**Description:**

Lower Roberts Reservoir or Leeds Reservoir serves as a public swimming area. The former water supply reservoir was converted to a recreation area between 1989 and 1991. The project consisted of converting the reservoir to a swimming area, adding a beach, picnic area, parking lot, and facilities and restroom building. A trail into Roberts Hill Conservation Area starts from this recreation are**a.**

## Nagle Downtown Walkway 2.5 acres

**Ownership:** Recreation Commission

**Management:**

**Maintenance:**

**Zoning:** CB, GB

**Location:** Between Main St & Old South St parking lot

**Parcel ID:** 32C-333, 32C-335

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/28/1985 | B2582, p243 | Entire walkway | |
| | PB134, p96 | | |
| 10/21/1985 | B2634, p331 | Project agreements | |
| | B3752, p40 | **NO RECORD FOUND ON REGISTRY OF DEEDS**<br>Funded by Urban self-help & City | |
| 5/15/1990 | B3561, p271 | Maintenance and easements, Hampton Housing Associates | |
| | PB166, p89 | | |
| 5/15/1990 | B3561, p275 | Gleasons | |
| | PB167, p121-123 | At DPW | |
| 5/15/1990 | B3561, p279 | Mass Electric | |
| 7/5/1991 | B3752, p35 | Transfer to Recreation | |
| 7/5/1991 | B3752, p31 | Masters | |
| | PB171, p36 | | |
| 11/27/1991 | B3834, p265 | Union Square Realty Trust--Depot | |

**Signage:** "A Cooperative Conservation Project Between the Northampton Recreation Commission and the Commonwealth of Massachusetts" installed in 1991

**Description:**

There is a handicap accessible walkway on an old railroad right-of-way, including a section along the Historic Mill River. A small park just east of Pleasant Street was built by and is maintained by the Gleasons in return for a right-of-way across the park to their building. Hampton Court holds a right-of-way across the Hampden Avenue Parking Lot and in return, maintains the walkway from Pleasant Street to the parking lot.

## Pulaski Park (formally known as Main Street City Park) 1 acre

**Ownership:** City (acquired for Parks & Recreation, subject to Article 97)

**Management:**

**Maintenance:** DPW

**Zoning:** CB

**Location:** Main St, New South St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1893 | B457, p21-25 | Edward H.R. Lyman with reversion clause | |
| 1905 | PB593, p51 | Plan | |
| 1906 | B603, p319 | J.B. O'Donnell | |
| 8/22/1906 | PB593, p33 | Plan | |
| 1908 | B632, p333-335 & 429 | Edward H.R. Lyman | |

**Description:**

A small rectangular park with memorials, benches, and paths for sitting and strolling, this site is located in the heart of downtown Northampton helps define downtown. It receives extremely heavy citywide use throughout the year.

**Chronological history:**

1904 Main Street City Park proposed.

1906 Contributions of over $27,000 to purchase Prindle and Holley properties for park.

1906 Aldermen authorized purchase of said Holley and Prindle properties for Park purposes forever. Holley and Prindle parcels on Main Street ordered to be taken in fee by City for use as public park.

1907 April 15—Plans for City Park selected.

1907 Transfer of funds ($4,963) to Park Commissioners for development of Main Street Park.

1907 Protest by owners of Holley and Prindle properties.

1907 Architect Joseph Gabringer of New York selected.

1907 Plan of Park. There is an acre in two parcels taken for Park. Design is made so as to give it appearance of being much larger, the perspective being so arranged, so that the walks are laid out with that intention. At intervals, beside curved walks, concrete seats will be placed in shrubbery where people can spend moments near others but practically shut off from them by dense shrubbery, hence undisturbed.

1907 Work started. Prindle House moved.

1908 Settlement of claims of former owners of Holley and Prindle sites.

1908 Conditional Transfer of land in rear of Academy of Music by Executors of estate of Edward H. R. Lyman, under condition that it be devoted solely and exclusively for purposes of public park. That if used otherwise, the property reverts to heirs of Edward H. R. Lyman.

1911 Purchase of Prindle property for use as public park in conjunction with Holley parcel.

1934 Letter opposing taking Main Street Public Park for high school site.

1954 Opposition to taking any part of Park for off-street parking.

1958 Letters to Editor of Gazette opposing plan of taking any part of Main Street City Park for off-street parking place for automobiles.

1958 Plan of off-street parking withdrawn at City Council Meeting.

197# Pulaski Park Renovation $47,200. Huntley Associates did design, construction plans and construction documents.

## Sheldon Field Recreation Area 12.848 acres

**Ownership:** Northampton Recreation Commission (Subject to Article 97)

**Protection:** Conservation Restrictions (two) held by Broad Brook Coalition, Inc.

**Management:** Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** URA & Watershed Protection Overlay

**Location:** Bridge St, Old Ferry Rd

**Parcel ID:** 25C-84

**Acquisition history:**


| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | B601, p132 | Historical Sheldon Field record | |
| | B1034, p521 | Former lease, interests merged w/purchase | |
| | PB200, p40 | Survey plan | |
| 7/15/1999 | B5738, p233 | Sheldon deed | 10.16 |
| | B5738, p221 | Sheldon CR to Broad Brook Coalition | |
| 10/28/2004 | B8042, p203-204 | Kielec Deed | 2.688 |
| | B8042, p190 | Kielec CR to Broad Brook Coalition (Life Estate Release) | |
| 5/9/2008 | PB217, p101; PB218, p37 | Jasinski donation survey | |
| 5/12/2008 | B9482, p193 | Jasinski deed, consideration: farm lease | 1.654 |

**Equipment:** Four ball diamonds, two basketball courts (and overflow parking lot), storage building, restroom building, playground equipment, & joint recreation/park-and-ride parking lot w/bicycle lockers (built in 2002).

**Description:**

Fields and equipment cover most of this site. Larger grassed areas could be redesigned at different times of the year to support other field layouts. Residents use this area heavily throughout the spring and summer and lightly in the fall.


## Veterans Memorial Field Recreation Area 7.84 acres

**Ownership:** City

**Management:** Recreation Commission

**Maintenance:** DPW, Recreation Division

**Zoning:** URB

**Location:** Off Clark Ave.

**Parcel ID:** 31D-171

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | License agreement w/Mass Electric for access from West St (on file at Planning Dept., Recreation Dept., & DPW) | |
| | B982, p91 | | |
| | B1034, p320 | | |
| | B1036, p478-480 | | |
| | | Land & Water Conservation Fund agreement | |

**Equipment:** Baseball diamond, all-purpose paved area for basketball & street hockey, soccer field, restroom building (rehabilitated in 1998), unpaved parking area, playground equipment, & new drainage, skateboard park, & fields (2007).

**Description:**

This recreation area is heavily used year-round by various leagues and by residents citywide. The area is currently (2005) undergoing a major rehabilitation.

# D: Rail Trails

## Manhan Rail Trail in Northampton — 3.4 miles

**Ownership:** National Grid, City of Northampton (Nagle walkway & NSH Parcel on Earle St), & Commonwealth of Massachusetts (Registry of Deeds)

**Easement:** City of Northampton

**Location:** King St (near State St) to Main St (downtown section)

Main St to Old South St (Nagle section)

Round House parking lot (downtown section, parking lot)

New South to box culvert south of Earle St (State Hospital Parcel B4)

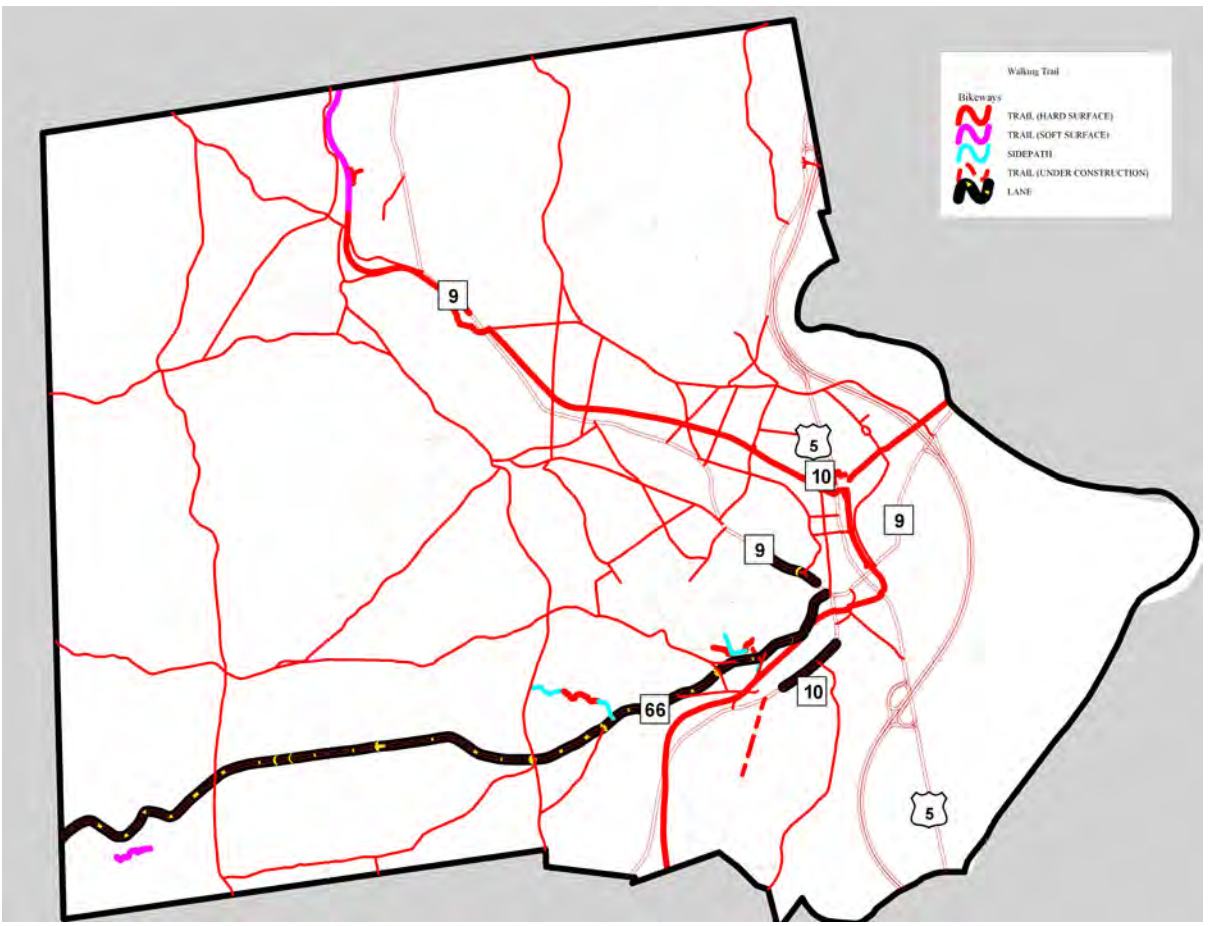
Registry of Deeds off ramp

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Meters |
|---|---|---|---|
| 6/27/1997 | B5144, p152 | Donation from Hampshire County (Registry of Deeds) | |

**RAIL TRAILS IN NORTHAMPTON**



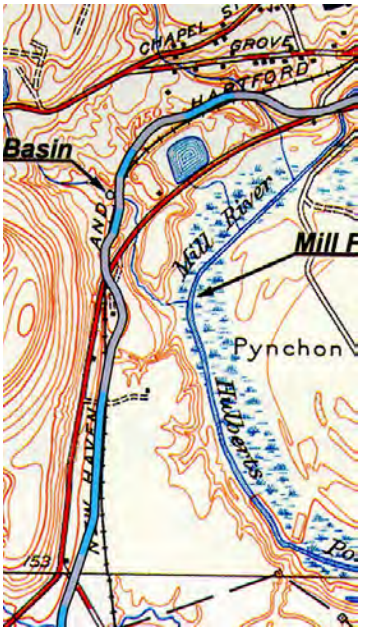
| Date | Book, page or other | Description | Meters |
|---|---|---|---|
| 12/9/1998 | B5558, p19 | NSH Earle St parcel (22,839 SF for parking lot, reverts to Commonwealth if not used for transportation) | |
| 3/9/2002 | PB191, p83-110 | State St. to Easthampton | |
| 5/31/2002 | B6661, p92 | Downtown | |
| 2/4/2004 | B7675, p182 | Master deed of Strong Block—Strong Block responsible for some maintenance of trail | |
| 8/11/2005 | B8388, p8 | Earle/Grove taking from National Grid, O'Connell Oil, Bay State Gas Company | |
| 10/26/2005 | B8492, p105 | Earle/Grove confirmatory deed from O'Connell Oil | |
| 10/26/2005 | B8942, p108 | Earle/Grove sewer easement under Manhan Trail to O'Connell Oil | |
| 11/7/2006 | B8940, p175 | Searle's Confirmatory Deed ($3,895.50) | |
| 5/15/2007 | B9128, p260 | King Street $1,085 taking | 44.48 |
| 8/17/2007 | B9238, p237 | Housing Authority to City (portion of Round House parking lot & related land for Manhan Rail Trail) | |
| 5/6/2008 | B9476, p49 | Long/Fisher Deed at Route 10 ($3,300) | |
| 5/13/2009 | B9806, p150 | Taking south of Earle St to Easthampton town line | |
| 5/13/2009 | B9806, p157 | Confirmatory deed $1.00 Mass Electric (check #282898 CPA funds) | |
| 5/13/2009 | B9806, p162 | Confirmatory deed from Frank N. Fournier | |
| 5/13/2009 | B9806, p165 | Surplus land to New England Power | |
| 5/13/2009 | B9808, p170 | Easement Reservation for rail trail | |
| 6/15/2009 | B9591, p33 | Confirmatory deed from Massachusetts Audubon Society | |

**Description:**

The former Hampshire and Hampden Canal (reorganized as the New Haven and Northampton Canal) was abandoned in 1847 and much of the right-of-way was redeveloped as a railroad. The Manhan Rail Trail follows this historic right of way from a point mid-way between Earle Street and Route 10 to a point midway between Route 10.

The Manhan Rail Trail from Earle Street to the Easthampton City line includes $100,000 of Community Preservation Act assistantce ($1.00 for right-of-way from MA Electric and remainder for design and local construction costs).

Strong Block Condominium is responsible for maintaining paved paths and snow removal from Main Street to Union Station, including the stairs from Main Street and Strong Avenue, and not encroaching on the park behind the building.



Hampshire and Hampden Canal at Manhan Rail Trail

## Manhan Rail Trail Spur—Florence Road Spur 48,529 square feet

**Ownership:** Pathways CoHousing Condominiums & Rocky Hill CoHousing Condominiums (both fee)

**Right-of-way:** Northampton Conservation Commission

**Location:** Rocky Hill CoHousing (Florence Road) & Pathways CoHousing (Ice Pond)

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Feet |
|---|---|---|---|
| 8/5/2004 | B7962, p177 | Pathways CoHousing (Ice Pond), Order of Taking | 24,529 |
| 10/14/2004 | B8023, p144 | Confirmatory deed | |
| 11/29/2004 | B8082, p258 | Rocky Hill (Florence Rd) | 24,000 |
| 11/29/2004 | B8082, p274 | Rocky Hill subordination | |

**Description:**

This parcel is 0.6 miles long and serves as a right-of-way for the portion of the bike path that connects Florence Road, Rocky Hill CoHousing, Pathways CoHousing, Ice Pond Drive, and Route 66.

## Norwottuck Rail Trail (City) 8 acres/5 miles

**Ownership:** Mass Electric; City of Northampton (Jackson St ramp); WJG Realty Trust (Stop & Shop); Coolidge Northampton, LLC (Walgreens); Beaver Brook Nominee Trust (spur to Grove Ave, Leeds)

**Right-of-way:** City of Northampton

**Location:** State St to Bridge Rd (Francis P. Ryan section), Bridge Rd to Williamsburg Town Line (Leeds section), Grove Ave to railroad bed (Grove Ave/Beaver Brook spur), State St to King St (Stop & Shop easement), King St to railroad (Walgreens easement)

**Parcel ID:** 16B-64, 17C-280, 17C-295, 17C-296, 17C-297, 23B-90, 23B-91, 24A-236, 24A-237

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/3/1982 | B2274, p282 | Francis P. Ryan section | |
| 5/22/2009 | PB220, p91 | Jackson St ramp | |
| 5/22/2009 | PB220, p89-90 | Related Safe Routes to School | |
| 5/27/2009 | B9823, p35 | Jackson St ramp, taking Mass Electric | |
| 5/27/2009 | B9823, p35 | Jackson St ramp, taking Polachek | |
| 6/9/2009 | B9843, p331 | Jackson St ramp, confirmatory deed Polachek | |
| 2004 | PB200, p27 | Leeds section | |
| 6/23/2005 | B8314, p46 | Taking | |
| 5/13/2009 | B9806, p180 & 183 | Confirmatory, Mass Electric | |
| 5/22/2009 | PB220, p92 | Route 9/Bridge Roundabout & bicycle access | |
| 6/2/2009 | B9833, p202 | Confirmatory, Francis & Linda Sweeney | |
| 4/6/2007 | B9109, p48 | Beaver Brook to Grove Ave right-of-way | |
| | LC7, p70 | Land Court certified of title 713, Stop & Shop spur | |
| 8/14/2008 | PB219, p23 | Walgreens spur | |
| 10/1/2008 | B9610, p210 | Walgreens spur (as traffic mitigation) | |
| 7/8/2009 | PB221, p13 | Rail trail by Megan O'Brien property | |

**Description:**

The Norwottuck Rail Trail through the Jackson Street ramp includes Community Preservation Act assistance ($4,000.00) for right-of-way from Massachusetts Electric and the remainder for design, soft costs, and non-participating construction costs.

## Norwottuck Rail Trail (State) 6 acres

**Ownership:** Massachusetts Department of Conservation Resources

**Zoning:** HB, GI, & SC

**Location:** Damon Rd

**Parcel ID:** 25A-166, 25A-167

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 2/6/1985 | B2546, p132 | Parcel 25A-166 | 6.01 |
| 2/6/1985 | B2546, p132 | Parcel 25A-167 | 0 |

**Description:**

The Norwottuck Rail Trail extends from Woodmont Road in Northampton to Amherst. It provides a major recreation and transportation route from non-motorized vehicles, especially for those in wheelchairs and for pedestrians. It links to the UMass bikeway in Amherst and will eventually link to the Northampton rail trail network.

# 5.2: Non-Permanently Protected

## Bridge Street School

**Ownership:** City

**Management:** School Department

**Zoning:** URC

**Location:**

**Parcel ID:**

**Equipment:** Outdoor: basketball court, some swings

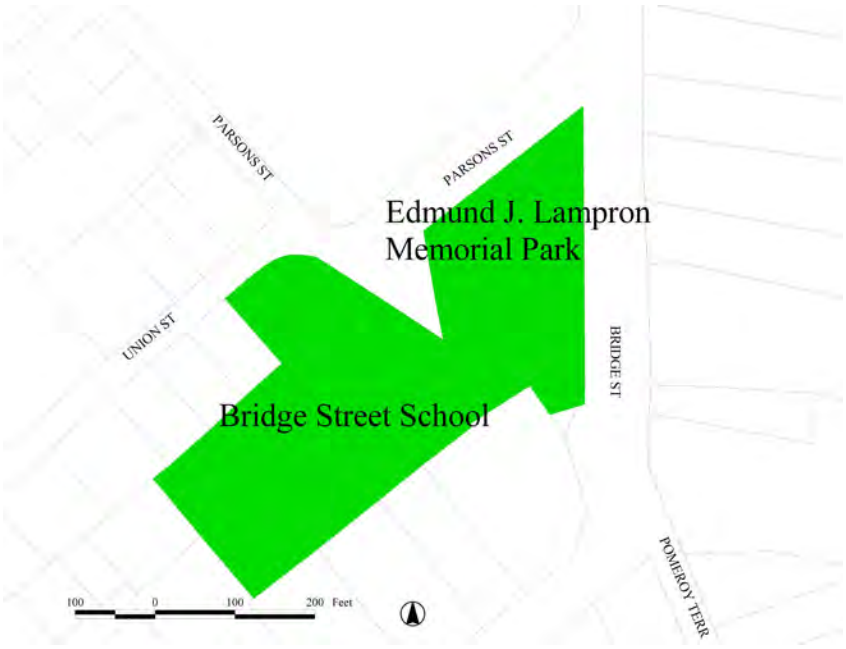
**Description:**

This elementary school site offers limited outdoor recreational facilities. It is used heavily throughout the school year by the school and neighborhood residents.

## Burts Pit Road Recreation Area, Parcel C 15.49 acres

**Ownership:** City of Northampton (acquired for general City use)

**Zoning:**




**Location:**

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1994 | Chapters 86 & 307 | Acts of 1994 | |
| 12/9/1998 | B5558, p19 | | |

**Description:**

This is a former cornfield to be used as a recreation area. It has two softball fields and one soccer field. The City is reserving the land for a future elementary school site and future fire sub-station, if those are ever needed, to accommodate new growth in this area of the town.

## Clear Falls Recreation Center — 73 acres

**Ownership:** Private (use by membership only)

**Zoning:** RR-Flood Zone

**Location:** Drury Ln

**Parcel ID:**

**Description:**

Located in the extreme southwest corner of Northampton, this recreation area offers swimming, picnicking, and nature trails for hiking. It also has a field house, snack bar, and picnicking shelters. With a moderate level of use, this area attracts residents from throughout the region. As of 2005, the property was currently on the market for sale.

## Driving Range

**Ownership:** Private

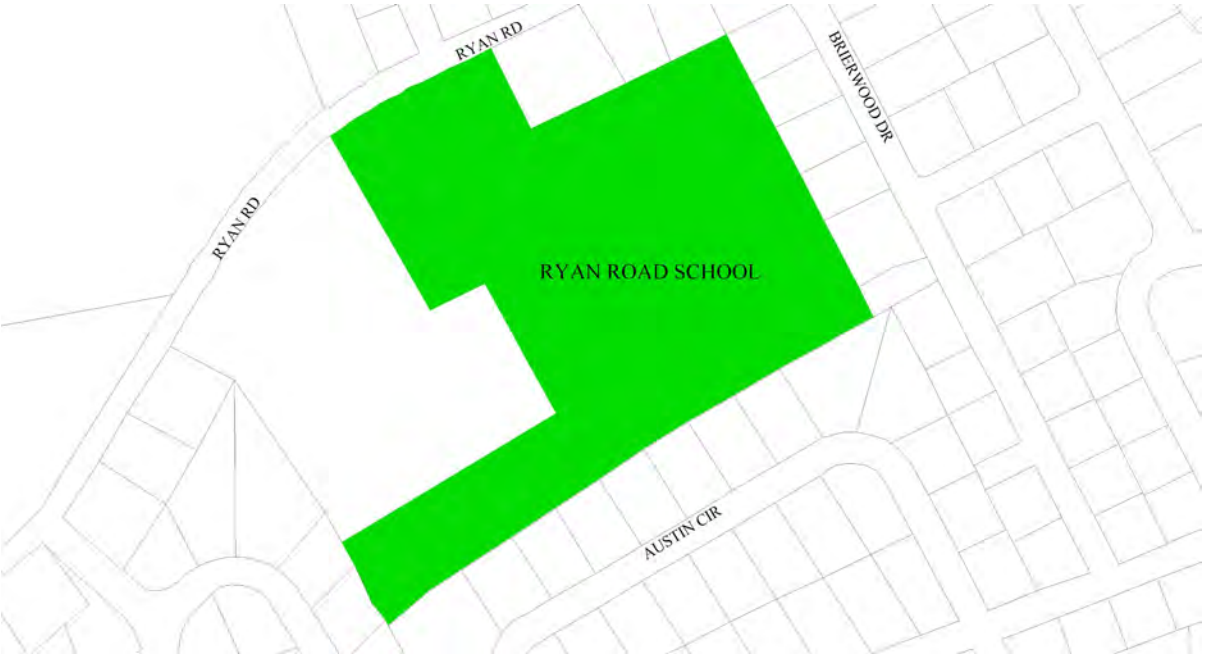
**Zoning:** URA

**Location:** Haydenville Rd

**Parcel ID:**

**Description:**

A practice driving range for golf, this facility receives medium summer use by residents throughout the region. It also has a snack bar. As a commercial facility, a fee is required for admission.




## Robert K. Finn Ryan Road School 18.2 acres

**Ownership:** City

**Management:** School Department (building use), Recreation Department (field use)

**Zoning:** URA

**Location:** Ryan Rd

**Parcel ID:** 29-104

**Equipment:** Outdoor: playground, five ball diamonds, soccer field, skating area

Indoor: gymnasium with six basketball hoops, four volleyball nets; locker rooms w/ shower facilities

Bike racks, drinking water, first aid facilities

**Description:**

Both indoor and outdoor facilities are available on this 15-acre school site that receives medium-heavy, year-round school, neighborhood, and citywide use. The rear wooded area could be utilized for some form of outdoor recreation or nature education.

## Florence Community Center (former Florence Grammar School) 2.5 acres

**Ownership:** City

**Management:** School Department, leased to Property Committee

**Zoning:** URB

**Location:**

**Parcel ID:**

**Equipment:** Outdoor: limited playground, blacktop play area

**Description:**

This former grammar school (closed in 1992) is now a City alternative high school with some of the inside space serving as a community center.

## Hampshire YMCA 4.3 acres

**Ownership:** YMCA (use by membership or fees)

**Zoning:** URA, URB

**Location:** Massoit St

**Parcel ID:**

**Description:**

This facility is utilized on a region-wide basis. It offers racquetball, basketball, volleyball, and swimming (two pools). It has a sauna, steam room, and fitness center. It is used heavily year-round.

## Keyes Field

**Ownership:** Florence Savings Bank

**Zoning:**

**Location:** Keyes St at Northampton Bike Path

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/8/2000 | B5906, p326 | Declaration of Open Space Restriction | |

**Description:**

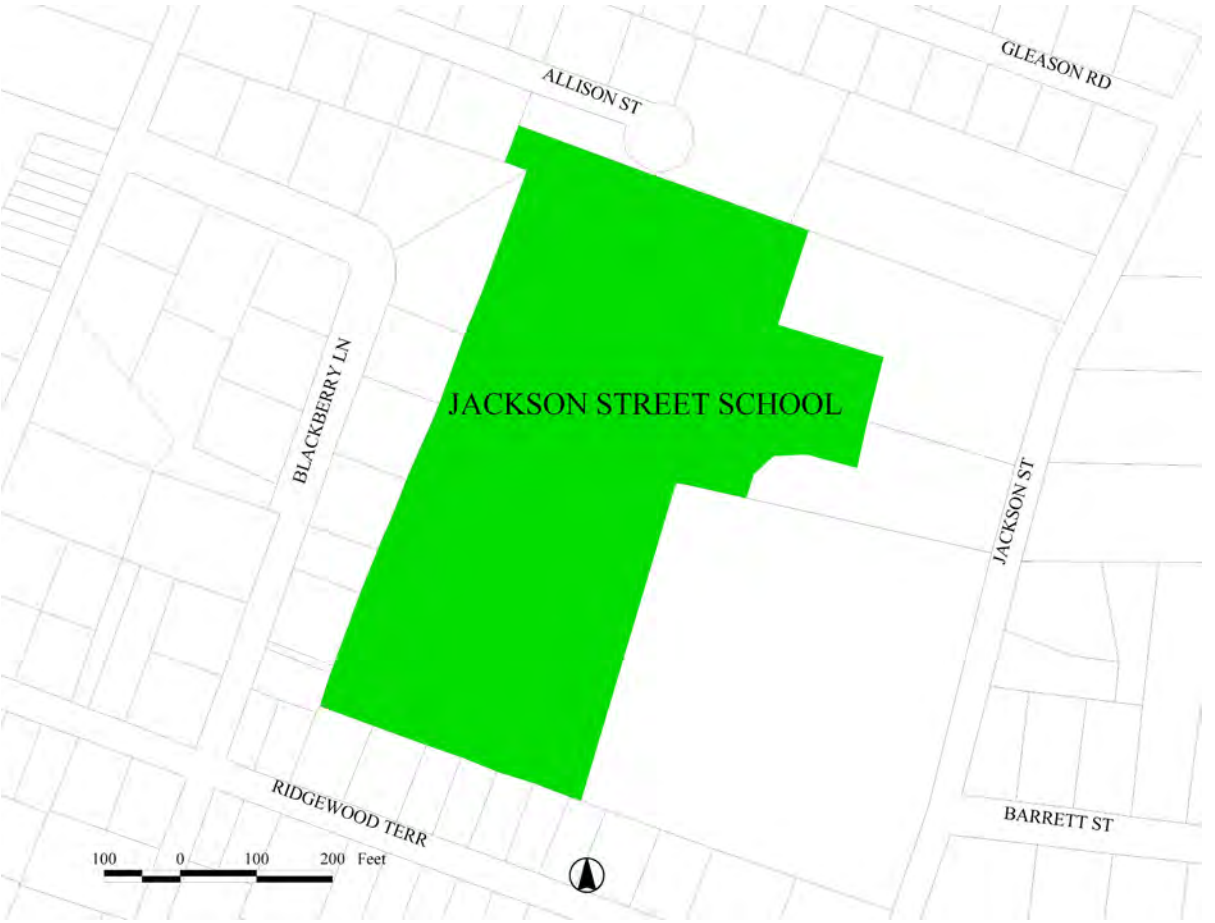
This field is protected by the covenants, "as open space with reasonable access to the public for passive use and enjoyment under reasonable conditions."

## Jackson Street School 7.2 acres

**Ownership:** City

**Management:** School Department (building use), Recreation Department (field use)

**Zoning:** URB




**Location:**

**Parcel ID:**

**Equipment:** Outdoor: extensive playground equipment, two ball diamonds, one soccer/football field, one touch football field, two basketball courts

Indoor: gymnasium with six basketball hoops, gymnastics equipment, bleachers for 175 people

Parking, bike racks, showers, drinking water, supervision, first aid facilities

**Description:**

This elementary school site offers both indoor and outdoor recreational facilities that are heavily used by the school and the neighborhood. The site also offers the City's first "adventure playground" (wooden play apparatus), constructed by volunteers. The wooded area on site could possibly provide outdoor education or nature study activities.

## JFK Middle School 15 acres

**Ownership:** City

**Management:** School Department (building use), Recreation Department (field use)

**Zoning:** URA

**Location:** Florence St, Leeds


**Parcel ID:**

**Equipment:** Outdoor: two ball diamonds, three soccer fields, football field
Indoor: gymnasium, six basketball hoops, two volleyball nets
Bike racks, showers, drinking water, supervision, first aid

**Description:**

Heavily used primarily by the school, this site contains both indoor and outdoor facilities. The facilities are in generally good condition; however, recurring problems with neighbors have limited the use of this site.

## Edmond J. Lampron Memorial Park

*See Bridge Street School above for map*

**Ownership:** City

**Maintenance:** DPW

**Zoning:** URB

**Location:**

**Parcel ID:**

**Description:**

A small, ornamental triangle of about one-acre, this site is used for strolling and sitting. It is located in front of the Bridge Street School. Benches are located onsite. This is a medium use park.

## Leeds Memorial 1.6 acres

**Ownership:** City

**Maintenance:** DPW

**Zoning:** URA

**Location:** Florence St, opposite Leeds School

**Parcel ID:**

**Description:**

A small, grassed area, this site contains memorials. It is used by Leeds residents. This park has a memorial, but it is not appropriate for additional memorials. However, benches would increase its potential for use.


## Leeds School 9.3 acres

**Ownership:** City

**Management:** School Department (building use), Recreation Department (field use)

**Zoning:** URA

**Location:** Florence St, Leeds

**Parcel ID:**

**Equipment:** Outdoor: playground, ball diamond, skating area, soccer field

Indoor: gymnasium with two basketball hoops, two volleyball nets, pull-up bars; auditorium

Parking, bike racks, supervision, first aid facilities

**Description:**

This 9.3-acre site contains both indoor and outdoor recreational facilities. It is used year-round by the school, local neighborhoods, and residents city-wide. This site is large enough to be redesigned to accommodate other types of field layouts, although some site work would be necessary due to sloping terrain.

## Northampton Community Music Center (formerly South Street School)

**Ownership:** City

**Management:** Northampton Community Music Center

**Zoning:** URB

**Location:** Florence St, Leeds

**Parcel ID:**

**Description:**

This former elementary school is now used by the Music Center for music education. The parcel includes a small tot lot and access from South Street to the adjoining Veterans Field Recreation Area.

## Northampton Country Club

**Ownership:** Private

**Zoning:** URA

**Location:** Main St, Leeds

**Parcel ID:**

**Description:**

This private golf club offers its members a nine-hole golf course, swimming pool, and clubhouse. The establishment receives medium use during the golfing season by residents throughout the region.

## Northampton High School 23 acres

**Ownership:** City

**Management:** School Department (building use), Recreation Department (field use)

**Zoning:** URB—Flood zone

**Location:**

**Parcel ID:**

**Equipment:** Outdoor: playground, two storage buildings, three ball diamonds, soccer field, field hockey field, two grassed gym fields, track, lacrosse field, bleachers, concession stand

Indoor: gymnasium, universal gym, bleachers, basketball hoops, auditorium


**Description:**

This large school site offers both indoor and outdoor recreational facilities. It is used heavily by the school (physical education and interscholastic sports) and by residents citywide. Outdoor facilities are used very heavily in the spring, summer, and fall, depending on the sport season. Ramps and special toilet facilities are available for the handicapped. A small triangular, grassed area is located directly across from the High School. It serves as an informal park, although there are no facilities.

## Northampton Revolver Club — 34.3 acres

**Ownership:** Northampton Revolver Club, Inc

**Zoning:** URA

**Location:** Ryan Rd

**Parcel ID:**

**Description:**

The Club offers indoor and outdoor target shooting facilities to members from throughout the region.

## Oxbow Marina — 56.1 acres

**Ownership:** Private

**Zoning:** SC—Flood Zone

**Location:** Island Rd, CT; Oxbow River

**Parcel ID:**

**Description:**

The Marina is a commercial facility, offering boat rentals, storage, and mooring facilities; tennis, swimming, and horseshoes. Utilized on a region wide basis, this facility receives heavy summer use. Fees are charged. The Marina allows one of Northampton's soccer leagues to use their fields during the

summer.

## Peoples Institute 1.5 acres

**Ownership:** Peoples Institute

**Zoning:** CB

**Location:** Gothic Street

**Parcel ID:**

**Description:**

This facility offers arts and crafts classes, educational programs, and summer day camps for elementary age children. The facility includes a dance floor and an outdoor pool. Fees are charged.

## Pine Grove Golf Course 132.3 acres

**Ownership:** Private

**Zoning:** SR

**Location:** Old Wilson Rd

**Parcel ID:**

**Description:**

With an 18-hole golf course and field house, this facility is open to members as well as non-members for a fee. Level of use is medium to heavy throughout the golf season. It also offers cross-country skiing in the winter. The facility has a regional-use population.

## Smith College Mill River, Paradise Pond, Arboretum, and Athletic Fields

**Ownership:** Smith College

**Zoning:** URC

**Location:** Smith College, Mill River, West St

**Parcel ID:**

**Description:**

This recreational area is part of the Smith College campus and receives heavy use by both students and area residents (with permission). Facilities include playfields, track and field, tennis courts, rowboats, and ice-skating. It includes a heavily used foot trail from Paradise Pond to the northern edge of Smith College, along Mill River. The trail then continues to Ward Avenue and Federal Street.

## Smith School V.A. Parcel/Forestry Studies 182.1 acres

**Ownership:** City/Smith Vocational School

**Zoning:SR**

**Location:** Haydenville Rd

**Parcel ID:** 11-2

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/4/1958 | B1267, p217 | | |
| 4/30/1987 | B2961, p193 | | |

**Description:**

The Smith Vocational School for Forestry Studies uses this large wooded site. The site contains an informal trail that could be used to link to a proposed northern corridor trail. It also contains land that could allow an extention of that trail to Route 9. It has been suggested in the past that part of this property be used for a future high school site and some of it for affordable housing. Others have indicated a desire to keep this as permanent open space for use by the Smith School.

## Smith Vocational and Agricultural High School 78.9 acres

**Ownership:** City/ Truesses of Smith Vocational School

Recreation Department manages tennis courts and fields

**Zoning:** UR

**Location:** Locust St

**Parcel ID:** 11-2

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/22/1845 | Box 249, #2 | Will of Oliver Smith | |
| 12/22/1905 | B601, p287 | Deed | |

**Equipment:** Outdoor: eight tennis courts, soccer field, two ball fields (in construction by students)

Indoor: gymnasium, universal gym, six basketball hoops

**Description:**

This site contains the Smith Vocational School, the original core farm, tennis courts, and recreation fields. It also contains a public farm trail.

This site is used heavily by the school for physical education classes and interscholastic sports and by residents citywide throughout the school year. With a two-acre field area and indoor facility, it offers both outdoor and indoor recreational activities. There are handicap accessible facilities. There is also a large wetland on the south side of the property. The land immediately west of the developed part of the Smith Vocational School campus is currently used for agriculture (primarily grazing land with a farm trail constructed in 1993).

## South Main Street and Berkshire Terrace

**Ownership:** City

**Maintenance:** DPW

**Zoning:** URC

**Location:**

**Parcel ID:**

**Description:**

This is a small, grassed corner lot with no facilities.

## Trinity Row 0.5 acres

**Ownership:** City

**Maintenance:** DPW

**Zoning:** URB

**Location:** Florence

**Parcel ID:**

**Description:**

This is an ornamental, open space street park, containing a foundation and various memorials. This site receives light, year-round, local neighborhood use. Benches could increase its potential for use.

## Tri-County Fairgrounds 42 acres

**Ownership:** Hampshire, Franklin, & Hampden Agricultural Society

**Zoning:** URA, URB, Watershed Protection

**Location:** Old Ferry Rd, Fair Rd, Bridge St

**Parcel ID:**

**Description:**

The Fairgrounds receive heavily regional use during the fair and racing season. This facility contains an exhibition area, race track (horse), baseball field, playfields, picnic area, and a field house.

## Former Vernon Street School

**Ownership:** City

**Management:**

**Zoning:** URB

**Location:**

**Parcel ID:**

**Equipment:**

**Description:**

This is a former school that includes playground equipment used by the surrounding neighborhoods.

## VFW Memorial

**Ownership:** City

**Zoning:** GB, URB

**Location:**

**Parcel ID:**

**Description:**

A small park located near the center of Florence, this site contains a fountain and memorial. It is lightly used by Florence residents.

# 5.3: Preservation and Historical Restrictions

## Academy of Music

**Ownership:** City

**Protection:** Preservation Restriction Agreement

**Zoning:** CBD

**Location:** Main St

**Parcel ID:** 31D-166

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/10/1986 | B2826, p49 | | |

## David Ruggels Center

**Ownership:** Committee for Northampton, Inc

**Protection:** Preservation Restriction Agreement

**Zoning:** SI

**Location:** 225 Nonotuck St, Unit D

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/28/2009 | B9948, p215 | $15,000 in CPA funds for PR & project | |

## Hatfield Street School

**Ownership:** Private

**Protection:** Preservation Restriction Agreement (City has right to enforce)

**Zoning:** URB

**Location:** 52 Hatfield St

**Parcel ID:** 18C-140

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/22/2002 | B6843, p211 | | |

## The Manse

**Ownership:** Private

**Protection:** Preservation Restriction Agreement (Stewards of the Manse has right to enforce)

**Zoning:** UR

**Location:** 54 Prospect St

**Parcel ID:**

## Masonic Street Fire Station

**Ownership:** Private (Media Education Foundation)

**Protection:** Preservation Restriction Agreement (City has right to enforce)

**Zoning:** CBD

**Location:** 60 Masonic St

**Parcel ID:** 31D-122

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/13/2002 | B276, p377 | | |

## West Farms Chapel

**Ownership:** Private

**Protection:** Preservation Restriction Agreement (City has right to enforce)

**Zoning:SR**

**Location:** West Farms Rd

**Parcel ID:** 35-15

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/29/1987 | B3007, p250-252 | | |

# 5.4: Affordable Housing Restrictions & Limited Developments

## 34 Barrett Street

**Ownership:** Private

**Agency:** Prevent, Inc (found in 10/14/2003 letter)

**Protection:**

**Expiration:** 49 years from 2/19/1998-2/19/2047

**Enforcement:** Northampton & Prevent, Inc/Honor Court on subrecipient agreement #218-98

**# of units:** 7-8 program participants of Prevent, Inc/Honor Court (subrecipient agreement on 2/27/1998, #218-98)

**Location:** 34 Barrett St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/8/1997 | B5109, p340 | Quit claim deed | |
| 2/19/1998 | Contract #218-98 | Loan for rehab. of single family home. Terms: must be used to provide direct benefit to persons of low & moderate income for 49 years (CDBG Assistance) | |
| 3/24/1998 | B5326, p195 | 2nd mortgage | |
| | | Subordination agreement | |
| 9/7/2003 | B7490, p189 | Loan repaid, discharge | |

## 72–44 Barrett Street (see Coachlite Condo)

## 575 Bridge Road (The Gables)

**Ownership:** Private (#215-96, see #3 of agreement)

**Agency:** Valley CDC/HAP

**Protection:** Permanently affordable "through a mechanism approved by the Northampton Housing Partnership" (#215-96, #2 of agreement); for people earning 80% of median income

**Expiration:**

**Enforcement:** City/HAP/Valley CDC/HUD (found in Deed Rider, 6/25/1998)

**# of units:** 1 (1 unit, 3 bedroom, single family) (#215-96 on 4/4/1996)

**Location:** 575 Bridge Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/4/1996 | Contract #215-96 | Grant for acquisition to Valley CDC for $25,000 | |

## 36 Bedford Terrace/74 State Street

**Ownership:** Smith College

**Agency:** Smith College

**Protection:** 99 years (8/17/2005)

**Expiration:** 8/17/2104

**Enforcement:** City

**# of units:** 26; 14 affordable at 60% Area Median Income (AMI), 10 at 80% AMI, 2 at market rate

**Location:** 36 Bedford Terrace

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/4/2007 | B9149, p259 | Restrictive covenant for affordable housing | |

## 82 Bridge Street

**Ownership:** Valley CDC

**Agency:** Valley CDC

**Protection:**

**Expiration:**

**Enforcement:** Valley CDC

**# of units:** 15 unit-SRO housing (Valley CDC letter, 10/10/2000), units are rentals, according to FY98 Audit by Valley CDC

**Location:** 82 Bridge St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Subordination and Intercreditor Agreement | |
| 4/22/1990 | Contract #193-90 | Grant to Valley CDC for down payment for $25,000 | |
| 5/20/1990 | Contract #207-90 | Grant to Valley CDC for acquisition for $12,500Terms: no payments due. If property is still used as SRO after date of execution, loan shall be forgiven in its entirety | |
| 9/6/1990 | Contract #75-91 | Loan to Valley CDC for acquisition for $25,000Terms: 1st payment to be made 6 years from execution; subsequent payments annually in amount of $25,000 or 50% of residual receipts for prior fiscal year | |
| 9/14/1990 | B3620, p20 | Mortgage | |
| 8/6/1991 | B3772, p78 | Conditional grant secured by mortgage | |

## 72–74 Barrett Street (72 Barrett Street, #213), Coachlite Condo

**Ownership:** Private (sold to tenant according to 6/14/2002 letter)

**Agency:** Valley CDC

**Protection:** Could be sold to person earning 50% of median (#92-94) or rented long-term affordability; later sold to tenant earning 54% of median income

**Expiration:**

**Enforcement:** Valley CDC/City (#92-94)

**# of units:** 1 (according to 6/17/2002 letter from Valley CDC)

**Location:** 72-72 Barrett St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/6/1993 | Contract #92-94 | Grant to Valley CDC for acquisition of one bedroom unit (13A) for $6,000 | |

## Ask about Coachlite Condo

## Cottage Kitchen (see 17 North Maple Street)

## Country Lane Estates (see Meadowbrook Apartments, 491 Bridge Road)

## 75 Forbes Avenue (see 68 Vernon Street)

## Ask about 37 Franklin Street

## Shelter for Battered Women (confidential location and references)

## The Gables (see 575 Bridge Road)

## Garfield Avenue Limited Project—Habitat for Humanity

**Ownership:** Private

**Agency:** Habitat for Humanity

**Protection:** Affordability Deed restriction (homes under construction, restriction not yet closed)

**Expiration:**

**Enforcement:** City, Habitat for Humanity

**# of units:** 5 affordable units plus one market rate single family lot sold by City

**Location:** Garfield Ave (formerly 39 Verona St)

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/20/1995 | B4685, p81 | Quitclaim deed with Katherine Georgianna | |
| 3/1/2006 | B8632, p77 | Confirmatory deed with Joanne Montgomery | |
| 1/4/2010 | B10067, p326 | Deed | |
| 1/4/2010 | B10068, p1 | Affordable Housing Regulatory Agreement | |
| 1/4/2010 | B10068, p34 | Agreement Regarding Garfield Ave Extension | |

**Description:**

This was originally planned as a Northampton Area Community Land Trust project (CDBG loan deposit repaid and CDBG grant for consulting costs). The finding of hazardous materials ended that project.

The City purchased the property with City and CDBG funds as a settlement for any involvement with hazardous materials (the City had permitted this as a dump site in the 1800s). It is developing this site as a limited development project with conservation land and affordable housing.

## 66 Green Street—New Units at West Street due to Smith Construction

**Ownership:**

**Agency:**

**Protection:**

**Expiration:**

**Enforcement:**

**# of units:** SRO Housing

**Location:** 66 Green St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/6/1988 | Contract #182-89, 182-89-1Mortgage B3644, p322 | Loan to HER, Inc for acquisition for $25,000 | |
| 3/6/1989 | Contract #181-89 | Grant to HER, Inc for acquisition for $25,000 | |
| 12/5/1990 | Contract #141-91, 141-91-1 | Loan to HER, Inc for bridge loan for $7,000 | |
| 12/5/1990 | Contract #142-91 | Grant to HER, Inc for interim staffing for $2,650 | |
| 7/31/1991 | B3772, p280 | Subordination agreement | |
| 7/31/1991 | B3772, p294 | Subordination agreement | |
| 5/14/1996 | Contract #141-91, 141-91-1 | Loan forgiven | |
| 3/5/1997 | Contract #259-97 | Grant to HER, Inc for emergency sewer repairs for $5,000 | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1/24/2007 | Contract #182-89, 182-89-1B9029, p39 | Loan forgiven | |

## 27 Hooker Avenue

**Ownership:** NACLT

**Agency:**

**Protection:** 3 units at 80% of median income (8/20/1992 application)

**Expiration:**

**Enforcement:** NACLT owns land, "owners will be low income families." "The NACLT will continue to own the land and lease it to the families." (9/14/1992 application for financing)

**# of units:** 3 units (one of which is handicap accessible, according to Memorandum of Understanding on 12/4/1992)

**Location:** 27 Hooker Ave

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/1/1992 | Contract #132-93 | Grant to NALCT for acquisition and pre-development for $30,000 | |

## Ice Pond

**Ownership:** Private as 6 homes are for sale

**Agency:** TCB Hospital Hill

**Protection:** At or below 80% of median income (#246-03, p3), 99 years of affordability

**Expiration:**

**Enforcement:** Northampton, TCB Hospital Hill (#246-03)

**# of units:** 6 homes, 2 of which shall include accessory apartments (#246-03 grant agreement)

**Location:** Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Deed Rider | |
| 6/3/2003 | Contract #246-03 | Grant to TCB Hospital Hill, LLC for acquisition of 6 residential buildings for $35,000 | |

## Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/13/2004 | B7900, p85 | Lot 1 | |

## Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/21/2004 | B7863, p170 | Lot 25 | |

## 31 Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 31 Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/10/2004 | B8097, p119 | Lot 5 | |

## 32 Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 31 Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 11/3/2004 | B8051, p299 | Lot 20 | |

## 67 Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 67 Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/16/2004 | B7950, p145 | Lot 12 | |

## 71 Ice Pond Drive (see above)

**Ownership:**

**Agency:**

**Protection:** Single family home restriction

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 71 Ice Pond Dr

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/10/2004 | B7941, p203 | Lot 13 | |

## 209 Locust Street (see Valley Inn)

## The Lorraine (see 96 Pleasant Street)

## The Maples (see 16 North Maple Street)

## Meadowbrook Apartments (Country Lane Estates—formerly Meadowbrook)

**Ownership:** Rental (#156-05, p2)

**Agency:**

**Protection:** 40 years for 209 of units earning less than 60% of median and 13 units earning less than 50% of median (#156-05)

**Expiration:** 12/28/2044

**Enforcement:** City, Preservation of Affordable Housing, LLC (#156-05, p3)

**# of units:** 252 units rental housing (222 units affordable)

**Location:** Bridge Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/28/2004 | Contract #156-05 | Grant to Preservation of Affordable Housing for acquisition for $100,000Terms: 40 years affordability for 209 units for households earning less than 60% of area median income & 13 units for households earning less than 50% of area median | |
| 2/2/2005 | B8153, p240 | Promissory Note, Assignment of Note & Mortgage, Sewer easement | |

## Millbank II/Michaelman Avenue

**Ownership:** Valley CDC

**Agency:** Valley CDC

**Protection:** 60% of median

**Expiration:**

**Enforcement:** City, Valley CDC

**# of units:** 24 rental units

**Location:** 18/79 Michaelman Ave, adjacent to 79 Michaelman Ave

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | #78-03 | | |
| 4/12/1991 | Contract #218-91 | Grant to Valley CDC for pre-development costs for $20,000 | |
| 4/22/1991 | Contract #218-91-1 | Grant to Valley CDC for increase of total contract amount to $50,000 for $30,000 | |
| 3/25/1993 | Contract #218-91-2 | Grant to Valley CDC for increase total contract amount to $100,000 for $50,000 | |
| 3/24/1994 | Contract #218-91-3 | Grant to Valley CDC for wording change paragraph 2 | |

## 1–3 North Main Street, Florence

**Ownership:** Rentals Valley CDC (application

**Agency:** Valley CDC

**Protection:** Initial 40 years—25% units 50% median income; 75% units 80% median; subsequent 10 years—80% income

**Expiration:** 10/27/2053

**Enforcement:** City, Valley CDC

**# of units:** Minimum 17 units SRO housing (#223-03-2)

**Location:** 1-3 North Main St, Florence

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/30/2003 | Contract #223-03 | Loan to Valley CDC for interim operating expenses for $35,000Terms: must maintain 20 SRO units as follows:Initial term: 25% (5 units) affordable to persons at/below 50% of area median income; 75% (15 units) affordable to persons at/below 80% of area median income for 50 yearsSubsequent term: 100% (20 units) affordable to persons at/or below 80% of area median income for 10 years | |
| 10/27/2003 | Contract #223-03, Amendment No. 1 | Loan to Valley CDC for installation of new roof for $9,574.50 | |
| 6/7/2004 | Contract #223-03, Amendment No. 2 | Loan to Valley CDC for bridge loan for acquisition for $145,000 | |
| 1/8/2005 | B8146, p237 | Agreement | |

## 65–67 North Main Street, Florence

**Ownership:** Units sold—discharged to homebuyers

**Agency:**

**Protection:**

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 65-67 North Main St, Florence

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/11/1997 | Contract #274-97B5099, p321 | Loan to Valley CDC for acquisition for $20,000Mortgage | |
| 4/11/1997 | Contract #275-97 | Grant to Valley CDC for acquisition for $40,000 | |
| 9/15/1997 | B5199, p142 | Subordination of mortgage | |
| 6/14/2001 | B6244, p151, 166 | Subordination agreement, Quitclaim deed, Deed Rider | |

## 16 North Maple Street, Florence (The Maples)

**Ownership:** Valley CDC

**Agency:** Valley CDC

**Protection:**

**Expiration:**

**Enforcement:** City, Valley CDC

**# of units:** 11 rentals (Daily Hampshire Gazette 12/16/1992, SRO Housing fact sheet)

**Location:** 16 North Maple St, Florence

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 1/17/1992 | #171-92 | Grant to Valley CDC for acquisition for $95,000 | |
| 3/25/1992 | Contract #207-92-1 | Loan to Valley CDC for bridge loan soft costs for $8,624 | |
| 6/5/1997 | Contract #207-92-1 | Loan paid | |

## 17 North Maple Street, Florence (Cottage Kitchen)—The Florence Inn

**Ownership:**

**Agency:** Service Net, Inc

**Protection:** Permanently affordable units (#2 in agreement) for homeless or at risk of homelessness (2/24/1995 Loan Agreement (#206-95)

**Expiration:**

**Enforcement:** HUD funded section 8 program

**# of units:** 14 (affordable units—SRO Housing)

**Location:** 17 North Maple St, Florence

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/27/1994 | Contract #24-95 | Grant to Valley Programs for acquisition for $25,000 | |
| 8/3/1994 | Contract #72-95 | Loan to Service Net, Inc for acquisition for $75,000Terms: remaining balance of $15,000 to be repaid at annual rate of $1,000 per year beginning 1/1/2011Must be repaid if property is sold or converted to use other than SRO | |
| 2/24/1995 | Contract #206-95 | Loan to Service Net, Inc for interim management costs for $3,000 | |
| 1/30/1996 | Contract #206-95 | Paid | |
| 8/28/1996 | Contract #72-95, Contract #72-95-1A | Forgiven, $37,900 | |

## Paradise Pond Apartments

**Ownership:** HAP, Inc

**Agency:** HAP, Inc

**Protection:** Affordability Deed restriction

**Expiration:**

**Enforcement:** City, DHCD

**# of units:** Transitional affordable unit

**Location:** West St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Access easement from Smith College | |

## Paradise Pond (155 West Street)

**Ownership:**

**Agency:** HAP, Inc

**Protection:** 99 years affordability according to subrecipient agreement #188-04

**Expiration:** 4/22/2103

**Enforcement:** City, HAP

**# of units:** 12-unit family rental housing

**Location:** 155 West St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/22/2004 | Contract #188-04 | Loan to HAP, Inc for architectural design & project construction for $44,000 ($112,500 total amount) | |
| 8/27/2004 | Contract #188-04, Amendment No. 1 | Loan to HAP, Inc for increase amount of initial contract for $68,500 | |
| 8/23/2005 | B8404, p187 | Mortgage w/Paradise Pond, LLCLessor's Estoppel Certificate & Agreement w/NHA | |

## 96 Pleasant Street (The Lorraine)

**Ownership:**

**Agency:** HAP

**Protection:** Duration that Section 8 Moderate Rehabilitation rental subsidies—min. of 20 units must be maintained at 50% or below of median income; project shall continue to seek Section 8 subsidies. W/o Section 8, minimum of 20 units at 80% or below median and half at/below 50%

**Expiration:**

**Enforcement:** City, HAP

**# of units:** 28 units SRO Housing (#176-00

**Location:** 96 Pleasant St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/30/1990 | Contract #3-91 | Loan to Wickles for rehab loan $25,000 (foreclosure on property b/c loan not repaid) | |
| 12/17/1999 | Contract #176-00 | Loan to HAP for acquisition for $170,000 | |
| 3/20/2000 | B5902, p234 | Promissory note | |

## 109 Ryan Road

**Ownership:** Private

**Agency:** PV Habitat for Humanity

**Protection:** 50 years (5/13/2004 Deed Rider)

**Expiration:** 5/13/2054

**Enforcement:** PV Habitat

**# of units:** 2 (condo units 109A & 109B)

**Location:** 109 Ryan Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 7/14/2000 | B5984, p203 | Confirmatory deed ($45,000) for full payment to Pauline Sienkiewicz for damages for Taking by Eminent Domain | |
| 2/21/2001 | | Loan to PV Habitat for Humanity, Inc for City transfer of property valued at $57,500 for affordable housing for two income eligible families | |
| 4/30/2001 | B6197, p22 | Mortgage ($57,500), forgive in 50 years from date of signing (see mortgage) | |
| 5/13/2004 | B7801, p124 | Unit deed ($64,980) for unit 109A, Chamnan Koy Tan & Huy Kean Tan | |
| 5/13/2004 | B7801, p149 | Unit deed ($46,455) for unit 109B, Thomas Paul Goldscheider | |

## Ryan Road Limited Project—Habitat for Humanity

**Ownership:** Private

**Agency:** Habitat for Humanity

**Protection:** Affordability Deed restriction

**Expiration:** 5/13/2054

**Enforcement:** City, PV Habitat

**# of units:** 2 affordable units

**Location:** 109A & 109B Ryan Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/13/2004 | B7801, p124, p130 | 109A Ryan Rd | |
| 5/13/2004 | B7801, p149, p155 | 109B Ryan Rd | |

**Description:**

The City initiated a limited development project that created two affordable units (built by Habitat for Humanity) and 80 acres of open space, now part of the Saw Mills Conservation Area.

## 46–48 School Street

**Ownership:** Valley School Street, LLC

**Agency:** VCDC

**Protection:** 99 years for all 8 units (affordability must be at/below 80% of median income, #150-08)

**Expiration:**

**Enforcement:** City, VCDC

**# of units:** 8 (1 of 3-bedroom; 1 of 2-bedroom, 3 of 1-bedroom, 3 studio units) (#150-08 subrecipient agreement)

**Location:** 46-48 School St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/15/1994 | Contract #191-94 | Grant to Valley CDC for acquisition for $45,000 | |
| 4/29/1994 | Contract #215-94 | Grant to NACLT for acquisition of land for $25,000 | |

## 22–34 South Street

**Ownership:** New South St Limited Partnership

**Agency:**

**Protection:**

**Expiration:**

**Enforcement:** New South St Limited Partnership, MA Housing Investment Corp, Valley CDC, Community Economic Development Assistance Corp, DHCD, HAP (according to Sponspor Agreement Loan, 11/15/2006)

**# of units:** 18 units, rental

**Location:** 22-34 South St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/26/1996 | Contract #193-96 | Loan to Valley CDC for tenant relocation costs during renovation for $50,000Terms: repayment no later than 12/31/2015 or upon repayment from New South St Limited Partnership (Contract #193-96, Amendment No. 1) | |
| 11/15/1993 | Contract #131-94 | Grant to Valley CDC for acquisition for $50,000 | |

## 237 South Street

**Ownership:**

**Agency:** NACLT

**Protection:**

**Expiration:**

**Enforcement:** NACLT

**# of units:** 2 (duplex—Unit A, 2 bedrooms; Unit B, 3 bedrooms)

**Location:** 237 South St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/5/1990 | | Grant to NACLT for acquisition for $13,048.93 for development of affordable housing | |

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | PB174, p248 | Survey of property | |
| 7/31/1990 | B3598, p164 | Deed, option for purchase of land and ground lease (B136, 1) | |
| | B4136, p38 | Master deed | |
| 4/1/1991 | Contract #215-91 | Grant to NACLT for pre-development for $11,500 | |
| 1/29/1992 | Contract #183-92, No. 1 & 2 | Loan to NACLT for capital costs for $11,900Paid: March 1993 | |
| 4/1993 | | Grant to NACLT for excavating (emergency grant) for $3,500 | |

## 145 Spring Street

**Ownership:**

**Agency:**

**Protection:**

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** 145 Spring St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/18/1997 | Contract #266-97 | Grant to Northampton Housing Authority for renovation of property for $40,000 | |

## 74 State Street (see 36 Bedford Terrace)

## Straw Avenue Housing

**Ownership:**

**Agency:**

**Protection:**

**Expiration:**

**Enforcement:**

**# of units:**

**Location:** Straw Ave

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 6/2/2008 | B9501, p347 | Deed to the Friends | |
| 6/2/2008 | B9502, p6 | Affordable housing restriction | |
| 6/2/2008 | B9502, p14 | Recapture agreement | |
| 6/2/2008 | B9502, p18 | Deed to ServiceNet | |

## 18 Summer Street

**Ownership:**

**Agency:**

**Protection:**

**Expiration:** 9/19/2047

**Enforcement:**

**# of units:** Sober SRO Housing

**Location:** 18 Summer St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 5/30/1996 | Contract #256-96 | Grant to Alliance for Sober Living for acquisition for $50,000Terms: if sold, transferred, or otherwise conveyed to unqualified buyer, grant must be repaid | |
| 8/21/1996 | B4956, p98 | Mortgage | |
| 10/27/1997 | Contract #135-98 | Grant to Alliance for Sober Living for replacement of heating system for $5,830 | |
| 9/19/1998 | Contract #73-99a, #73-99b | Loan to Alliance for Sober Living for structural repairs for $23,707 (not full expended?)Terms: w/n 49 years or if property is transferred or no longer provides direct benefit to low/mod income persons | |
| 10/1/1998 | B5499, p237 | Mortgage and promissory note | |
| 4/12/2001 | Contract #285-01 | Grant to Alliance for Sober Living for structural reinforcement w/n basement, installation of key & lock system, & installation of replacement windows & exterior door for $14,300 (not fully expended?) | |

## Turkey Hill Road (317A and 317B)

**Ownership:** Private

**Agency:** Equity Builders

**Protection:** 30 years (under right of refusal/recapture)

**Expiration:** 11/24/2034

**Enforcement:** City

**# of units:** 2

**Location:** Turkey Hill Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 8/17/2001 | Contract #97-02, #97-02, No. 1 | Loan to Thomas Fortier & Trist Metcalfe for pre-development (construction of 2 duplex residential units) for $48,500 (not fully expended?)Discharged: 12/11/2003 as part of closing w/Equity Builders | |
| 10/2/2001 | B6380, p167 | Promissory note & mortgage | |
| 10/29/2003 | Contract #98-04 | Loan to Equity Builders Realty, LLC for acquisition & construction for $37,500Discharged: 11/26/2004 | |
| 12/11/2003 | B7616, p114 | Promissory note & mortgage | |
| 4/7/2004 | Contract #171-04 | Grant to Valley CDC for marketing & buyer selection of units for $8,540 | |
| 11/24/2004 | B8079, p317 | Unit A Deed Rider | |
| 11/24/2004 | B8079, p206 | Unit B Deed Rider | |

## Valley Inn—209 Locust Street

**Ownership:** Douglas P. Ferrante

**Agency:**

**Protection:** Homeless mentally ill, at/below 80% of median income (from letter to Mayor Higgins, 9/27/2002); 20 years affordability according to subrecipient agreement on 10/1/2002 (#144-03)

**Expiration:** 10/1/2022

**Enforcement:** City

**# of units:** 14 individuals

**Location:** 209 Locust St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Promissory note, construction agreement & restriction | |
| 10/1/2002 | Contract #144-03 | Loan to Skyline Design/Doug Ferrante for renovations for $54,000 | |

## 39 Verona Street (see Garfield Avenue/39 Verona Street)

## 68/70 Vernon Street and 75 Forbes Avenue

**Ownership:** Private

**Agency:** PV Habitat for Humanity

**Protection:** 25-50% median income (according to 8/31/1998 PVHFH proposal)

**Expiration:** 7/25/2052

**Enforcement:** PVHFH

**# of units:** 2 units

**Location:** 68/70 Vernon St, 75 Forbes Ave

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 12/1996 | | Cold Springs Environmental Consultants, Inc for historical 21E site assessment ($950) | |
| 1/10/2000 | Contract #178-00B7821, p36 (discharged) | Loan to Habitat for Humanity for move & rehabilitation of 2 family home for $100,000Discharged: 7/25/2004 | |
| 1/11/2000 | B5867, p81 | Promissory note & mortgage | |
| 7/25/2002 | Contract #133-03 | Loan to Macaye A. Santos (68 Vernon St) for purchase of condominium for $50,000Terms: reduction of loan amount by 2% each calendar year w/loan being forgiven in 50 years unless sold to "non-income eligible" homebuyer | |
| 9/30/2002 | B6807, p126 | Promissory note & mortgage | |
| 3/7/2004 | Contract #48-04 | Loan to Sylvia & Ernest Jerry Johnson for purchase of condominium for $50,000Terms: reduction of loan amount by 2% each calendar year w/loan being forgiven in 50 years unless sold to "non-income eligible" homebuyer | |
| 4/26/2004 | B7770, p247 | Promissory note & mortgage | |

## Village at Hospital Hill

**Ownership:**

**Agency:** TCB

**Protection:** 17 of units affordable for people earning 60% of median income, 5 of units affordable to people earning 50% of median income, according to "Rental Phase II"

**Expiration:**

**Enforcement:** City, TCB

**# of units:** 33 units (phase I, rentals, 75% affordable to people earning less than 80% of median income, 40 years)

**Location:** Village Hill Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 4/27/2005 | Grant #B-05-SP-MA-0121 | Economic Development Initiative (EDI) Grant for redevelopment of blighted land for $198,400 | |

## 5 Walnut Street

**Ownership:** Private

**Agency:**

**Protection:** 15 years

**Expiration:**

**Enforcement:** DHCD, VCDC

**# of units:** 2 units (1 rental, 1 ownership)

**Location:** 5 Walnut St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| | | Quitclaim deed | |
| 5/2/1997 | Contract #289-97 | Grant to Valley CDC for acquisition for $60,000Funds returned w/interest to HUD 1/28/1998 | |

## 135–137 West Street (see Paradise Pond Apartments)

## Westhampton Road

**Ownership:** Private

**Agency:** Pioneer Valley Habitat for Humanity

**Protection:** 50 years from signage of each of deed riders (signed bet. 10/18/2006 & 8/30/2007)—to people earning 30-50% of median income

**Expiration:** Unit 840A—1/3/2057; Unit 840B—10/18/2056; Unit 340C—8/30/2057; Unit 840D; Unit 840E—8/16/2057; Unit 840F—5/25/2057

**Enforcement:** City

**# of units:** 6 units

**Location:** 840 (A-F) Westhampton Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/2/2001 | B6137, p317 | Order of Taking | |
| 7/28/2003 | B7347, p320 | Quitclaim deed w/Pioneer Valley Habitat | |
| 12/9/2004 | B8118, p172 | Corrective deed w/Pioneer Valley Habitat | |

## Westhampton Road Limited Project—Habitat for Humanity

**Ownership:** Private

**Agency:** Habitat for Humanity

**Protection:** Affordability Deed restriction (homes under construction, restriction not yet closed)

**Expiration:**

**Enforcement:** City, Habitat for Humanity

**# of units:** 6 affordable units (1 market rate single family lot sold by City)

**Location:** Westhampton Rd

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 3/3/2001 | B6137, p317, p327 | Taking & confirmatory deed to City | |
| 4/8/2003 | PB195, p98 | Plan | |
| 7/28/2003 | B7347, p320 | Deed | |
| 12/29/2004 | B8118, p172 | Corrective deed, Westhampton Rd | |
| 10/26/2006 | B8925, p246 | 840B Westhampton Rd Deed Rider, West Farms | |
| 1/5/2007 | B9002, p78 | 840A Westhampton Rd Deed Rider, West Farms | |

**Description:**

The City initiated a limited development project, creating six affordable units (built by Habitat for Humanity), one market rate lot sold to defray project costs, a landfill buffer, a future market rate building lot site, and 16 acres of open space, now part of West Farms Conservation Area.

# 5.5: Development Agreements

## 200–206 King Street

**Ownership:** Private

**Zoning:** HB

**Protection:** Permanent Development Agreement

**Enforcement:** City

**Location:** 200-206 King St

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 9/9/2004 | B7982, p197 | | |

**Description:**

The property owner agrees to limit users to prevent those incompatible with a residential neighborhood. S/he also agrees that new buildings will be a minimum of two stories and that upper floors will only be used for housing as long as the City maintai**ns the property as GB or HB.**

## North King Street

**Ownership:** Private

**Zoning:** HB

**Protection:** Permanent Development Agreement

**Enforcement:** City

**Location:** North King St.

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/14/1960 | B1337, p407 | Deed | |
| 3/4/2005 | B8180, p119 | Development agreement | |

**Description:**

The property owner agrees to fund $150,000 to allow the City to make certain transportation improvements if the City rezones the property to HB, which the City did in March 2005.

# 5.6: Drainage Easements

## Microcal, LLC

**Ownership:** Private

**Enforcement:** City, Board of Public Works

**Location:** 22 Industrial Drive East

**Parcel ID:**

**Acquisition history:**

| Date | Book, page or other | Description | Acres |
|---|---|---|---|
| 10/10/2007 | B9291, p7 | Site plan decision | |
| 12/14/2007 | B9349, p103 | Easement agreement | |

# 6 Community Vision

This plan builds on seven earlier *Open Space, Conservation, and Recreation Plans* (1975, 1980, 1985, 1989, 1994, 2000, and 2005) and on other planning, conservation, and recreation documents, including *Sustainable Northampton Comprehensive Plan* (2008). This plan was written under the direction of the Conservation Commission, Recreation Commission, Transportation and Parking Commission, and Planning Board, with participation from an ad-hoc Open Space and Recreation Plan Committee.

To ensure that this Open Space and Recreation Plan truly reflects the current needs, desires, and opinions of the citizens' of Northampton, the Planning Board, Conservation Commission, and Recreation Commission sought input from the public and from various municipal boards during two public hearings. The findings were consistent with the findings from a much more extensive 2007 outreach and participation conducted as part of the citywide *Sustainable Northampton Comprehensive Plan*. The Conservation Commission, Recreation Commission, Transportation and Parking Commission, and Planning Board reviewed and approved the final document and submitted it to City Council.

## Statement of Open Space and Recreation Goals

Northampton is endowed with a diverse natural and cultural environment, which provides scenic vistas, opportunity for passive and active recreation, and a wide variety of plant and animal habitats, including habitats for rare and endangered species. Northampton residents want to preserve and enhance these resources, but they also acknowledge that open space and recreation goals are sometimes in conflict with other community goals.

### Major open space and recreation goals are to:

- Preserve and expand city holdings of open space, wild lands and small pieces of open land in developed areas.
- Use open space and recreation to ensure that the urban and village centers are attractive places to live, work and visit.
- Determine the need for and possibly provide additional sites for community gardens.
- Where consistent with protection of wildlife and plant habitat, make more natural areas available for public use.

- Provide recreation opportunities for individuals of all ages and physical abilities now and for future generations.
- Preserve the character and integrity of rural areas, farms, forests, and rivers.
- Maintain and restore healthy and sustainable natural ecosystems with diverse populations of indigenous flora and fauna.
- Develop partnerships with neighborhood groups and organizations to help maintain, protect and expand the existing open space and recreation area.

# 7 Analysis of Needs

The City has been acquiring and permanently protecting approximately 100 acres of open space, in fee or by easement, annually for the past decade. Still, as Northampton has developed in recent years, residents have recognized that the existing open space is being lost and that permanent protection of open space and recreation lands is needed more than ever.

During numerous public meetings and hearings and meetings with city boards and officials, the Planning Board, Conservation Commission, and Recreation Commission have consistently heard concerns that important open space and recreation needs are not being met.

The Conservation Commission and Planning Board, working through the public planning process, have identified the following, as Northampton's most pressing open space needs:

1. Passive recreation opportunities throughout the city.
1. Linkage and augmentation of open space parcels, to provide for passive recreation and wildlife movement between large natural habitat areas.
2. Protection of vistas and "viewsheds."
3. Acquisition for permanent protection of a range of critical and natural plant and animal habitats, including:
    - Wetlands
    - Rare or endangered species habitat
    - Riparian lands along the Connecticut, Mill, and Manhan Rivers and other rivers and major streams
4. Preservation of open space parcels that help define Northampton's character, including parcels at the "entrances" to the city and parcels that limit the expansion of development into previously rural areas.
5. Protection of farmland, forestland, and the rural character of outlying areas.
6. Protection of Northampton's drinking water supply watershed and aquifer lands and of Hatfield's aquifer.
7. Encouraging or requiring that development is sensitive to ecological resources, vistas, and open

space.

8. Limited improvements, including improvements to make some conservation areas handicap accessible.
9. Fishing and informal swimming opportunities in conservation areas and throughout the City.
10. Permanent protection of Smith Vocational agricultural and forestry lands and of undeveloped lands at the Veterans Administration Hospital and the County Long Term Care Facility.
11. Protection of key parcels in the last remaining large undeveloped areas of town – Broad Brook Watershed, Marble Brook Watershed, Saw Mill Hills, Mineral Hills, and the Meadows.

The Recreation Commission and Planning Board, working through the public planning process, have identified the following as the most critical recreation and park needs:

1. To the extent resources allow, improvement of recreation area facilities and provision of access for residents with disabilities, especially rest rooms, at existing recreation areas.
2. A wider diversity of recreation facilities, especially indoor facilities.
3. Better maintenance of recreational areas.
4. More bike paths, bike lanes, bike routes and bike linkages.
5. Permanent protection for current and future recreation and park areas.
6. Provide additional recreation opportunities wherever possible.

The Northampton Council on Aging and Committee on Disabilities have identified the following as the most critical recreation and park needs:

1. Create signs with the international symbol of accessibility at each recreation area.
2. Create better signage for the visually impaired.
3. Add rails to existing paths.
4. Upgrade facilities to restrooms with handicap accessible sinks and stalls.

## Summary of Open Space and Conservation Needs—The 2000 Statewide Comprehensive Outdoor Recreation Plan (SCORP)

The Massachusetts Executive Office of Environmental Affairs Department of Conservation Services publishes the *Statewide Comprehensive Outdoor Recreation Plan (SCORP)* to provide cities and towns in Massachusetts with information for local and regional planners to use as a tool in targeting areas of critical need for recreation, whether in acquisitions, facility improvements, or programming changes. The Department of Conservation Services' Needs Assessments are created by evaluating the available supply of recreational facilities along with the current and future demand. The regional analyses create profiles of needs, which communities are required to consider when applying for grants under the Land and Water Conservation Fund and state Self-Help and Urban Self-Help programs. Regional profiles of needs are useful as indicators, not as specific and absolute predictors. The intent in developing the needs analysis is to provide information on demand, both met and unmet, and supply that will point out areas of need that should be considered in planning and grant applications. The intent was not to create a set of imperatives or a specific local plan that communities could follow but rather to supply communities with

statewide and regional data that should be considered and perhaps modified by particular local needs.

# Unmet Statewide Need for Recreational Facilities

Overall, statewide need is greatest for trail-based activities, with walking and road biking indicated as the individual activities with the highest demand. Field-based activities rank second as priority needs for new facilities, with playground activity, tennis, and golfing ranked at the top of the activity need list. Finally, a strong need exists for water-based activities, with swimming indicated as the facility most needed statewide. In simple rank order, the ten most needed or desired facilities mentioned by respondents are:

## Desired Facility Percent of Respondents Using the Facility

| | | |
|---|---|---|
| 1. | Swimming | 14.8% |
| 2. | Walking | 13.8% |
| 3. | Road Biking | 12.9% |
| 4. | Playground Activity | 9.9% |
| 5. | Tennis | 8.0% |
| 6. | Golfing | 7.9% |
| 7. | Hiking | 7.1% |
| 8. | Mountain Biking | 6.7% |

## Regional Needs Patterns

Regionally, facility needs are similar to statewide needs, with trail-based activities at the top of all regional lists. Field-based and water-based activities follow in need and are too close to accurately rank.

However, there are notable differences among regions and between regions and statewide results. Most regional results show a clear relationship between the facilities available in an area and the facilities respondents would most like to see more of (that is, those in greatest supply are in least demand and those in least supply are in greatest demand). Land managers must carefully consider these needs and thoroughly evaluate if existing facilities can support this demand before committing to new facilities. Programmatic changes may fulfill some portion of the expressed need.

A distinctive pattern emerges in the Connecticut Valley Region, including the hill towns of Hampshire, Hampden, and Franklin Counties. Hiking (10.7%) and playground activity (11.3%) ranked high with swimming and road biking, but also hiking, mountain biking (10.3%), and cross country skiing (4.1%) are ranked higher than in any other region.

## Need Expressed by Non-White Ethnic Groups

Significant differences exist in activity-based needs among ethnic groups, according to perceptions of need. The interest expressed in more field-based facilities, particularly for basketball and playgrounds was much higher among people of color than among the statewide sample. Conversely, the trail and wilderness based activities were of significantly less need among these groups than the state sample. As noted in the Demand section of this report, these activity preferences may reflect the more urban locations of these populations and a lack of access or exposure to some activities than a disinterest in the

activity per se.

African-Americans expressed significantly more interest than the state sample in facilities for volleyball (6.6% versus 1.1% statewide), football (5.0 versus 1.4%), and basketball (15.8% versus 6.2%), yet not so much as Other/Multi-racial groups did in basketball (23.0%) and tennis (26.2%).

Hispanics expressed significantly higher levels of interest in facilities for basketball and playground activities, along with somewhat greater levels for baseball, soccer, mountain biking and swimming.

### Need Expressed by People with Disabilities

Households with people with disabilities report usage rates that are very similar to the statewide average.

They report significantly lower participation rates only for golfing. When asked to indicate how a domestic disability affects their household's recreation activities, responses fell into two categories. Many responses emphasized that the disability had little or no affect on the recreation. Some responses suggest that, for disabilities relating to mobility, usage of recreation areas is lower.

## Departmental Needs for Recreation in the City of Northampton

With limited resources, maintenance of existing municipal facilities is one of the most difficult tasks facing the City of Northampton. As resources grow scarcer, recreation maintenance funds have become more limited and different municipal needs have often conflicted with each other.

Unfortunately, most actions that address recreation and park area management needs require scarce resources:

1. To the extent resources allow, the City should continue to work to provide better maintenance and staff support for the Recreation Department.
2. The City should consolidate the ownership of all recreation areas with the Recreation Department.
3. The City should continue to work with Look Park and cooperate with its efforts to meet Northampton's recreation needs.
4. The City should continue to cooperate with non-municipal recreation providers to coordinate on recreation facilities.
2. Through the Northampton Council on Aging, the City should continue to be dedicated to enhancing the quality of life for the City's elder population, 60 and over. Rooted in its mission is the belief that every elder is a valued member of the community and has a right to a life of dignity while maintaining a maximum level of independence. To meet this goal, the Council on Aging should continue to identify recreation needs of seniors and provide a range of programs and services to meet those needs. The Council on Aging should continue to work with the Conservation Commission, Recreation Commission, and the Office of Planning and Development to update the Open Space and Recreation Plan to address the recreation needs of Northampton's senior citizens.
5. The Committee on Disabilities is responsible for studying the needs of people with disabilities in the community and advocating for their integration in all phases of community life. The

Committee should continue to identify recreation needs of disabled residents and visitors while increasing public awareness of issues of accessibility. The Committee on Disabilities should continue to work with the Conservation Commission, Recreation Commission, and the Office of Planning and Development to update the Open Space and Recreation Plan and the Section 504 Self-Evaluation to address the recreation needs of Northampton's disabled population.

## Departmental Needs for Conservation in the City of Northampton

Limited municipal resources also restrict the public's use of conservation areas, even though conservation areas require far less maintenance than recreation areas. Improving management of conservation properties is only possible if scarce municipal resources are provided:

1. To the extent resources allow, improved funding for other than ordinary maintenance of conservation areas.
2. To the extent resource allow, improved staffing to allow a summer staff for needed maintenance and improvements.
3. To the extent resources allow, continued cooperation with other government agencies, conservation agencies, and neighborhood groups that manage conservation land.
4. Through the Northampton Council on Aging, the City should continue to be dedicated to enhancing the quality of life for the City's elder population, 60 and over. Rooted in its mission is the belief that every elder is a valued member of the community and has a right to a life of dignity while maintaining a maximum level of independence. To meet this goal, the Council on Aging should continue to identify conservation goals of seniors and provide opportunities to meet those needs. The Council on Aging should continue to work with the Conservation Commission, Recreation Commission, and the Office of Planning and Development to update the Open Space and Recreation Plan to address the conservation goals of Northampton's senior citizens.
5. The Committee on Disabilities is responsible for studying the needs of people with disabilities in the community and advocating for their integration in all phases of community life. The Committee should continue to identify conservation goals of disabled residents and visitors while increasing public awareness of issues of accessibility on conservation property. The Committee on Disabilities should continue to work with the Conservation Commission, Recreation Commission and the Office of Planning and Development to update the Open Space and Recreation Plan and the Section 504 Self-Evaluation to address the conservation goals of Northampton's disabled population.

## Resource Protection Needs in the City of Northampton

Although Northampton's resources are less threatened than many urban communities, there are significant threats to natural resources, plant and animal habitat, and the general environmental health of the City. Through the open space and recreation planning process, we have identified the following as critical natural resource protection needs:

1. Permanent protection of large open space parcels, or linkage of open space parcels, to provide large natural habitat areas.

2. Permanent protection of critical and highly-productive habitat, including:
    - Wetlands
    - Rare or endangered species habitat
    - Wildlife corridors
    - Riparian corridors
3. Permanent protection of a range of natural habitat types, including:
    - Riparian (riverfront) habitat
    - Farmland and forest
    - Perennial and vernal pools
4. Permanent protection of Northampton's drinking water supply watershed and aquifer lands and of Hatfield's aquifer.
5. Limiting development that could be damaging to environmental resources, including:
    - -Floodplains
    - Floodplains
    - Wetlands and buffer areas
    - All water courses and bodies
    - Prime and active agricultural land
    - Sensitive natural areas
    - Wildlife habitat and corridors
6. Ensuring protection of resources that cross political boundaries by working with neighboring communities, governments, state and regional agencies and nonprofit organizations.

# 8 Goals and Objectives

The following are policies, objectives, and actions that were adopted by the Northampton Planning Board in the Vision and Consistency Analysis of the *Sustainable Northampton Comprehensive Plan*, adopted in 2008. All of these goals have some impact on open-space and recreation. Some have more impact than others, and they are all repeated here for the sake of completion.

Listed in no particular order:

## Goal LU-1: Direct changes and improvements in accordance with the Future Land Use Map

## Goal LU-2: Create and preserve high quality, built environments in the downtown and village centers

## Goal LU-3: Maintain a distinction between rural areas, residential neighborhoods, and urban areas

## Goal LU-4: Preserve and encourage agricultural uses in designated areas, such as the Meadows

## Goal EEC-1: Reduce community's and City's energy demand and natural resource consumption

## Goal EEC-2: Reduce emissions of greenhouse gases (GHG)

**Goal EEC-3: Protect valuable and sensitive ecological resources (land, air, water, habitat, plants, & animals)**

**Goal EEC-4: Minimize the impacts of infrastructure systems on environmental resources**

**Goal EEC-5: Safeguard and improve the quality of the City's surface waters to ensure use for safe public swimming, recreational fishing activities, boating, and drinking**

**Goal OS-1: Maximize use of the City's open space and recreation areas**

**Goal OS-2: Expand open space and recreation areas**

**Goal OS-3: Preserve natural and cultural resources and the environment**

**Goal OS-4: Provide open space connections between public spaces**

**Goal HR-1: Protect and preserve the City's heritage resources**

**Goal H-1: Create new housing**

**Goal H-2: Preserve and sustain existing affordable housing**

# Goal 1: Expand Open Space and Recreation

- Preserve and expand city holdings of open space, wild lands, and small pieces of open land in developed areas.

**ICON KEY**

☑ Partially completed but can use improvement

☐ To be done

- Use open space and recreation to ensure that the urban and village centers are attractive places to live, work, and visit.
- Make more natural areas available for public use.
- Provide recreation opportunities for individuals of all ages and physical abilities now and for future generations.
- Preserve the character of rural areas, farms, forests, and rivers.

| Policies and objectives to meet goals: | Partial list of actions for goals and objectives | |
|---|---|---|
| Ensure that all appropriate recreation areas are accessible to those with physical disabilities. | ☑ | Complete handicap accessibility improvements at all feasible recreation areas. |
| Upgrade all parks in urban and developed areas. | ☑ | Add and maintain downtown and Florence pocket parks, green ways, rail trail (bike path) linkages, and Mill River access. |
| Increase the number of ball fields by at least 10 to serve burgeoning recreation needs. | ☑ | Acquire land for ball fields at Northampton State Hospital and in western section of City. |
| Link all the City's conservation districts to each other with greenways so that hikers and walkers can traverse the City. Create a citywide trail system that is marked. | ☐ | Explore possibility of getting easements from private landowners, so hikers can cross to public lands. |
| Add to the City's conservation land holdings by acquiring small green areas downtown and in villages of Bay State, Leeds, and Florence. | ☑ | Conservation Commission must make it a priority. |
| Provide recreation, conservation, and open space opportunities. | ☑<br>☑<br>☑<br>☑ | Acquire parcels that are accessible to residents.<br>Acquire parcels that help define neighborhoods and the community.<br>Acquire restrictions to preserve farms, forests and rivers, and other resources.<br>Acquire parcels for new recreation opportunities. |
| Acquire land with vistas and interesting landscapes, especially in western edge of City. | ☑ | Conservation Commission charge. |
| Make sure that no City farm goes out of business. Farmland should not be lost to housing. | ☐<br>☐ | Link City farmers with conservation groups and state agricultural protection restriction program.<br>Foster the current Northampton farmers' market. |
| Acquire land that serves as a gateway between urban, suburban, or rural landscapes. | ☑ | Conservation Commission charge. |

## Significant inconsistencies between vision and current practices:

1. New development is not contributing to the preservation of open space and is converting open space to housing much faster than open space is being preserved.
2. Municipal spending has not been allocated for open space acquisition.

# Goal 2: Preserve Traditional Land Use Patterns Without Creating Sprawl

- Redevelop vacant land in built-up areas, guarding against sprawl.
- Promote new villages (commercial, residential areas) where feasible.
- Foster continued mixture of uses in villages: Florence, Leeds, and Bay State.
- Discourage development damaging village character of urban/residential neighborhoods.
- Ensure new downtown development meshes with architectural heritage.
- Maintain clear distinction between rural, suburban, and urban areas.
- Promote traditional neighborhood development patterns.
- Encourage and create incentives to develop in urban centers and zones identified for growth pursuant to the Sustainability Plan comprehensive planning process.

| Policies and objectives to meet goals: | Partial list of actions for goals and objectives | |
|---|---|---|
| New development should be accompanied by open space preservation, so that at least one acre of open space is preserved for each acre of land developed. | ☑ | Acquire open space for conservation and recreation purposes |
| | ☑ | Use zoning to ensure open space preservation. |
| Suburban style development should be matched by an equal or greater amount of compact development. | ☑ | Amend zoning and subdivision regulations. |
| | ☐ | Add adequate facilities/concurrency ordinance with no development until City services/water and sewer can accommodate it. |
| | ☐ | Adopt a best practices design manual. |
| Ensure that new housing development will not outstrip school, public works, public safety services, and ability of downtown roads to handle suburban traffic. | ☐ | Consider phased development ordinance. |
| | ☐ | Add adequate facilities/concurrency ordinance. |
| | ☐ | Consider impact fees or exactions where development pays for its own services. |
| | ☐ | Consider community preservation act, taxing real estate sales. |
| Undertake City-wide sustainability-focused comprehensive plan 2005–2006. | ☑ | Revise regulatory structure to move toward City land use plan. |
| Create land zoned for new economic development opportunities where it will not harm neighborhoods. | ☐ | Rezone to create new industrial and commercial areas (see land use map). |

| Policies and objectives to meet goals: | Partial list of actions for goals and objectives | |
|---|---|---|
| Encourage development patterns that contribute to, and do not sap, the strength of their neighborhoods. | ☐ | Amend zoning rules to encourage new development to be linked with existing neighborhoods. |
| Make sure that all existing buildings are reused and rehabilitated. | ☑ | Some zoning has been changed to allow for easier reuse of old mill buildings. |
| Cluster all housing developments in rural areas, leaving more open land, with designs that still allow for housing choices. | ☑<br>☐ | Current zoning allows some advantages for developers who cluster houses.<br>Revise subdivision rules and regulations. |
| While showing a preference to village-type growth, do not preclude homeowners from choosing large lots in suburban areas. | ☑ | Current zoning allows for large lots in outlying areas. |
| Make certain the community groups have a role in City planning. | ☐ | Inform neighborhood groups of planning issues as individual abutters are now notified. |
| Prevent any significant development from sensitive floodplain areas. | ☐ | Revise Special Conservancy zoning and Water Protection zoning to prevent development in floodplain areas. |
| Define that portion of Rural Residential zoning that should be rural and preserve the character of that area. | ☐ | Adopt zoning that preserves farms and forests, instead of simply calling for larger suburban lots and labeling it rural. |
| Reduce traffic impacts from new residential development and sprawl. | ☐ | Evaluate impacts from current residential development patterns, especially development in the Ward 6/Route 66 sections of the City. |
| Address anomalies and inconsistent messages sent in the zoning. Especially coordinate City zoning at town boundaries with that of surrounding towns. | ☐<br>☐<br>☐ | Rezone parcels on Hatfield town line or near town line that abuts commercial or industrial areas in Hatfield to match Hatfield zoning.<br>Work with adjoining towns for coordinated zoning.<br>Examine pre-existing, non-conforming commercial and industrial areas and consider if some of these should be rezoned commercial or industrial. |

## Significant inconsistencies between vision of traditional development patterns without sprawl and current practices:

1. Land use guidance regulations allow but do not particularly encourage development patterns consistent with this vision.
2. There is not adequate control to ensure that new development only takes place when adequate facilities are in place either to support that development or to phase development to minimize adverse impacts.
3. Rural residential zoning does not preserve rural character of the City and special conservancy may not be much more effective at preserving floodplains.

# Goal 3: Preserve Natural and Cultural Resources and the Environment

- Protect important ecological resources, including surface and groundwater resources, plant communities, and wildlife habitat.
- City should take lead in protecting architectural and cultural history.
- Preserve ecological and wildlife linkages, especially water-based linkages.

| Policies and objectives to meet goals: | Partial list of actions for goals and objectives | |
|---|---|---|
| Improve quality of storm water discharges. | ☐ | Focus on low maintenance solutions such as stream daylighting and artificial wetland creation. |
| | ☐ | Use regulations to reduce non-point source pollution. |
| Discourage development in environmentally sensitive areas and encourage environmentally sound development. | ☑ | Zoning and City infrastructure extension policies. |
| | ☑ | Zoning, subdivision regulations, City investment, grant investment. |
| | ☐ | Review zoning restrictions that undermine energy efficient building. |
| Protect valuable ecological resources. | ☑ | Acquire, in fee and by restriction, valuable ecological and open space linkages |
| Reuse brownfields sites. | ☐ | Use property tax and TIFs to encourage reuse of brownfields and previously developed properties. |
| Provide performance standards to preserve the environment. | ☑ | Improve performance standards in zoning. |
| Preserve cultural and architectural history. | ☐ | Historical Commission should complete an inventory of historic properties. |
| | ☐ | Inventory of historic properties should be available for review on the Internet and at local libraries. |
| | ☐ | Historical Commission should begin acquiring historic preservation restrictions on key buildings. |
| | ☐ | Historical Commission should examine new proposals for local historic districts and demolition delay ordinances. |
| | ☐ | City should consider tax incentives to encourage historic preservation. |
| New acquisitions to City vehicle fleet should include alternative fuel vehicles, such as those run by natural gas, fuel cells, or electricity. | ☐ | Energy Resources Commission/Central Services should work with School Department and DPW to implement. |
| Provide for quality street trees and streetscape. | ☐ | Consider how to expand street tree program. |
| Provide parking spaces and refueling places for electric vehicles. | ☐ | Energy Resources Commission should work with the Parking Commission to implement. |
| Reduce City dependence on disposable items. | ☐ | City should purchase products from companies that promote recycling and waste reduction. |

## Significant inconsistencies between vision of preserving natural and cultural resources and current practices:

- City storm water discharges need to be rebuilt throughout the city and improved water quality practices need to be applied to those systems.

# 9 Five-Year Action Plan

The Planning Board, Conservation Commission, and Recreation Commission identified the following actions to achieve the objectives and address the goals and needs outlined in this plan. The Boards have included actions that they would like to see done within the next five years, even though many of these actions will not realistically be completed because of the availability of funding and other resources.

It is the City's goal to comply with Title IX (equal opportunity for recreation) and American Disabilities Act and Section 504 (accessibility for people with disabilities).

## Prioritizing Objectives in the Five-Year Action Plan

### Primary Objectives

To assist the staff and boards in the City of Northampton in implementing the Recommended Action Steps in the Northampton Open Space and Recreation Plan, it is important to reestablish and continually refine the Primary Objectives in the Five-Year Action Plan.

The Primary Objectives for conservation are based on protection of natural resources and scenic views, creating greenway networks and linkages of open spaces and trails, and maintaining the landscape and character of the City. These factors have been repeatedly stressed in the goals and objectives and during the course of the public participation forums held as part of the Open Space and Recreation plan development process.

The specific criteria used to evaluate sites for conservation include the following:

- Agricultural features such as open fields, the existence of prime agricultural soils, scenic views from and into the agricultural property, whether some portion of the land is currently in active agricultural use, and the presence of structures used in the agricultural setting (such as barns, silos, etc.).
- Location of the parcel in relationship to other protected land including other land owned by the City, the Commonwealth of Massachusetts, or other not-for-profit organizations such as conservation organizations or land trusts. Will it contribute to needed civic space near village centers or adjacent recreational areas? Is it located in a currently under-served area?
- Proximity to valuable environmental resources including existing and potential drinking water

sources, wetlands, ponds, lakes, streams, steep slopes, unique geological features, significant vegetative and wildlife habitat or wildlife corridors (including habitat for rare or endangered species).

The Primary Objectives for recreation are based on protecting community health and character, providing high quality recreation opportunities to the citizens of Northampton, especially in areas not otherwise served, and improving accessibility to existing recreation areas. These factors have been repeatedly stressed in the goals and objectives and during the course of the public participation forums held as part of the Open Space and Recreation Plan development process.

The specific criteria used to evaluate sites for recreation include the following:

- Does the land create new or expanded connections to an existing trail network for alternative transportation, walking, hiking, biking, cross-country skiing, or other recreational opportunities?
- Can the land provide public access to water? Can the property provide recreational access to the waterfront?
- Does the property provide a safe park and recreation system that continues to meet the community's needs for useable and accessible park and open space?
- Does the project offer a variety of affordable and accessible spectator and participatory events and experiences for people of all ages?

### Secondary Objectives

Private landowners, land trusts and developers may approach the City of Northampton with conservation or recreation opportunities that have not been identified as Primary Objectives in the Open Space and Recreation Plan. These conservation and recreation opportunities can be incorporated into life estates, bargain sales, charitable donations, and large-scale developments. Although not identified as primary objectives for conservation and recreation, these secondary objectives may have regional significance; provide access to special or unique natural and cultural resources; have potential as multi-use corridors; provide recreational opportunities and access to key amenities or destinations such as parks, downtown areas, stores, office parks, and schools; protect and possibly enhance an area that encompasses a unique and/or representative biologic community; have local/regional support; e.g. project is listed as a priority on regional transportation and/or recreation plans.

## Funding Sources to Achieve Objectives in the Five-Year Action Plan

Throughout the Commonwealth of Massachusetts, municipal funding for conservation land, park facilities, and recreation programs does not yet reflect the high value citizens' place on conservation, parks, and recreation facilities.

Interest in open space preservation and recreation has translated into a number of state, federal, and private grant programs. Funders often require that local agencies contribute some money of their own, so grant funding is often used in tandem with locally derived sources of revenue (sometimes referred to as "matching funds").

The City of Northampton has strived to develop new strategies for providing "matching funds" and other funding for open space acquisition and recreation improvements. Funds for open space acquisition and recreation have been raised by a combination of local partnerships, grants, gifts, and a myriad pf other revenue sources. The City has used multiple combinations of these funding sources to implement the

Recommended Action Steps in the Open Space and Recreation Plan.

The City of Northampton has explored numerous combinations of funding strategies to attempt to fulfill the Primary Objectives of the Five-Year Management Plan, however, federal and state grant application processes are often extremely competitive and have no guarantee of success. Furthermore, agencies applying for these funds must have staff resources to research, apply for, and administer grants. The City needs to continue to make new partnerships and experiment with new and progressive ideas to be able to provide the level of commitment necessary to meet the recreational needs and protect the natural resources in the community.

In order to achieve the Primary Objectives for Conservation and Recreation, the City of Northampton will need to utilize multiple combinations of progressive land acquisition strategies with potential funding sources.

## Potential Funding Sources and Land Acquisition Strategies to Achieve Primary Objectives for Conservation and Recreation

- Fee Simple Purchases
- Fee Simple Purchases with Lease Back/Resale
- Long Term Purchase Options
- Right of First Refusal Purchases
- Land Trust Partnerships
- Donations and Gifts
- Local Fundraising
- Life Estate Donations
- Zoning/Subdivision Regulations
- Conservation Restrictions
- Easements
- Land Swaps
- Open Space Residential Development Donations
- Agricultural Preservation Restrictions
- Limited Developments
- Funds allotted annually from the General Fund
- Federal, State and Private Grants
- Commonwealth Self Help programs
- Income from forestry practices on select parcels owned by the Conservation Commission
- Conservation Commission Fees
- Funds from the Community Preservation Act

## The Community Preservation Act – Adopted by the City of Northampton in 2006

The Community Preservation Act (CPA) is a new tool that will help the City of Northampton preserve open space and historic sites and create affordable housing and recreational facilities.

The Community Preservation Act provides new funding sources, which can be used to address three core community concerns:

1. Acquisition and preservation of open space.
2. Creation and support of affordable housing.
3. Acquisition and preservation of historic buildings and landscapes.

A minimum of 10% of the annual revenues of the fund must be used for each of the three core community concerns. The remaining 70% can be allocated for any combination of the allowed uses, or for land for recreational use. This gives the City the opportunity to determine its priorities, plan for its future, and have the funds to make those plans happen.

| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Provide linkages or greenways between protected areas and along wildlife corridors. | Engage in proactive planning and land acquisition.<br>Continue to encourage CRs, Easements, and acquisition of linkages from developers at the time of subdivision. | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Protect vistas and scenic viewsheds, including hilltops and ridgelines, views from roads, conservation areas, and nearby State Parks. | City should consider revisions to its open space residential development zoning and consider adopting a ridge top protection zoning ordinance to ensure that development does not damage sensitive scenic resources. | Conservation Planner<br>Planning Director<br>Planning Board |
| Protect farmland. | Assist in formation of Agricultural Commission.<br>Acquire land in Meadows area of Northampton. | Conservation Commission<br>Conservation Planner |

| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Obtain CRs or APRs for important parcels not currently in permanent protection. | Conservation or agricultural restrictions should be used to provide permanent protection for the agricultural lands at Smith Vocational Agricultural School and the forestry lands used by the school on the old Veterans Administration parcel.<br><br>Conservation Restrictions could be placed on the Department of Public Works water supply lands if financial Commonwealth of Massachusetts offers incentives. | Planning Director<br><br>Conservation Planner |
| Maintain ecological inventory data about conservation parcels and City in general. | Continue collecting ecological inventory data as an update to Laurie Sanders' inventory information and the work of the Conservation Commission's wildlife committee.<br><br>Collect base line data on new conservation parcels as they are acquired, update old data every 10-15 years, and continue vernal pool mapping program. A stronger focus on ecological resources that cross municipal boundaries is needed. | Conservation Commission<br><br>Wildlife Committee<br><br>Conservation Planner |
| Improve and revisit long-range funding strategies for property acquisition and maintenance. | Build and increase acquisition and maintenance endowments through collaborative efforts. | Recreation Commission<br><br>Conservation Commission<br><br>Planning Director<br><br>Local Partner Organizations and Conservation Area Management Citizen Groups |
| Protect community health and character by preserving small recreation locations important to Northampton's neighborhoods. | Work with neighborhoods to identify key parcels, which might not have city-wide recreation or conservation significance, and therefore, are not identified in this plan, but which are a special place or a local treasure for that neighborhood and demanding of special attention. | Conservation Commission<br>Conservation Area Citizen Volunteer Groups |

| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Employ variety of land protection techniques to maximize pro-active land preservation in City. | Continue use of limited development and other means, in cooperation with landowners and developers, to preserve large parcels of land that the city does not otherwise have the resources to preserve. | Planning Director<br>Conservation Planner |
| Participate in regional coordination of open space protection. | Conservation Commission should meet with Conservation Commissions and Open Space Committees in neighboring towns to discuss possible joint projects. | Conservation Commission<br>Conservation Planner |
| As part of future Manhan rail trail linkage, build bridge connecting State Hospital parcel off Federal Street with bulk of State Hospital property. | Acquire needed approvals and permits locally, from DAR, Commonwealth of Massachusetts, and possible legislative approval.<br>Continue neighborhood outreach. First neighborhood meeting was held in 1996.<br>Update bridge costs and design. Preliminary plans for bridge completed in 1996 by Tighe & Bond; estimated 1996 cost $200,000.<br>Design for bridge that spans the annual flood zone and ensures that bridge could withstand any floodwater it might encounter. | Planning Director |
| Expand and protect State Hospital Area. | Acquire agricultural preservation restriction on Gateway Vistas and Hayfields parcel at Northampton State Hospital (parcel D), with land to be owned by Department of Agricultural Resources. (See the Planning Board's 1993 Northampton State Hospital Plan.) (1994 legislation authorizes. Cons. Com. voted 9/12/94 to accept.) Transfer expected in late 2005. | Planning Director<br>Conservation Planner |

| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Expand and protect Fitzgerald Lake Conservation Area. | Acquire land between Fitzgerald Lake Conservation Area and both Mary Jane Lane and Cooke Avenue;<br>Acquire woodland and wetlands abutting Pines Edge section of the Fitzgerald Lake Conservation Area, on its north side. (USFS purchase of conservation restrictions from Anciporch protects a parcel. Conservation Commission is still interested in acquiring remainder interest or trail right-of-way.) | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Expand and protect Mill River Corridor. | Acquire conservation land in floodplain area between Yankee Hill Conservation Area, Northampton State Hospital Agricultural land APR and Mill River. | Planning Director<br>Conservation Planner |
| Expand and protect Saw Mill Hills Conservation Area. | Preserve eventual 500+ acre conservation area covering much of the ridgeline, highly productive small wetlands and vernal pools in Saw Mill Hills and land for trail system through Saw Mill Hills. (24-acre parcel donated by Towne in 1995 and a 28-acre parcel donated by Jonathon Wright in 2000). | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Preserve areas in Northampton Business Park. | Preserve open space related to proposed Northampton Business Park (50% of site as required under current zoning) due to its rich wetlands and its use as wildlife corridor between Massachusetts Audubon's Arcadia Wildlife Sanctuary and farmland at Northampton State Hospital. | Mayor<br>City Council<br>Economic Development Coordinator |
| Expand and protect Mineral Hills Conservation Area. | Create eventual 500 + acre Mineral Hills conservation area in Northampton and Westhampton, including a trail system through Mineral Hills connecting Northampton with Westhampton. (Current 87-acre Mineral Hills Conservation Area provides trailhead and beginning of trail system.) | Planning Director Conservation Commission Town of Westhampton |
| Preserve buffer along Marble Brook Corridor. | Preserve wide buffer of land along Marble Brook, in Leeds. | Planning Director<br>Department of Public Works |

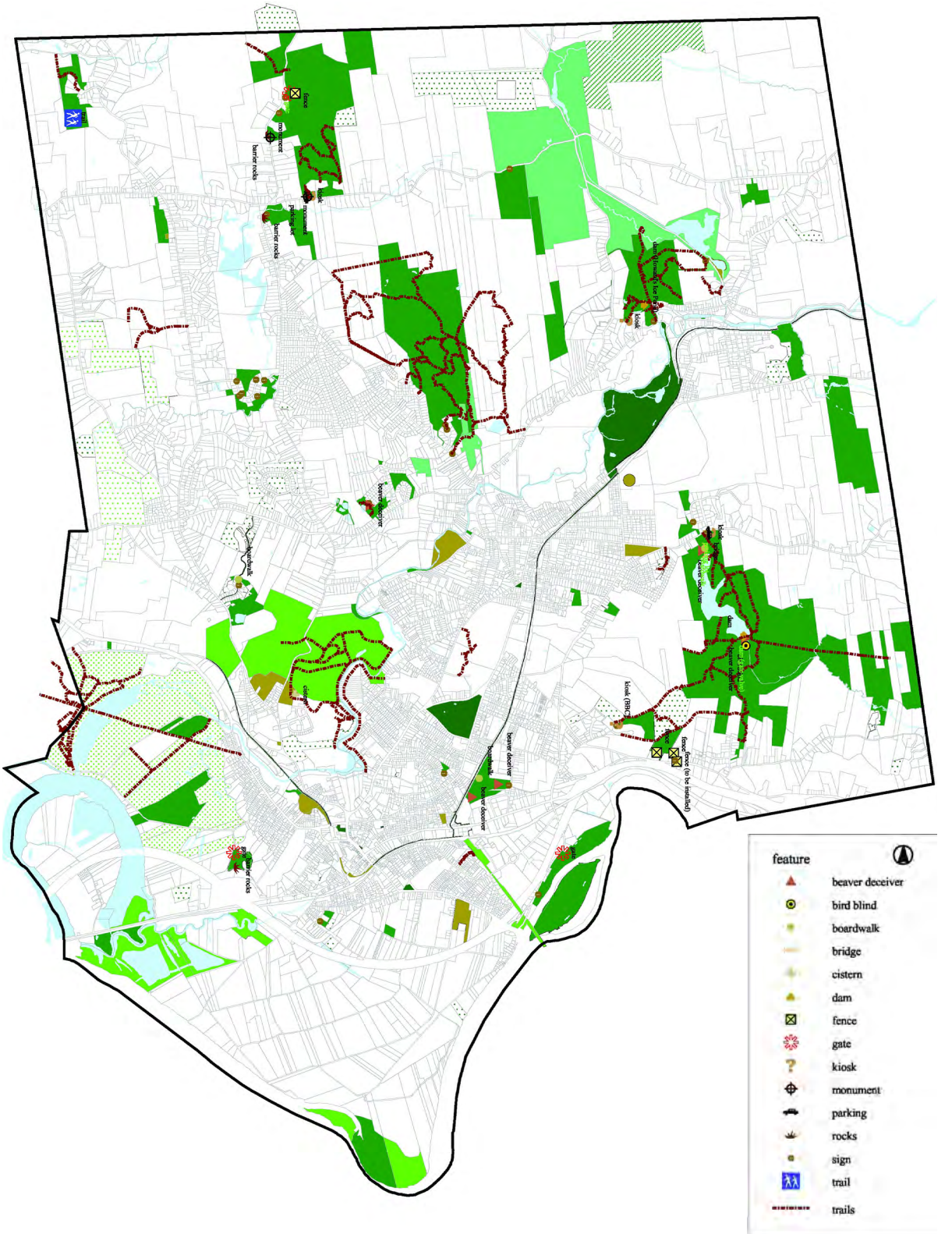
| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Preserve Flood Plain Areas. | Preserve parcels along historic Mill River, Connecticut River, Oxbow, and current and historic confluences, especially highly productive wetlands and floodplains. | Planning Board<br>Conservation Commission |
| Protect areas along Broad Brook. | Preserve uplands and wetlands north and east of Fitzgerald Lake Conservation Area along Broad Brook. | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Expand and protect Roberts Hill Conservation Area. | Preserve unused power line right-of-way at Roberts Hill Conservation Area should from Mass. Electric Company.<br>Wooded land abutting Roberts Hill Conservation Area on its north side. | Planning Director<br>Conservation Planner |
| Expand and protect West Farms Conservation Area Park Hill Road. | Facilitate development of conservation areas, conservation restrictions, and agricultural preservation restrictions in meadows and in Park Hill section of Northampton. This area contains some of best non-floodplain farmland in Northampton and wonderful vistas. Much of it has already been preserved, but there are critical gaps, especially gap between existing Park Hill Road APR and CR land and existing West Farms Conservation Area on Route 66.<br>Purchase land for open space corridor from West Farms Conservation Area to existing Park Hill Road Conservation Restriction and Agriculture Preservation Restriction Cluster. | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Expand Route 66, Glendale Road and Loudville Road area. | Acquire conservation land in area bounded by Rte. 66, Glendale Rd, and Loudville Rd. | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Protect views along Rail Trail Areas. | Protect viewshed along rail-trails and proposed rail trail and bike paths to ensure that rural or otherwise attractive areas remain attractive to users. | Planning Board |

| Primary Objectives for Conservation and Recreation | Actions | Responsible Board/Group |
|---|---|---|
| Expand and protect Turkey Hill. | Preserve land in Turkey Hill section of City (between Route 66 and Turkey Hill Road) that can eventually link to Mineral Hills Conservation Area | Planning Director<br>Conservation Planner<br>Conservation Commission |
| Provide recreation opportunities in new locations. | Encourage developers to provide for recreation needs in new cluster subdivisions, planned unit developments, and business parks. | Recreation Commission<br>Planning Board<br>Senior Planner |
| Provide high quality passive recreation opportunities, especially in areas not otherwise served. | Acquire parcel of land for a future recreation area on site with relatively low development costs. Ideally new site should be in area not already well served by recreation areas, such as southwest quarter of town. | Recreation Commission<br>Conservation Commission |
| Plan for expansion of current recreation areas. | Acquire western portion of City's surplus Oak Street property, to create buffer along bike path and serve other future recreation needs.<br>Acquire undeveloped land abutting Sheldon Field to allow for additional recreation opportunities. | Recreation Commission |
| Improve accessibility to Maines Field. | Improvements should include those described in this plan, 504 Handicap Accessibility Self-Evaluation, and Americans with Disabilities Act Transition Plan. | Recreation Commission<br>Department of Public Works |
| Redesign and improve Veterans Field. | Project is ongoing and should be completed. | Recreation Commission |
| Improve safety in key spots along existing rail trails. | Work with Department of Conservation and Recreation to insure that Norwottuck Rail Trail is eventually placed in a tunnel or bridge where it crosses Damon Road. | Planning Director |
| Provide for co-existence of beavers. | Work with Department of Environmental Protection and the Division of Fisheries and Wildlife to restore wetlands and to implement best management practices. | Conservation Planner |

## Capital Expenditures Completed in past decade:

1. Rehabilitation of the Fitzgerald Lake dam. Fitzgerald Lake is among Northampton's most important ecological and passive recreation resources.
2. New roadside parking lot at Fitzgerald Lake parking lot and closing of old lot 1/10 mile from the road.

# CITY OF NORTHAMPTON
# CONSERVATION AREA IMPROVEMENTS



3. Major improvements for Arcanum Field—improve accessibility and rehabilitate the recreation area.
4. Significant rehabilitation of Howard's Ice Pond dam.
5. Sheldon Field parking lot (dual recreation and park-and-ride use) and basketball courts.
6. EXPECTED 2005—Veterans Field reconstruction.
7. Bicycle trail extension at State Street and through Stop and Shop to King Street.
8. EXPECTED 2005—Manhan Rail Trail from downtown to former Northampton State Hospital.
9. 2004 and 2005—Manhan Rail Trail Spur from Route 66 at Ice Pond Drive to Florence Road.

# Management Plan: Conservation & Agriculture

All conservation areas should be managed to protect the parcels in their natural state. Management actions are limited to those that restore parcels to their natural state, improve wildlife habitat, or provide for generally non-consumptive enjoyment of conservation areas.

Conservation Commission properties, easements, and restrictions should be inspected at least yearly:

1. All property lines should be walked and inspected for encroachment and violations of the restrictions.
2. All trails should be inspected for trail maintenance needs and marked as needed.
3. All trash should be cleaned up.
4. All wooden and metal signs should be inspected and repaired or replaced as needed.
5. The Commission should avoid the burden of making brochures for each conservation area, and instead, maintain all necessary information on the City's web site. A single map should be produced, containing pertinent information about all the conservation areas. If a volunteer group would like to create a brochure on their own, the Commission should review it for accuracy, and if appropriate, endorse the brochure.
6. The Commission should continually update its ecological assessments of conservation areas and other properties of high conservation value. Properties should be evaluated for potential habitat improvement or restoration and vernal pools should be identified and state certified.
7. Signs with conservation area rules should be posted around the edge of properties.
8. Access should be improved to conservation areas whenever possible, especially at Roberts Hill and Mineral Hills conservation areas.

In addition, some conservation areas are in need of other improvements, land acquisitions, or on-going maintenance. Recommendations within each subcategory are given in order of priority in the following section.

## Barrett Street Marsh

**Improvements:** The Conservation Commission shall continue to work jointly with the Department of Public Works regarding the review and implementation of the hydrology report prepared by Baystate Environmental Consultants ("The Functional Analysis of the Hydrology and Hydraulics of Barrett Street Marsh, April 2000).

**Acquisition:** The Conservation Commission should acquire the woodland west of the conservation area, off of Jackson Street.

**Maintenance:** Two coats of environmentally sensitive preservative (two to three gallons/coat) should be added to all of the boardwalk decking and to cracked support beams annually.

**Completed items:**

- Wheelchair accessible walkway built (1992).
- PTO/Jackson Street School cleanups (November 1990; May 1992; May 1993).
- Preservative added and boardwalk repairs (1992-2005, two coats).
- 39 tons (approximately 12 yards) of trap rock gravel purchased May 1993. One half spread in May onto the wheelchair accessible path by Smith Vocational School and the remainder to be spread in the fall.

## Beaver Brook/Broad Brook Conservation Area—Forest Management Plan

### LANDSCAPE/REGIONAL CONTEXT

**The local pattern of land use** is rural/forested with mildly increasing (though currently stagnating) single and multi-unit residential development as well as institutional and commercial development. Major rural land uses are forestry/logging, hunting, snowmobiling, and golf.

**Distinguishing or special features include:** By acquiring this land, the City of Northampton is preventing both a heavy, forest-changing, logging operation as well as a potential residential development. The property includes a significant area of mature, upland red oak and white pine forest as well as a large, complex area of wetlands and uplands with older pines, hemlocks, and black locust along agricultural boundaries and younger old-field growth and/or shrub swamp surrounding Beaver Brook. The southeastern part of the property is part of the headwater of Broad Brook. Just prior to purchase, two dilapidated farm houses along Route 9 were torn down.

**A note about logging:** Access from the road frontage to the older forest area is greatly complicated by the streams and wetlands, and this may partially explain how this woodlot escaped any recent cutting. The difficult access played a role in the disapproval by DCR of a cutting plan (case # 214-2534-6) filed by the previous owners in June, 2006 (see disapproval letter from DCR Service Forester dated June 28, 2006).

### PROPERTY OVERVIEW

**Ca 102.4 acres in Northampton, MA.** The parcels making up this property are older parcels as evidenced by barbed-wire fence and, in some cases, stone walls that bound most of the perimeter (and in some cases internal lot lines as well).

Topography is flat in the western portion, including saturated and flooded areas, and it is gently, steadily sloping in the eastern section.

Dominant forest types are red oak and affiliated hardwoods (probably 100-120 years old) with hemlocks in the eastern section, and an eclectic mix of white pine, hemlock, black locust, and a range of old-field species and shrub swamp/beaver pond in the western section.

The oaks and large pines probably date back to 1880-1900. The younger forest old-field forest started growing after WWII.

Overall forest health is good. There are no apparent health problems compromising this forest (note: at this time, though, the long-term health of hemlock is considered at risk to the hemlock woolly adelgid.

Landowners might consult the following website: http://www.fs.fed.us/na/morgantown/fhp/palerts/hemlock/hemlock.htm AND ALSO periodically Google the term "hemlock woolly adelgid" to follow any developments).

The black locust is generally dying back, but this is not surprising since its lifespan is generally much shorter than native hardwoods such as oak and red maple. The white ash is in decline and dying back as well; this is a region-wide phenomenon with no clear explanation, and there is nothing a landowner can do about it.

One major caveat to the determination of good health is the prevalence of non-native invasive plant species in the western part of the property, on land that was farmed until WWII and beyond (see below for a listing of invasive species). One effect of the non-native invasive plant species is that it will be difficult, perhaps impossible, for the type of forest one would expect someday (tall, native trees forming a closed canopy) to ever form. Instead, one could anticipate a continuous thicket of vines pulling down and choking almost every tree that becomes established (for a preview: some thickets like this are visible along Route 91).

Invasive species are essentially absent in the older, eastern portion and rampant in the younger, western portion, limited only by flooding, shade, and time-since-establishment. Most notable, abundant, and problematic is Oriental bittersweet, which inhibits the growth of trees by shading, choking, smothering, and yanking. Prevalent, though less abundant, is multiflora rose, which shades out young trees (and to a lesser extent chokes them) and is notable for preventing human access with its thorns. In moister areas, under pines Japanese barberry is well established. In old-field areas there is non-native honeysuckle. Along with bittersweet and rose, these three have in common their tendency to shade out native trees and understory vegetation. Finally, black locust (non-native) is prevalent, both as very old trees along agricultural boundaries and as in-filling trees in abandoned fields. From a forestry perspective, black locust may be a tolerable non-native plant because it does not tend to overcrowd native trees but grows with them, and is valuable for its high-energy content (as firewood) and for its rot-resistant qualities (as posts or, rarely, as millable logs).

Any attempt to reverse the take-over by invasive species would most likely be considerable in terms of cost and on-going attention.

Main habitat types are either mature oak-hardwood forest or variable open-water/beaverpond and marsh-stream-shrubswamp interwoven with mixed mature pine-hemlock-oak forest. Records of the Natural Heritage and Endangered Species Program (MA Division of Fisheries and Wildlife) indicate actual wood turtle habitat on the property (wood turtle is a species of "special concern"). To safeguard this species, NHESP typically restricts motor vehicle use to the winter (November 1 to March 31). As evidenced by tracks and sign, this property is actively used by common wildlife species, including black bear, porcupine, deer and coyote, fisher cat, beaver, grouse and turkey, and red squirrel. I saw a male bluebird (1/2/2010).

**Unique cultural and physical features:** There is a significant area of mature red oak; confluence of Beaver Brook and Broad Brook in a large wetland with beaver activity.

**Water resources concerns are normal:** avoiding surface runoff into waterways. The land is not within a surface-water drinking-water supply.

Property-wide stewardship concerns include protecting/providing for a wildlife corridor.

### ROLE/IMPACT WRT. NEARBY PROTECTED LANDS

**Water supply:** There is no threat to water supplies anticipated from any expected human use of this land.

**Wildlife habitat:** The anticipated uses should sustain the current habitats (mature forest and swale/shrub-swamp).

**Recreation:** There is no expected change to current recreation (snowmobiling, hunting).

**The between-property impact of any management is expected to be** essentially non-existent.

### SUMMARY OF MANAGEMENT RECOMMENDATIONS

The landowner's main goals include: (1) completing this plan as a way of taking stock of the property and identifying major concerns and opportunities; and (2) clearly establishing boundaries.

The property's potential to achieve the landowner's goals is outstanding (with the caveat that the prevalence of non-native invasive plant species, discussed above, could harm the long-term goals of ownership, especially if these ultimately occupy the eastern portion of the property as well).

Working towards these goals, the main recommendations include:

1. When/if feasible, carry out a property survey and permanently mark boundary sections (except where properties may be added to the conservation area)
2. Develop an awareness of and a plan to control non-native invasive plant species
3. Be aware that there is a silvicultural approach that can maintain the mature aspects of the forest while also diversifying habitat and structure for the long term (e.g. group selection).

### OVERVIEW OF STANDS

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 1 | OH5a | 64 | 13.0 | 137 | 14.6 | 6.3 | 60 |
| Stew | 2 | WK 1-5+a/c | 19 | 13.2 | 78 | 10.3 | 5.1 | 80 |
| Stew | 3 | BL 2-3 a/c | 8 | Poles | 80 | 1.0 | 10.0 | 80 |
| Stew | 4 | RZ | 6 | N/A | N/A | N/A | N/A | N/A |
| Stew | 5 | BL 1-3 a/c | 5.4 | Poles | 80 | 0.0 | 10.0 | 80 |
| **Total** | | | **102.4** | | | | | |

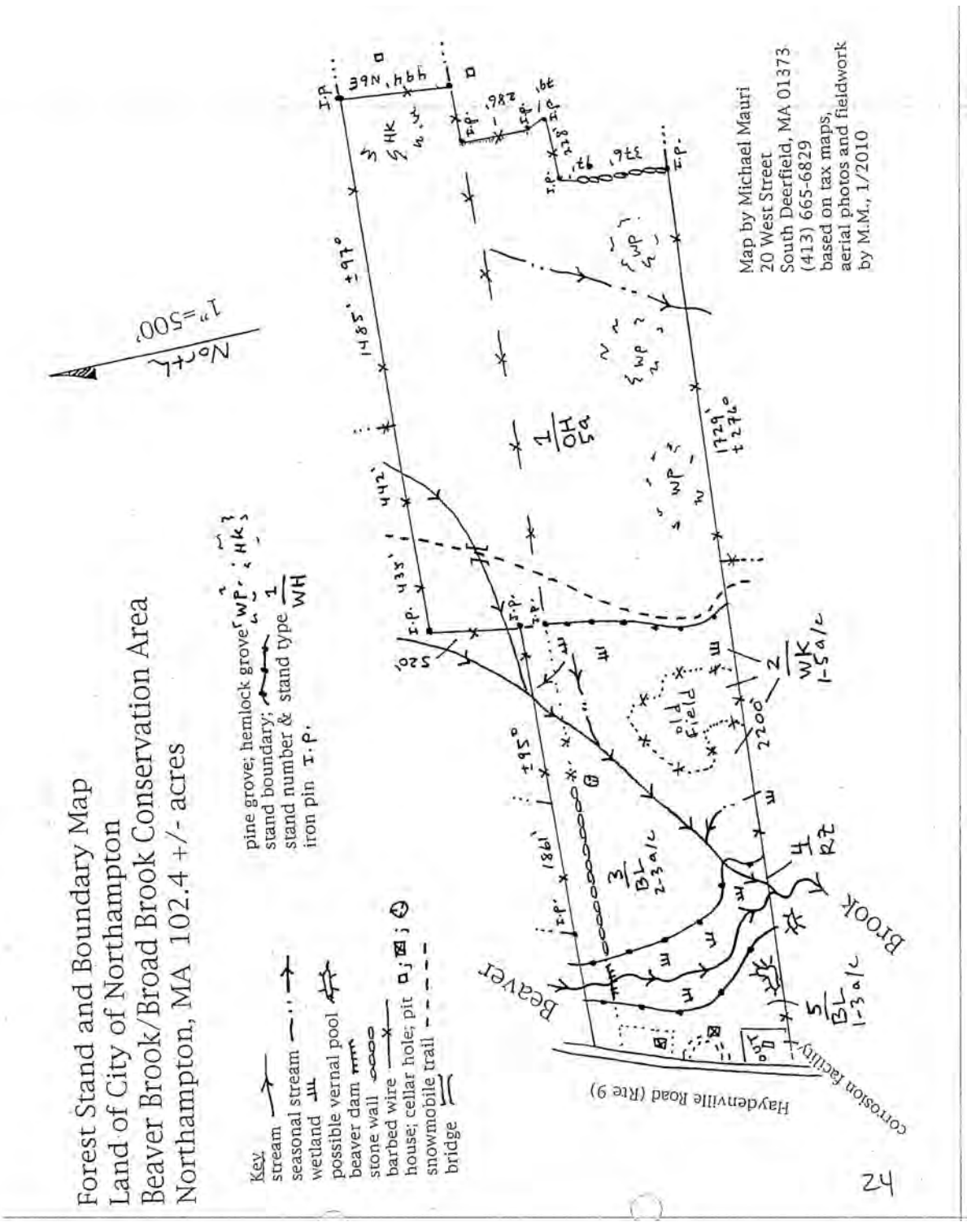
### STAND 1

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 1 | OH5a | 64 | 12.5 | 133 | 12.1 | 7.1 | 60 |

**Comment:** Remarkable stand of large, old red oak on upland; "OH" stands for oak and hardwoods (but pine is also important here). The abundance of tall, large, old trees combined with tree-habitat features such as cavity trees and large snags make this stand a wonderful expression of mature, native forest. This is a great timber resource even after factoring in the defect caused by the ravages of time and the resulting exposure to elements (various wind storms, ice storms, lightning, gypsy moths, etc.)

**Type and Overstory (species and condition):** Large red oaks, 14"-28" in diameter (rarely up to 40"), 80'-100' tall, with large-branched crowns. Probably 100-120 years old. Mixed in are mature black oak (to 30"), white oak (to 28"), red maple and black birch (to 20" or more), with less black locust (to 30"), poplar (to 24"), ash, pignut hickory and ¾ unexpectedly ¾ black gum (the latter as tall as 100'). Included in the southern half of this stand are a number of concentrations ¾ groves ¾ of white pine (to 40") or hemlock (to 22"); the pine is taller than the hardwoods and sometimes quite impressive; the hemlock is usually a co-overstory and quite tall as well. Yellow birch and sugar maple are rare, except at the moister

# BEAVER BROOK/BROAD CONSERVATION AREA



toe of the western slope.

This is a mature stand that appears to be healthy; certainly, the large-crowned trees are well-suited to longevity, though these are also susceptible to storms. To a limited extent, some oaks lost their tops or were uprooted ¾ probably in the 2008 ice storm. (In general, this type of natural disturbance serves to create rough habitat elements that are generally under-represented in the forests of the area). A number of very tall pines have been struck by lightning over the years, sometimes remaining standing and sometimes being shattered. These are excellent habitat trees.

**Regeneration (species and distribution):** due to the closed overstory there is no regeneration that is ready to be released. There are, however, stringy hardwoods, including sugar maple, and white pines in heights from 5'-25'. In places there is a stunted hemlock midstory.

**Understory:** Mountain laurel ranges from thickets to scattered to absent; also witch hazel, mainly where moisture is greater, and low-bush blueberry where moisture is more limiting.

**Non-native invasive plants (species, distribution, potential threat):** None noted. This is an important distinction from the other Stands 2,3 & 5, and probably reflects a combination of the shade of the mature forest and the lower fertility of this drier upland soil (for this latter reason logging here is not likely to cause establishment of invasives if cutting near streams or small wetland areas is avoided).

**Soils (type, moisture, drainage and productivity*):** Stony and very stony, compact glacial till with adequate moisture and fertility for oak and pine growth (but stressful for sugar maple). Though fertility is medium, the soil is not as delicate as more fertile soils, and thus this soil is good for growing and harvesting timber. The fertility for tree growth is best in swales and in the lower-slope positions where moisture is more available during dry times.

**Main (and Special) Habitat:** Large hardwood trees, abundant acorns, some coarse woody habitat, interior forest.

**Management history:** No evidence of logging or management in recent decades but the origin of this stand appears to have been heavy cutting of old-field pine in the late 1800s. In two locations a small number of large oaks were felled (a few years ago or more) and left for no apparent reason.

**Desired future condition:** Continue to have lots of mature oaks and other hardwoods interspersed with tall pines and hemlock groves. Possibly diversify habitat with small openings (about ½-acre) designed so that well-formed oaks occupy the edges of these openings.

**Management options:** Selection system harvest to create openings on about 5 acres total (roughly 10 ½-acre openings). This hypothetical harvest is described in the Management Practices section.

**Unique features:** Abundance of mature red oak; several tall black gums (not expected in an upland oak forest).

**Cultural features:** Snowmobile trail crosses the property running north-south; stone wall along eastern boundary; barbed wire along historic parcel lines.

### STAND 2

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 2 | WK 1-5 + a/c | 19 | 13.2 | 78 | 10.3 | 5.1 | 80 |

**Comment:** Complex interspersing of very large old white pine, forested swamp, and abandoned field; "WK" stands for white pine & hemlock, but this stand does not fit perfectly into a type. Many impressive pine snags (mainly due to lightning).

**Type and Overstory (species and condition):** This stand consists of four main elements: (1) groupings of very large, tall pine timber ¾ some well-formed and some very rough ¾ which grew along the edge of (a now abandoned) agricultural area including large coarse woody habitat created by storms (lightning, etc.); (2) a variable mix of old large pine and hemlock with older hardwoods including red maple, red oak, white oak and black locust and slender black gum and even the odd Norway spruce and basswood; (3) swampy areas of pole-sized yellow birch, red maple and hemlock both with and without tipping and uprooting; and (4) an in-growing abandoned field (about 6 acres) with pole-sized black locust (and minimal black cherry) and clumpings of white pine 10'-20' tall.

**Regeneration (species and distribution):** Essentially absent.

**Understory:** (For an overview of non-native invasive plant species in the understory see below) goldenrod (abundant in the abandoned field); cinnamon and sensitive fern in wetter areas with speckled alder and winterberry where overstory shading from conifers is absent, mountain laurel (in some of the upland areas). Wild grapes occur in the abandoned field.

**Non-native invasive plants (species, distribution, potential threat):** The older, established areas of this stand have a minor infestation of Japanese barberry, which does well on moist soil in partial shade; the abandoned field is heavily infested with oriental bittersweet and to a lesser extent multiflora rose and honeysuckle. Of course, the black locust itself, which is the main tree in the abandoned field, is non-native. The bittersweet infestation is certainly serious enough to prevent or greatly hinder the establishment of native forest trees in the abandoned field.

**Soils (type, moisture, drainage and productivity*):** Generally flat and close to or at the water table. The flat, well-drained area was maintained in agriculture until after WWII, but the low, wet and stony/hilly areas were abandoned back to forest a long time ago. The impressive size and height of the pines growing along the old field edges (where the soil was a little too wet for farming) exhibit the best possible soil fertility for trees in this woodlot. The abandoned field could be reclaimed for farming, but the other areas are best suited for forest growth.

**Main (and special) habitat:** Tall trees (pines) tall snags and large downed trees (pines), swamp and upland-wetland transition, somewhat open and scrubby old-field growth.

**Management history:** None evident.

**Desired future condition:** A very mixed-habitat stand that retains a tall partial canopy with large woody debris and is free of all non-native invasive shrubs and vines but especially bittersweet. (Another consideration is whether it is important to have more black gum).

**Management options:** Efforts should concentrate on addressing the problem of bittersweet in the abandoned field (about 6 acres). A minimum reasonable effort would be to hand-cut any climbing vines (possible with a brigade of volunteers). A more serious and effective effort would involve chemically treating the vines as well (with herbicide), either directly on the cut vine faces or as a foliar spray. The intention would be to allow native trees a chance to establish and outgrow to a certain extent future vines. (Regarding black gum: black gum requires full-sun openings to become established and thrive as seedlings (and deer need to be kept at bay) ¾ to create more black gum, a selection system of openings in the wetter parts of this stand would need to be created, either by harvesting or by cutting and leaving. The openings would need to be kept free of invasive non-native plant species).

**Unique features:** Very tall, large pines.

**Cultural features:** The abandoned field (within this stand) is delineated by a barbed wire fence.

**STAND 3:**

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 3 | BL 2-3 a/c | 8 | Poles | 80 | 1.0 | 10.0 | 80 |

**Comment:** Abandoned field growing back into black locust and invasive species; "BL" stands for black locust.

**Type and Overstory (species and condition):** This stand contains some of the same elements as Stand 2, but in a different distribution. Large pine mixed with hemlock occupies a small area in the northeast of this stand, but most of the acreage is an old-field mix of pole-sized black locust and dense clumps of pine 10'-20' tall (with very abundant invasives ¾ see below). Along the stone wall there are very large, rough old trees, mostly black locust (and one shagbark hickory).

**Regeneration (species and distribution):** Essentially absent.

**Understory:** Other than goldenrod and poison ivy, mostly non-native invasive plants (see below).

**Non-native invasive plants (species, distribution, potential threat):** Even worse than the abandoned field in Stand 2, the bittersweet is heavy and the honeysuckle bushes are large. Of course, the overstory is mainly non-native black locust. Without active intervention it is doubtful a pure native forest will become established here.

**Soils (type, moisture, drainage and productivity*):** This mostly flat, well-drained area was maintained in agriculture until after WWII and could be reclaimed for farming but is certainly excellent for timber growth.

**Main (and Special) Habitat:** Brushy habitat suited for many species of wildlife include cottontail rabbits.

**Management history:** None evident.

**Desired future condition:** either brushy or forested area comprised of native species ¾ ideally ¾ but at the very least not overrun with bittersweet vines.

**Management options:** To control bittersweet, the same methods could be used as discussed for Stand 2. Alternatively, this stand (except for the large established trees) could be managed specifically for open/ brushy habitat involving an initial phase of heavy brush and tree cutting (and invasives control) followed by periodic mowing. Permission for access would have to be from the northern abutter. (This approach could be extended into the old field in Stand 2 as well, covering about 14 acres total, but would require the construction of a stream crossing). (If Stand 5 were added, the total would approach 20 acres, plus 6 acres of adjacent riparian area managed by beavers).

**Unique features:**

**Cultural features:** An old trash pit with metal and glass debris (jars, a bicycle frame, etc.); stone wall and barbed wire fence.

## STAND 4

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 4 | RZ | 6 | N/A | N/A | N/A | N/A | N/A |

**Comment:** Beaver Brook and essentially tree-less adjoining flooded land; "RZ" stands for riparian zone.

**Type and Overstory (species and condition):** This is a very wet/saturated/flooded area with an active beaver population. Along the upland edges black cherry and red maple are abundant (especially on the eastern edge), often of a young age due to beaver felling of previous trees. In wetter peripheral areas there is speckled alder, winterberry dogwood and viburnum, but this has also been heavily cut by beavers. Most of the vegetation is a thick, hummocky mat of wetland grasses and sedges with goldenrod, Joe Pye weed, and meadow sweet (spirea) and limited willow. Beaver Brook is deep, flat and slow-flowing through this stand.

**Regeneration (species and distribution):** None. This stand is not expected to regenerate to trees.

**Understory:** See description of overstory (above).

**Non-native invasive plants (species, distribution, potential threat):** Absent, presumably due to beaver-caused flooding.

**Soils (type, moisture, drainage and productivity*):** Even without beaver flooding this soil was apparently saturated throughout much of the growing season and was suitable for wet hay. Not productive for tree growing.

**Main (and Special) Habitat:** Flowing and ponded water and wetland grass-sedge beds.

**Management history:** None evident.

**Desired future condition:** Maintain current condition and allow for shifting beaver activity.

**Management options:** None needed.

**Unique features:**

**Cultural features:** None apparent.

## STAND 5

| OBJ | Stand | Type | Acres | Size | BA | Mbf/acre | Cords/ acre | Site Index |
|---|---|---|---|---|---|---|---|---|
| Stew | 5 | BL 1-3 a/c | 5.4 | Poles | 80 | 0.0 | 10.0 | 80 |

**Comment:** Overgrown former housesites (2) and agricultural land with a small pond/vernal pool; "BL" means black locust.

**Type and Overstory (species and condition):** This highly disturbed area is mainly an overgrowing field, with black locust poles, similar to Stand 3 and part of Stand 2 (with a younger area of locust as well) ¾ also heavily infested with non-native invasive plants, including Japanese knotweed (see below). Around the foundations the overstory mix is wildly variable and unprecedented, with groups of sugar maples, very tall yew shrubbery, and the odd spruce, fir, apple tree, elm, black cherry, elm, and walnut. Essentially it is an overgrown yard.

**Regeneration (species and distribution):** None.

**Understory:** Primarily invasives (see below) but does include dogwood, blackberry and raspberry, sensitive fern and goldenrod. Wild grapes.

**Non-native invasive plants (species, distribution, potential threat):** Raging thickets of bittersweet or, alternatively, Japanese knotweed and multiflora rose, with black locust as the main overstory tree outside of the housesite area. Given the prevalence of invasives it is unlikely that new native trees can become established.

**Soils (type, moisture, drainage and productivity*):** Upland soil transitioning to the large riparian area, similar to Stand 3.

**Main (and Special) Habitat:** Brushy habitat bordering a large wetland; a small pond or vernal pool separate from, but near, Beaver Brook, and near another similar small pond (south of the property boundary).

**Management history:** None evident.

**Desired future condition:** Invasives-free habitat similar to Stand 3 with overgrown housesite trees left for aesthetic/historical reasons.

**Management options:** Same as Stand 3. This is the only part of the property that is easy to access.

**Unique features:**

**Cultural features:** Two foundation remnants (houses demolished in 2009); parts of an old circular sawmill (including the saw blade) grown into trees.

## EXPLANATION OF SILVICULTURAL METHODS

These are referred to in Stand-level management practices on subsequent pages and are drawn from the following list, which is based on **(proposed)** Chapter 132 (Forest Cutting Practices Act) regulations. Silvicultural methods are broadly divided into two groups, **intermediate cuts** and **regeneration cuts**. Intermediate cuts focus on improving growth in an existing overstory. Regeneration cuts focus on establishing and promoting new stands of trees.

**Intermediate Cuts**

**Thinnings & Improvement Cuts:** reduce the density of trees to enhance the vigor of residual trees. An improvement cut is usually an initial treatment that removes trees of low quality or undesirable species. Thinnings are subsequent adjustments to continue focusing growth on selected trees. Intermediate cuts that are overly "heavy" are classified as regeneration cuts: basal area thresholds are as follows: BA = 100 for conifer stands, BA = 60 for hardwood stands, BA = 80 for conifer-hardwood stands.

**Regeneration Cuts**

Regeneration cuts use existing stands of trees to create future stands of trees. The future stands of trees can be of one age (even-aged), two ages (two-aged) or of three or more ages (uneven-aged, i.e. selection). In regeneration cuts, particular attention is paid to seed and seedling sources for the future stand, light conditions in the understory, and interfering factors (e.g. competitor plants in the understory).
A regeneration cut can be sudden and decisive (clearcutting, single-cut shelterwood), staggered (most methods), or ongoing (uneven-aged, i.e. selection).

### EVEN-AGED METHODS

**Clearcut:** All established trees are removed to allow new trees to grow from seed in full sun. Clearcutting is especially appropriate for early-successional species (e.g. paper birch, poplar and black cherry plus gray birch and pin cherry) and may grow with mixes of hemlock, red maple and other birches. Seeding is assumed to occur from edge trees or from seed stored in the soil (cherry). Clearcuts may be up to 5 acres, or, if artificial seeding or planting is used, up to 10 acres. Larger clearcuts require special permission. Clearcuts separated by more than 100 feet are considered separate.

**Seed-tree:** Similar to a clearcut except that seed trees are retained to provide seed (and cut later) and except that any species may be grown. No size limitation. At least four seed trees (20-inch diameter or greater) or 12 seed trees (14-20 inches diameter) must be retained per acre.

**Shelterwood:** Usually a multi-step approach to establish desirable trees in the understory in medium-light conditions before the overstory is eventually removed to release the seedlings. Used especially for oak, sugar maple (giving these species years to establish well-developed root systems) white pine and hemlock (giving these species years to establish competitive height). Black birch typically becomes abundant as well. Regeneration that is adequate for release must typically be 2 feet tall, well-distributed and abundant. Interfering vegetation must be identified and (ideally) controlled.

**Coppice:** A complete "cutting off" of small or medium-sized hardwoods to cause these to resprout and form a new stand from the same root systems.

### TWO-AGED METHODS

**Clearcut, Seed-tree, Shelterwood with "reserves":** Same as methods described above but with retention of trees (12 inches diameter or larger) (possibly for timber, habitat or aesthetic reasons).

### UNEVEN-AGED METHODS (SELECTION)

In an uneven-aged stand there will always be trees in a range of size and age classes that are free to grow. Often current conditions will be an approximation of this but over time a true 3+-aged stand can be created and maintained. A selection cut is a mix of thinning and creating/enlarging openings. Openings are defined as groups or patches; new openings generally do not cover more than 50% of the stand area.

**Group Selection:** Openings may range from single-tree up to $^1/_4$ acre (e.g. equivalent to a circle about 120 feet in diameter) in size, which is about 1.5 times the mature height of many trees (80'-100'). No special provisions are needed in the understory for this" conservative" opening size.

**Patch Selection:** Openings may range up to two acres (e.g. equivalent to a circle about 333 feet in diameter). Interfering vegetation (if present) should be identified and ideally controlled so that seedlings can be established/released.

**Required Management 2010-2020:** None.

### SUGGESTED MANAGEMENT 2010-2020:

(Note: any future acquisitions of abutting land are not expected to change the rationale for the management recommendations discussed below).

**Boundaries:**

Although this property has not been surveyed recently, some abutting parcels have been, and the boundaries seem adequately clear on the ground based on existing pins, wire fence, painting (one line),

one stone wall, old posted signs, etc. Therefore, a survey is probably not needed for any of the intended uses of this parcel. Instead, consider marking boundaries on the ground using signs and/or blazing and painting.

**Trails:**

Consider allowing existing snowmobile trail to continue and establish an agreement or understanding with the trail maintainers (currently listed as "Burgy Bullets") about use/monitoring.

**Access from Route 9:**

Consider whether vehicle access/parking will be allowed and how unwanted uses will be prevented (e.g. dumping) or how/whether access will be blocked. Investigate the possibility of parking at the Corrosion Control Facility (an advantage would be that this area is already monitored; a disadvantage would be any disruption to the operation or condition of the facility and grounds).

**Forest habitat/timber management:**

| Stand | Type | Silviculture (harvesting) | Acres to Cut | BA to Cut | Mbf to Cut | Cords to Cut | Timing |
|---|---|---|---|---|---|---|---|
| Stew | OH 5a | Selection | 5 | 133 | 50 | 35 | 2010/2011 |

**Practice purpose (how it helps create desired future condition):**

This uneven-aged technique allows younger forest habitat/new generations of trees to be created and integrated into an existing mature forest without leading to an anticipated conversion from older to younger forest (cf. Even-aged methods). For further information see Selection in "Explanation of Silvicultural Methods" above.

**Trees to be removed & retained (types, conditions, sizes):** Remove/salvage on about 10% of the stand acreage, in areas with less impressive or well-formed trees, remove all trees and mountain laurel within groups up to one-half acre. Retain overwhelmingly a canopy of mature oak and hardwoods groves of hemlock, groves of pine. In openings retain large woody debris for habitat.

**Special considerations (erosion, habitat, access, timing, cultural, etc.):**

Logging access would have to be gained by permission from an abutter. A no-cut buffer of at least 100' should be maintained along the eastern boundary to preserve the current mature forested conditions.

Brushy habitat/non-native invasive plant species control: Stands 2,3 & 5 (ca. 19 acres)

Two separate but possibly related practices:

1. Control non-native invasive plant-species: At a minimum level this would entail curtailing the bittersweet so that native plants could have a better chance of becoming established. Interested volunteers (e.g. Broad Brook Coalition) could use hand tools to cut vines (see discussion of vine-treatments in management options in Stand Descriptions);
2. If the City desires a greater level of control, the options range from greatly intensifying the hand-tool effort to combining selective use of herbicides by a licensed applicator (following a chemical treatment program to be devised in conjunction with that licensed applicator) to mechanical mowing or uprooting, or some combination of these. Treatments generally are not 100% effective and thus require follow up. Also, bear in mind that the seed sources for the non-native invasive

plant species is well-established in areas just off the property as well and therefore the non-native invasive plants will perpetually attempt to re-establish. Therefore, complete control of non-native invasive plants ¾ if possible at all ¾ seems, at this writing, to entail an ongoing commitment.

**Maintain brushy habitat:** Use brush-mowing reclaim/re-establish brushy areas with the intention of maintaining these over time (making sure that mowing is done in the winter to avoid harm to wood turtles).

**Confirm presence/absence of vernal pools:**

Ideally during spring breeding season, consider having a qualified person survey the property for vernal pools (including the pool on the southern boundary just east of the Erosion Control Facility). Map any vernal pools and add the map to this plan. It would be up to the City to decide to certify any vernal pools (with the Natural Heritage and Endangered Species Program of MA Fish and Wildlife). If any vernal pools are located in Stand 1, and if any timber harvesting is done there, protection measures for the vernal pool and adjacent habitat will be addressed in the Forest Cutting Permit.

### ECOLOGICAL REPORT

By Molly Hale (6/23/2009, 7/2/2009, 4/12/2010)

According to topographical maps and aerial photographs of the Beaver Brook/Broad Brook Conservation Area, there are four wetlands that could be vernal pools. However, based on further investigation, only one of these is in actuality is a vernal pool.

**Point 001** (please refer to map above): This is an open water pond with a 90% cover of duckweed and a 50% cover of water lilies. It is home to 4-toed salamanders, wood frogs, painted turtles, and pickeral frogs. It is sheltered by tall, fluffy sphagnum hummucks over standing water. It is a permanent body of water not subject to seasonal drying. It is also connected to a forested wetland on the abutter's property to the south (Point 001). If the abutter's wetland does not serve as a permanent outlet for this open water pond, Point 001 could be a vernal pool. At this point in time though, this cannot be determined.

**Point 002:** This is a forested wetland less than three inches deep with a 50–75% cover of sedges and herbaceous vegetation. It is too shallow to support vernal pool species and is, therefore, not a vernal pool. It also flows south.

**Point 004:** This is a vernal pool but entirely on the abutter's property. This wetland, in a low finger surrounded by higher land, collects drainage from the north via an intermitten stream that begins as a seep. At its maximum depth, it is about six to eight inches deep, so obligate amphibian species probably use it as a place to breed. It is home to at least 30 salamander egg masses and two dozen wood frog egg masses. The portion of the wetland on City-owned property is a shallower section in which the water is less than two inches deep.

**Point 006:** This is not a vernal pool. It is very shallow water covering mud.

## Brookwood Marsh

**Improvements:** The Commission should continue the beaver dam maintenance agreement on an annual basis to prevent failure of the culverts placed in the beaver dam.

Install a "Brookwood Marsh" sign at Indian Hill cul-de-sac.

**Acquisition:** The Commission should attempt to acquire the remainder of the wetlands immediately south of the Conservation Area as one of the Commission's top priorities for land acquisition. See Rediscovering Northampton. (Partially done 1994).

**Completed Items:**

- Beaver dams removed (fall 1990).
- Culvert in dam to lower water level (July 1992).

**Description:**

In 2001, the Commission completed its plans to restore previously filled wetlands with financial help from the US Fish and Wildlife Service (F&WS), the Department of Environmental Protection (DEP), and the Natural Resources Conservation Services. The 1998 GROWetlands Grant Program, out of the Executive Office of Environmental Affairs, funded the restoration of these wetlands. The restoration involved the removal of fill material and the relocation of a controversial beaver dam further away from the surrounding residential homes. The cost to the City was in-kind contributions (Office of Planning and Development, Smith Vocational School Forestry Department, and assistance from local volunteer groups).

Because the invasive non-native plant Purple loosestrife has been out-competing native plants of much higher wildlife value, the Commission applied for and received a WHIP Grant in 2004 from the Natural Resources Conservation Service to implement a biological invasive control program for the eradication of the invasive. The Conservation Commission purchased 16,000 Galerucella beetles and released them in the northern section of the marsh in June 2005. If successful, this type of biological control can be a highly cost effective, long term, nonpolluting, and self-sustaining solution to the Purple loosestrife invasion. Furthermore, the wetland marsh has benefited from the native biota being replaced from the work completed from the GROWetlands Grant Program, which is persistent and self-sustaining. The Conservation Commission will monitor the site for the next five years.

## Mary Brown's Dingle

**Improvements:** The Commission should work with and establish a relationship with the abutters of this area to help inspect the area for encroachment.

The Commission should attempt to educate the abutters about the history of this area and the impact of yard debris being discarded around the perimeter of this area.

The Commission should examine the potential for removing the storm sewer through center of property, if this can be done without flooding, to restore the wetlands for storm water treatment and storage functions.

**Management Items:**

Encroaching fill and garden area should be removed and the natural area restored on the southerly and westerly sides of the conservation area.

Send out an educational mailing to the abutters of this conservation area. Inform abutters of permit process for work in a buffer zone or resource area.

## Connecticut River Greenway/James H. Elwell Conservation Area

**Improvements:** The Commission should ensure that the farmland does not grow into the abutting floodplain forest or vernal pool area.

Farm Licensees should repair the gate that blocks access to the field and the access roadway for farm equipment, as a condition of the license.

The Commission should request City Council approval for a five-year lease and lease

through competitive bid for 2006-2011.

The Conservation Commission should explore methods for removing purple loosestrife. When the best method is established, this effort should be conducted through the help of volunteers.

**Acquisition:** The Commission should acquire some additional floodplain forest and riverfront buffer parcels north of Elwell Conservation Area. Eventually a greenway could be acquired up to the Hatfield town line.

**Completed Items:**

- Five-year farm license (1989, 1992, 1997, 2006).
- Non-native plants (purple loostrife, Japanese Knotweed) removed from mainland and island (October 1994).

## Fitzgerald Lake Conservation Area

**Acquisitions:** Cooke's Pasture to the east, which contains valuable plant and animal habitat, and especially the area from the wetlands south of Broad Brook north to the Abuza Section and an area to allow a trail linkage to Marian Street Conservation Area. (Top citywide priority for the Commission). (Done 1994).

The Warburton in-holding or at least the very small section where there may be an encroachment by the Fitzgerald Lake Access Road. (Done 1995).

The Swayze in-holding. (Done 1997).

The old telephone right-of-way (long since discontinued) held by AT&T. (Done 1994).

**Completed Maintenance:**

1. Boggy Meadow Road should be improved going through the Cooke's Pasture wetland, in accordance with the trail maintenance plan prepared for the Conservation Commission and approved with Wetlands Order of Conditions 246-356. This includes:
    a) Placing twin culverts under the road to replace old culverts as shown on the plans (top priority). (Done 1998).
    b) Relocating the trail out of the wetlands onto the adjoining upland areas as shown on the plans (top priority). (Done 1998).
2. The White Oak Tree (52" diameter), at the intersection of Marian Street Trail and Boggy Meadow Road, should receive the following treatment (based on the recommendations of David Cotton, Massachusetts Certified Arborist and President of Cotton Tree Service): pruned (class 1) of dead limbs and storm damage, liquid fertilizer, and flush cut of all small diameter underbrush and saplings beneath the white oak canopy. The leaning 20" hickory tree that threatens the white oak should be removed and the other trees around the perimeter of the oak canopy should be trimmed. (Done 1999).
3. The apple orchard in Cooke's Pasture should be rehabilitated. Within a year, all non-fruit trees should be cut in Cooke's Pasture apple orchard, north of the wetland. The area should be brush hogged as in 1995 and thereafter, should be brush-hogged every three to five years. In the apple orchard south of the wetlands, select trees, competing with the apple trees, should be cut, but no vegetation in the wetland should be cut. (Done; brush-hogged 2004).
4. The Marian Street Trail should be extended to Marian Street, in the Marian Street Section.

Extend existing pressure treated wood boardwalk for an additional 120 LF along Marian Street (Done 1999).

5. South Pasture should receive a herbicide application in spring 1998 (Done).
6. A new parking lot (for approximately five cars) should be installed just off of North Farms Road. This parking lot should serve as an overflow parking lot during the summer and as the primary parking lot in the winter and spring. If Mr. Warburton sells his parcel to the City, the parking lot should be located on his property; otherwise, it should be located at the beginning of the access roadway. (Con. Com. agreed to complete by 12/1/96 as a condition of their purchase of Warburton property). (Done).
7. A gate should be placed on Boggy Meadow Road by the rock outcropping between Pines Edge Conservation Area and the Moose Lodge to close off private vehicle use of Boggy Meadow Road. Install a steel swing gate along Boggy Meadow Road at the beginning of City property (the private landowners were unwilling to locate a gate at the entrance to Boggy Meadow Road by the Road Moose Lodge). (Done 1998).
8. Improvements are needed on Boggy Meadow Road to allow access to maintain and repair the Fitzgerald Lake Dam (top priority). Specifically, a culvert should be replaced where Boggy Meadow Road crosses the first boggy meadow, and a culvert should be installed on Fitzgerald Lake Trail approximately 100 yards north-west of Boggy Meadow Road, where the trail crosses a stream. Gravel is needed to fill low spots in the road within the conservation area. A wetlands permit is needed for some of this work. (Done 1998).
9. A map showing trails, section names, and locations should be posed at the North Farm Road (by the road, not the parking lot because of vandalism problems) and the Cooke Avenue entrance, with Plexiglas installed over the map. (Done; map updated in 2005).

**Completed Items:**

- Asphalt and boardwalk wheelchair accessible path to Fitzgerald Lake installed (summer 1993).
- BBC cut some of vegetation on dam (fall 1989, fall 1990, fall 1991, summer 1992, summer 1993, fall 1993). Yearly by contract (1994-2004). Yearly by BBC (2005-present).
- Total Dam Restoration(1998).
- Property lines inspected, blazed as possible (fall 1991).
- Parking lot and access road regraded (some new gravel & TRG) (spring 1992 by Smith Vocational) (fall 1993 by contractor).
- Brush cut along access road (September 1993).
- Rocks placed along end of road to close old logging road (spring 1992).
- Hiking trails blazed (spring 2005).
- New color map/brochure developed (2002, updated 2005).
- Wildlife blind constructed on marsh off of Marian Street Trail (2000).
- Pilot Planting of shrub "island" in Cooke's Pasture (2005).
- "Beaver Deceiver" installed at Fitzgerald Lake outflow pipe (2005).
- Donation cylinders (aka "Iron Rangers") constructed for placement at North Farms Road and Cooke Avenue entrances (2005).
- Parking lot curbing (2005).

*See Management Plan section for Broad Brook Coalition's Management Plan for Fitzgerald Lake Conservation Area.*

## Meadows Conservation Area

### BLEIMAN PROPERTY AGRICULTURAL MANAGEMENT PLAN

The Bleiman Property Agricultural Management Plan is a planning document designed to provide guidance for agricultural management of the Bleiman Donation property. The plan encompasses a 5 acre portion of a 9.95 acre property on the corners of Potash Rd. and Dike Rd.

The goals of this plan is are to:

- Provide analysis of agricultural site potential
- Highlight important factors for making agricultural use determinations, and recommend options for use
- Suggest land management practices
- Recommend elements of a lease agreement which support the practice of regenerative agriculture

The planning process included a site tour and a meeting with the citizen group interested in stewarding the property, for the purpose becoming familiar with their goals. In addition, a interview with Lisa Depiano, a farmer at Montview Farm currently leasing from the city, added depth of understanding to small scale farming on City owned property.

Site characteristics include an isolated location, seasonal and non-seasonal access issues, and limited infrastructure. Water is a major theme onsite, including the presence of a mixture of wet and dry soils, the existence of a vernal pool, and the floodplain location, which corresponds with infrastructure restrictions, and some access issues.

The agricultural potential of the site is extensive based on the soil type, with the exception of some seasonally wet locations. Zoning and floodplain regulations, access issues, as well as city and community wishes all constrain the future intensity of site use, and entail the primary use restrictions.

The plan begins with an inventory of the site (see Section 5 of the Open Space & Recreation Plan), followed by agricultural use recommendations and recommendations on maintenance and infrastructure. Section II addresses potential site uses including: haying, row crops, grazing, composting, nursery, seed garden, productive perennial plantings, community garden plots, educational programming, farm incubator, farmstands and CSAs. Considerations about potential uses are offered as suggestions, and are not intended to outline one particular use for the site. It is recommended that the end users, minding site constraints, be the primary determinants of specific uses.

Acknowledging that this parcel is part of a larger interest by the City of Northampton and its residents to understand and encourage regenerative agriculture, the plan includes both suggestions finely narrowed to the property in section II, "Agricultural Use Recommendations," and examples more broadly and contextually relevant to the property, and to the

**RANKING:**

The ranking is on a scale of 1 to 5 with 1 being most negative and 5 being most positive.

1 Very negative

2 Negative

3 Neutral, can be managed easily enough so as to be not a factor, or not a factor

4 Positive

5 Very positive

| AGRICULTURAL USES: DECISION MATRIX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| POTENTIAL PROJECTS | SITE CONDITIONS | | | | Summary | REGENERATIVE IMPACT | | Summary |
| | Heavy, wet soil, in some areas | Limited water storage & no irrigation | Limited infrastructure* | Limited Access | | Meets & exceeds site needs | Meets & exceeds community needs | |
| Resource Garden (perennial nursery, propagation or seed garden) | 4 | 2 | 2 | 4 | 12 | 5 | 5 | 12 (5+5)<br>120 |
| Productive perennial plantings (small nuts, fruits, vegetables, coppice, herbs, medicinal & wild plants) | 4 | 3 | 2 | 3 | 12 | 5 | 5 | 12 (5+5)<br>120 |
| Composting, small scale | 3 | 3 | 3 | 2 | 11 | 5 | 4 | 11 (5+4)<br>99 |
| Community garden plots | 2 | 2 | 3 | 3 | 10 | 3 | 5 | 10 (3+5)<br>80 |
| Educational programming (timeframe of 3 hrs. or less) | 3 | 3 | 2 | 2 | 10 | 3 | 4 | 10 (3+4)<br>70 |
| Haying | 2 | 5 | 4 | 3 | 14 | 4 | 1 | 14 (4+1)<br>70 |
| Row crops | 2 | 3 | 3 | 3 | 11 | 3 | 3 | 11 (3+3)<br>66 |
| Grazing small animals (goats, sheep) | 3 | 2 | 2 | 2 | 9 | 4 | 3 | 9 (4+3)<br>63 |
| Farm incubator | 2 | 1 | 1 | 1 | 5 | 1 | 5 | 5 (1+5)<br>30 |
| Retail (ongoing, onsite) sales of agricultural products (farmstand or CSA) | 2 | 1 | 1 | 1 | 5 | 1 | 4 | 5 (1+4)<br>25 |

*For the purpose of this matrix, "limited infrastructure" is defined as: the absence of permanent infrastructure beyond a small shed or trailer for storage, signage, information kiosk, entry gates, small water catchment, portable solar electric fencing, low tunnels/cold frames, and other similar seasonal portable items.*

understanding of regenerative and civic agriculture in section III "Local Context: Cutting Edge Civic Agriculture." Civic Agriculture includes food and agricultural systems that sustain and strengthen farm families, local communities, and natural resources.

After analysis and community input, it is clear that the Bleiman property, with community and city involvement, can fit successfully into a growing and existing framework of civic agricultural properties in Northampton. Dedication to long term goals and development of assets including site ecological and soil health, and community investment in stewardship, are key pieces for long term success.

## AGRICULTURAL USE RECOMMENDATIONS

### Considerations for Choosing Agricultural Uses

What makes a site an excellent location for agriculture? What uses are appropriate for any given site? Agricultural sites range from dry-farmed seasonal crop fields without permanent infrastructure, power or utility access, and visited only a few days a year, to acres covered with greenhouses, fencing, barns, worker housing, storage, retail, and customer parking. Often, civic and community agriculture entails infrastructure and accommodation for incorporating a wide range of human and agricultural activities, such as educational and community buildings, permanent plantings and experimental or research-oriented agricultural practices.

Decisions about infrastructure are particularly crucial. Even in smaller scale agricultural or gardening enterprises, the presence of basic site infrastructure is a make or break situation for the success of the agricultural endeavor.

For the Bleiman property, site constraints dictate that less intensive uses are most appropriate. The site users will have to contend with the need for a low-impact, creative approach. The most determinative constraints are: (1) heavy, wet soils in some areas; (2) limited water storage and no irrigation; (3) limited infrastructure possibilities; and (4) limited access.

### Decision Matrix

The decision matrix below shows how factors (1-4) above impact potential projects. It measures how site conditions relate to possible uses. A site condition can either be positive or negative for a potential use, or the condition may be not a meaningful factor. In a second step, each use is ranked by the strength of its regenerative impact on the site, and in the greater community.

Written analysis of these projects begins below. The matrix is intended to offer a method of project evaluation for the site, and can be expanded or changed to included new uses under consideration. It is only a useful method if matrix users understand the needs and impacts of each use. The discussion of particular recommended and not recommended uses in the next sections is meant to assist those who are choosing uses, by illuminating the necessary elements for each use to be successful, as well as potential pitfalls.

### Agricultural Use Analysis

Included below are examples of recommended and not recommended uses, not meant to be an exhaustive list. Many of these uses have been discussed by interested site stewards.

#### Recommended Uses

1. **Row crops, grazing or hay (lease to one farmer)**

   Site use by a farmer who maintains infrastructure elsewhere mitigates many of the infrastructure

limitations onsite. In the case of vegetable row crops, since the farmer also farms elsewhere, crops may chosen as appropriate for a dry-farmed site and rotated effectively. In the case of hay, limited visits to the site are necessary. With grazing, proper rotational grazing of small animals provides regenerative benefits such as improved pasture quality, and has a low site impact, with only limited, temporary infrastructure necessary, including fencing, and water via catchment.

**2. Community gardens**

Numerous smaller users are capable of using human or bike power to carry water, tools, and fertility to the site incrementally. This mitigates access issues. In addition, small scale water catchment, a small tool shed, and moderate compost piles are appropriately scaled solutions here.

**3. Perennial nursery, propagation garden, or seed garden**

A seed garden was one idea proposed by potential users. A seed garden would be an appropriate use: the relative isolation of the site would be an asset in seed saving due to the convenience of distance for avoiding cross-pollination. A nursery or propagation garden would also be appropriate. This is best executed with dedication to quality soil prep, and on-going watering needs, in order to grow quality transplants. Each of these undertakings provides opportunity for an educational garden open to visitors.

**4. Productive perennial planting**

For example: nuts, coppice, silvopasture, fruits, vegetables, herbs, medicinal & wild plants. Long-term plantings mitigate the water constraints onsite. A long term perennial design can easily accommodate for most water needs of the plants without the issue of constant water provisioning associated with annual plantings. In this case, it becomes essential that user maintain a longer term lease appropriate to the harvest timing of the crop, since the yields are not immediate.

> Coppice is an agroforestry system based on 1-25 year stump sprout harvest cycles. It can be easily mixed into vertically layered perennial system with other agricultural yields growing above or below, including fruits, nuts, edible greens, medicinal herbs, small grazing, etc....
>
> Silvopasture is an agroforestry system that combines trees with forage and livestock production. The trees are managed for lumber, nut or fruit production, at the same time, provide shade and shelter for livestock and forage, reducing stress and sometimes increasing forage production.[1]

**5. Educational programming of a shorter nature (less than three hours long)**

Educational programming is a good addition many other site uses, such as a seed or nursery garden, or community garden plots. Publically-oriented signage for site elements is one example of compatible education. Educational programming of a longer nature is not a recommended site use, since more involved and lengthy educational offerings would require improved access, and infrastructure such as shelter and bathroom facilities.

**6. Small-scale composting, by hand tools or small tractor**

Composting is compatible with a wide variety of site conditions and other uses. In fact, it is almost a requirement for a regenerative site. It is by far the most common and well-understood method of adding organic matter, and increasing soil biological health.

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1USDA National Agroforestry Center (NAC)." USDA National Agroforestry Center . 4 Oct. 2009 <http://www.unl.edu/nac/silvopasture.htm>

Not Recommended Uses

7. **Retail (on-site) sales of agricultural products, including a CSA**

   Farm stand or CSA-type operations typically require easy customer access and roadside exposure, as well as infrastructure for the washing, processing, distribution and sale of products, storage of farm equipment, and housing of farmers and/or workers.

8. **Farm incubator**

   Successful farm incubators typically provide shared equipment and infrastructure, and in addition often provide access to a marketing outlet/location. Any potential farmer lessee would need to have access to infrastructure and marketing elsewhere. The site potential and constraints would make meeting the whole picture of farm needs unlikely. This does not indicate that small agricultural endeavors are not appropriate for the site, but rather that expectations should be clear and tailored to site possibilities.

### Regenerative Practices

Regenerative soil management practices balance nutrient cycles to conserve water and nutrients, increase soil organic matter, sequester carbon, and meet crop needs with site resources or with recaptured resources present locally. These practices also limit erosion and minimize impact on native ecosystems. In order to manage a site regeneratively, an understanding of the inputs needs of the agricultural endeavor are essential.

It is recommended that site stewards/users map nutrient cycles (water, carbon, nitrogen, phosphorus) as they relate to the site, and develop regenerative, closed-loop, self-sustaining cycles. What sources of water, organic matter, nitrogen, phosphorus, are available? Can you design closed loop systems that take advantage of these resources? Can you include recaptured organic matter present locally (such as leaves from landscapers), or captured water onsite?

In particular, regenerative issues point to the possibilities of whole farm systems with interconnected parts. For example, the Compost Utilization Trial (CUT) at Rodale Institute demonstrated that the use of composted manure with crop rotations in organic systems can result in carbon sequestration of up to 2,000 lbs/ac/year, a greater sequestration than side-by-side comparisons to non-manure compost or chemical fertilizers. Carbon sequestration is associated with the increase in stable soil organic matter (which is mostly carbon). This shows that incorporation of animals and crops into a whole farm system is one example of a regenerative loop that outperforms other options.

Which site projects to pursue depends finally upon the goals of users and, if more than one cotemporaneous use is desired, upon the synergy of various proposed uses. Synergistic uses are strongly recommended. Mutually supportive uses are an important component of regenerative agriculture. Single, monocultural uses do not demonstrate long term stability, or other self-sustaining characteristics of regenerative systems.

### Cover Croping

Establishing a nitrogen fixing cover crop is a recommended next step. Plowing and sowing the cover crop may take place anytime between April and August.

Red clover, a short lived perennial, is recommended. Red clover prefers heavy, fertile soils of near-neutral pH. It can handle less-than-perfect drainage, acid soils and clays. It can even tolerate wet soil conditions but not prolonged flooding. Nitrogen yield averages are 100-110lb/acre per season.

Red clover seed rates are 11-14 lbs per acre. To establish red clover in the spring, because it is slow growing at first, and liable to leave the field at risk to weed growth, it is recommended that a nurse crop of oats at 1.5-2 bushes per acre be seeded with it. Clover inoculants should be mixed with the seed (unless clover has been grown in the field in the previous 3 years).

In the Northeast it is generally planted in spring and allowed to grow for a full year before incorporation. This allows one or more hay cuts or mowing before incorporation as a green manure. The clover should be mowed two or so times over the course of the season, at flowering (before seeding), to prevent developing clover seed as a field weed.[2]

### Recommended Conditions of Lease

The following are suggested as additions to common lease elements. These suggestions are intended to support the practice of regenerative agriculture.

- Stable or increasing soil organic matter, as measured by annual soil tests (biannual is sufficient after numerous years of similar practices), up to a 10% soil organic matter maximum.
- Stable or increasing soil nutrient levels. Except those shown by soil test to be in excess, which must shown to be stable or decreasing. Measured by annual soil tests (biannual is sufficient after numerous years of similar practices).
- Adherence to the NOP Organic Standards for the current year (sustainable practices beyond the terms of the NOP standards are encouraged, but this is set as a minimum).
- Maintain covered (not bare) soil at all times via the use of crops, cover crops, or mulch. Excluding possible 6 week at-a-time maximum pre-crop soil prep and/or summer bare fallow.
- Management of plants so they do not set seeds in the field. Including but not limited to: vegetable crops, pasture species, annual and perennial weeds, hedgerows and weedy field edges. Excluding those plants explicitly managed for seed saving purposes.
- Maintenance of the tree line to preserve the field for agricultural purposes, including the edge running along Potash Rd, which borders the driest and highest quality agricultural soil on site. However, possibly excluding wet edges and/or edges abutting the vernal pool area, which are determined better left aside from managed agriculture.

### Maintenance and Infrastructure Recommendations

- Close Dike Rd. permanently so as to avoid troublesome access, dumping in the area, and safety issues where the road meets Pleasant Street.
- Develop signage to convey information to the public. Such as signs pointing to the site at neighborhood intersections, descriptive signage at site entrances, and a kiosk with on-going project and educational information.
- Build a shed or a shed on a trailer for tools and equipment storage.
- Construct permanent perimeter fencing and/or lay a hedge, which along with mobile solar electric fencing, will make seasonal rotational grazing for small animals an easy and practical site element.
- Utilize plastic covered low tunnels, cold frames, and other similar temporary solutions to season extension and crop care.
- Employ small-scale water catchment, for example from the shed roof, or in containers.
- Include on site other small scale agricultural infrastructure like that mentioned here, with the intention of supporting the success of site projects.

2 This and other cover crop information may be found in the Northeast Cover Crop Handbook. Sarrantonio, Marianne. *Northeast Cover Crop Handbook (Soil Health Series)*. Emmaus, PA: Rodale Institute, 1994.

- Designate a strategic materials depot with easy entrance access for storage of leaves, cuttings and organic matter, and for the turning of compost piles by hand or small tractor.
- Design for key site development actions like the delivery of organic matter and other soil amendments or site additions by truck or tractor.
- Avoid truck/tractor travel to most areas of the site unless a lessee farmer/grower describes trucks or tractor access as central to production.

## LOCAL CONTEXT: CUTTING EDGE CIVIC AGRICULTURE

### Local Community Farm Examples

These examples demonstrate the varied purposes of community agricultural endeavors and the varied partners and parties involved. The local nature of the examples is intended to inspire follow up with organizations who serve their missions especially well.

- **Land's Sake, Weston, MA**

  A 501c3 nonprofit farm operated on land leased from the town of Weston, and in operation since 1981. Focus is on youth environmental education, sustainable land management, community building and caretaking. Innovations include management of the town forest by the farm for "educational and productive purposes."

  www.landsake.org

- **Drumlin Farm Wildlife Sanctuary, Lincoln, MA**

  A property of the Massachusetts Audubon Society, Drumlin farm mixes a nature center with school programs, summer camps and adult programming, with a working farm including animal and vegetable production.

  www.massaudubon.org/Nature_Connection/Sanctuaries/Drumlin_Farm/schoolprograms.php

- **The Food Project, Lincoln, Beverly and Boston, MA**

  Exemplary for its focus on youth development through an agriculture and sustainable food systems medium. The Food Project provides long term opportunities for youth to engage with the farm, and gain leadership skills to build sustainable food systems.

  www.thefoodproject.org

- **Natick Community Farm, Natick, MA**

  A 501c3 nonprofit farm, on land leased from the City of Natick, in operation since 1974. Offers school and family programming, sells vegetables, fruits and plant starts through a farm stand and annual plant sale. Also offers community garden plots.

  www.natickfarm.org

- **Appleton Farms, Ipswich, MA**

  Operated by the Trustees of Reservations, Appleton offers interpretative historical and nature tours, a 500+ member CSA, 500 acres of pasture used for grazing beef and dairy cattle, rare bird habitat, and recreational trails. Agricultural products include vegetables, beef and milk.

  www.thetrustees.org/places-to-visit/northeast-ma/appleton-farms.html

- **Food Bank Farm, Hadley, MA**

  The Food Bank Farm is a community farm focused on producing affordable food for both 700+ CSA shareholders, and the Food Bank of Western Massachusetts, to which the Farm donates and

average 200,000 lbs per year. The farm also operates a store open to shareholders, which draws annual gross revenue equal to sales of CSA shares. The store provides an outlet for an abundance of local agricultural food products. The farm focuses on efficiency of production, which provides fertile training ground for farm interns who often move on to managing other similar operations.

www.foodbankwma.org/farm

- **Nuestras Raices, La Finca, Holyoke, MA**

  The Nuestras Raices Farm is an example of a community organization that established a farm to service the vision of the local community, who wished to extend food production beyond their existing garden plots, and to create a space to share common food and agricultural practices. The central programs of the farm are a beginning farmer training program, youth gardens and programming. These programs, combined with a restaurant, and events complete the food and culture focus of the farm. The farm is unique in its careful financial planning for self-sufficiency, rather than relying long-term on grants or donations.

  www.nuestras-raices.org/en/nuestras-raices-farm

- **Holcomb Farm, West Granby, CT**

  Holcomb Farm is a nonprofit located on a historic 322 acre farm property owned by the town of West Granby. Holcomb focuses on environmental and arts education for school groups, children and adults. The site also contains public hiking trails and other amenities. The Hartford Food System operates a 400+ member CSA onsite on 27 acres of the farm.

  www.holcombfarm.org

### Top Six Civic Agricultural Ideas

These examples focus on meeting civic agricultural goals such as community food security, regenerative land management and education. Each example is relevant to local needs and opportunities, and portions of each project coincide with ideas discussed for the Bleiman site.

Some of the ideas, (for example, plant nursery), are repeated here, but with the addition of example sites, and an explanation of how each idea has been implemented in other places. Included in each explanation is years to project potential, and which choices are revenue neutral, revenue seeking, or revenue generating. Each of the six projects is an example of an approach to utilizing land and community resources to support local food security, educational, and agricultural goals.

1. **Community Greenhouse**

   A community greenhouse is like a community garden under cover. Community greenhouses are designed for gardeners and upstart farmers to rent bench space to grow their own plant starts each season. Instead of renting a garden plot or plots, users sign up for bench space and a pay a user fee to cover a share of annual operating cost. An excellent use for shuttered retail garden centers, or underutilized state or educational facilities.

   Revenue Granting/Revenue Seeking: Revenue seeking in year 1, revenue neutral thereafter.

   Years to Potential: 2

   Example: Inuvik Community Greenhouse, Inuvik, NT: www.cityfarmer.org/inuvik.html

2. **Compost Production**

   Production of compost closes nutrient-cycle leaks, channeling resources back to regeneration of agricultural land. Compost production revenues typically exceed those of food production,

making a compost operation an excellent addition to many civic agriculture sites. The quantity of successful civic agriculture projects utilizing compost production as a revenue generator to support other endeavors demonstrates its well-tested success.

Revenue Granting/Revenue Seeking: Revenue seeking in years 1-3, revenue generating thereafter.

Years to Potential: 2-4, contingent on marketing, distribution and growth of sales.

Examples: Intervale Center, Burlington, VT: www.intervale.org

Stone Barns Center, Tarrytown, NY: www.stonebarnscenter.org

Growing Power, Milwaukee, WI: www.growingpower.org

**3. Food Security Plant Nursery**

Nurseries have unique site requirements which may make them appropriate for sites where other agricultural endeavors are not desirable. For example, urban sites with asphalt or contaminated soil are not appropriate for in-ground food production, but make excellent sites for pot-grown plants. Even shaded sites are appropriate for growing shade-loving starts, or protecting delicate young plants. As with compost operations, nurseries have higher revenues and more assured profitability than agricultural operations oriented only towards food production. This makes them an excellent choice for those seeking a revenue generating project.

Commercial nurseries often focus on plant species for landscaping, not on locally-adapted food-producing plants. Availability of plant starts for diverse and locally hardy perennial fruit, vegetable, and nut crops are lacking in the local area. Continual provision of diverse plant starts is vital to improving community food security and diversifying agricultural operations.

Revenue Granting/Revenue Seeking: Revenue seeking in years 1-4, revenue generating thereafter.

Years to Potential: 4-5, depending on scale of operation and investment.

Examples: Edible Plant Project, Gainesville, FL: www.edibleplantproject.com

Food Forest Farm, Holyoke, MA: www.permaculturenursery.com

**4. Educational Farm and Regenerative Agriculture Demonstrate Site**

The model educational farm has evolved over the past few decades. Currently, the most exciting examples include sustainable design features like carbon neutral operating and regenerative agricultural practices where fertility and production needs are met from on site renewable resources, or from redirecting leaks in the local nutrient or waste cycles. Heavy on infrastructure and upfront capital needs, educational farms are long-term projects suited for permanent sites with easy community access and high visibility. Organizational structures are typically city-owned farms, non-profit farms on city-owned land, independent non-profits, or projects linked to schools or colleges.

Revenue Granting/Revenue Seeking: Revenue seeking

Years to Potential: 5-10

Examples: 21 Acres Center for Local Food and Sustainable Living, Woodinville, WA: www.21acres.org

Teal Farm/Living Futures Foundation, Huntington, VT: www.tealfarm.com/

**5. Dispersed, Localized Community Food Production**

This is a recently established model, focusing on creation of dispersed perennial plantings for ongoing, localized food production. Common sites include under utilized public, semi-public or private spaces such as: schoolyards, church yards, public parks, community gardens, community centers, collections of neighboring yards or vacant lots. This model is useful for communities focusing on localized community food security issues, and communities with limited access to larger agricultural sites. The model is scalable over space and time, working as well in one neighborhood as in a city-wide program.

Revenue Granting/Revenue Seeking: Revenue seeking but scaleable, and with limited costs over time.

Years to Potential: 3-5

Examples: Digging Deeper, Des Moines, IA: www.ci.de s-moine s.ia.us/departments/pr/Comm_Gard/digging_deeper.htm

Philadelphia Orchard Project, Philadelphia, PA: www.phillyorchards.org

**6. Schoolyard to Cafeteria Program**

Well-known, but not nearly widely enough implemented, school-run gardens that contribute to school lunches are a learning opportunity connecting environmental education, agriculture, and healthy living in a hands-on environment. The best examples include children in food production, food preparation and cooking, and connect the garden to classroom learning subjects.

Revenue Granting/Revenue Seeking: Revenue seeking

Years to Potential: 3-5

Examples: Edible School Yard, Berkeley, CA: www.ediblesschoolyard.org

Digging Deeper, Des Moines, IA

King Elementary School

www.ci.des-moines.ia.us/departments/pr/Comm_Gard/digging_deeper.htm

"Over 100 students and volunteers at King Elementary School … dug, mulched, and planted a garden that covers much of the school's campus and will eventually feature a butterfly garden, patch of prairie, and wild flower garden, in addition to vegetable beds and two orchards. The project is funded in part by a USDA community food security grant."[3]

## Mill River Greenway

**Acquisition:** Expand area to buffer the bike path and Beaver Brook.

The Commission should acquire the land between the Greenway, the State Hospital agricultural lands, and the Mill River.

The Commission should attempt to obtain a pedestrian right-of-way or land along the Mill River to the north of this parcel.

**Two studies:**

1. "An Inventory of Mill River Corridor Discharge Sources" by students of Elizabeth Farnsworth, Environmental Science Seminar, Smith College, April 1999.

3 "Weekly Harvest Newsletter - May 11, 2005." ATTRA - National Sustainable Agriculture Information Service: organic farming, sustainable ag, publications, newsletters. 3 Sep. 2009 <http://attra.ncat.org/newsletter/

2. "The Mill River Revitalization Plan, Northampton, Massachusetts" by Landscape Planning Studio, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst, Fall 1999.

Both are on file in the Office of Planning and Development. The Conservation Commission should continue to work with the Planning Department and/or other entities to seek funding sources for some of the revitalization projects presented in these reports.

**Completed items:**

- "Mill River Greenway, Yankee Hill Section" sign installed (summer 1989).

## Mineral Hills Conservation Area

**Improvements:** The Commission should continue to lease the seven acres of farmland at the Mineral Hills Conservation Area and seek approval from the City Council to extend this lease from three years to five years. The 2002-2005 Mineral Hills lease agreement includes responsibility for the maintenance of the existing internal trail system. A Soil Conservation Plan prepared by the USDA Natural Resources Conservation Services is included in the license agreement. This plan should be amended, if desired, by the NRCS and the Conservation Commission to meet individual farmer's needs for a particular growing season.

The Commission should work with neighbors in the area to continue maintenance on the existing trail system.

The Commission should locate a two-car parking lot along the southern edge of the frontage on Sylvester Road.

A trail, including a wetland crossing, is needed from the parking lot to the network of trails further back. The Sylvester Road neighborhood should build this trail with the City providing materials.

**Acquisition:** Build into a 500-acre conservation area in Northampton and Westhampton.

**Management Items:**

The Commission should obtain a Soil Conservation Plan prepared by the USDA Natural Resources Conservation Services.

## Rainbow Beach Conservation Area

**Improvements:** The Commission should continue to work with the Environmental Police regarding regulation and enforcement issues at this site.

The Commission should organize volunteers to remove Japanese knotweed and purple loosestrife, which are colonizing non-native species that out-compete native species with higher wildlife values.

**Completed Items:**

- Junk car removed (1991).
- "No camping" signs installed (Natural Heritage) (1991).
- Removed non-native plants in sensitive areas (Natural Heritage) (1993).
-

## Saw Mill Hills Conservation Area

**Improvements:**

1. Locate and mark boundaries, including right-of-way access. Since right-of-way access is tree-less, some sort of permanent stakes should be used as markers. This will help avoid future disputes and facilitate access maintenance and wildlife management activities.
2. A spring walk guided by one or more naturalists and aimed at the residents of Avis Circle would help promote familiarity with the parcel and increase their understanding and appreciation of the area. Special advice about coexisting with wildlife such as bears and coyotes may be provided. If the access is marked by then, residents could resolve this concern.
3. Cut (and leave) all stems (except shrubs) to maintain valuable early successional wildlife habitat (see Stand descriptions below). A small crew can complete this within one day with loppers, or a single person can complete this in two days with a chain saw. Basic knowledge of what to cut/leave is important, so that valuable wildlife plants are not inadvertently cut. This practice should be repeated every seven years or so.
4. The Conservation Commission should implement the 1998 Sawmill Hills Forest Stewardship Plan as outlined below:
    a) **Boundaries:** The primary concern is to identify and mark the property boundaries. Good boundaries are an important starting point for good neighbor relations.
    b) **Recreation:**
        i) Stand 1—With its open understory, frequent rock outcrops, and rolling terrain, the parcel is well suited to recreational activities such as hiking, snowshoeing and cross-country skiing.
        ii) Stand 2—The view from atop the steep embankment is nice, and the likelihood of seeing wildlife is high, so a trail on the property should skirt along the edge.
        iii) Stand 3 is the approximate route of the 20' wide right-of-way at the end of Avis Circle. Stand locations are shown on the map attached to the Forest Stewardship Plan in the Sawmill Hills file.
    c) **Wildlife:**
        i) Stand 1—The abundant acorn crop provided by this parcel is an important component of wildlife. Some thinning (i.e. culling) of suppressed trees would increase the acorn production and improve the long-term health of residual trees. However, the low value of the trees to be removed as firewood would probably preclude this type of work, unless it was incidental to projects on adjacent lands or if local landowners were to supply their own cordwood carried out the work.
        ii) Stand 2 - The natural and rapid regrowth of southern New England forests on fertile sites works will quickly replace the early successional stage of forest growth, consisting of seedlings, sprouts and shrubs, with pole-sized trees. This is good for timber growing, but it is bad for species that depend on this type of ephemeral habitat. Revisiting this stand every five years to cut back all trees (shrubs can be left) is the best way to maintain a young forest habitat.
    d) **Forest Products:**

i) Stand 1—The white pines in the midstory could be developed by thinning, as described above, but also by removing a greater number of trees. The same economic restrictions would likely apply. Ideally, the pine trees would be professionally pruned following the thinning to grow pine of the highest value. If the opportunity arises, it might be worth growing pine in this fashion on about five acres, more by way of demonstration than a serious timber growing operation.

ii) Stand 2—Although the productive site is well suited to growing timber, the small size of Stand 2 makes this unfeasible. This area should be controlled for invasive exotic shrubs, especially while it is still relatively early. Successful control usually involves pulling (for smaller shrubs), or cutting and applying herbicide to the remains.

e) **Fire:** People cause most wildfires in Massachusetts, intentionally and unintentionally. Dry grassy habitats like this former gravel pit are very flammable. An effort should be made to reduce the likelihood of human-induced fires (such as posting the access "No Smoking") as well as the chance of a fire spreading into the residential area. It would be advisable to discuss fire prevention and fire fighting, including the possibility of prescribed burns to reduce fuel loads.

f) **Education:** A spring wildflower walk, with conversations about birds, other wildlife, and possibly management, which would be open to the public—with a special effort to invite residents of Avis Circle—would help many recent arrivals to become familiar with this nearby conservation resource.

g) Though Stand 3 is not technically a "forest stand," this 20-foot-wide, 0.73-acre right-of-way is a potentially important and controversial part of the town conservation land. This connector from Avis Circle to the conservation land crosses Lots 7 & 8 along their common boundary, then follows the southern and western boundary of the Stormwater Retention pit before heading off to the conservation land.

h) This area, an old gravel pit, which is growing back into grasses, wildflowers and trees, will need to be mowed or partially cleared (ideally annually) to keep it from overgrowing with shrubs and trees.

i) The broader implications of all management proposals, including a do-nothing policy on this property, should be considered.

**Acquisitions:** Build into a 500 + acre conservation area, preserving trails, ride lines, vernal pools and coyote dens.

**Management Items:**

Implement Sawmill Hills Conservation Area Landowner Outreach Project per contract agreement with the Massachusetts Forest Stewardship Small Grants Program.

### ROBERTS HILL SECTION

**Acquisition:** The Commission should attempt to acquire the small Massachusetts Electric parcels on the Mill River and South Main Street, Leeds and between the Mill River and Water Street.

The Commission should attempt to acquire the private land just north of Roberts Hill and the Roberts Hill overlook.

The Commission should attempt to acquire the unused Massachusetts Electric power line right-of-way that crosses Roberts Hill Conservation Area.

**Maintenance:** Howard's Ice Pond Dam (DCR No. 2-8-214-8) is classified by the DCR Dam Safety office as a "low hazard" dam and is not routinely inspected by DCR. The dam must be regularly inspected and maintained.

The driveway into Roberts Hill, which has not been maintained or used for many years, should not be repaired and Roberts Hill should remain closed to vehicles.

Maintain vista from high point on Roberts Hill overlook.

**Management Items:**

Clearing of trees along the slope of the dam should be cut and prevented from rooting. (Trees cut by Smith Vocational Forestry Dept., fall 1998).

The Conservation Commission should work with the neighbor abutting the property at the end of Water Street to prevent encroachment into the Roberts Hill entrance. (Neighbor moved all items stored at entry way, fall 1998).

The dam is sound and stable but requires repairs to the concrete wall on top of the dam, repairs to the concrete spillway walls, grading of the crest to protect the concrete wall, removal of all trees on the downstream slope and toe, and rip rap at the base of the spillway to protect the streambed from erosion. (Design by Tighe & Bond completed 1998; construction completed summer 1999).

**Completed Items:**

- Minor concrete repairs to the dam spillway and apron (by abutter, 1990).
- Brush and trees on the dam removed (fall 1990, 1991, 1992; spring 1993).
- Trees cut on overlook to improve view (fall 1991; spring 1993).
- Major spillway restoration and rehabilitation (1999).
- "Roberts Hill Conservation Area, City of Northampton" sign installed at the end of Water Street and opposite the David B. Musante Beach (2001).

## State Hospital Agricultural Land—Drumlin and Mill Rivers

Although managed by the Smith Vocational Agricultural School, the Conservation Commission has contributed to conservation management because of its role of holding an agricultural preservation restriction on the entire property and a conservation restriction and public right-of-way on the drumlin and the buffer along the Mill River.

**Improvements:**

1. If the opportunity exists, the Conservation Commission should sponsor controlled burns of the drumlin to restore Grasshopper Sparrow habitat (a state concern species) and remove multi-flora rose and woody vegetation. The members of the University of Massachusetts Forestry and Wildlife Program should do burning, with assistance from the Natural Heritage Program. (See Completed Management Items for burn dates).

   After the burning, the Smith Vocational School should again clear brush from the top of the drumlin annually in the fall. All cutting on the drumlin should occur after mid-August to avoid disturbing spring and summer ground-nesting birds.

   Over-grazing should be avoided in this area. Cattle or sheep should be rotated through this area,

or another area should be used during the nesting season. Bunch grasses should be maintained at 4"-12".

Woody vegetation along the hillsides, particularly the multi-flora rose, should be repeatedly cut and removed from the site. Alternatively, Scottish Highland cattle have been shown to be effective grazers on woody vegetation.

2. Post the Drumlin with signs informing the public that the drumlin is used as nesting habitat (similar to signs Arcadia is currently using) to keep people and pets off the area during nesting season, or mow trails along the borders for visitor use.
3. Work with adjacent landowners to improve grazing and mowing practices.
4. Smith Vocational will maintain a road used as a walkway within the 100-foot buffer from the river, and most of the rest of the buffer should be allowed to return to native vegetation. The Smith Vocational School will cut one part of a field in the buffer area, on the northern edge of the property, for hay.

**Improvements to Archeological Resources:**

The Northampton State Hospital burial ground is protected from development by a permanent agricultural-use restriction on the property held by the City of Northampton. However, if the location of the cemetery is forgotten, it is possible that the Smith Vocational School or a subsequent renter or owner of the property might unwittingly use the field not only for instruction in haying but also for instruction in plowing and planting, which would also disturb the soil deflations and patches of low vegetation that are the only marks of the locations of the graves.

Erecting a memorial to the burial ground is recommended as a measure for preserving knowledge of the use of the site for the hospital cemetery. The memorial must not disturb subsurface burial remains, the location of which cannot be accurately determined by surface indications. Not all burials result in soil deflations or distinctions in vegetation.

Preservation and restoration is recommended for the 1958 bench and surrounding bushes that were the first memorial commemorating the field as a burial ground. The bench and bushes are an important part of the history of the cemetery. They are particularly important to preserve, as they are the earliest precedent to the current effort to erect a memorial to those buried in the cemetery. Chapter 272, Section 73 of the enclosed Massachusetts Laws and Regulations Protecting Burial Grounds indicates that it is illegal to remove either the bench or the bushes because they were built as a memorial.

It is recommended that the bench built in 1958 be restored if possible without excavation or any other disturbance of the ground. If any excavation is required to restore the bench, the restoration plan must be reviewed by the Massachusetts Historical Commission, which will require that an archaeologist mitigate any impacts of excavation on the burial ground.

It is also recommended that the surrounding bushes be preserved and trimmed by hand above ground to create access to the bench while maintaining its location in the arbor created by the overgrown bushes, which are picturesque and a useful protection against the wind.

It might be possible to mount commemorative plaques on the stone bench supports. A plaque could be mounted on one of the stone supports, noting when the bench was built as a memorial to the burial ground. This plaque would restore an important part of the history of the cemetery. A second plaque could be mounted on the other stone support for the modern commemoration of the cemetery. This plaque could include the dates of use of the burial ground (1858-1921), the 181 confirmed burials, the 413 potential burials, and a short commemorative statement or poem. It is recommended that this plaque also note the existence of at least two burials in the woods across the road to the north, and the fact that the boundaries of the cemetery have not been determined. It is important to preserve the present

knowledge about the cemetery for future generations that may otherwise forget it.

If another memorial is erected, it must avoid disturbing any graves in the cemetery. It is possible to erect a completely aboveground dry-laid stone monument such as a stone cairn that would not disturb the ground with a foundation. However, a memorial plaque could not be mounted on this unmortared monument. Because any mortared monument would require a foundation, its design would need to be reviewed by the Massachusetts Historical Commission, which would require an archaeological survey and/ or excavation to mitigate the impact of the foundation excavation on the burial ground. If an archaeologist found evidence of a grave shaft in the planned location of the monument, it would have to be moved to another location until one was found where excavation would not disturb any burials. Erecting a sign would involve the least amount of excavation and archaeological investigation to prevent disturbance to burials. It is recommended that any memorial be placed near the road to minimize disturbance to burials.

The Northampton State Hospital Memorial Committee suggested the memorial could include material from old buildings at the Northampton State Hospital that are being torn down. The Community Builders, who are doing the demolition, have informed the NSH Memorial Committee that they could save some of the materials, including bricks and bars used on the caged porches. People in the community suggested a memorial to symbolically show that the people buried in the site had symbolically broken free of the institutional confines. One possible memorial would be an open brickwork tower with a barred window. The tower could be open at the top to symbolize the escape of the buried inmates to heaven. Flowering vines could grow on the open brickwork to symbolize how the living spirit triumphs over stone and bars that may hold a person's body. Rebecca Macauley suggested that stone birds might further symbolize the spirits of the inmates flying free of the hospital. This memorial would also evoke the demise of the hospital into a ruin and be a memorial to the demolition of some of the buildings.

If a plaque is not mounted on the reconstructed bench, it is recommended that a plaque be mounted on a sign or a memorial, including the dates of use of the burial ground (1858-1921), the 181 confirmed burials, the 413 potential burials, and a short commemorative statement or poem. It is further recommended that this plaque would also note the existence of at least two burials in the woods across the road to the north, and the fact that the boundaries have not been determined. Again, it is important to preserve for posterity the knowledge that has been recovered about the burial ground.

A few long depressions were found running south-north across the hill that appear to have been made by large tires of a tractor or other agricultural equipment running across the field when the soil was wet and soft, thus displacing soil down the hill. It is strongly recommended that haying be conducted only when the ground is completely dry. Barbara Hopson, the Local Land Use Administrator for the Department of Agricultural Resources, has agreed to draw up a regulation to this effect for the Smith Vocational School.

Further archaeological reconnaissance and subsurface testing such as resistivity testing are recommended to identify the boundaries of the cemetery and map the soil deflations and vegetation indicating burials. Further archaeological reconnaissance in the area might also locate small-unmarked gravestones of the types Mr. Mielke found on the burial ground in his childhood. Further documentary research is recommended to find the cemetery plot records and map that Mr. Mielke saw years ago at the Northampton State Hospital.

## Management Plan: Parks and Recreation

All recreation areas should be managed to ensure long-term use for active recreation. Currently, the Department of Public Works Recreation Division does the maintenance in recreation areas and parks, while maintenance of schools sites, including those used for recreation, is done by the School Department.

On-going maintenance activities for recreation areas include:

1. Mowing grass.
2. Turf management, including lime striping.
3. Equipment maintenance.
4. Buildings and restroom maintenance.
5. Trash removal.
6. Monitoring and enforcing agreements where second parties are responsible for maintenance of Recreation Commission properties (Nagle Downtown Walkway and the Gothic Street Pocket Park).
7. Inspecting all signs and repairing or replacing as needed.

The top management/capital improvements priority for the Recreation Commission is the rehabilitation of Veterans' Field. Outside of the rehabilitation of existing recreation areas, expansion of the City and State bike paths are the top recreation priorities identified in this plan.

Within each of the recreation and park areas listed below, projects are listed in order of priority.

## Childs Park

Childs Park (private non-profit) is managed and maintained by an independent Board of Trustees. Because it is internally maintained without City funds, it is not discussed in this management plan.

## Community Gardens

The plots are located on the State Hospital property and contain 440 plots that are rented to the general public. The gardens are under the jurisdiction of the Recreation Commission and are directly supervised by a volunteer committee made up of concerned gardeners. Each year, the plots are completely sold out and waiting lists are formed to distribute any plots that are returned. The DPW Recreation Division assists the Department in maintaining the community garden site.

Also investigate other locations for satellite gardens sites at additional parks throughout the City.

## Look Park

Although managed and maintained by an independent Board of Trustees, the City owns Look Park. It is the most heavily used recreation area in the City, and it also serves regional needs. Improvements to obsolete infrastructure and improvements to its regional services are needed, in spite of major upgrades made in recent years with Look Park, state, and federal funds.

The Garden House at Look Park is the area's premier community and banquet facility, providing superior accommodations for public and private parties, meetings, and community events.

Located in one of New England's finest parks, the Garden House stands on the site of the former Look Park pool building, a nostalgic Northampton landmark built in 1930. The restoration of the building, now unsurpassed in comfort and convenience, keeps faith with the Mission style architecture of the earlier period.

## Maines Field

**Improvements:**

1. Design fences, roadways and fields to be able to prevent or minimize flood damage from the powerful flow of the river. There is no cost-effective way to prevent Maines Field from flooding periodically or even significantly slowing down the velocity of the floodwaters. There are several issues outlined below:
    a) Maines Field was an island until one channel of the Mill River was filled in to create the recreation area. The flow patterns in the river that created the island and the channels still exist.
    b) It would be next to impossible to obtain environmental permits and would be very expensive to re-channel the flow.
    c) If flow patterns were changed, it is likely you would send the energy somewhere else nearby and cause new flooding or erosion problems on someone else's property.
2. Install new lights on ball field.
3. Renovate and improve picnic and play equipment facilities.
4. Mark handicap parking spaces.
5. Create an accessible (trap rock gravel or asphalt) trail in play and game areas.
6. Repair or replace restrooms to make them accessible.
7. Construct an accessible water fountain.
8. Continue to work with the Bocce Committee and the Council on Aging to maintain the two bocce courts.

**Mitigation Options:**

- Breakaway fences – were installed and can be opened if flooding occurs.
- Ensure vegetation coverage, especially grass, as much as feasible over the entire site.
- Re-consider the need for the parking lot farthest from Riverside Drive or replace asphalt with permeable pavement that would allow grass to grow inside of the paved area (e.g. Grasspave or Turfstone).
- Replace gravel road with the same permeable pavement as above.
- Design fencing so that it does not channel water, especially in the dugout area.

## Nagle Downtown Walkway

A handicapped accessible walkway located on an old railroad right-of-way in the downtown area of the City. The DPW Recreation Division assists the Department with the maintenance of the walkway. Several abutters to the walkway have maintenance responsibilities along the walkway in return for easements granted by the City.

## Northampton Watershed and Aquifer Land

**Management/restrictions:**

DPW should consider placing restrictions on property to insure it remains as forestry and open space.

## Pulaski Park

Improvements were done in 1996.

## Sheldon Field

**Improvements:** Built a combined park-and-ride/recreation parking lot with handicap spaces and ramp up to Bridge Street. This State-funded lot was completed in 2001.

Re-design the existing parking area to include the installation of basketball facilities as well as 30-35 parking spaces. This was completed in the fall of 2004.

Install proper landing materials under play equipment to improve safety.

Replace restrooms to make them accessible and install these new restrooms out of the floodplain in a more centralized location

Create an accessible (trap rock gravel or asphalt) trail in play and game areas.

Install all new play equipment that is handicapped accessible for all age groups.

Repair all field fencing.

Construct an accessible water fountain.

**Acquisitions:** Acquired land abutting Sheldon Field to allow for future recreation expansion.

## Veterans Memorial Field

**Improvements:** Total rehabilitation renovation is slated to begin in the summer of 2005. The baseball and soccer fields will be renovated. The City's first skate park and inline skate rink will be added.

Installed proper landing materials under play equipment to improve safety

Repair or replace restrooms to make them accessible (completed 1998).

New field entrance/exit onto West Street (completed and in full use).

## State Hospital Soccer Field

The future school site parcel (parcel C) of the Northampton State Hospital was developed by the City for use as one multi-purpose field and two softball fields. It should also be considered as a possible future elementary school site. The opening of the fields has been delayed due to DPW budget cuts, but it is expected to open in the fall of 2005. Continued maintenance of recreation fields by the DPW is dependent upon funding and adequate personnel.

# Management Plan: Non-Permanently Protected

## Northampton High School

Northampton High School Fields are heavily used for recreation on weeknights and weekends. Major

renovations were included as part of the High School expansion (2000).

## Smith Vocational Agricultural School

**Management/restrictions:**

Place restrictions on agricultural property to insure it remains as forestry and open space.

## Smith Vocational School VA Parcel—Forestry Studies

**Improvements:** Use the existing trail system to build a trail to link to J.F.K. Middle School and, eventually, to Fitzgerald Lake Conservation Area.

**Management/restrictions:**

Place restrictions on property to insure it remains as forestry and open space.

## South Street School/Community Music Center

**Management/restrictions:**

If the former school site is ever sold, a public right-of-way should be retained to allow pedestrian access from South Street to Veterans Field.

# 10 Public Comments

# 11 References


The Open Space Planner's Workbook available online at www.state.ma.us/envir.

Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP) available online at www.state.ma.us/envir.

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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

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## The following plans and Ordinances are attached by reference:

"Americans With Disabilities Act (ADA) Transition Plan, City of Northampton," 1992.

"Northampton State Hospital Plan, An Element of the Northampton General Plan," Northampton Planning Board, 1993

"Rediscovering Northampton, The Natural History of City-Owned Conservation Areas," 1993

"Section 504 Handicap Accessibility Self Evaluation, City of Northampton, Park, Recreation and Conservation Facilities," 2000, 2005

"Northampton Vision 2020 Vision and Consistency Analysis, A Blueprint for the Northampton Vision 2020 Comprehensive Plan," 1999

"Broad Brook Coalition's Management Plan for the Fitzgerald Lake Conservation Area" Broad Brook Coalition, 2005

"Northampton Recreation Department Five Year Strategic Plan" Northampton Recreation Commission, 2005

City of Northampton Flood Hazard Mitigation Plan, 2004

City of Northampton Wetlands Ordinance

City of Northampton Zoning Ordinance

# A ADA Self-Evaluation Report

# A1. Recreation Areas

## FACILITY INVENTORY

| | | | LOCATION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTIVITY | EQUIPMENT | NOTES | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| Picnic Facilities | Access | All facilities (tables, benches, grills, trash cans, picnic shelters, etc.) are adjacent to accessible paths & open spaces | | | | | | | ☑ | | ☑ | | | | | | |
| | Tables & Benches | Back & arm rests | | | | | | | | | | | | | | | |
| | | Adequate number | | | | | | | ☑ | | ☑ | | | | | | |
| | Grills | Height of cooking surface | | | | N/A | | | | | | | N/A | | | | |
| | Picnic Shelters | Near accessible water fountains, trash can, restroom, parking, etc. | | | | | | | ☑ | | ☑ | | | | | | |
| Trails | | Surface material | | | | N/A | | | | | | | | | | | |
| | | Dimensions | | | | | | | | | | | | | | | |
| | | Rails | | | | | | | | | | | | | | | |
| | | Signage (for visually impaired) | | | | | | | | | | | | | | | |
| Swimming Facilities | Pools & Beaches | Location from accessible path to pool/into water | | | | N/A | N/A | | | | N/A | | N/A | | | | |
| | | Location from accessible parking | | | | | | | | | | | | | | | |
| | | Safety features, i.e. warning for visually impaired | | | | | | | | | | | | | | | |
| | | Handrails | | | | | | | | | | | | | | | |
| | | Shade provided | | | | | | | | | | | | | | | |
| Play Areas (tot lots) | All Play Equipment | Same experience provided to all | | | | N/A | N/A | | | | ☑ | | N/A | | | | |
| | Access Routes | Located adjacent to accessible paths | | | | | | | ☑ | | ☑ | | | | | | |
| | | Enough space between equipment for wheelchairs | | | | | | | ☑ | | ☑ | | | | | | |
| Game Areas | Access Routes | Located adjacent to accessible paths | | | | N/A | N/A | | ☑ | | ☑ | | N/A | | | | |
| | | Berm cuts onto courts | | | | | | | ☑ | | ☑ | | | | | | |
| | Equipment | Height & dimensions | | | | | | | | | | | | | | | |
| | | Spectator seating | | | | | | | | | | | | | | | |
| Fishing Facilities & Boat Docks | Access Routes | Located adjacent to accessible paths | | | | N/A | N/A | | | | N/A | | N/A | | | | |
| | | Handrails | | | | | | | | | | | | | | | |
| | Equipment | Arm rests, bait shelves, & fish cleaning tables | | | | | | | | | | | | | | | |
| | | Handrails | | | | | | | | | | | | | | | |
| Programming & Services | Are special programs at your facilities available (i.e. swimming lessons, hikes, etc.)? | | | | | | | | | | | | N/A | | | | |
| | Information available in alternative formats, i.e. for visually impaired | | | | | | | | | | | | | | | | |
| | Process to request interpretive services, (i.e. sign language interpreter) for meetings | | | | | | | | | | | | | | | | |

# PARKING

| Specification for Accessible Spaces | Total Spaces | Required Accessible Spaces | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Up to 25 | 1 space | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| | 26–50 | 2 spaces | | | | | | | | | | | | | | | |
| | 51–75 | 3 spaces | | | | | | | | | | | | | | | |
| | 76–100 | 4 spaces | | | | | | | | | | | | | | | |
| | 101–150 | 5 spaces | | | | | | | | | | | | | | | |
| | 151–200 | 6 spaces | | | | | | | | | | | | | | | |
| | 201–300 | 7 spaces | | | | | | | | | | | | | | | |
| | 301–400 | 8 spaces | | | | | | | | | | | | | | | |
| | 401–500 | 9 spaces | | | | | | | | | | | | | | | |
| Number of spaces/accessible spaces | | | | | | | | | | | | | | | | | |
| Accessible space located closest to accessible entrance | | | | | | | | | | | | | | | | | |
| Where spaces cannot be located within 200 ft of accessible entrance, drop-off area is provided within 100 ft | | | | | | | | | | | | | | | | | |
| Minimum width of 13 ft includes 8 ft space plus 5 ft access aisle | | | | | | | | | | | | | | | | | |
| Van space—minimum of 1 van space for every accessible space, 8 ft wide plus 8 ft aisle | | | | | | | | | | | | | | | | | |
| Sign with international symbol of accessibility at each space or pair of spaces, must be min. 5 ft, max. 8 ft to top of sign | | | | | | | | | | | | | | | | | |
| Surface evenly paved or hard-packed (no cracks) | | | | | | | | | | | | | | | | | |
| Surface slope less than 1:20, 5% | | | | | | | | | | | | | | | | | |
| Curbcut to pathway from parking lot at each space or pair of spaces, if sidewalk (curb) is present | | | | | | | | | | | | | | | | | |
| Curbcut is a minimum width of 3 ft, excluding sloped sides, has sloped sides, all slopes not to exceed 1:12, & textured or painted yellow | | | | | | | | | | | | | | | | | |

# RAMPS

| Specification | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| Slope maximum 1:12 | | | | | | | ☑ | | | | ☑ | | | | |
| Minimum width 4 ft between handrails | | | | | | | ☑ | | | | ☑ | | | | |
| Handrails on both sides if ramp is no longer than 6 ft | | | | | | | ☑ | | | | ☑ | | | | |
| Handrails at 34" & 19" from ramp surface | | | | | | | ☑ | | | | ☑ | | | | |
| Handrails extend 12" beyond top & bottom | | | | | | | ☑ | | | | ☑ | | | | |
| Handgrip oval or round & smooth surface | | | | | | | ☑ | | | | ☑ | | | | |
| Handgrip diameter between $1^1/_4$" & 2" | | | | | | | ☑ | | | | ☑ | | | | |
| Clearance of $1^1/_2$" between wall & wall rail | | | | | | | ☑ | | | | ☑ | | | | |
| Non-slip surface | | | | | | | ☑ | | | | ☑ | | | | |
| Level platforms (4 ft X 4 ft) at every 30 ft, at top, at bottom, at change of direction | | | | | | | ☑ | | | | ☑ | | | | |

# SITE ACCESS, PATH OF TRAVEL, ENTRANCES

| Specification | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| **Site Access** | | | | | | | | | | | | | | | |
| Accessible path of travel from passenger disembarking area & parking area to accessible entrance | | | | | | | ☑ | | | | | | | | |
| Disembarking area at accessible entrance | | | | | | | ☑ | | | | | | | | |
| Surface evenly paved or hard-packed | | | | | | | ☑ | | | | ☑ | | | | |
| No ponding of water | | | | | | | ☑ | | | | | | | | |
| **Path of Travel** | | | | | | | | | | | | | | | |
| Path does not require use of stairs | | | | | | | | | | | | | | | |
| Path is stable, firm & slip resistant | | | | | | | ☑ | | | | ☑ | | | | |
| 3 ft wide minimum | | | | | | | ☑ | | | | ☑ | | | | |
| Slope maximum 1:20 (5%) & maximum cross pitch is 2% (1:50) | | | | | | | ☑ | | | | ☑ | | | | |
| Continuous common surface, no changes in level greater than $^1/_2$" | | | | | | | ☑ | | | | ☑ | | | | |
| Any objects protruding onto pathway must be detected by person with visual disability, using cane | | | | | | | ☑ | | | | ☑ | | | | |
| Objects protruding more than 4" from wall must be within 27" of ground, or higher than 80" | | | | | | | ☑ | | | | ☑ | | | | |
| Curb on pathway must have curb cuts at drives, parking, & drop-offs | | | | | | | ☑ | | | | ☑ | | | | |
| **Entrances** | | | | | | | | | | | | | | | |
| Primary public entrances accessible to person using wheelchair, must be signed, gotten to independently, & NOT be service entrance | | | | N/A | N/A | | | | | | N/A | | | | |
| Level space extending 5 ft from door, interior & exterior of entrance doors | | | | | | | | | | | | | | | |
| Minimum 32" clear width opening (i.e. 36" door with standard hinge) | | | | | | | | | | | | | | | |
| At least 18" clear floor area on latch, pull side of door | | | | | | | | | | | | | | | |
| Door handle no higher than 48" & operable with closed fist | | | | | | | | | | | | | | | |
| Vestibule is 4 ft plus width of door swinging into space | | | | | | | | | | | | | | | |
| Entrance(s) on level that makes elevators accessible | | | | | | | | | | | | | | | |
| Door mats less than $^1/_2$" thick are securely fastened | | | | | | | | | | | | | | | |
| Door mats more than $^1/_2$" thick are recessed | | | | | | | | | | | | | | | |
| Grates in path of travel have openings of $^1/_2$" maximum | | | | | | | | | | | | | | | |
| Signs at non-accessible entrance(s) indicate direction to accessible entrance | | | | | | | | | | | | | | | |
| Emergency egress—alarms with flashing lights & audible signals, sufficiently lighted | | | | | | | | | | | | | | | |

# STAIRS AND DOORS

| Specification | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| **Stairs** | | | | | | | | | | | | | | | |
| No open risers | | | | | | | | | | | | | | | |
| Nosings not projecting | | | | | | | | | | | | | | | |
| Treads no less than 11" wide | | | | | | | | | | | | | | | |
| Handrails on both sides | | | | | | | | | | | | | | | |
| Handrails 34"–38" above tread | | | | | | | | | | | | | | | |
| Handrail extends minimum of 1 ft beyond top & bottom riser (if no safety hazard & space permits) | | | | | | | | | | | | | | | |
| Handgrip oval or round, has a smooth surface, & has diamter between $1^1/_4$" & $1^1/_2$" | | | | | | | | | | | | | | | |
| $1^1/_2$ clearance between wall & handrail | | | | | | | | | | | | | | | |
| **Doors** | | | | | | | | | | | | | | | |
| Minimum 32" clear opening | | | | N/A | N/A | | | | | | N/A | | | | |
| At least 18" clear floor space on pull side of door | | | | | | | | | | | | | | | |
| Closing speed minimum 3 seconds to within 3" of latch | | | | | | | | | | | | | | | |
| Maximum pressure 5 pounds interior doors | | | | | | | | | | | | | | | |
| Threshold maximum 1/2" high, beveled on both sides | | | | | | | | | | | | | | | |
| Hardware operable with closed fist (no conventional door knobs or thumb latch devices) | | | | | | | | | | | | | | | |
| Hardware minimum 36", maximum 48" above floor | | | | | | | | | | | | | | | |
| Clear, level floor space extends out 5 ft from both sides of door | | | | | | | | | | | | | | | |
| Door adjacent to revolving door is accessible & unlocked | | | | | | | | | | | | | | | |
| Doors opening into hazardous area have hardware that is knurled or roughened | | | | | | | | | | | | | | | |

# RESTROOMS—also see DOORS AND VESTIBULES

| Specification | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| 5 ft turning space measured 12" from floor | | | | N/A | N/A | | | | | | N/A | | | | |
| **At least one sink:** | | | | | | | | | | | | | | | |
| Clear floor space of 30" by 48" to allow forward approach | | | | N/A | N/A | | | | | | N/A | | | | |
| Mounted without pedestal or legs, height 34" to top of rim | | | | | | | | | | | | | | | |
| Extends at least 22" from wall | | | | | | | | | | | | | | | |
| Open knee space minimum 19" deep, 30" width, & 27" high | | | | | | | | | | | | | | | |
| Cover exposed pipes with insulation | | | | | | | | | | | | | | | |
| Faucets operable with closed fist (lever or spring activated handle) | | | | | | | | | | | | | | | |
| **At least one stall:** | | | | | | | | | | | | | | | |
| Accessible to person using wheelchair at 60" wide by 72" deep | | | | N/A | N/A | | | | | | N/A | | | | |
| Stall door is 36" wide, swings out, is self-closing, & has a pull latch | | | | | | | | | | | | | | | |
| Lock on stall door is operable with closed fist & is 32" above floor | | | | | | | | | | | | | | | |
| Coat hook is 54" high | | | | | | | | | | | | | | | |
| **Toilet** | | | | | | | | | | | | | | | |
| 18" from center to nearest side wall | | | | N/A | N/A | | | | | | N/A | | | | |
| 42" minimum clear space from center to farthest wall or fixture | | | | | | | | | | | | | | | |
| Top of seat 17"–19" above floor | | | | | | | | | | | | | | | |
| **Grab Bars** | | | | | | | | | | | | | | | |
| On back & side wall closest to toilet | | | | N/A | N/A | | | | | | N/A | | | | |
| 11/4" diameter | | | | | | | | | | | | | | | |
| 11/2" clearance to wall | | | | | | | | | | | | | | | |
| Located 30" above & parallel to floor | | | | | | | | | | | | | | | |
| Acid-etched or roughened surface | | | | | | | | | | | | | | | |
| 42" long | | | | | | | | | | | | | | | |
| **Fixtures** | | | | | | | | | | | | | | | |
| Toilet paper dispenser is 24" above floor | | | | N/A | N/A | | | | | | N/A | | | | |
| One mirror set maximum 38" to bottom (if tilted 42") | | | | | | | | | | | | | | | |
| Dispensers (towel, soap, etc.) at least one of each, maximum 42" above floor | | | | | | | | | | | | | | | |

# FLOORS, DRINKING FOUNTAINS, TELEPHONES

| Specification | LOCATION | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| **Floors** | | | | | | | | | | | | | | | |
| Non-slip surface | | | | | | | | | | | N/A | | | | |
| Carpeting is high-density, low pile, non-absorbent, stretched taut, securely anchored | | | | | | | | | | | | | | | |
| Corridor width minimum is 3 ft | | | | | | | | | | | | | | | |
| Objects (signs, ceiling lights, fixtures) can only protrude 4" into path of travel from height of 27" to 80" above floor | | | | | | | | | | | | | | | |
| **Drinking Fountains** | | | | | | | | | | | | | | | |
| Spouts no higher than 36" from floor to outlet | | | | | | | | | | | N/A | | | | |
| Hand operated push button or level controls | | | | | | | | | | | | | | | |
| Spouts located near front with stream of water as parallel to front as possible | | | | | | | | | | | | | | | |
| If recessed, recess minimum 30" width & no deeper than depth of fountain | | | | | | | | | | | | | | | |
| If no clear knee space underneath, clear floor space 30" X 48" to allow parallel approach | | | | | | | | | | | | | | | |
| **Telephones** | | | | | | | | | | | | | | | |
| Highest operating part maximum of 54" aboe floor | | | | | | | | | | | N/A | | | | |
| Access within 12" of phone, 30" high by 30" wide | | | | | | | | | | | | | | | |
| Adjustable volume control on headset so identified | | | | | | | | | | | | | | | |
| **Signs, Signals, and Switches** | | | | | | | | | | | | | | | |
| **Switches, Controls, and Signs** | | | | | | | | | | | | | | | |
| Switches & controls for light, heat, ventilation, windows, fire alarms, thermostats, etc. must be minimum of 36" & maximum of 48" above floor for forward reach, maximum of 54" for side reach | | | | | | | | | | | N/A | | | | |
| Electrical outlets centered no lower than 18" above floor | | | | | | | | | | | | | | | |
| Warning signals must be visual as well as audible | | | | | | | | | | | | | | | |
| **Signs** | | | | | | | | | | | | | | | |
| Mounting height must be 60" to centerline of sign | | | | | | | | | | | | | | | |
| Within 18" of door jamb or recessed | | | | | | | | | | | | | | | |
| Letters & numbers at least 11/4" high | | | | | | | | | | | | | | | |
| Letters & numbers raised .03" | | | | | | | | | | | | | | | |
| Letters & numbers contrast with background color | | | | | | | | | | | | | | | |

| Specification | LOCATION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agnes Fox Field | Arcanum Field | Childs City Park | Community Gardens | Halligan-Daley Historical Park | JFK Middle School | Look Park | Main Street Streetscape Park | Maine's Field | David B. Musante, Jr. Beach | Nagle Downtown Walkway | Northampton High School | Pulaski Park | Sheldon Field | Veterans Memorial Field |
| **Swimming Pools—accessibility can be via ramp, lifting device, or transfer area** | | | | | | | | | | | | | | | |
| Ramp at least 34" wide with non-slip surface extending into shallow end, slope not exceeding 1:6 with handrails on both sides | | | | N/A | N/A | | | | | | N/A | | | | |
| Lifting device | | | | | | | | | | | | | | | |
| Transfer area 18" above path of travel & minimum of 18" wide | | | | | | | | | | | | | | | |
| Unobstructed path of travel not less than 48" wide around pool | | | | | | | | | | | | | | | |
| Non-slip surface | | | | | | | | | | | | | | | |
| **Shower Rooms—Showers must accomodate both wheel-in and transfer use** | | | | | | | | | | | | | | | |
| Stalls 36" by 60" minimum, with 36" door opening | | | | N/A | N/A | | | | | | N/A | | | | |
| Floors are pitched to drain stall at corner farthest from entrance | | | | | | | | | | | | | | | |
| Floors are non-slip surface | | | | | | | | | | | | | | | |
| Controls operate by single lever with pressure balance mixing valve | | | | | | | | | | | | | | | |
| Controls located on center wall adjacent to hinged seat | | | | | | | | | | | | | | | |
| Shower heads attached to flexible metal hose | | | | | | | | | | | | | | | |
| Shower heads attached to wall mounting adjustable from 42" to 72" above floor | | | | | | | | | | | | | | | |
| Seat is hinged & padded & at least 16" deep, folds upward, securely attached to side wall, height is 18" to top of seat, & at least 24" long | | | | | | | | | | | | | | | |
| Soap trays without handhold features unless they can support 250 pounds | | | | | | | | | | | | | | | |
| 2 grab bars are provided, one 30" & one 48" long, or one continuous "L" shaped bar | | | | | | | | | | | | | | | |
| Grab bars are placed horizontally at 36" above floor line | | | | | | | | | | | | | | | |
| **Picnicking** | | | | | | | | | | | | | | | |
| Minimum of 5% of total tables must be accessible with clear space under table top not less than 30" wide & 19" deep per seating space & not less than 27" clear from ground to underside of table<br>An additional 29" clear space (totaling 48") must extend beyond 19" clear space under table to provide access | | | | | | | ☑ | | | | N/A | | | | |
| For tables without toe clearance, knee space under table must be at least 28" high, 30" wide, & 24" deep | | | | | | | ☑ | | | | | | | | |
| Top of table no higher than 32" above ground | | | | | | | ☑ | | | | | | | | |
| Surface of clear ground space under & around table must be stable, firm & slip-resistant, & evenly graded with maximum slope of 2% in all directions | | | | | | | ☑ | | | | | | | | |
| Accessible tables, grills, & fire rings must have clear ground space of at least 36" around perimeter | | | | | | | ☑ | | | | | | | | |

# A2. Conservation & Agricultural Areas

## FACILITY INVENTORY

| | | | LOCATION | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTIVITY | EQUIPMENT | NOTES | Barrett Street Marsh | Brookwood Marsh | Mary Brown's Dingle | CT River/James H. Elwell | Fitzgerald Lake/ Beaver & Broad Brook | Florence/Garfield | Ice Pond | Manhan Rail Trail Buffer | Meadows | Mill River Greenway | Mineral Hills | Mineral Hills/Turkey Hills CR | Parson's Brook | Rainbow Beach | Roberts Hill Watershed | Saw Mill Hills | West Farms |
| Picnic Facilities | Not applicable | | None | None | None | 5, access | | | | None | None | None | | | | None | 2, access | None | |
| Trails | | Surface material | Paved, CS, BW | Dirt, user-made | None | Paved | Paved, BW, dirt | | | None | | None | | | | None | Dirt | None | |
| | | Dimensions | | | | | 9" wide | | | | | | | | | | Narrow, uphill | | |
| | | Rails | None | | | None | Only on 1 section | | | | | | | | | | None | | |
| | | Signage (for visually impaired) | None | | | None | None | | | | | | | | | | None | | |
| Swimming Facilities | Not applicable | | None | None | None | None | None | | | None | None | None | | | | None | None | None | |
| Play Areas (tot lots) | Not applicable | | None | None | None | None | None | | | None | None | None | | | | None | None | None | |
| Game Areas: | Not applicable | | None | None | None | None | None | | | None | None | None | | | | None | None | None | |
| Fishing Facilities & Boat Docks | Access Routes | Located adjacent to accessible paths | None | None | None | ☑ | None | | | None | None | None | | | | None | None | None | |
| | | Handrails | | | | None on dock, but on ramp to dock | | | | | | | | | | | | | |
| | Equipment (informal only, no improvements) | Arm rests, bait shelves, & fish cleaning tables | | | | None | | | | | | | | | | | | | |
| | | Handrails | | | | ☑ | | | | | | | | | | | | | |
| Programming & Services | Information available in alternative formats, i.e. for visually impaired | | None | None | None | None | No | | | N/A | None | None | | | | None | None | None | |
| | Process to request interpretive services, (i.e. sign language interpreter) for meetings | | | | | | Self-guided hike | | | N/A | | | | | | | | | |

CS crushed stone

BW wooden boardwalk

# PARKING

| Specification for Accessible Spaces | Total Spaces | Required Accessible Spaces | LOCATION | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Up to 25 | 1 space | Barrett Street Marsh | Brookwood Marsh | Mary Brown's Dingle | CT River/James H. Elwell | Fitzgerald Lake/ Beaver & Broad Brook | Florence/Garfield | Ice Pond | Manhan Rail Trail Buffer | Meadows | Mill River Greenway | Mineral Hills | Mineral Hills/Turkey Hills CR | Parson's Brook | Rainbow Beach | Roberts Hill Watershed | Saw Mill Hills | West Farms |
| | 26–50 | 2 spaces | | | | | | | | | | | | | | | | | |
| | 51–75 | 3 spaces | | | | | | | | | | | | | | | | | |
| | 76–100 | 4 spaces | | | | | | | | | | | | | | | | | |
| | 101–150 | 5 spaces | | | | | | | | | | | | | | | | | |
| | 151–200 | 6 spaces | | | | | | | | | | | | | | | | | |
| | 201–300 | 7 spaces | | | | | | | | | | | | | | | | | |
| | 301–400 | 8 spaces | | | | | | | | | | | | | | | | | |
| | 401–500 | 9 spaces | | | | | | | | | | | | | | | | | |
| Number of spaces/accessible spaces | | | None | None | | /2 | /1 | | | None | | | | | | None | /2 | | |
| Accessible space located closest to accessible entrance | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Where spaces cannot be located within 200 ft of accessible entrance, drop-off area is provided within 100 ft | | | | | | N/A | N/A | | | | | | | | | | N/A | | |
| Minimum width of 13 ft includes 8 ft space plus 5 ft access aisle | | | | | | ☑ | ☑ | | | | | | | | | | No | | |
| Van space—minimum of 1 van space for every accessible space, 8 ft wide plus 8 ft aisle | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Sign with intl. symbol of accessibility at each space or pair of spaces, min. 5 ft, max. 8 ft to top | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Sign minimum 5 ft, maximum 8 ft to top of sign | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Surface evenly paved or hard-packed (no cracks) | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Surface slope less than 1:20, 5% | | | | | | ☑ | ☑ | | | | | | | | | | ☑ | | |
| Curbcut to pathway from parking lot at each space or pair of spaces, if sidewalk (curb) is present | | | | | | N/A | N/A | | | | | | | | | | N/A | | |
| Curbcut is a minimum width of 3 ft, excluding sloped sides, has sloped sides, all slopes not to exceed 1:12, & textured or painted yellow | | | | | | N/A | N/A | | | | | | | | | | N/A | | |

# RAMPS

| Specification | LOCATION | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Barrett Street Marsh | Brookwood Marsh | Mary Brown's Dingle | CT River/James H. Elwell | Fitzgerald Lake/Beaver & Broad Brook | Florence/Garfield | Ice Pond | Manhan Rail Trail Buffer | Meadows | Mill River Greenway | Mineral Hills | Mineral Hills/Turkey Hills CR | Parson's Brook | Rainbow Beach | Roberts Hill Watershed | Saw Mill Hills | West Farms |
| Slope maximum 1:12 | ☑ | None | ☑ | | ☑ | | | None | None | None | | | | None | None | None | |
| Minimum width 4 ft between handrails | ☑ | | ☑ | | ☑ | | | | | | | | | | | | |
| Handrails on both sides if ramp is no longer than 6 ft | ☑ | | ☑ | | ☑ | | | | | | | | | | | | |
| Handrails at 34" & 19" from ramp surface | ☑ | | No | | No | | | | | | | | | | | | |
| Handrails extend 12" beyond top & bottom | ☑ | | No | | No | | | | | | | | | | | | |
| Handgrip oval or round & smooth surface | ☑ | | ☑ | | ☑ | | | | | | | | | | | | |
| Handgrip diameter between $1^{1}/_{4}$" & 2" | ☑ | | ☑ | | ☑ | | | | | | | | | | | | |
| Clearance of $1^{1}/_{2}$" between wall & wall rail | ☑ | | ☑ | | N/A | | | | | | | | | | | | |
| Non-slip surface | ☑ | | ☑ | | No | | | | | | | | | | | | |
| Level platforms (4 ft X 4 ft) at every 30 ft, at top, at bottom, at change of direction | ☑ | | ☑ | | ☑ | | | | | | | | | | | | |

## SITE ACCESS, PATH OF TRAVEL, ENTRANCES

| | LOCATION | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Specification | Barrett Street Marsh | Brookwood Marsh | Mary Brown's Dingle | CT River/James H. Elwell | Fitzgerald Lake/ Beaver & Broad Brook | Florence/Garfield | Ice Pond | Manhan Rail Trail Buffer | Meadows | Mill River Greenway | Mineral Hills | Mineral Hills/Turkey Hills CR | Parson's Brook | Rainbow Beach | Roberts Hill Watershed | Saw Mill Hills | West Farms |
| **Site Access** | | | | | | | | | | | | | | | | | |
| Accessible path of travel from passenger disembarking area & parking area to accessible entrance | ☑ | | | ☑ | ☑ | | | None | None | None | | | | None | | None | |
| Disembarking area at accessible entrance | ☑ | | | ☑ | ☑ | | | ↓ | ↓ | ↓ | | | | ↓ | | ↓ | |
| Surface evenly paved or hard-packed | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| No ponding of water | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| **Path of Travel** | | | | | | | | | | | | | | | | | |
| Path does not require use of stairs | ☑ | | | ☑ | ☑ | | | None | None | None | | | | None | | None | |
| Path is stable, firm & slip resistant | ☑ | | | ☑ | ☑ | | | ↓ | ↓ | ↓ | | | | ↓ | | ↓ | |
| 3 ft wide minimum | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| Slope maximum 1:20 (5%) & maximum cross pitch is 2% (1:50) | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| Continuous common surface, no changes in level greater than $^1/_2$" | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| Any objects protruding onto pathway must be detected by person with visual disability, using cane | ☑ | | | ☑ | ☑ | | | | | | | | | | | | |
| Objects protruding more than 4" from wall must be within 27" of ground, or higher than 80" | ☑ | | | N/A | N/A | | | | | | | | | | | | |
| Curb on pathway must have curb cuts at drives, parking, & drop-offs | ☑ | | | N/A | N/A | | | | | | | | | | | | |
| **Entrances (not applicable)** | | | | | | | | | | | | | | | | | |

## STAIRS AND DOORS (not applicable)

## RESTROOMS—also see DOORS AND VESTIBULES (not applicable)

## FLOORS, DRINKING FOUNTAINS, TELEPHONES (not applicable)

## SWIMMING POOLS, SHOWER ROOMS, & PICNICKING (not applicable)


# City of Northampton

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