

Hatfield Open Space and Recreation Plan 2014

July 14, 2014
Final draft copy for review

Hatfield Open Space Committee
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ACKNOWLEDGEMENTS

Many thanks to all the dedicated volunteers, committees, planners and citizens whose thoughtful participation in this update to the 2008 Open Space and Recreation Plan has created an important planning tool to guide development for the protection of Hatfield's natural and cultural resources. Special thanks to Anne Capra, Pete Westover and PVPC for their invaluable contributions in this effort.

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Thanks also to those who participated in the electronic version of the open space survey, public visioning sessions, and/or submitted comments on many drafts of this plan.

HATFIELD OPEN SPACE AND RECREATION PLAN 2014

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SECTION 1: PLAN SUMMARY

As its name implies, this plan focuses on the protection of natural resources, access to recreational areas, and the long-term management of both. Although it addresses many of the same issues as did the 2008 Open Space and Recreation Plan, it does so in the light of evolving and changing community needs and circumstances and seeks to build on the findings of its predecessor. The plan itself moves from an inventory of recreational and open space resources, to a description of community preferences in relation to them, and, finally, to an action plan for accommodating such preferences revealed in the committee's fact-finding.

Perhaps not surprisingly, the overall objectives that support the broader goals of providing recreational opportunities, and protecting the valuable natural resources and open space that are currently abundant within Hatfield, have been consistently repeated during this on-going process that began more than thirty years ago. These goals, stated in Section 8 are:

- Preserve Community Character;
- Protect Farmland;
- Protect Wetlands and Floodplains;
- Protect the Water Supply;
- Protect Woodlands;
- Management of Protected Resources; and,
- Provide Adequate Recreation Spaces.



SECTION 2: INTRODUCTION

A. Statement of Purpose

Previous Open Space and Recreation Plans for the Town of Hatfield were completed in 1989, 2003 and 2008, and approved by the Massachusetts Division of Conservation Services, Executive Office of Environmental Affairs (EOEA). This current document constitutes an update to the 2008 Plan. It inventories open space and recreational resources, identifies the community needs for open space and recreation, and recommends possible ways to satisfy such needs in the form of a Five-Year Action Plan provided in Section 9. Since the adoption of the 2008 Plan, the Town has accomplished many of the actions identified in the plan, particularly in the area of watershed protection as identified in Section 10.

B. Planning Process and Public Participation

The Open Space Committee met ten times between January and December 2013, on which occasions the most important facets of the Open Space and Recreation Plan were on the agenda. All the meetings were held at Town Hall and were open to the public. In addition, the OSC conducted an electronic survey (using Survey Monkey) on open space issues. There were thirty respondents, substantially more than we have been able to attract to traditional visioning sessions for OSRP's in the past. The Committee also drew on the findings of six complementary visioning sessions that took place in the Town between 2009 and 2013 (see Section 6 of this OSRP for more details.)

A community session was held on **Thursday, August 14th** after the final draft of the updated plan had been available to the public for a 30-day public comment period. The plan was made available at Town Hall and the Hatfield Library and on the Town website. **A press release regarding the comment period was issued** and noted in the Hampshire Gazette, a local newspaper. Notice of the comment period was also mailed to each department, board or committee head.

SECTION 3: COMMUNITY SETTING

A. Regional Context

Geographic Location

Covering about 16 square miles, the Town of Hatfield is located in Hampshire County in the Commonwealth of Massachusetts. Hatfield is surrounded by the towns of Hadley to the east, Northampton to the south, Williamsburg to the west and Whately to the north. Major roadways through the Town are Interstate 91 and Routes 5 & 10.

Hydrology

The limits of the 100-year flood plain are primarily located within the eastern and northern portions of Hatfield along the Connecticut and Mill Rivers, coincident with the majority of Hatfield wetlands. However, some 100-year flood plain also exists along Running Gutter Brook in West Hatfield.

The entire landmass of the Town of Hatfield is situated in the Connecticut River watershed. All naturally draining surface water eventually finds its way to the Connecticut River, which forms about 7.5 miles of the town's eastern and southeastern boundaries. Most of the Town's drainage stays within Hatfield proper before emptying into the Connecticut River, but two minor watersheds in West Hatfield drain first into Northampton. The three major watersheds that drain the approximate 10,000 acres of land in the Town include drainage from neighboring Northampton, Whately and Conway. These watersheds are described fully in Section 4(C).

Development Overview

Development is limited within both the 100-year flood plain and wetlands as defined under the Massachusetts Wetlands Protection Act and the Town of Hatfield Wetland Bylaw. With diligent application of the appropriate State laws and local bylaws, these areas can remain undeveloped. However, both floodplain and wetland development is potentially permissible under the law provided that certain conditions are met. As a result, protection of these lands as open space is not guaranteed. Nevertheless, both wetlands and floodplain development has been limited in Hatfield and these areas largely remain open space.

Hatfield's location adjacent to the college towns of Northampton and Amherst, as well as its access to Interstate 91, have contributed to its development as a "bedroom community" both for these larger towns and the cities of Springfield, Greenfield, and others along the I-91 corridor.

Despite Hatfield's location in the well-populated Pioneer Valley, but perhaps due to its paucity of recreational open space, there is no widespread perception that the town is a recreational destination within the Valley, or even amongst Hatfield residents. However, local and area recreational cyclists throughout the week as well as on weekends use its flat, low-trafficked roadways during the spring, summer and fall months. In addition, boaters use the Hatfield boat ramp to access the Connecticut River and "The Shallows" section of the river near the Northampton line, is heavily used by recreational motor boaters as an anchorage and picnicking destination. Increasing ATV use on unpaved town roads and private lands has been noted in West Hatfield on Horse Mountain. "Bashin Beach", located at the end of Bashin Road on the Connecticut River, also draws a small number of residents and regional people during summer months. The beach is owned by the Massachusetts Department of Recreation and Conservation and is part of the Connecticut River Greenway State Park.

B. History of the Community

An Old Town with an Important Heritage

Hatfield was "first a frontier village, then a prominent colonial community which has been the home of educators and benefactors. It has long been known for the beauty of wide streets, sitting between hills and the river valley, the fertile fields, industry and prosperity." So wrote Colonel James Day, in the introduction to *Hatfield, Massachusetts 1670-1970*. A drive through Hatfield today shows the elegant homes mixed with the sturdy, functional New England farmhouses, newer homes, and tobacco barns.

Hatfield, or "Hattfield's," as it first was named by its settlers native to England, began its modern history in 1660, when the deed to the land was signed by Umpanchalla, a Nonotuck Indian chief and turned over to Hadley, Massachusetts. In 1670, Hatfield incorporated as its own Town. Its earliest European settlers were English puritan farmers. The major ethnic groups to migrate to the Town since are the Irish, Germans, French Canadians and Poles, the last being the largest nationality represented today.

With some of the richest land in Massachusetts, Hatfield has been the site of much agricultural as well as industrial activity. Its gristmill for grinding corn was the first in the region (1661); the mill became a sawmill at a later date. Its tall pines produced tar and turpentine (1600's). Flax produced linseed oil (1735). Broomcorn was grown and the broom building business flourished (1826-1860). Here, too, was located the putative first distillery in the state, which became a husk factory to make cornhusk mattresses, and the first creamery system in western Massachusetts. The Town became the state's center for growing tobacco, a crop introduced by the area's Indians. Current crops include tobacco, onions, cucumbers, potatoes, corn, asparagus, strawberries, pumpkins, winter squash, tomatoes, blueberries, beets, lettuce, eggplants, cabbage, string beans, gourds, herbs, and peppers. Cattle, horses and sheep have grazed in the fields. One of the old sawmills was turned into a button factory. Pistols and shotguns were manufactured, engine lathes and automatic knife blade polishers were introduced, and violins, guitars and banjos were tuned here.

Hatfield's early social and political history was marked by warfare between Europeans and Indians, including the King Phillip's War (1670's) and the King William's War (1690's). The Town's oldest burial stone, found in its first burial ground, "The Hill," dates back to this era (May 3, 1687). In the 18th century, 127 men out of a Town population of 600 served in the American Revolution. A three-day convention to prepare for Shay's Rebellion was held in the Town's meeting-house (1786). In the 19th century, the Town was a concealment station for runaway slaves as part of the Underground Railroad.

Like all towns, Hatfield has developed through the efforts of all who labored in it. A few names, however, stand out in its recorded history: Israel Williams, the Town's first citizen and a selectman for 31 years; Partridge I. Williams, a Tory leader; Caleb Cooley Dickinson, a prosperous Hatfield farmer, who funded in 1886 the beginnings of our area's largest public hospital; Colonel Oliver Partridge, active in state government and the State's delegate to the Stamp Act Congress; Colonel Ephraim Williams, whose will provided for the establishment of Williams College in Williamstown, Massachusetts (1755); Samuel Partridge; Oliver Smith, whose will provided funds for the establishment of an agricultural school in Northampton—now Smith Vocational High School—and for Smith Charities, a trust fund used to benefit "indigent boys, girls, young women and widows."

Sophia Smith is the best-known woman in Hatfield's history. She provided the funds for the beginnings of Smith Academy (now the Town's public junior and senior high school) and Smith College in Northampton.

Hatfield Today

Hatfield has several distinctive areas reflecting the Town's history, agricultural trends, localized development types and the underlying zoning. The entrance to Hatfield via the I-91 interchange at Exit 21 on Route 5 shows moderate density commercial and industrial development, and that quickly diminishes with distance from this corridor, and which itself splits the Town into its eastern and western sections. Towards the east, the land becomes a mosaic of residential areas broken by agricultural expanses and wooded floodplains, dotted with occasional small commercial enterprises.



To the west, the wooded slopes of the "Rocks" area and Horse Mountain have frontage development with single- and multi-family residential lots. Approaching the Main Street area are 18th and 19th century farmhouses, early 20th century clapboard homes and 1950's ranches. Behind the buildings are the agricultural fields, dotted with old, dark tobacco barns. Beyond the fields to the east are the dike, some woods and the river. Crisscrossing the floodplain fields and connecting Main Street to the dike are long dirt roads

Entering Hatfield Town limits from the north along River Road (which becomes Main Street), reveals a more rural character, with a long flat street edged with maples, houses, and farm-stands selling berries, onions, pumpkins, asparagus, Indian corn and the ubiquitous potato. Behind them are the fine, broad fields; across the river, the state university skyscrapers loom up from the plain. The road continues past tobacco sheds in brooding groups of twos and threes, and then it becomes the main street of Hatfield's "town center." Here there are some new homes, a housing complex for the elderly, a convenience store, an elementary school, a brick Town Hall, a local library, great turreted Victorians, plain colonials, classic New England capes, a few Federal style houses, and spired churches. Behind and between them, once again, are the barns, croplands, horse paddocks, and, in the exact center of Town, playing fields, a few graveyards, and great expanses of lawn and gardens.

On the west side of Route 5-10, the landscape changes as abruptly as the altitude. You can drive up towards Horse Mountain along Linseed, Old Stage, and Mountain Roads, past a few old houses and many more new ones. Although the roads' surface turns to dirt, the carving out of frontage lots for new homes is abundantly evident. Nonetheless, the landscape here is still dominated by forest, a substantial proportion of which is actively worked. And here, too, Town-owned woodlands around the reservoir provide permanent protection for this vital water source while contributing to open space and providing habitat for wildlife.

Despite its rural appearance, Hatfield has changed a great deal in the past fifty years from the way it had been for generations. A confluence of factors now has brought the Town to the edge of a critical transformation. These factors include: the economic trends in Massachusetts and the country as a whole; the nationwide dissolution of the family farm; the pressures placed on prime agricultural and forest land by building development; and the changing sensibilities of a population that works

increasingly not in primary or secondary industry, but in the service and information sector of the economy. The erosion of Hatfield's farmland and forests by strip developments, highways and subdivisions would be an especially grave loss for river valley land that is as naturally rich and as perfectly made for farming as any land could possibly be. Hatfield also provides stunning architectural qualities from the 18th and 19th centuries.

C. Population Characteristics

Demographics

Hatfield's geographic location between the Connecticut River and an interstate highway, its abundance of wetlands and floodplains, and the Town's relatively old-fashioned infrastructure have worked together to insulate the Town from some of the more overwhelming development pressures other Pioneer Valley communities have been facing in the last ten years. At the same time, the Town's rich soil and healthy agricultural industry, combined with easy commute distances to many major regional employers, including the University of Massachusetts, have left Hatfield with functioning farmland and a relatively well-educated and well-employed population.



Between 1990 and 2010, the population grew at a modest rate of 4 per cent. In the same period, however, its median age rose from 38 to 48.3, a gain of 21 per cent. See **Table 1**. Compared with the region and the state, Hatfield is almost exactly in the middle of the average change in population and median age among similar area communities

| Table 1 - Population Changes 1990-2010 | | |
|---|-------------------------|-------------------|
| Year | Total Population | Median Age |
| 1980 | 3,095 ¹ | 34.1 |
| 1990 | 3,184 ¹ | 38 |
| 2000 | 3,249 ¹ | 43.2 |
| 2010 | 3,279 ¹ | 48.3 |
| 30 year change | + 184 | 14.2 yrs. diff. |
| 30 year % Change | + 5.9% | |

While the size of Hatfield's population has remained relatively stable, its population, as we have noted, is aging. The percent of the population under age 19 remained stable at about 23 percent between 1990 and 2000 but dropped to 19 percent by 2010¹. The population over age 65 increased

¹ 1980, 1990, 2000, and 2010 U.S. Census.

from 12.5 percent in 1980 to 16 percent in 1990 to 18.3 per cent in 2010. To the degree that the upward trend resumes it will have an effect on Hatfield’s economic and social character as older adults have different needs and make different contributions to their community than do younger people.

The Pioneer Valley region is experiencing growth in residential development and it is likely that the Town of Hatfield will continue to experience pressures to grow, too.

Residential Growth

Although the region’s residential growth rate slowed considerably at the end of the decade, the Pioneer Valley did experience growth in residential development between 2000 and 2010. In updating the data in the comparable communities in the 2001 Master Plan, Hatfield averaged only a little over ten new single family residential parcels each year, the lowest figure of the four communities. Statistically however, because Hatfield had the smallest number of such parcels to begin with, its growth rate shifted from one of the slowest (1.6%) to one of the fastest (11.5%) of the four. See **Table 2**.

Table 2: Number of Single Family Residence Parcels

| Community | 1990 | 2000 | 2010 | 1990-2000 | | 2000-2010 | |
|-----------------|------------|------------|--------------|--------------------|------------|--------------------|-------------|
| | | | | Increase # parcels | % | Increase # parcels | % |
| Hatfield | 924 | 939 | 1,047 | 15 | 1.6 | 108 | 11.5 |
| Hadley | 1,299 | 1,498 | 1,625 | 199 | 15.3 | 127 | 8.4 |
| Northampton | 5,122 | 5,348 | 5,531 | 226 | 4.4 | 183 | 3.4 |
| Southwick | 2,278 | 2,638 | 2,982 | 360 | 15.8 | 344 | 13.0 |

As has been noted, despite a somewhat larger than average residential growth rate, the Town of Hatfield has been fortunate in that it has not yet experienced a major crush of new residential development. Regional growth trends, and continuing recovery of the economy following the recession that began in 2008 suggest, however, that such a push may happen in the near future.

Economic Character and Employment Trends

Hatfield is obviously not a self-contained economic unit. The large majority of Town residents work outside Hatfield. Conversely, many people from out of town work in Hatfield. From 1980 to 1990, Hatfield’s population remained stable (3 percent increase) while income increased quite dramatically over the same period (per capita by 156 percent, and household by 128 per cent.) From 1990 to 2000, Hatfield’s population grew at a slower, two percent pace, while income grew at a substantially reduced rate (per capita by 41 percent and median household income by 29.7 percent²). From 2000 to 2010 there was a slight, 2.2 per cent increase in population growth. In the same decade, median household income rose by 29.7 per cent, and by 2010 it was \$67,851³. Hatfield residents are relatively well off financially compared with residents in our comparison communities/groups (Hadley, Northampton, Southwick, Hampshire County, and the state average).

² DemographicsNow, 2007 based on 1980, 1990 and 2000 U.S. Census data. For 2010-11 figures, see, Town of Hatfield, Update of the Hatfield Master Plan, 2012.

Per capita income in Hatfield increased a full 30 percent more than it did for other communities in Hampshire County—or for the county as a whole. Preliminary conclusions from median household income data may mask a skewed distribution of income or the fact that households now have two wage earners instead of one. Still, the overall economic and employment picture for Hatfield residents is positive. The median household income in Hatfield went from \$38,864 in 1990 to \$50,238 in 2000 or an \$11,374 increase, up 29.27% over this 10-year period, and, as we have pointed out above, it increased by a further \$17,343 in the next decade. The median household income for Hatfield moved from the 11th position in 1990 to the 12th position in 2000 among the 25 Hampshire and southern Franklin communities reported on.

Not surprisingly, declining unemployment rates coincided with the increase in median household income. The unemployment rate in Hatfield peaked at 7.93 percent in 1992, declined to 3 percent in 1998 and in 2012 was at 5.6 percent³. Hatfield’s unemployment rate compares favorably with the regional and statewide unemployment rates.

Key economic trends in Hatfield include:

- Despite the recent recession, Hatfield’s local economy is healthy, with rising per capita incomes, a stable tax rate, and comparatively declining low rate of unemployment.
- Hatfield has substantial undeveloped land zoned for commercial or industrial use, although development of some of it is subject to environmental constraints.
- Businesses perceive Hatfield as a “business-friendly” community.

Both property values and household incomes have increased in Hatfield. The average assessed home value in Hatfield went from \$146,800 in 1990 to 148,166 in 2000, or a .9 percent increase over those 10 years. The average assessed home value in 2007 was \$286,660, and in 2011 it was \$297,126.

Business and Industry

Hatfield has business districts scattered throughout all areas of the Town. The business districts of Hatfield include the following:

South Hatfield—Route 5:

This district is adjacent to the Northampton-Hatfield town line, and is the Town’s largest concentration of commercial/industrial enterprises. The district includes businesses such as R.K.Miles Building Materials’ Supplier, G & S Industrial Inc., and Danco Modern Furniture.

Central Hatfield - Route 5:

This district is located in the middle of the Route 5 corridor, and is a mixture of multi-family residential facilities, and commercial operations run by such companies as FedEx, Diamond RV Center, and Penske Truck Rental.

³ Massachusetts Department of Revenue Division of Local Services Municipal Databank

North Hatfield—Route 5:

A small commercial center exists along Route 5 in North Hatfield, including several retail outlets and a construction company.

Town Center:

Hatfield's historic Town center includes modest commercial uses combined with civic and residential uses. Across from Town Hall, the Town's retail center is very small, consisting mainly of a convenience store, a Sports Travel and Tours business, and a restaurant. There is also a modest commercial area at Prospect and School Streets, which includes another convenience store, the Hatfield Market.

East I-91 Industrial Corridor:

Virtually the entire east side of Interstate 91 in Hatfield has been zoned for industrial use. This area is home to Hatfield's largest employers, including C&S Wholesale Grocers, (c. 1000 employees,) Brockway-Smith (c. 110 employees,) and somewhat smaller firms such as Lesco and Northeast Solar.

Other Commercial Areas:

Other businesses such as Verizon (c. 130 employees,) Hatfield Equipment, and the Hatfield public schools are scattered in various other locations throughout the Town.

D. Growth and Development Patterns

Patterns and Trends

The Town of Hatfield has historically maintained its identity as a small and scenic agricultural community. People who live in Hatfield talk about the community's "rural character." This description refers to four primary aspects of the Hatfield community: agriculture, natural resource protection, open space and recreation, and historic preservation.

William MacConnell and the University of Massachusetts first documented Land use patterns in Massachusetts through aerial photography in the 1950s. In 1971, 1985, 1997, and 2005 aerial photographs of land use in Hatfield were taken again and mapped according to what was photographed. **Table 3** identifies the most recent picture of land use distributions based on the MacConnell maps, and those produced by the Sanborn Co. in 2005. Table 3 also shows the change in land use from the 1971 data. Some of the most noticeable changes during this period have been increases in both residential and industrial development, highlighted by frontage lot and small subdivision development along existing Town Roads, together with the development of major distribution facilities in North Hatfield and smaller light industry elsewhere in Town. The 2008 OSRP noted that "The 'loss' of urban open land and gain in other open land [between 1985 and 1997, seen in Table 3 reflects a change in the methodology of categorizing land use types, and not a real change in use." Why these "losses" and "gains" were reversed between 1997 and 2005, as shown in the 2012 update of the Master Plan, is a matter of conjecture that remains to be cleared up. As for the Town's wetlands, Paul Davis, then of the Conservation Commission, thought that their

extent was considerably greater than official sources showed. The data of Table 3 certainly seems to show that to be the case.

Table 3 - Land Uses in Hatfield 1971 – 2005

| Land Use | 1971 | | 1985 | | 1997 | | 2005 | | '71-'85 | '85-'97 | '97-'05 |
|------------------------|-------|----------|-------|----------|-------|----------|-------|----------|---------|---------|---------|
| | Acres | % of Tot | % Chg | % Chg | % Chg |
| Crop Land | 3,754 | 34.9 | 3,717 | 35 | 3,478 | 32 | 2,793 | 25 | -1 | -6 | -20 |
| Pasture | 73 | 0.7 | 84 | .8 | 82 | .8 | 161 | 2 | 16 | -3 | 96 |
| Forest | 5,043 | 46.8 | 4,868 | 45 | 4,795 | 45 | 4,189 | 39 | -3 | -2 | -13 |
| Wetland/Forest | - | | - | - | - | - | 910 | 8 | | - | - |
| Wetland | 141 | 1.3 | 141 | 1 | 141 | 1 | 390 | 4 | 0 | 0 | 176 |
| Mining | 15 | 0.1 | 15 | .1 | 21 | .2 | 6 | 0 | 0 | 39 | -71 |
| Open Land | 149 | 1.4 | 118 | 1 | 139 | 1 | 65 | .6 | -21 | 18 | -53 |
| Recreation | 35 | 0.3 | 30 | .3 | 30 | .3 | 21 | .2 | -15 | 0 | -30 |
| MF Res. | - | 0.0 | 2 | .1 | 2 | .1 | 18 | .2 | NA | 0 | 800 |
| Res.< ¼ acre lot | 2 | 0.02 | 5 | .1 | 7 | .1 | 6 | .1 | 121 | 30 | -14 |
| Res.¼-½ acre lot | 360 | 3.3 | 396 | 4 | 411 | 4 | 200 | 2 | 10 | 4 | -51 |
| Res. >½ acre lot | 385 | 3.6 | 544 | 5 | 711 | 7 | 847 | 8 | 41 | 31 | 19 |
| Business | 35 | 0.3 | 49 | .5 | 71 | 1 | 96 | 1 | 42 | 43 | 35 |
| Industrial | 59 | 0.5 | 75 | .7 | 115 | 1 | 188 | 2 | 28 | 52 | 63 |
| Urban Open | 45 | 0.4 | 64 | .6 | 53 | .5 | 68 | .6 | 41 | -17 | 28 |
| Transportation | 166 | 1.5 | 170 | 2 | 156 | 1 | 148 | 1 | 2 | -8 | -5 |
| Waste Disposal | 3 | 0.03 | 8 | 0 | 8 | 0 | 8 | 0 | 171 | 0 | 0 |
| Water | 479 | 4.5 | 479 | 5 | 479 | 5 | 540 | 5 | 0 | 0 | 13 |
| Orchard/Nursery | 20 | 0.2 | - | - | 67 | .6 | 92 | .9 | -100 | - | 13 |
| Successional Brushland | | | - | - | - | - | 9 | 0 | | - | NA |

Source: MacConnell Land Use Survey and Massachusetts Geographic Information System (GIS).

Commercial/Industrial Growth

In Hatfield, as of 2005, 265 acres of land were zoned for business use. 96 acres of that land (36 percent) are currently developed, up from 71 in 1997 an increase of 35 percent over eight years.

Furthermore, as of 2005, 989 acres are zoned for industrial use in Hatfield, 788 in the Industrial Zone and 201 in the Light Industrial Zone. 188 acres (19 percent) are currently developed up from 115 acres in 1997, an increase of 63 percent over 8 years.

The business district in Hatfield is divided into 29 separate land parcels or freestanding groups of parcels, which are scattered throughout the Town. The industrial districts comprise 19 distinct parcels or groups of parcels, also scattered throughout Town. **Table 4** shows the Business and Industrial zoned acreage in Hatfield as identified in the Town’s Master Plan dated January 2001, and the Updated Plan in 2012.

Table 4 - Business and Industrial Zoned Acreage in Hatfield to 2005

| Type | Acres Zoned 2005 | Total Acres Developed thru 1971 | Total Acres Developed thru 1985 | Total Acres Developed thru 1997 | Total Acres Developed thru 2005 |
|------------|------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Business | 265 | 34 | 49 | 71 | 96 |
| Industrial | 989 | 58 | 75 | 115 | 188 |
| Total | 1254 | 92 | 124 | 186 | 284 |

Although Hatfield has significant acreage of industrial and commercial zoned land, large amounts of this land either are already developed or are constrained from future development due to floodplains, wetlands, river protection lands, and other environmental constraints. Some of the land zoned for commercial and industrial uses is protected from development by the Rivers Protection Act 310 CMR 10.58 that restricts development of land within 200 feet of a river (25 feet in urban areas). While this legislative protection is likely to exist into the future, other environmental constraints may not. For example, in today’s real estate market in western Massachusetts, it is not cost effective to develop land that exceeds a certain slope. In other parts of the country where land is scarce and growth pressures are much greater than they are here, developers routinely build on steep slopes. Given existing constraints in western Massachusetts, of the 265 acres of business zoned land, 35 acres are unconstrained for future development. Of the 989 acres of industrial zoned land, 189 acres are unconstrained for future development⁴. These concerns were noted in the 2012 Master Plan Update.

Infrastructure

The Planning board, Redevelopment Authority, Capital Planning Committee and the Water Department, through the DPW and Board of Selectmen have been looking at infrastructure throughout the town.

Two big issues face the Town of Hatfield with respect to infrastructure and public facilities: (1) the age of existing infrastructure, and (2) the effect of new infrastructure on development. Originally, the Town was able to get by with allocating only minimal funds to maintain existing infrastructure and public facilities when the infrastructure was all relatively new. Now that the infrastructure is aging, it will no longer be cost effective to defer maintenance. The Town must address the probability that future upgrading of public facilities and infrastructure will lead to growth and development, and will need to plan for this eventuality. As was noted in the Economic Character section of this plan, the Town has accidentally avoided many of the growth pressures facing towns in the Pioneer Valley by having a relatively outdated infrastructure that has made Hatfield less attractive than surrounding communities to new development.

⁴ Hatfield Master Plan, 2001

b. Water Supply Systems. Hatfield's public water supply comes from three sources: the Town reservoir (capacity of 500,000 gallons per day); the West Hatfield Well (capacity of 350,000 gallons per day); and the Omasta Well (capacity of 150,000 gallons per day). The Town relies on the reservoir as the primary source of water (74%) and the two wells as a secondary or back up supply (26%).

The water treatment plant came on line in 1997. It is located at the reservoir on Reservoir Road in West Hatfield. Although the capacity of the reservoir is 1.5 million gallons, the actual safe yield rate is 500,000 gallons per day.

Usage – In 2011, water usage was approximately 300,000 gallons per day. As in most communities, demand for water is highest during the warmest eight to ten weeks of summer. During this high use period, demand can reach a level of one million gallons per day, placing a severe strain on the system, particularly after summer storms render the waters of the reservoir cloudy with particulates from storm water runoff. Currently, approximately 95 percent of the community is served by the public water system. In 2006, the Town completed metering all residences, which has encouraged conservation because people are now paying for water based on their actual usage. The current rate for water usage is \$3.65/100 cu.ft.

Distribution - Much of the current distribution system is composed of asbestos-cement (AC) pipe. In popular use from the 1940s through the 1960s, this material is susceptible to leaks. Small breaks or abrasions can become major pipe failures as the cementaceous material disintegrates over time. Locations where new lines are tied into existing AC pipes are particularly threatened. As long as the pipe material remains intact, it is not believed to be dangerous to public health. However, because of its brittle nature, this piping material is being replaced as portions of the system are upgraded. Ductile iron is the material of choice in current line construction. The Town performed a leak detection survey of the distribution system in 2007 and detected and repaired one 10,000 gal/day water main leak, replaced 2 hydrants, capped one abandoned service, and repaired one service for a total of 19,000 gallons per day in leak repairs. The major recent project is the replacement of the water transmission line from the town reservoir.

The size and the layout of the pipes delivering water to Hatfield residents and businesses are not fully adequate. The line serving Routes 5/10 however, is currently being upgraded with new larger pipe from the reservoir to Route 5/10 via Rocks Road. This project is expected to be completed in 2014.

c. Sewer Service. The wastewater treatment plant began operation in 1987. It is located off Main Street on the Connecticut River and has a capacity of 500,000 gallons per day. Approximately one-third of the Town is currently served by this system. Current demand is 250,000 gallons per day. Billing for sewer usage is now based on water usage as determined by the metering program. Continued installations of water meters is still underway and will be completely implemented in a few years.

Expansion of town sewer service could spur secondary residential development along Linseed and Old Stage Roads, just as recent expansion on Bridge Street has increased pressure for significant development along the town's unimproved Jericho Road. The town therefore needs to assess

carefully the provision of sewer service west of I-91 and to provide some means of controlling residential growth in this area. Such controls could include limitation on sewer flows via pipe size reduction, prioritized allocation of service, betterment zones favoring business use, or other techniques.

Long-Term Development Patterns

Zoning By-Laws

During the Master Plan process undertaken by the town in 2000 to 2003 and updated in 2012, a critical evaluation of the town’s zoning was performed that resulted in recommendations for a major overhaul of the town’s zoning bylaws. According to the Master Plan for the Town of Hatfield published January 2001, “Regional pressures make it necessary for the town to take specific new actions to control its fate. Hatfield needs up-dated zoning regulations to preserve its rural character and enhance its economic base without overstepping private property rights. The town does not have adequate tools to attract new business to town while preventing over-scaled, poorly sited, or ill-designed commercial and industrial buildings.”

The Master Plan also claimed that Hatfield lacked housing opportunities for elderly residents and for children of Hatfield families who wished to buy their first homes here. It lacked standards for clustered residential development that might help preserve open space. The Town’s water supply was strained by residents’ needs in the summer and is threatened by development occurring over the aquifer. Houses on large lots are being built on some of the world’s richest farmland, while land currently zoned for industrial and commercial growth is crisscrossed by wetlands.

With the momentum of the newly created Master Plan behind it, a comprehensive zoning package was adopted at Town Meeting in May of 2003. The revised bylaws separated the Agricultural Residential “B” district into Rural Residential and a new Agricultural District, establishing eight (8) zoning districts, and three overlay districts, as follows:

| <u>DESIGNATION</u> | <u>TITLE AND PURPOSE</u> |
|--------------------|--|
| RR | Rural Residential District |
| OR | Outlying Residential District |
| TC | Town Center District |
| TCB | Town Center Business District |
| B | Business District |
| I | Industrial District |
| LI | Light Industrial District |
| AG | Agricultural District |
| FP | Floodplain Overlay District |
| WS | Water Supply Protection Overlay District |
| RP | River Front Protection Overlay District |

The following changes were also made:

- Adopted site plan review/approval for all commercial and industrial uses.
- Adopted commercial and industrial design guidelines.

- Adopted commercial and industrial performance standards.
- Adopted Transfer of Development Rights bylaws.
- Created a new light industrial and technology park district.
- Created a new satellite business center district.
- Created an Agricultural Zoning District to provide protection of prime farmland.
- Created a Water Supply Protection District to protect the watershed and Hatfield’s drinking water.
- Adopted a Stormwater Management Bylaw specifically for construction and post-construction storm water events.
- Adopted an Environmental Impact Analysis for large development projects.
- Created a Floodplain Overlay District to buffer the negative impact of development.⁹

Scheduled/proposed subdivisions and expansions to infrastructure

There are four approved subdivisions currently under construction or planned and approved as follows: 1) 50-unit senior housing development on Elm Street for people 55 years of age and older; 2) 4-lot residential subdivision between Chestnut Street and Gore Avenue; 3) A 12 unit residential condominium development on Elm Street; and 3) a 25-lot subdivision off Kellogg Road and Main Street next to the Hatfield sewer treatment plant. The Kellogg Road parcel was subdivided several years ago but has recently been sold to Nourse Farms. It seems likely that it will remain farmland for the foreseeable future.

Projected community character with a maximum build-out under current zoning plans

The PVPC performed a build-out analysis in 2003, to show how the town population and character could change if each zoning area were to be developed to its maximum under zoning in place at that time. Since then, a zoning overhaul has been adopted which may have some impact on the following build-out statistics. Such an analysis, however, is beyond the scope of updating an Open Space and Recreation Plan. Thus, the following build-out statistics are being provided for informational purposes and may not be reflective of development restrictions under current zoning. However, the potential for new development has been given great consideration in development of this plan and is reflected strongly in the Action Plan in Section 9.

Impact of Additional Development-Hatfield, MA

| | |
|---|-----------|
| Developable Land Area (Acres)----- | 7,119 |
| Additional Residential Units----- | 6,260 |
| Additional Commercial/Industrial Floor Area (Square Feet) ----- | 6,532,719 |
| Additional Residential Water Use (Gallons Per Day ----- | 1,616,835 |
| Additional Residential Solid Waste (Tons) ----- | 6,743 |
| Additional Students ----- | 1,750 |
| Additional Miles of Roadway ----- | 78 |

⁹Town of Hatfield Zoning Map, 2/25/13.

SECTION 4: ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Geology, Soils and Topography

Geology

Hatfield hosts two different topographic relief forms, one being the fertile lowlands in the eastern two thirds of the Town, and the second being Horse Mountain and the Rocks, located just west of Interstate 91. Both relief forms and the associated soil types have been greatly influenced by the last glacial Ice Age which most recently shaped the Town's geology a mere 10,000 to 20,000 years ago. The retreat of this two-mile high block of ice resulted in much of Hatfield being covered by a vast glacial lake known as Lake Hitchcock. The bottom of this lake marks the boundaries of the lowland which are characterized by thick varied lake bottom deposits that include glacial stream deposits of gravel and sand, outwash plains, deltas and terraces left by the retreating waters of the lake. More recently rich silt deposits are left by the Connecticut River as it periodically floods its banks during the high waters of spring while snaking across this primitive lake bottom. The edges of this lake are marked by a thin layer of sand, silt and gravel till left by the glacier on top of higher bedrock, which bounded the valley floor.

In close proximity to the rocky ledges (the Rocks) of West Hatfield is the abandoned Galena mine where tailings of barium sulphate (used as a lead substitute in paint) may still be found. The Hatfield lead vein is one of five similar accessible deposits in the central Connecticut Valley

Soils

Soils within the Horse Mountain and Rocks region are very thin, generally poorly drained and wet, with shallow bedrock. The nature of these soils poses moderate to severe limitations on intensive development. The Town should use caution and carefully limit development in this region. In addition, this area is where the Town's reservoir is located and also is the aquifer recharge region for both of the Town's water wells.

The soils in the lowlands east of Interstate 91 are in sharp contrast to the rugged soils of West Hatfield. They are almost evenly divided between two predominant soils associations: (1) Hinckley-Merrimac-Windsor association, and (2) Hadley-Winooski-Limerick association. Each association has a distinctive pattern of soils, relief, drainage; each forms a unique natural landscape, and each consists of one or more major soils and some minor soils.

The Hinckley-Merrimac-Windsor association consists of about 25% Hinckley, 15% Merrimac and 10% Windsor soils. The remaining 50% minor soils are composed primarily of Agawam, Sudbury, and Walpole soils. The soils in this association are deep, nearly level to steep, excessively drained, both sandy and loamy, and formed in outwash deposits in outwash plains. These soils are suited best to tree growth and can be droughty. This droughtiness could limit plant growth. The major soil groups in this association possess very rapid permeability; hence with current Title V Health Code regulations there are few limitations for private septic systems. The rapid permeability does create the possibility for ground water contamination. Walpole and Sudbury soils possess a high water table. In Hatfield, this association is found predominantly in an approximately 2+-mile band along Interstate 91.

The Hadley-Winooski-Limerick association consists of about 35% Hadley, 15% Winooski and 10% Limerick soils. The remaining 40% minor soils consist of Pootatuck, Rippowam, Saco, and Suncook soils. These are deep, nearly level, well to poorly drained, loamy soils formed in alluvial materials on floodplains. They are found mostly in broad bands adjacent to streams and rivers. They are exceptionally suited as cropland as well as for tree growth. These soils are subject to occasional flooding and seasonally high water, which could limit their use for private septic systems. This association is located from the Connecticut River westerly to the Hinckley-Merrimac-Windsor association mentioned above.

The U.S. Department of Agriculture has defined a land capability classification, which shows in a general way the suitability of soils for most kinds of field crops. The soils are grouped according to their limitation for field crops, the risk of damage if they are used for field crops, and the way they respond to management. Capability classes are designated by Roman numerals, I-VIII, indicating progressively greater limitations and narrower choices for practical use. Generally, the soils best suited for agriculture are classes I-IV. Of the 21 soil classes found in the lowlands east of Interstate 91, 14 classes are class III or better. The dominant class is the Hadley silt loam, a class I soil.

"SCS Agricultural Soils Land Use Statistics" produced by the Soil Conservation Service for a Connecticut River Valley farmland retention program in the early 1980s, identifies 5,045 acres of prime farmland soils in Hatfield, and 1,239 acres of soils of state and local importance. According to *National Geographic*, Hatfield has the seventh best agricultural land in the world. Hatfield as part of the larger Pioneer Valley has been identified by the national farmland conservation organization, American Farmland Trust, as the 19th most threatened agricultural landscape in the Nation.

These data objectively verify the commonly held perception that Hatfield is blessed with a large amount of the best soils in the country. A soils-based protection strategy obviously should strive to retain the best soils, either prime or of state or local importance, for agricultural use and should guide growth and development on to the poorer quality soils. Unfortunately, however, the best agricultural soils often present the least impediments for development. The worst soils are in the areas otherwise not acceptable for large-scale development.

Topography

The relief and forested areas are greatest in the section of Town west of Interstate 91 in several of the mountains (Horse and Chestnut) and the Rocks, with elevations reaching as high as 840 feet above sea level, with steep slopes ranging from 5 to greater than 15%, which is often the limits of readily developable land. In this densely wooded terrain, outcroppings of bedrock alternate with pockets of wetlands, most of which flow into Running Gutter Brook, the primary stream draining these western Hatfield hills. East of the Interstate are the fertile Connecticut Valley lowlands, where the terrain has hardly any slope—elevations being as low as 110 feet above sea level. The Soil Class map and Prime Farmland Map in Section 13 provides greater details on the Agricultural Soils and Topography of Hatfield.

B. Landscape Character

The Town of Hatfield has diverse natural landscapes, which have more or less formed natural boundaries for residential, industrial and agricultural development. The Connecticut River has cut a

path in the bottom of a former glacial lake bottom, and its natural flooding cycles have contributed to rich farmland in the lowlands that border its banks. The early settlers recognized the value of this land, and thus built their homes on this land adjacent to the river more than 300 years ago. Today in the center of Town, there remain many grand old homes adjacent to vast flat fields that extend to the banks of the river where cash crops of potatoes, cucumbers, squash and other vegetables are grown.

The large expanse of former alluvial floodplain soils is a unique natural resource. In few places around the world are the soils of such high agricultural quality. Large tracts of farmland can still be found In North Hatfield - east of Bradstreet and Main, along Straits Road, east of Great Pond, and in the floodplain along the Connecticut River south of Town. Located in the midst of the farmland is the remnant of a wayward Connecticut River, the Great Pond and Cow Bridge Brook. A Connecticut River oxbow, the Great Pond, with its approximately 200 acres of open water, wooded swamp, and marsh, has many rare plant species and is an important refuge for migrating wildfowl.

Above the lower river valley, near the general north-to-south line formed by Prospect Street and Straits Road, you reach a plateau where farmland, residential, commercial and industrial development has been a part of the landscape for several decades, developing on the flat terrain which readily supported agricultural activities during the early history of the Town. The Mill River falls at the Prospect Street dam dramatically mark the rapid change in topography between the lower floodplain terrain and the upper plateau. The railroad and state/interstate highway systems are located within these areas and have served as focus for more recent residential, commercial and industrial growth in amongst scattered farm parcels.

Further to the west, the flat upper plateau is bounded by a rugged wooded hilly landscape whose primary value to the Town is its source of water and its recreational possibilities, with some limited residential development having escalated within the last twenty years. The area of Hatfield west of Routes 5-10 is dramatically different from the flatland of the eastern part of Town. Here, the steep, rocky wooded slopes contain three main natural features: the “Rocks”, Horse Mountain, and Chestnut Mountain.

Horse Mountain, rising approximately 840 ft. and covering approximately 3100 acres, is most easily accessible by a trail off of Coles Rd in Hatfield accessible from Williamsburg. The mountain is hardwood forest, with few conifers and much mountain laurel. Included among the several steep slopes and vistas are several impressive views, White Rock being one such vista. Providing a 180-degree view of Hatfield Center and the Connecticut Valley, it contains a limited amount of white quartz and is important for geologic study.

Chestnut Mountain is located in the northwest section of Town and rises approximately 740 ft. above sea level. It can be reached via Chestnut Road off of Rocks Road. Much of this area is part of the Northampton Mountain Street reservoir and, as such, will be protected as open space. Horse Mountain and Chestnut Mountain provide the opportunity for hiking, snowmobiling, horseback riding, and hunting as well as being an important wildlife habitat.

The “Rocks” is a north to south ridgeline with much exposed bedrock between Route 5 and Linseed Road. They are a steeply rising, rugged section of terrain which forms the easterly boundary of West Hatfield. There is the potential for a series of trails to connect Horse Mountain, Chestnut Mountain and the “Rocks”.

Between the Rocks and Horse Mountain is the Hatfield reservoir. Approximately 300 acres of wooded land, mainly mixed stand of hardwood and softwood, this is an important wildlife area. Running Gutter Brook, a clear clean brook flowing to and from the reservoir, contains recreational and water supply functions along with the habitat of an endangered species. There is also a small falls, which further enhances the beauty of this stream. Broad Brook, near the southwest border, is another clear fresh brook in this area.

C. Water Resources

Rivers and Streams

Hatfield is heavily influenced by watercourses. There are approximately 35 miles of stream and river channel within the town boundaries, primarily consisting of the Connecticut River, the Mill River, Running Gutter Brook, Mountain Brook, and Broad Brook. The following is a brief description of these water resources and some of the important features of each.

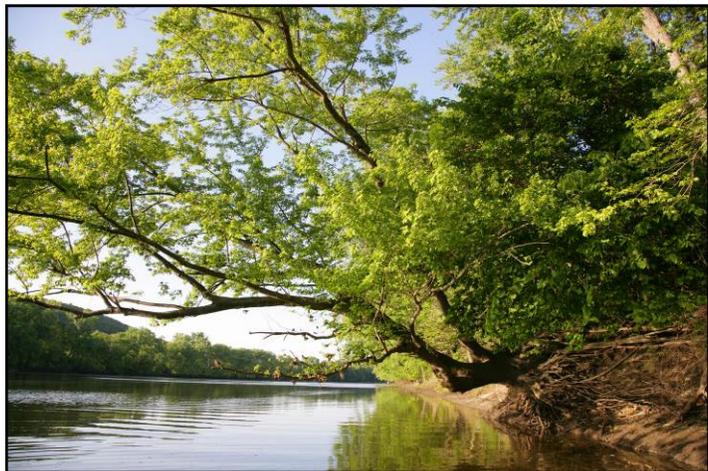
Connecticut River

About 7.5 miles of the Connecticut River forms the eastern and part of the southern boundaries of Hatfield, providing approximately 450 acres of open water. The Connecticut River is one of the longest and largest rivers in the American northeast and it has influenced everything from settlement patterns to agricultural productivity.

The construction of the wastewater treatment plant has contributed to the upgrading of the river to Class B (fishable/swimmable) status, allowing the potential for swimming, recreational boating, fishing and wildlife propagation. The river supports over 30 species of fish including shad, walleye, northern pike, and catfish. It is also home to many other types of wild animals, such as ospreys, river otters, and herons.

The dike, adjacent to the river in the Indian Hollow section, offers 2 miles for hiking, hunting, and cross-country skiing, however, it is illegal to discharge a firearm within 100' of a residence. Access to the dike can be gained from Valley Street, South Street, Bridge Road, and the path directly across the street from Memorial Town Hall on Main Street, immediately to the south of the former Center School building.

Access to the river is possible from Old Farms Road, Upper Farms Road, Bashin Road, at the state boat ramp, the dike, at what



is known as the Indian Hollow boat ramp near Kellogg Hill Road, and at the confluence of the Mill and Connecticut Rivers. Boat access is limited to the state boat ramp, while small canoes can be entered in the water at the Indian Hollow site and the confluence of the Mill and Connecticut. Three sites, along Bashin Road, Indian Hollow, and the confluence of the Mill and the Connecticut, are

most suited for swimming. Canary Island, located near the Northampton border, offers the potential for limited access picnicking or boat camping.

Land use patterns along the Connecticut River in Hatfield show that most of the acreage within 2,000 feet of the riverbank is in agricultural use. At several points along the river, forestland provides a vegetated buffer to human activities although much of this forest area is quite narrow—less than 200 feet deep. The Town center area parallels the river for approximately two miles, coming within 800 feet of the bank for much of this stretch. Most of this riverbank, however, remains unprotected from development.

Mill River

The Mill River is a central geographic feature within Hatfield, draining from a watershed of 5 communities. The Mill River enters the Town along the northern boundary with Whately. In the northern portion of Town, the Mill River parallels the west side of Route 91, but then flows in a broadly meandering southeasterly path to its confluence with the Connecticut River. Once called Capawonk Brook, this meandering, approximately 7-mile river forms a natural green belt through the Town. With variable depth and width, containing dual channels, islands, and peninsulas, overhung with trees and lined with native shrubs, this enchanted wilderness is a haven for recreationalists, naturalists, hunters and fishermen. The wildlife supported includes several species of ducks and songbirds as well as trout, pickerel, and perch.

The Mill River watershed has been the focus of increasing research over the past several years, showing the unique value of this riverine resource with studies performed by Smith College, University of Massachusetts and Cornell University. It has become known as one of the most biologically diverse river systems in Massachusetts, supporting four of the state's seven listed species of freshwater mussels, including the Federally endangered dwarf wedgemussel *Alasmidonta heterodon*. There are additional protected flora and fauna known to inhabit this river corridor, including the wood turtle *Clemmys insculpta*. River otter live along the brook, the favorable water quality of which also supports brook trout. Atlantic salmon are known to migrate to the base of the historic Hatfield Dam on Prospect Street. There are at least five access points to the Mill River (Plain Road, Chestnut Street, Bridge Street, off Elm Street, and off Farm Road) for fishing and other activities.

The Hatfield Dam on Prospect Street is close to the mouth of the Mill River at its junction with the Connecticut River. The dam is approximately 150 feet long, 15 feet high and three hundred years old and was built on a 7 foot high sandstone outcrop. The dam is the only one on the Mill River and blocks the movement of fish (Atlantic salmon, American shad, blueback herring and lamprey) and other aquatic organisms between the Connecticut River and the upper watershed.



A feasibility study for the removal of the Hatfield Dam to restore fish passage continuity has been completed.⁵ Dam removal is complicated by a number of factors. Removal of the dam could negatively impact the mussel population through the introduction of predatory species. It could also potentially impact the extensive upstream wetland system through a decrease in water levels. In addition, the old mill site was listed on the National Register of Historic Places in 1982.

Major tributary streams to the Mill River include Running Gutter Brook and Mountain Brook, which drain much of West Hatfield. Running Gutter Brook drains much of the Rocks and Horse Mountain areas, feeds the Hatfield Reservoir and includes the tributary of Broad Brook, whose watershed extends into Northampton. Mountain Brook drains the northwest portion of Hatfield and extends into Whately. It originates at the Northampton water reservoir system, and a portion of its natural watershed contributions are diverted to other portions of the Northampton water system.

100-Year Floodplain

The 100-year floodplain is defined as an area with a 1 percent chance of flooding in a given year. The floodplain serves as a critical habitat for many plant and animal species and provides some of the richest agricultural soils in the Pioneer Valley. An overlay-zoning district for protecting floodplain areas in Hatfield has been completed in conjunction with the proposed zoning map. Areas in the 100-year flood zone in Hatfield are primarily those lands adjacent to the Connecticut River in the eastern part of the Town and along the Mill River in central Hatfield. A portion of the floodplain extends northward along a portion of Running Gutter Brook into West Hatfield, as well. Much of this flood area is currently in agricultural production—cleared of wooded, habitat areas—and ready for development. This condition perhaps makes these areas more vulnerable to development in the coming years.

⁵ Parasiewicz, Piotr et al., *Advocate Dam Feasibility Study, Mill River, Hatfield, Massachusetts*. Northeast Instream Habitat Program, Department of Natural Resources conservation, University of Massachusetts. January 2007.

Hatfield has not experienced substantial development of its floodplain areas and with the new Floodplain and Riverfront (or Agricultural) Overlay Districts, greater review is required in order for a structure to be built in this area. Neither of these zoning districts expressly prohibits residential or other development but rather require certain provisions for its occurrence which add costs to a project. Hence, these overlay districts do not prevent development but potentially make it more expensive. Other protective regulations and disincentives that limit development in the floodplain exist at several levels: 1) Lending institutions may require flood insurance for those structures built in the 100-year flood zone; 2) The Massachusetts Wetlands Protection Act limits the impacts of construction and alteration activities in the floodplain through its local enforcement by the Conservation Commission; and 3) The State Building Code requires the elevation of structures in the floodway, and also reinforces the overlay district regulations by prohibiting any change in the flood storage capacity of the area.

Wetlands

The Town of Hatfield includes about 3,100 acres of wetland, floodplain, and open water (including about 450 acres of the Connecticut River), which accounts for about 30% of the Town's total area. These wetlands include the open water of streams and ponds, shrub swamps, forested swamps, wet meadows, bogs, marshes, beaver ponds, and land within the flood water elevation of the 100-year storm, not all of which is currently considered true vegetated wetland under the Massachusetts Wetlands Protection Act, Chapter 131, Section 40 of the General Laws of the Commonwealth. Wetlands were identified using aerial photographs (Mass. Map Down, MacConnell et al., 1972), USGS topographic maps, and Flood Hazard Boundary Maps (Federal Insurance Administration) as presented in the Hatfield Land Use Planning Study (Almer Huntley, Jr., & Associates, Inc.).

Most of the wetlands are in the eastern and northern sections of Hatfield bordering the Connecticut River, the Mill River, Great Pond, and the old oxbow meander in the northeast section of Hatfield. The wetlands in West Hatfield are primarily narrow wetlands bordering Running Gutter Brook and its tributaries, with larger expanses within the Rocks area and at the base of Horse Mountain. However, several small isolated wetlands exist in this area as well, which also provide important wetland wildlife habitat.

Wetland areas are home to frogs, fish, freshwater clams and mussels, beaver, muskrats, great blue herons, waterfowl, and bitterns. Wetland habitats in Town occur along stream and river corridors with some isolated ponds and pools in places like The Rocks in West Hatfield. In Hatfield, wetlands and water resources stretch from the hills in the west to the Connecticut River on the east and from Whately on the north to Northampton on the south.

Riparian areas are the vegetated lands adjacent to water sources. This juncture of land and water attracts a range of species and tends to mark a transition zone between habitats. As such, these corridors link one habitat to another. In Hatfield, the riparian areas exist along the Connecticut River, Mill River, Running Gutter Brook, and Great Pond. Many of these riparian areas remain intact, aided by the Rivers Protection Act and regulations restricting floodplain development. However, floodplain regulations in Hatfield are not as effective as they could be. An ineffective floodplain overlay district requires revision or replacement with a bylaw that can decrease inappropriate development if the community wishes to do so.

In 1996, Massachusetts amended its Wetland Act to include protection of a 200-foot buffer along all streams and rivers in the commonwealth. Development within this “riverfront area” is severely restricted to protect the natural quality of the waterway, its adjacent wetland areas, and its habitat and wildlife resources. The Rivers Protection Act established this additional resource area to be considered by local conservation commissions who must enforce the wetlands regulations. Waterways affected by these regulations include those that flow year round. Even with the Rivers Protection Act in place, it is probable that there will continue to be some development along waterways. Single lots of record in existence at the time the law was passed in 1996 are held to a less restrictive standard that allows development within the “outer riparian zone” (100’—200’). The Hatfield Wetlands Bylaw establishes additional protections beyond the State Wetlands Protection Act especially up gradient of the reservoir and to isolated wetlands.

Watersheds

The entire landmass of the Town is situated in the Middle Connecticut River Watershed Basin. All naturally draining surface water in Hatfield eventually finds its way to the Connecticut River. Three major watersheds drain the 10,000± acres of land in the Town.

Running Gutter Brook in West Hatfield drains one of these watersheds. This sub-watershed has its genesis in the upper reaches of West Hatfield along Mountain Road and includes the Hatfield Town Reservoir. The brook is also fed by inputs from Whately and Northampton. Broad Brook feeds into Running Gutter Brook from Northampton. Two minor watershed areas in West Hatfield drain into Northampton, one of which includes Mountain Reservoir. About one-third of this 35-acre reservoir is in Hatfield’s far northwestern corner.

The second major watershed drains through the Mill River, a primary tributary of the Connecticut River with its headwaters in the Town of Conway. Running Gutter Brook joins this mature river just east of I-91 in south central Hatfield. The dam at Prospect Street, the site of former water based industry, causes the watercourse to run deep upstream of the dam with wide meanders and broad marshes that are important wildlife habitats.

The third major watershed is within the northeast corner of Hatfield. This area drains the remnants of an old Connecticut River meander—once an “oxbow lake”—including Great Pond and Cow Bridge Brook, and eventually drains to the Connecticut River. This area was originally an oxbow lake, which, over the years, has aged due to sedimentation and eutrophication, and the oxbow is now a series of ponds and marshes. It remains a significant wildlife habitat and Connecticut River flood storage area.

Public Water Supply

There are three sources of drinking water in the Town of Hatfield (**Table 5**) with the primary one being the Running Gutter Brook Reservoir. This surface water source provides most of the water reaching homes and businesses in the Town. A filtration plant prepares the water for distribution to users in the Town. Two public wells supplement the supply from the reservoir: the Omasta Well and the West Hatfield Well, neither source of which is treated with filtration or chlorination. Cost has dictated the choice of primary water supply from the reservoir, as the operation of the filtration plant remains less expensive than the electrical power used to operate the two wells. The wells are used

primarily in two situations: 1) to provide adequate water supply during peak demand hours (summer months), and 2) to bypass the reservoir supply during times of high turbidity (primarily after heavy rainstorms).

| Table 5 - Source of Hatfield Public Water | |
|--|--|
| Water Source | Approximate Annual % Total Water Supply |
| Town Reservoir | 70 % |
| West Hatfield Well | 20 % |
| Omasta Well | 10 % |

This reliance on a surface water reservoir as the primary supply of water to Hatfield presents several problems:

1) Vulnerability and sensitivity to land use changes in the watershed: Changes in land use that result in a degraded water supply area can directly, and quickly, affect the quality of the water supply. The removal of forest lands, wetlands, and other naturally vegetated areas can result in increased storm runoff and increased sediment in the reservoir. This leads to the turbidity problem during heavy rains.

2) Vulnerability to contamination by human activity: Human activity, and development in particular, leads to an increased threat of contamination via failing on-site septic systems, hazardous waste spills (even motor oil and gasoline), and increased use of lawn chemicals (pesticides, herbicides, and fertilizers). All of these threats can result in immediate contamination of the supply.

3) Capacity for growth: There are limits on the number of gallons that can be affordably and practically provided to users of the water supply system when surface waters are the primary source. The current safe yield of Running Gutter Brook Reservoir is approximately .5 million gallons per day (mgd), and up to 1 mgd with the two wells online. Water usage in 2006 averaged 331,178 gallons per day which was a reduction in usage from the previous year after the town completed metering all service connections. Metering generally creates a reduction in usage and can function as conservation or demand management measure. Water users perceive that because they are paying for their water based on their actual usage versus a flat fee, their bill will go up which in turn makes people use less water.

Threats to the water resource follow closely those to the watershed areas and waterways. They include:

- Residential development in sensitive areas—particularly in the forested water supply area feeding the reservoir
- Clearing of vegetation that borders waterways
- Alteration of stream conditions such as temperature, velocity and volume of flow, and turbidity (amount of particulate matter in the water)
- Non-point source pollution from households, septic systems, roadways, agricultural operations, and industries
- Overuse or misuse of recreational resources
- Poor stewardship of forest lands through inappropriate timbering practices

The development of residential lots in the upper reaches of the Running Gutter Brook watershed in recent years endangers the health of the reservoir. Continued removal of natural vegetation and replacement of this natural landscape with human residences increases storm water runoff contaminated by lawn fertilizers, pesticides, de-icers, motor oil, and other damaging substances.

According to a 1999 report titled “Comprehensive Nonpoint Source Management in the Mill River Subwatershed, Hatfield, Massachusetts”:

“Many large agricultural land parcels are being converted to residential uses. This is evidenced by the number of withdrawals of Chapter 61A farm parcels from the farm use assessment tax programs. Several large, unused, easily developable agricultural parcels are located in the primary recharge area to Hatfield’s Omasta and Whately Wells. Without adequate land use controls, large subdivision development of this area could threaten the quality of Hatfield’s drinking water supplies....The watershed and recharge areas are extremely desirable locations for new homes.”

Threats to the aquifer recharge areas surrounding the Town wells are similar to those in the water supply area feeding the reservoir. The 1994 report Developing a Regional Wellhead Protection Program notes:

“...hazardous wastes and petroleum present one of the greatest threats to aquifers. Only a few parts per billion of these contaminants can ruin an aquifer for human use...Subsurface oil or gasoline storage tanks in service stations, private residences, and businesses present a serious threat to groundwater supplies. Stringent preventive measures are justified, due to the considerable impairment of groundwater supplies from the many leaks and spills from petroleum products. The cost to restore contaminated aquifers can reach millions of dollars.”

The report goes on to document the location of the primary and secondary recharge areas in Hatfield, illustrating that most of the land west of I-91 lies in the secondary recharge zone. The primary recharge zone covers a swath of land in the upper reaches of Running Gutter Brook. Land uses that pose a high risk to the water supply in this area of Hatfield include auto service and repair facilities, fuel stations, auto body and auto repair shops, general agricultural use, major highways, railway tracks, commercial greenhouses/nurseries, operational equipment storage, road and maintenance depots, fertilizer/pesticide storage and application, on-site septic systems, and underground storage tanks.

A Zone II study of the West Hatfield Well, completed in January 2000, provides a more detailed and accurate delineation of the recharge area. The new Zone II delineation was used to update the current Water Supply Protection District boundary on Hatfield’s zoning map and to ensure a safer source of public water.

D. Vegetation

Forest Land

In terms of forest types, Hatfield is located in what is referred to as the transition zone. This transition area is a blending of the southern oak-hickory forests and the northern maple-birch climax forest types. Also found in association with this zone are eastern white pines. Forty-five percent of Hatfield's total acreage is forested land.

The forest resources and woodlands in Hatfield lie primarily west of the I-91 corridor. Extensive range of forestland encompasses approximately 4,800 acres, which consists of 45 percent of the total land area in the Town. There are approximately 135 species of trees and woody shrubs naturally occurring in Hatfield.

Without forested areas, floodwaters from heavy storms would run off more rapidly, raising flood waters and assuring more property and crop damage. Other environmental impacts such as air quality degradation, reduction of visual buffers from adjacent uses, and elimination of habitat could ensue as well. In particular, West Hatfield forested land provides important absorption and filtration of water runoff before it reaches the Town's water supply reservoir. Protecting this supply will be crucial to the future commercial and residential growth of the Town. Continued deforestation within the water supply recharge area could result in pollution of the supply as oil, fertilizers, and other chemicals are rapidly washed off developed areas to the surface waters.

Deforested areas in the hills also could cause impacts on down-gradient properties as the rapid runoff causes erosion of stream banks and hillsides, sending sediment onto farmland and other properties, and potentially causing greater damage to homes and businesses during major storm events. Erosion causes streams and rivers to fill with silt, resulting in oxygen deprivation to water plants and animal species, killing them and causing down-slope wetlands to deteriorate. This in turn would eliminate food sources for migratory birds and land animals. Finally, the loss of significant forested areas will visually alter the character of the community.

The vegetation of riparian zones where water and land meet also serve important functions to both the wildlife of the area, as well as to man's dependence on these environments. These "bordering vegetated wetlands" along streams, rivers and ponds in the Town provide wildlife habitat and play a critical role in maintaining water quality by serving as natural filters for nutrients, toxins, and sediment that would otherwise move directly into surface and ground waters.

Rare, Threatened and Endangered Species - Flora

A biologically diverse native ecosystem is important to ensure stability of all plant and animal species. On a global scale, it is essential for human health as well. As the number of species within an ecosystem declines, the remaining species become more dependent upon fewer resources for survival. In many cases, the elimination of one species leads to the demise of another or many others when such species cannot adapt to the reduction and change in their environment.

Because of its diverse terrain, Hatfield is abundant in important habitat for plants as well as animals. See **Table 6**. Bio-Map 2 cores (1932, 1955, 2015, 2083, and 2943), include five Exemplary or

Priority Natural Community Cores, three Wetland Cores, four Aquatic Cores, three Vernal Pool Cores, and two Species of Conservation Concern Cores. *Core Habitat* identifies key areas that are critical for the long-term persistence of rare species and other Species of Conservation Concern, as well as a wide diversity of natural communities and intact ecosystems.

Critical Natural Landscape areas include one Landscape Block (areas of predominately natural vegetation, consisting of contiguous forests, wetlands, rivers, lakes, and ponds), two Wetland Core Buffers, and two Aquatic Core Buffers. These areas are of great biodiversity importance. Bio-Map 2 Cores and Critical Natural Landscape areas were produced as categories by the Natural Heritage & Endangered Species Program (NHESP) to identify the areas of most importance for biodiversity: they are based on known locations of rare species and uncommon natural communities, and incorporate the habitats needed by rare species to maintain the local populations. Land protection that ties in with open space in other municipalities, and other protected open space, public or private is one way to provide important large areas of biodiversity protection. As of 2012 The Core Habitat category consisted of 4,581 acres of which 315 acres, or 6.9%, was protected. The Critical Natural Landscape acreage totaled 2,566 acres, of which 79 acres, or 3.1% was protected.⁶

Most of the rare plants of Hatfield are species of riparian areas – river and stream side specialists. Because floodplain areas are also prime agricultural lands, habitat for these species has diminished over the years. The remaining undisturbed and even moderately disturbed lands along the rivers provide important habitat for these rare and other more common native species, as well as helping to protect the waters of the rivers and streams. Other plant species formerly known from Hatfield, such as New England Blazing Star, were found in pastures and other dry open areas. Moist forests with some nutrient richness support some of the other upland species. Hatfield clearly has a variety of habitats, some of which have been lost or changed as the land has reforested over time.

There are several uncommon natural communities from Hatfield in the Massachusetts Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program (NHESP) database, all but one associated with the rivers. The various types of floodplain forest are just small remnants of what would have been present in the past. Even the small degraded example of Major-river Floodplain Forest (located at Bashin Beach) could be a core for restoration and river shore protection. The other uncommon type of natural community, the Black Gum-Pin Oak-Swamp Whit Oak "Perched" Swamp (located in North Hatfield between Route 5 and River Road and extending north into Whately) is very uncommon, forming only on glacial lake sediments, and known from very few places in Massachusetts and Connecticut. Even though only a small part of this community occurrence is in Hatfield, most being in Whately, protecting the area with the community would contribute to maintaining the region's biodiversity.

Hatfield is one of the towns with town wide maps showing areas forested in the 1830s, areas of possible Primary Forest, most of which were untilled woodlots and wooded pastures. Such lands have greater biodiversity than areas that have been tilled. These are not Old Growth, they have been harvested and pastured, but the ground may not have been tilled. Harvard Forest digitized maps from the 1830s that the Massachusetts legislature mandated that the Towns make. Hatfield's map exists and shows areas that were forested in the 1830s. NHESP GIS staff took those data and combined them with information from MassGIS' landcover datalayer made from 1999 aerial photos. Although a great deal will have gone on in those areas in the time between the map dates, some areas that were

⁶ *BioMap2 Conserving the Biodiversity of Massachusetts in a Changing World*
http://maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Hatfield.pdf

forested in both times won't ever have been tilled. Surveys of the soil structure in the individual sites are necessary to determine whether those sites are Primary Forest. The importance of primary forest is that such sites retain more native biodiversity than sites that have been tilled: soil fauna and flora, microorganisms and plants that reproduce contribute to the higher biodiversity. In addition, a variety of species of wildflowers are more common in untilled forests than previously tilled lands. The areas of 1830s forest on private land would be good targets for conservation acquisition to maintain the biodiversity of the town and region.

According to NHESP, as of 2012, there are 13 Certified Vernal Pools (CVP) and many (100+) additional Potential Vernal Pools (PVP) (identified from aerial photographs, needing verification on the ground) in Hatfield. Areas of swamps also provide habitat for vernal pool species. Certifying more of the PVPs would provide additional protection to these wetlands and the species that use them. There are several clusters of CVPs/PVPs - three identified Vernal Pool Cores.- which provide extra habitat value for the species that use them since each pool is somewhat different and provides alternate habitats in different years and seasons.

Table 6 - Rare Species and Natural Communities Documented in the Town of Hatfield⁷

| Scientific Name | Common Name | MESA Status | Most Recent Year |
|---|------------------------------------|-------------|------------------|
| VASCULAR PLANTS | | | |
| <i>Arisaema dracontium</i> | Green Dragon | T | 2011 |
| <i>Crassula aquatic</i> | Pygmyweed | T | 1984 |
| <i>Deschampsia cespitosa ssp. glauca</i> | Tufted Hairgrass | E | 1991 |
| <i>Desmodium canescens</i> | Hoary Tick-trefoil | WL | 1977 |
| <i>Eleocharis diandra</i> | Wright's Spike-rush | E | 2009 |
| <i>Eleocharis intermedia</i> | Intermediate Spike-sedge | T | 1984 |
| <i>Eleocharis ovate</i> | Ovate Spike-sedge | SC | 2009 |
| <i>Eragrostis frankii</i> | Frank's Lovegrass | SC | 2009 |
| <i>Hypericum ascyron</i> | Giant St. John's-wort | E | 1974 |
| <i>Menispermum canadense</i> | Moonseed | WL | 1997 |
| <i>Pseudolycopodiella caroliniana</i> | Carolina or Slender Clubmoss | H | 1976 |
| <i>Ribes rotundifolium</i> | Round-leaved Gooseberry | WL | 1986 |
| <i>Sagittaria rigida</i> | Mud-arrowhead | WL | ND |
| <i>Salix exigua</i> | Sandbar Willow | T | 2010 |
| NATURAL COMMUNITIES | | | |
| Black gum-pin oak-swamp white oak "perched" swamp | S2 | | 1993 |
| High-terrace floodplain forest | S2 | | 1998 |
| Low-energy riverbank | S4 | | 1991 |
| Small-river floodplain forest | S2 | | 1998 |
| Transitional floodplain forest | S2 | | 1997 |
| VERTEBRATES | | | |
| <i>Acipenser brevirostrum</i> | Shortnose Sturgeon | E, FE | 1999 |
| <i>Ambystoma jeffersonianum</i> | Jefferson Salamander | SC | 2009 |
| <i>Ambystoma opacum</i> | Marbled Salamander | T | 2002 |
| <i>Glyptemys insculpta</i> | Wood Turtle | SC | 2008 |
| <i>Haliaeetus leucocephalus</i> | Bald Eagle | T | 2012 |
| <i>Hybognathus regius</i> | Eastern Silvery Minnow | SC | 2003 |
| <i>Ixobrychus exilis</i> | Least Bittern | E | 1991 |
| <i>Poocetes gramineus</i> | Vesper Sparrow | T | 2012 |
| INVERTEBRATES | | | |
| <i>Alasmidonta heterodon</i> | Dwarf Wedgemussel | E, FE | 2006 |
| <i>Alasmidonta undulata</i> | Triangle Floater | Delisted | 2006 |
| <i>Lampsilis cariosa</i> | Yellow Lampmussel | E | 2009 |
| <i>Ligumia nasuta</i> | Eastern Pondmussel | SC | 2011 |
| <i>Strophitus undulatus</i> | Creeper | SC | 2006 |
| <i>Gomphus abbreviatus</i> | Spine-crowned Clubtail (dragonfly) | SC | 2011 |
| <i>Gomphus fraternus</i> | Midland Clubtail (dragonfly) | E | 2005 |
| <i>Gomphus vastus</i> | Cobra Clubtail (dragonfly) | SC | 2011 |
| <i>Gomphus ventricosus</i> | Skillet Clubtail (dragonfly) | T | 2008 |
| <i>Neurocordulia yamaskanensis</i> | Stygian Shadowdragon (dragonfly) | SC | 2012 |
| <i>Ophiogomphus asperses</i> | Brooke Snaketail (dragonfly) | SC | 1998 |
| <i>Stylurus amnicola</i> | Riverine Clubtail (dragonfly) | E | 2010 |
| <i>Stylurus scudderi</i> | Zebra Clubtail (dragonfly) | Delisted | 2001 |
| <i>Stylurus spiniceps</i> | Arrow Clubtail (dragonfly) | Delisted | 2005 |

KEY TO MESA STATUS: FE – Federally Endangered; E = Endangered. T = Threatened. SC = Special Concern. H = Historic, no longer present in state. WL = unofficial Watch List, not regulated. Delisted – species no longer protected under MESA. Natural Communities are not regulated. S (state abundance) ranks are on a 1 to 5 scale, with S1 being considered vulnerable, generally having 1 to 5 good occurrences, and S5 being demonstrably secure. Community types ranked S1, S2, and S3 are priority for conservation protection.

⁷ MA Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, August 13, 2013

E. Fisheries and Wildlife

General Inventory

Wildlife populations are related directly to habitat, which is a function of soil types and vegetation. All forms of wildlife have two basic requirements: food and cover. If one is deficient, a stable population cannot exist. Many species do not restrict themselves to one habitat, but share both upland and lowland sites at various times.

The wooded areas of West Hatfield are primary habitat for several upland mammal species including white-tailed deer, black bear, bobcat, eastern coyote, red and gray fox, porcupine, skunk, weasel, red and gray squirrel, flying squirrel, fisher cat, opossum, raccoon, snowshoe hare, cottontail rabbit, mice, voles, moles, shrews, woodchuck, chipmunks and bats. These upland forests are contiguous with vast forest tracts of the Appalachian Range in the American northeast, and sightings of moose that move along these corridors have become more frequent in recent years. Upland birds include ruffed grouse, turkey, woodcock, turkey vulture, several species of hawks and owls, crows and ravens, woodpeckers, and deep wood songbirds such as wood thrush, scarlet tanager, and veery among others.

Lowland wildlife mammals are primarily beaver, muskrat, otter and mink. Lowland birds are primarily Canada geese, several species of ducks, osprey, green and blue herons and kingfishers.

Grasslands and open fields are habitat for grassland birds such as meadowlarks, bobolinks, vesper sparrows, and mammals such as mice. These areas occur generally in the parts of Hatfield east of I-91 and include much of the Town's agricultural lands. In general, the upland species occur west of Interstate 91 and lowland species east of it. There are exceptions, however, the ring-necked pheasant being one, most often associated with open farmlands. Great importance should be attached to the numerous species of insects, reptiles and amphibians that inhabit both upland and lowland environments and form the basis for much of the food chain.

Fish range from warm water species like bass, pickerel, catfish, sunfish and walleye to cold-water species such as brook, rainbow and brown trout. Trout are found mainly in the Mill River and Running Gutter streams.

The Massachusetts Department of Fisheries and Wildlife and the Hatfield Fish and Game Club annually stock trout in the Mill River and place a large population of ring-necked pheasants in eastern Hatfield. Hunting, fishing, and trapping are very popular with many people, as is bird watching and nature study. These activities are the principal ones that use the different wildlife resources.

Environmental Needs of Wildlife

The various natural resources present in Hatfield provide a wide array of benefits for both the natural environment and the residential, farming, and business community at large. It is beyond the purview of this plan to provide an exhaustive identification of the carrying capacity of these resources. However, it is widely documented that substantial degradation or elimination of resources such as forestlands, wetlands, floodplain areas, and riparian habitat has profound implications on the communities surrounding these areas. If wetlands and floodplain areas are unable to perform their

intended filtering and absorption functions, results such as increased weed growth and algae blooms will occur. These blooms use a tremendous amount of oxygen during their natural cycles. This massive consumption of oxygen leaves little for fish and other plant life, causing “fish kills” and ultimately affecting the entire food chain from plants to birds and animals that depend on aquatic life for sustenance. Not only is the natural filtering and absorption eliminated, but also what replaces the wetland is generally impervious surface, which increases the velocity of runoff and often leads to erosion.

The extensive forestland in the hills and along river corridors provides vital resources for wildlife. These include:

- Protection and shelter for inland and water-based species such as bear, moose, and duck
- Nutrient and food source for land and water species
- Nesting areas for indigenous birds such as osprey, duck, and heron
- Seasonal shelter and food source for migratory birds
- Protected breeding areas

A great diversity of species is dependent upon the wetlands and riparian areas in Hatfield. If these corridors are disturbed or interrupted, damage to habitat and species population will result. This holds true for common species as well as rare and endangered species. Maintaining the integrity of wetlands and riparian corridors with vegetated cover is important to:

- Provide shelter for various species
- Provide protected corridors for movement between and among adjacent habitats
- Provide food source
- Provide permanently flowing water sources
- Provide nesting and breeding places

Wildlife populations are used often as indicators to judge the quality of the environment. The best way to maintain healthy upland populations is to insure that habitat is maintained and intensively managed to create diversity, which produces food and cover. In the case of lowland species and fish, it is vital to maintain their environments and to ensure they are not polluted with contaminants like pesticides and waste products. The question of how to safeguard productive farming and the wildlife that thrives when farmland is not overly saturated with pesticides is thus a critical one.

Rare, Threatened and Endangered Species - Fauna

The Massachusetts Division of Fisheries and Wildlife’s Natural Heritage and Endangered Species Program has mapped areas of critical concern for threatened and endangered species within the Town of Hatfield. The animals that fall within this classification are identified in **Table 6**.

These species are dependent upon habitat provided by riparian and wetland resources as well as forest resources. There are over 5,000 acres that provide productive habitat for wildlife species in Hatfield, including forest, open waters, and wetland. Approximately 500 of these acres include areas that are priority sites for rare and endangered species. Preventing the extinction of these species is critical to maintaining biodiversity in the Pioneer Valley. A biologically diverse native ecosystem is important to ensure stability of all plant and animal species. In many instances, the elimination of

one species leads to the demise of another or many others when such species cannot adapt to the reduction and change in their environment.

Most of the currently known rare animal species in Hatfield are associated with wetlands. A few, such as the Marbled Salamanders and Wood Turtles also use uplands for much of their lives including for foraging for food. The Marbled Salamanders breed in vernal pools in the fall and spend most of their time in surrounding uplands forests, under the leaves (as a result, they and their relatives are called “mole salamanders”). Wood Turtles spend time in streams and upland and riverside forests, but over-winter in the river (or stream) bank.

The Bald Eagles nest in old trees near water, along rivers and oxbows. The Least Bittern is a reclusive marsh bird, nesting in tall grassy marshes in backwaters with patches of open water where they hide their nests and raise their young in areas of little disturbance. Vesper Sparrows, on the other hand are species of upland grasslands, such as old fields and pastures. Although considered secure globally, they have declined significantly in eastern North America due to changes in agricultural land use.

Both groups of invertebrates, freshwater mussels and dragonflies, found in Hatfield, depend on the rivers and streams for habitat. The Mill River, particularly, provides exceptional habitat and needs to be maintained in the good condition it is in: Having four of the state’s seven listed species of freshwater mussel in the town means that it is a hot spot for aquatic biodiversity. The abundance of rare dragonfly species, whose young spend several years in the sediments of streams and ponds (depending on the species), reinforces the importance of maintaining the aquatic conditions in Hatfield.

F. Scenic Resources and Unique Environments

Scenic Landscapes

Hatfield abounds with landscapes that have much scenic value. The following landscape viewpoints have been identified to have particularly great scenic value, and efforts should be maintained to protect these areas:

- Open breath-taking vistas from wooded trails along the peak of Horse Mountain (in particular a location known locally as “White Rock”) that look over Hatfield toward Hadley and Amherst to the East, with views of the Holyoke Range to the south, and Mount Sugarloaf and Mt. Toby to the north;
- Similar but less expansive views at lower elevations seen from the northeast corner of Swift Plantation on Mountain Road, and points along Mountain Road as it descends to Pantry Road;
- Banks of Connecticut River, in particular the areas defined by public access points in the Bashin Beach area and along the dike from the Town center south and then west to the confluence of the Connecticut River with the Mill River;
- Canary Island beach in the Connecticut River near the Northampton Town line that is accessed from Little Neponsett Road.
- The Mill River itself, which has been identified as part of MA DCR’s “Commonwealth Connections, A Greenway Vision for Massachusetts”

Major Characteristic or Unusual Geologic Features

Some of the distinctive geologic features in Hatfield include the following which are described in detail in Section 4:

- Fertile Connecticut River and its floodplains
- Great Pond (remnants of an oxbow lake) and its associated marshes
- Horse Mountain and Chestnut Mountain
- The “Rocks” area of West Hatfield including some shallow lead mines used during the 1700 and 1800’s.
- Glacial outwash delta forming critical ground water recharge area for North Hatfield well.

Cultural and Historic Areas

Historic districts are commonly defined as areas possessing a concentration, linkage, or continuity of sites, buildings, or structures united historically or aesthetically whether by plan or spontaneous development. There are two types of designations of historic districts: National Register districts and districts designated locally.

A listing on the National Register of Historic Places, the nation’s official list of historic and cultural resources, provides properties with a degree of protection from federally funded projects or programs that could threaten or destroy historic character. Although National Register designation provides a high level of recognition and can qualify select property owners (commercial and rental property owners only) for certain beneficial tax credits or other preservation funding, it does not offer the same type of protection that a local historic district can provide. Hatfield has one single property listed on the National Register and eight nationally registered districts identified in **Table 7**.

Historic districts designated at the local level are those protected from major changes through the adoption and enforcement of a local historic preservation ordinance. Historic preservation ordinances are flexible tools that can facilitate preservation through a variety of means. They are often used to encourage a wide range of preservation activities in historic districts depending on local preservation goals. Many ordinances encourage preservation by regulating alterations to building facades, exterior building materials, exterior architectural detailing, and building mass. New construction in historic districts can be encouraged to complement the existing character through design that is sensitive in terms of size, style, and placement. Through the designation of a local historic district and adoption of an historic preservation ordinance, municipalities can accomplish many goals, including guiding alterations to privately owned historic buildings and delaying or preventing demolition of important resources.

| Table 7 - National Register of Historic Districts and Places | | |
|---|---|------------------------|
| Name | Location | Date Registered |
| Billings Way Tobacco Barn | Billings Way | 7/27/1994 |
| Bradstreet Historic District | Main Street and Bashin, Cronin Hill, Depot, Old Farms and Upper Farms Roads | 7/17/1997 |
| Elm Street Historic District | Elm, Sunset and Scotland Streets and Little Neponset Road | 12/7/2000 |
| Hatfield Center Historic District | Roughly bounded by the Connecticut and Mill Rivers and Day Avenue | 7/27/1994 |
| Mill-Prospect Street Historic District | Chestnut, Bridge and School Streets, Raymond Avenue and Prospect Court | 10/22/2002 |
| North Hatfield Historic District | 155-166 Depot Road, 178 North Hatfield Road and 273-336 West Street | 10/30/1997 |
| Old Mill Site Historic District | 48 and 50 Prospect Streets | 6/2/1982 |
| Upper Main Street Historic District | Main Street from 83 Main Street to Cow Bridge, 1-44 King Street and 6-70 North Street | 7/22/1994 |
| West Hatfield Historic District | 3-12 Church Ave, 2 Linseed Road and 23-42 West Street | 2/24/2005 |

Areas of Critical Environmental Concern

Hatfield has not yet nominated any areas within the Town for the state’s Department of Environmental Management program for Areas of Critical Environmental Concern (ACEC). This program was established to provide recognition and add protection to areas of land possessing multiple environmental attributes, such as wildlife habitat, water supply, rare species, historic resources, all of which combined to identify an area worthy of a higher level of protection. Some of the recent information gathered on the Mill River corridor and portions of West Hatfield suggest some portion of Hatfield may be worthy of consideration as part of this program.

G. Environmental Challenges

Hatfield is blessed with an abundance of open space, with broad, flat agricultural fields and expanses of forested hill country. The observation of the 2008 OSRP that the Town was beginning to see a development threat on the horizon that was much greater than it had experienced before, remains as true in 2014 as it was then. Residential development has eaten into the Town’s forested western sections, its southern and central agricultural areas and along its eastern flood plain. Hatfield is a latecomer to development on this scale. The Town can learn from the experience of comparable towns that have been built out, and not always with desirable results. In short there may be advantages to being a comparative latecomer, as Hatfield is, to fairly large scale development.

Fragmentation

The Town still has numerous large parcels of property still under the control of families or corporate entities that are now ripe for sub-division. For years those large parcels were under the stewardship of the owners as agricultural resources. However, as the importance of farming and forestry in the region diminishes, those lands are becoming economically attractive for their one-time developmental potential. Thus, both the open space for which Hatfield is noted, and the quality of wildlife and human life within its borders are put at risk.

While commercial enterprises such as crop cultivation and forestry kept large areas of the Town open, they also provided habitat and movement corridors for an abundance of wildlife. By way of contrast, subdivision and development of those formerly large parcels restrict both habitat and corridors, and at the same time make resource management far more difficult. Instead of one owner/manager, outreach to multiple owners is needed to get them to consider such factors in the disposition of their land. Utilization of existing tax reduction options such as 61A make it easier for large landholders to keep their holdings intact. Further, purchase of conservation restrictions and agricultural preservation restrictions through state programs would allow those owners the economic benefits that subdivision and development would have brought them and, at the same time, allow them to maintain ownership and stewardship of the property.

Floodplain Development

Hatfield enjoys a lengthy, seven mile shoreline along the Connecticut River. That shoreline also means a seven-mile-long flood plain as well. Increasingly the flood plain has been used for residential and commercial development. Such uses are allowed under current zoning bylaws on a case-by-case basis, allowing compensatory storage to be determined for limited areas each time. However, the cumulative effects of incremental development of the flood plain should be assessed to determine if it is being adequately protected, avoiding a gradual compromise and loss of its protective benefit to the citizens of Hatfield. Development of the flood plain, even with restrictions, diminishes the resource's capability to sustain its function within the overall ecosystem. Construction of on-site wells and septic systems places demands on the resource that impair its primary role and makes the eventuality of contamination a virtual certainty.

Allowing development in federally delineated flood plain areas also puts lives and property at needless risk and endangers the Town government as well. In the event of a 100-year storm, developed residential property and the people who live there will be in the path of potential destruction. The Town could be held liable for damage to property and danger to people by allowing continued development and habitation, and the assumed safety that the official sanction implies, in what is a clearly precarious area. As part of its zoning overhaul in 2003, the Town adopted a Floodplain Overlay Zoning District to better regulate floodplain development for the protection of public health and safety and this critical habitat.

Land Use and Residential Development Trends

Hatfield's rich agricultural heritage kept much of the easily arable land under cultivation during the development boom of the 50s and 60s. At a time when flat, open areas were being developed into expanses of acre-or-more building lots for hundreds of small ranch style homes, the commercial value of the land in Hatfield as an agricultural resource minimized the pressure for development of the land for other uses. However, current economic trends that have diminished the importance of farming in the Pioneer Valley are increasing the development pressure on the open space Hatfield is

so widely known for. At the same time a new residential aesthetic also has come into play, with homes built within the environment, rather than clustered together in subdivisions, becoming among the most desirable in the high priced housing market. The market is demanding large homes with great expanses of lawn on previously forested land. The continued fragmentation of forests and the disruption of wildlife has a compounding negative effect on the ecosystem overall.

Land that was once thought of as unusable except for certain non-residential uses, such as forestry, is now seen as an ideal location for certain housing. But, construction on such property brings with it the loss of areas that were formerly considered *de facto* areas of undevelopable open space. Clear cutting of forests for lawns and open construction areas, long access roads cut through primeval forests, destruction of wetland resources and incidental mining in order to make land meet current building codes all have disastrous consequences on the environment. The zoning overhaul package of 2003 provided the town with better site plan review ability to properly manage growth in these areas.

Market pressures that do not factor in the environmental consequences of development can result in unbalanced development that does not serve the best long-term interests of the Town. Education and the voluntary compliance with best use practices will need to work hand in hand with the improved land use controls and policies. It is incumbent on the Town to empower the land use boards to become the purveyors of best use practices in a well-coordinated process, rather than reactors to inappropriate use. It would be highly desirable, therefore, if all of Hatfield’s land use boards were to create a common vision of, and a regulatory process for the promotion of the long-term goals of the Town.

Other Environmental Challenges

There is one 7 acre capped, unlined landfill in Hatfield on Straits Road. The site is the current Transfer Station. The landfill was closed in 1998 and is monitored by the Massachusetts DEP.

There are six active reportable release sites, or 21E sites, (**Table 8**) according to the Massachusetts Department of Environmental Protection. Reported contamination includes soil and hazardous materials and is limited to the release site locations.

Table 8 - Hazardous Release Sites (21E)

| DEP Release Tracking # | Address | Site Name | Notification Date | Status | Chemical Type |
|------------------------|---------------------|-------------------|-------------------|--------------|----------------------------|
| 1-0015925 | 43 and 59 Dwight St | Lesco Inc | 10/4/2005 | Tier 2 | Hazardous Material |
| 1-0000087 | Bridge St | Tremblay Barrel | 7/15/1988 | Tier 1D | Unknown |
| 1-0017129 | 115 Elm St | Construction Site | 9/5/2008 | Unclassified | Unknown |
| 1-0017095 | 62 King St | Pole # 17/30 | 8/6/2008 | Unclassified | Unknown |
| 1-0013284 | 60 Main St | No Location Aid | 1/20/2000 | Tier 2 | Oil and Hazardous Material |
| 1-0000488 | 361 West St | West St Property | 6/14/1988 | Tier 1A | Oil and Hazardous Material |

There is no ground and surface water pollution, erosion or sedimentation of great concern.

SECTION 5: INVENTORY OF LANDS OF CONSERVATION & RECREATION INTEREST

The inventory of lands of conservation and recreation interest describes ownership, management agency, current use, condition, recreation potential, public access, type of public grant accepted, zoning and degree of protection for each parcel. The degree of protection from destruction or degradation that is afforded to various parcels of land owned by private, public, and nonprofit owners is also evaluated.

- Private lands can be protected in perpetuity through deed restrictions, or conservation easements (yet some easements only run for a period of 30 years and those lands are therefore not permanently protected open space).
- Lands under special taxation programs, Chapter 61, 61A or 61B, are actively managed by their owners for forestry, agricultural, horticultural or recreational use. This is not any form of permanent protection. The town has the right of first refusal should the landowner decide to sell and change the use of the land, therefore, it is important to prioritize these lands and consider steps the community should take to permanently protect these properties.
- Lands acquired for watershed and aquifer protection are often permanently protected open space, provided for typically through a Town Meeting vote.
- Public recreation and conservation lands may be permanently protected open space, provided that they have been dedicated to such uses as conservation or recreational use by deed. Municipal properties may be protected via the Town Meeting vote to acquire them.
- Private, public and non-profit conservation and recreation lands can be protected under Article 97 of the Articles of Amendment to the State Constitution.

A. Private Parcels

Agricultural Preservation Restrictions

The Agricultural Preservation Restriction Program (APR) is a voluntary program that offers a non-development alternative to farmland owners for their agricultural lands who are faced with a decision regarding future use and disposition of their farms. The program, operated by the Massachusetts Department of Agricultural Resources (MDAR), offers farmers a payment up to the difference between the “fair market value” and the “fair market agricultural value” of their farmland in exchange for a permanent deed restriction, which precludes any use of the property that will have a negative impact on its agricultural viability. Hatfield is one of 162 cities and towns in Massachusetts with APR protected farms. There are 395.34 privately owned acres under APR held by the Massachusetts Department of Agriculture. See listing **Table 9**

Table 9 - Agricultural Preservation Restrictions (APR)

| FEE OWNER or SITE NAME | MA DAR ID | ACRES | PARCEL ID |
|---------------------------------------|-------------------|---------------|------------------|
| Adamski | DAR_122702127ADA | 11.21 | 205 -77 |
| Skawski / VLF | DAR_123102127SKA | 19.28 | 205-61 |
| Burke / Burke William H and Maryann L | DAR_020504127BUR | 14.79 | 215-21 |
| | | 24.84 | 215-20.1 |
| Duda Farm / Duda Robert M | DAR_052495127DUD | 00.93 | 203-9 |
| | | 03.15 | 203-9 |
| | | 07.74 | 203-2 |
| | | 27.40 | 202-13.2 |
| | | 16.51 | 202-13.1 |
| | | 00.83 | 203-6 |
| | | 03.85 | 203-6 |
| Belden Family Trust | DAR_022113127BEL2 | 45.00 | 205-38 |
| | | 04.80 | 205-37 |
| Belden / Luther Belden Inc | DAR_062987127BEL | 06.55 | 211-57 |
| | | 20.99 | 212-10 |
| | | 08.39 | 206-106 |
| | | 15.83 | 205-9 |
| | | 01.95 | 205-8 |
| | | 11.56 | 205-51 |
| | | 13.13 | 205-53 |
| | | 19.65 | 213-6 |
| | | 09.13 | 204-1 |
| | | 06.15 | 204-3 |
| | | 50.68 | 204-16 |
| | | 13.35 | 204-7 |
| Regish, John | DAR_062813127REG1 | 15.54 | 206-110 |
| Zagrdonik, Joseph | DAR_062813127ZGR1 | 22.11 | 222-8 |
| TOTAL | | 395.34 | |

Conservation Restrictions

A Conservation Restriction (CR), sometimes called a conservation easement, is a legal agreement between a landowner and a qualified conservation organization or government agency that permanently limits a property’s uses in order to protect its conservation values. CRs can be flexible and written to meet the particular needs of the landowner while protecting the property’s resources. For example, the easement may allow for sustainable forestry practices, recreational uses such as the construction of trails, or management of the land for particular wildlife habitat or control of invasive species. The easement is permanently recorded with the deed, remaining in force when the land changes hand. There are 171.82 privately owned acres with Conservation Restrictions in Hatfield as listed in **Table 10**.

Table 10 - Private Fee Owner with Conservation Restrictions

| FEE OWNER or SITE NAME | CR Holder | ACRES | TOWN PARCEL ID |
|-------------------------------|----------------------|---------------|-----------------------|
| Schrader/Kogut/Allenby | MA DEM | 07.71 | 207-34 |
| Schrader/Kogut/Allenby | MA DEM | 15.00 | 207-33 |
| Schrader/Kogut/Allenby | MA DEM | 61.00 | 207-35 |
| Anciporch, Frank | USDA, Forest Service | 71.00 | 210-6 |
| Dragon, Martha | Valley Land Fund | 15.61 | 216-47 |
| Blunt Family | Town of Hatfield | 01.50 | 210-9 |
| TOTAL | | 171.82 | |

Chapter Lands

The Chapter 61 programs provide a means to assess land for taxes at its current use (forest, agriculture, or open space/recreation) as opposed to its development value.

- *Chapter 61* - Intended for landowners with long-term, active forest management. Assessment of forestland based on the land’s ability to grow timber.
- *Chapter 61A* - Intended for landowners engaged in agricultural or horticultural use. Assessment based on the land’s ability to produce the agricultural or horticultural product being grown. Forestland may be enrolled and is based on the land's ability to grow timber.
- *Chapter 61B*- Intended for landowners maintaining the land in a substantially natural, wild or open condition. Assessment of forestland under Ch. 61B is 25% of the current assessed value of the land.

There are 219 acres in Chapter 61, 2,309 acres in 61A, and 468 acres in 61B. It is important to recognize that enrollment in the Chapter 61 program is not a permanent form of protection from development. Towns have the first right of refusal on lands classified under Chapter 61 if such lands are sold for residential, commercial, or industrial purposes. In this case, the right of first refusal is a legal interest in the property that grants the town the right to match a bona fide offer for conversion of the property from its forest, agricultural, or recreational use.

B. Public and Non-Profit Parcels

Municipal Recreation Lands

There are 742 acres of municipally owned land in Hatfield. Below is an abbreviated list of some of the most prominent sites. See **Table 12** for a complete listing.

Municipal Recreation Lands

Lions Club Pavilion

Owned by the Town of Hatfield and operated by the Lions Club, the outdoor covered pavilion is on the grounds of the Hatfield Elementary School and services various private and community groups for barbecues, dance festivals and celebrations. It is rustic but adequate for its use in good weather and has restroom facilities.

Hatfield Elementary School Grounds

There are two soccer fields and two baseball/softball fields behind the new school. There are also two playgrounds on school grounds: one for preschool and kindergarten age children and second for older elementary school children.

Smith Academy Fields

The 38 ± acres around Smith Academy, the Town's public High School, offer the opportunity for field recreational sports. There are 2 baseball diamonds, 2 softball fields, 1 soccer field, and 1 outdoor basketball court. While most heavily used by the school system, which manages the areas, other groups may use the field with permission from the school committee. In the summer the Recreation Department uses the fields for summer programming. There is undeveloped land available in this tract for field expansion if the need arises.

Former Center School Grounds

The fields around the former Center School in the center of town offer additional opportunity for field sports. This 6± acres parcel, owned and managed by the Town, has a baseball and softball diamond, and a field hockey field. Formerly not fully utilized, it is already being used more heavily this summer in response to the loss of the playing fields that the construction of the new elementary school entailed. This use may increase, necessitating some improvements to the area. The area also connects with the dike and thus is contiguous with the river.

Town Hall Basketball Courts and Playground

Completed in 2013, the new basketball courts and play structure are located next to the Fire Station behind town hall. This facility is managed by the Recreation Commission.

Town of Hatfield, Terry Blunt Watershed and Conservation Area

The Town has acquired since the beginning of the 20th century, land in the north-west corner of the town for the purposes of maintaining a drinking water reservoir and watershed. The area was recently, in Spring 2013, dedicated as the Hatfield, Terry Blunt Watershed and Conservation Area in memory of Terry Blunt. The conservation area contains approximately 600 acres. An approximately 1-mile long trail was built by the Open Space Committee on the southern portion of the area in 2013 and is open to the public for hiking. Access to the trail is on Rocks Road at the south end, and Reservoir Road at the north end. The unpaved path traverses some of the highest elevation in Hatfield under a high open forest canopy offering a unique outdoor experience in Hatfield.

State Recreation Lands

State Boat Ramp

The Commonwealth of Massachusetts owns 5.7± acres near Kellogg Hill Rd. for use as a public boat ramp. This ramp serves as one of the few access points to the river from the west bank in this area. Parking is provided and regional as well as local users use this area in the three seasons. The parcel is large enough to accommodate further picnic or recreational facilities.

Bashin Beach

Owned by the Commonwealth of Massachusetts as part of the Connecticut River Greenway, this beach and swimming area has few amenities but is an important recreational facility in Hatfield. This area is not maintained and shows evidence of litter and the lack of sanitary facilities. Given its lack of development, it is not particularly safe or attractive as a swimming area and does not meet the outdoor recreational needs of many Hatfield families.

Non-Profit Lands

Trustees of Smith Academy Park

In the center of Town on the corner of School and Main Streets, the Trustees of Smith Academy own a 1± acres parcel, which is used for passive recreation. While adequately maintained it has no amenities and suggestions have been increasing around Town that it be improved and made more inviting for residents to use for passive recreation.

Other Public Lands

The City of Northampton owns 70 acres of open space in Hatfield. See **Table 11**. The majority of those acres (62 acres) are for watershed protection of the City's Mountain Road Reservoir located west of Hatfield's Running Gutter Reservoir. A smaller 8 acre parcel was recently acquired along the southern boundary of Hatfield with Northampton for potential development of a rail trail.

Table 11 - Open Space and Recreation Lands Owned by City of Northampton

| ACRES | TOWN PARCEL ID | STREET |
|-------|----------------|----------------------|
| 22 | 208-1 | CHESTNUT MOUNTAIN RD |
| 9.11 | 208-2 | CHESTNUT MOUNTAIN RD |
| 31 | 208-7 | CHESTNUT MOUNTAIN RD |
| 8.76 | 209-10 | ROCKS RD |
| 7.55 | 209-11 | ROCKS RD |
| 7.18 | 209-12 | CHESTNUT MOUNTAIN RD |
| 8.15 | 225-18 | LITTLE NEPONSET ROAD |

Table 12 - Inventory of Municipal Recreation and Conservation Lands

| Acres | Assessor's Parcel | Street | Current Use | Public Access | Existing Condition | Level of Protection | Funding for Acquisition |
|--------------|--------------------------|----------------------|--------------------------|----------------------|---------------------------|----------------------------|--------------------------------|
| 1.39 | 201-3-0 | WEST ST | Omasta Well Field | N | Good | P | unknown |
| 1.31 | 205-54-0 | DEPOT RD | Cemetery | Y | Good | | unknown |
| 0.5 | 205-55-0 | DEPOT RD | Park/Cemetery Commission | Y | Good | L | unknown |
| 0.87 | 206-16-0 | WEST ST | Westbrook Cemetery | Y | Good | P | unknown |
| 6.27 | 206-35-0 | MOUNTAIN RD | Omasta Well Field | N | Good | P | unknown |
| 0.84 | 206-47-0 | WEST ST | Omasta Well Field | N | Good | P | unknown |
| 13.6 | 207-8.1 | RESERVOIR RD | Reservoir Watershed | Y | Good | P | unknown |
| 30 | 207-25-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 23 | 207-28-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P | unknown |
| 5.27 | 207-29-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 6.29 | 207-32-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 18.10 | 208-9-0 | CHESTNUT MOUNTAIN RD | Reservoir Watershed | Y | Good | P / Article 97 Deed | unknown |
| 18.46 | 208-10 | CHESTNUT MOUNTAIN RD | Reservoir Watershed | Y | Good | P | unknown |
| 11.72 | 208-16-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P | unknown |
| 2.84 | 208-17 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P | unknown |
| 12.93 | 208-18-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P | unknown |
| 2.14 | 208-19-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 2.1 | 208-20-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P /CR-DEM | unknown |
| 2.51 | 208-21-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |

KEY: P=Permanent Protection; L= Limited Protection; Y=Yes; N=No; CR-DEM = Conservation Restriction held by MA Department of Environmental Management

Table 12- (continued) - Inventory of Municipal Recreation and Conservation Lands

| Acres | Assessor's Parcel | Street | Current Use | Public Access | Existing Condition | Level of Protection | Funding for Acquisition |
|-------|-------------------|------------------|--------------------------|---------------|--------------------|---|-------------------------|
| 105 | 209-1-0 | ROCKS RD | Reservoir Watershed | Y | Good | P / CR/Forest Legacy - USDA, Forest Service | USDA, Forest Service |
| 11.23 | 209-14-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 7.25 | 209-15-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 12.69 | 209-16-0 | MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 10.15 | 209-8-0 | ROCKS RD | Reservoir Watershed | Y | Good | P | unknown |
| 3.95 | 210-10-0 | ROCKS RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 3.35 | 210-11-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 19 | 210-16-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 62 | 210-17-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 10 | 210-18-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 8.01 | 210-19-0 | RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 0.19 | 210-3-0 | ROCKS RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 3.07 | 210-59-0 | WEST ST | Reservoir Watershed | Y | Good | P | unknown |
| 4.58 | 210-7-0 | 0 MOUNTAIN RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 133 | 210-8-0 | 0 RESERVOIR RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 0.45 | 212-18-0 | MAIN ST | Highway Garage | N | Fair | N | unknown |
| 7.63 | 212-49-0 | 260 MAIN ST | Sewer Treatment Plant | N | Good | N | unknown |
| 3.93 | 212-50-0 | KELLOGG HILL RD | Sewer Treatment Plant | N | Good | N | unknown |
| 1 | 214-97.1-0 | LITTLE MEADOW RD | Connecticut River Access | Y | Good | N | unknown |

KEY: P=Permanent Protection; L= Limited Protection; Y=Yes; N=No; CR-DEM = Conservation Restriction held by MA Department of Environmental Management

Table 12-(continued) - Inventory of Municipal Recreation and Conservation Lands

| Acres | Assessor's Parcel | Street | Current Use | Public Access | Existing Condition | Level of Protection | Funding for Acquisition |
|--------------|--------------------------|----------------|---------------------------|----------------------|---------------------------|----------------------------|--------------------------------|
| 53 | 216-57-0 | ROCKS RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 11.5 | 216-59-0 | ROCKS RD | Reservoir Watershed | Y | Good | P / CR-DEM | unknown |
| 6.4 | 218-12-0 | OLD STAGE RD | unknown | ? | ? | ? | unknown |
| 1.04 | 219-22-0 | LINSEED RD | Water Dept. Facility | N | Good | P | unknown |
| 2.34 | 219-44.1-0 | LINSEED RD | West Hatfield Well Field | N | Good | P | unknown |
| 7.76 | 219-44-0 | LINSEED RD | West Hatfield Well Field | N | Good | P | unknown |
| 20.57 | 219-66-0 | WEST ST | West Hatfield Well Field | N | Good | P | unknown |
| 1.7 | 219-73-0 | LINSEED RD | West Hatfield Well Field | N | Good | P | unknown |
| 0.97 | 219-85-0 | WEST ST | West Hatfield Cemetery | Y | Good | P | unknown |
| 0.35 | 220-210-0 | CHESTNUT ST | Open Space | Y | Good | L | unknown |
| 0.71 | 221-1-0 | 59 MAIN ST | Town Hall | Y | Good | L | unknown |
| 6.28 | 221-179-0 | 58 MAIN ST | Former School | Y | Good | L | unknown |
| 0.83 | 221-2-0 | 59 MAIN ST | Town Garage | N | Fair | L | unknown |
| 0.49 | 221-4-0 | 1 SCHOOL ST | Fire Station | Y | Good | L | unknown |
| 35 | 221-86-0 | 34 SCHOOL ST | Smith Academy | Y | Good | L | unknown |
| 3.82 | 222-125-0 | MAIN ST | Elementary School Grounds | Y | Good | L | unknown |
| 9.07 | 222-126-0 | 33 MAIN ST | Elementary School | Y | Good | L | unknown |
| 0.36 | 222-127-0 | 35 MAIN ST | Library | Y | Good | L | unknown |
| 1.41 | 222-128-0 | 15 BILLINGS WY | Lions Club Pavilion | Y | Good | L | unknown |
| 2.73 | 222-129-0 | 0 MAIN ST | Main Street Cemetery | Y | Good | P | unknown |
| 1.08 | 222-90-0 | ELM ST | Hill Cemetery | Y | Good | P | unknown |
| 8.15 | 225-19-0 | ELM CT | Sewer Pump Station | N | Good | L | unknown |

KEY: P=Permanent Protection; L= Limited Protection; Y=Yes; N=No; CR-DEM = Conservation Restriction held by MA Department of Environmental Management

SECTION 6: COMMUNITY VISION

A. Description of Process

Since the completion of the 2008 OSRP, the Open Space Committee has been the beneficiary of several invaluable sources of data on both goals and preferences for open space in Hatfield.

- An electronically conducted sample survey on open space issues in the Town. (2013)
- A visioning session carried out as part of a Town Center study. (2011)
- A meeting with residents in relation to an OSC proposal to build a trail for passive recreation in the Town's watershed. (2011)
- A visioning session in relation to possible redesign of the Trustees of Smith Academy Park next to the Town Hall. (2013)
- A visioning session in connection with the Heritage Landscape Inventory Program. (2009)
- Partial update of the 2001 Master Plan, focusing on "how Hatfield should grow." (2012)

What stands out with remarkable consistency over time is the Town's support for open space itself, and for the goals and preferences that fall under that rubric. Thus, in 2013 the OSC conducted an electronic survey, which sought to solicit what Town residents thought were important space and recreation goals. (See survey results - appendix) The survey posed over a dozen specific questions. It also gave respondents an opportunity to identify goals that they thought to be important, but which were not necessarily mentioned in the multiple choice sections of the survey.

In the fall of 2010, as part of a Hatfield Town Center Study, a community visioning session was held in order to collect information on Hatfield's goals and preferences for open space and recreation specifically for the center of the Town. In conjunction with this visioning session, students from the University of Massachusetts School of Landscape Architecture and Regional Planning who worked under the supervision of Professor Robert Ryan, drafted several proposals of greenway plans for Hatfield. The proposals were presented to the community, and students and residents met in order to discuss them.

As part of planning a passive recreation trail in, and adjacent to the Terry Blunt Watershed and Recreation Area, members of the OSC met with abutters of the proposed trail and had a fruitful discussion with them about open space issues related to the trail, and more broadly about uses of Town open space west of I-91.

In 2013, as part of a plan to redesign the Trustees of Smith Academy Park adjacent to Town Hall, the OSC held a community forum to discuss the redesign process and what might usefully emerge from it.

In the summer of 2009 the Town participated in the Heritage Landscape Inventory Program sponsored by the Massachusetts Department of Conservation and Recreation. The OSC played an active part in the Program. in which residents were asked to say what heritage landscapes were important to them, and why. One of its main results was, on the basis of residents' preferences, to identify those heritage

landscapes that were adequately protected, and those that were not. All of the ones they did identify are of signal importance in maintaining open space in Hatfield.

In 2012 the Town, with the aid of the Pioneer Valley Planning Commission, undertook a partial update of Hatfield's 2001 Master Plan. The visioning process that was a vital part of the project provided the basis for an updated Section B of the plan, entitled "Growth and Development: How Land is Used." That section proved particularly pertinent to renewing the Town's Open Space and Recreation Plan. Its main focus--what justifiably might be said to be at the heart of open space questions for Hatfield--was on the reconciliation of growth and development, on the one hand, with rural and residential patterns of landscape that Town residents say they love about Hatfield, on the other.

Together these visioning sessions and conversations, which took place at posted public meetings, have provided a rich vein of the Town's views on open space that the OSC has mined, and continues to mine with considerable profit.

B. Statement of Open Space and Recreation Goals

The most valued features of the Town continue to be its rural character, open space, and working farms. The community recognizes that growth is inevitable but wants it to be carried out in a manner commensurate with the community's character. Residential and commercial development continue to put pressure on the rural character of the town and the Town's Open Space goal is to continue to work to preserve those areas of the town that have been identified as important for watershed, scenic, and open space.

The town's existing formal recreational facilities in Hatfield are showing signs of disrepair and need of upgrading. The Town's Recreation goal is to expand the availability of recreational space by converting an existing town owned land into a soccer field and to invest in needed improvements and maintenance to existing facilities.

SECTION 7 – ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

Protection of the watershed is of critical importance for maintaining the integrity of Hatfield's water supply. The Town has made significant strides in assuring that water quality in Running Gutter Brook is not jeopardized. In 2012 the watershed area was officially named the Terry Blunt Watershed and Conservation Area with the goal of developing a broader constituency that recognizes the importance of the area. Several additional parcels in the watershed have been permanently protected since the last OSRP plan was published. Protection of the remaining undeveloped land within the watershed to Running Gutter Brook remains a priority. Undeveloped land within the primary recharge area for the town's two wells also is important to protect.

The Mill River has been identified as an important wildlife corridor supporting endangered and rare species. The conservation of this area through land acquisition or restrictions is critical to maintaining this habitat.

There are no state designated scenic roads in Hatfield. There are, however, highways cherished for their bucolic charm and rural views that make them well qualified for such a designation: River Road and Main Street provide beautiful views of the Holyoke Range, Mount Warner in Hadley, U-Mass as well as the historic houses and public buildings of the town center, all surrounded by workable farmland dotted with barns. Rocks Road, Old Stage Road, Straits Road, and Pantry Road provide a much more rural, forested landscape quite different from Main and River Roads. Maintaining the landscapes associated with any of these roads is certainly a worthwhile project, one in which one might find an unusual reconciliation of the automobile and land conservation.

In order to establish a clear list of conservation priorities, we distinguish between primary and secondary values that the OSC seeks to promote. These values underlie the Five Year Action Plan delineated in Section 9. In seeking to conserve land for open space, we bear in mind that conservation itself is often most necessary when land is most at risk of development, when, that is, a parcel has the necessary road frontage, is connected to the sewer, and conforms to applicable zoning laws.

B. Summary of Community Needs

As the Town recognizes that development will persist, its residents wish to ensure that it grows without jeopardizing the existence of the very things that make it an attractive place to live, namely its historic areas and roads, watershed, working farmlands, wetlands, and flood plains.

The town's Recreation Committee recently spearheaded the creation of a new recreation area in the town center consisting of new basketball courts, playground with structures and sitting areas. The Open Space Committee established a one mile hiking trail in the Terry Blunt Conservation Area and more trails may be planned to expand the system. Hatfield also seeks to improve the maintenance of its existing recreational facilities, and, where possible, to responsibly expand them. The Town has adequate recreation areas at present, but there is a demand not just for improved maintenance, but also for additional, varied opportunities for passive and active recreation at a wider variety of recreational

venues. Here are some possibilities: Tennis courts at Smith Academy; another soccer field on Town land behind the Congregational Church; continued negotiation with Northampton about building a bike trail between Elm Court and Damon Road; the development of a redesigned town common; improved access to the Mill River; striping of roads for bike lanes and wider shoulders; creation of new sidewalks with a view to expanding the Town's "pedestrian circuit." These kinds of activities are, of course, for both younger and older residents of Hatfield.

C. Management Needs and Potential Changes of Use

It is clear that many lands valuable for habitat and watershed protection can also serve as resources for passive recreation. The Town needs to consider how best to meet both of these needs through a process that addresses not only conservation but also systematic, active management of conservation land and open space. Such management should involve the co-ordination of the work of Town boards that have in the recent past been involved in open space, conservation, and recreation issues. Without this kind of co-ordination, the Town is in danger of unintentionally losing the open space heritage that it has expended considerable energy and resources in building up over many years. In the immediate past OSC has benefitted from technical help from various organizations, most notably the Pioneer Valley Planning Commission. PVPC is suited to planning the kind of managerial co-ordination to which we alluded in the preceding paragraph.

SECTION 8 – GOALS AND OBJECTIVES

Goal A: Protect Community Character

Objectives:

- Promote the value of the Town’s defining natural and man-made resources.
- Secure long-term protection of scenic landscapes and vistas.
- Support the protection and restoration of historic buildings and places.

Goal B: Protect Farmland

Objectives:

- Promote the town’s agricultural economy.
- Promote farmland protection opportunities for all landowners
- Coordinate technical assistance to landowners to implement protection strategies
- Establish a local agricultural preservation program

Goal C: Protect Wetlands and Floodplains

Objectives:

- Promoting the value of the wetlands and floodplains in the community.
- Prevent residential and non-agricultural development from occurring in the floodplains to ensure adequate flood storage capacity and prevent public hazards.
- Promote land protection tools and strategies
- Coordinate technical assistance to landowners to implement protection strategies

Goal D: Protect Water Supply

Objectives:

- Promote the value of continued drinking water protection.
- Prevent residential and non-agricultural development from occurring in the floodplains to ensure adequate flood storage capacity and prevent public hazards.
- Permanently protect open space within the primary recharge areas to the Omasta and West Hatfield Wells and Running Gutter Reservoir watershed.

Goal E: Protect Woodlands

Objectives:

- Identify and protect important forested wildlife corridors and other woodland habitat.
- Support sustainable forestry practices on private and town-owned lands to ensure healthy forest ecosystems and control of invasive species, and prevent down gradient erosion and flooding.
- Promote appropriate and responsible recreational use of town-owned forest land.

Goal F: Management of Protected Resources

Objectives:

- Establish or designate Management Entity(s) in the Town for protected Lands.
- Promote establishment of “*Friends of*” stewardship groups and/or build constituencies for protected resources.
- Create or establish funding sources for management needs.
- Create and post rules for use of Town owned lands
- Better delineate and enforce areas for motorized recreational use versus non-motorized uses.
- Promotion of responsible use of recreational resources in Town

(continued) – GOALS AND OBJECTIVES

Goal G: Provision of Adequate Recreation Spaces

Objectives:

- Establish new recreational opportunities and facilities for picnicking and social events, ice skating, bicycling, passive water craft use, and hiking.
- Expand and improve existing recreational facilities such as playing fields and playgrounds.
- Better delineate and enforce areas for motorized recreational use versus non-motorized uses.

Goal A. Protect Community Character

Each of the other seven goals identified in this section in some way contributes to the character of the community that Hatfield residents greatly love, and which its neighbors admire. But community character comprises not only the scenic landscapes and vistas of a place, it also includes its history as told through the buildings and places in, and on which the Town was established. If 1670 marks the formal incorporation of the Town, archeological evidence demonstrates a Native American presence in the Connecticut Valley long before the 17th century. For their part, the early European settlers chose to call Hatfield their home for many of the same reasons as their Native American cohort: the presence of a fertile floodplain; a clean, abundant source of water; the existence of forested hills for wildlife and recreation. It is life lived in the union of these natural and human made features that has played a crucial role in giving Hatfield its character and sense of place. The goal of this plan, and of earlier plans of which it is the legatee, is that the Town's character will be preserved and promoted for the benefit of future generations.

Goal B. Protect Farmland

The Town of Hatfield has had some success in preserving farmland as there are currently eight farms totaling 395 acres, which are restricted for agricultural purposes. Most recently the Town voted to create a Community Preservation Act fund for local contributions to APR projects.

The community strongly identifies with its agricultural heritage and wants to see farming continue as a central part of the Town's economic life. While the quantifiable loss of farms and farmland in Hatfield is modest, the trend is not positive. Excluding forestland, the total loss of farmland in the Town between 1971 and 1997 was about 266 acres, or 7 percent. Between 1997 and 2005, 606 acres or 17 percent was lost. These figures, taken from the Hatfield Master Plan 2012 update, are cause for concern. Continuing pressure in the real estate market for larger lot home sites close to I-91, along with the educational, cultural, and economic amenities of communities like Amherst and Northampton, could easily tip the balance against Hatfield's working farm landscapes.

Hatfield needs to assist farmers who wish to protect their land from future development as well as find ways to promote the Town's agricultural economy. Hatfield also needs to encourage farmers to enroll in the state's Agricultural Preservation Restriction Program or seek other long-term preservation with potential state, federal or non-profit conservation agencies. One of the immediate goals is to establish a local APR program for farms with less than five acres, which do meet the state APR qualifications.

Goal C. Protect Wetlands and Floodplains

Wetlands serve many purposes: they absorb floodwater and runoff, filter pollutants from water, provide natural habitat for more wildlife species than any other land type, and serve as ground water recharge areas. There are a number of wetland types found in Hatfield including portions of the Mill River up gradient of the Hatfield Dam at Prospect Street, and Great Pond that is an old oxbow meander scar of the Connecticut River. Other wetland habitats in Hatfield include some abandoned farm fields with hydric soils and drained beaver meadows.

There is a greater abundance of wooded wetlands than any other wetland type in Hatfield. These are primarily associated with the Connecticut River and Mill River floodplains, as well as significant expanses west of the “Rocks” area, associated with Running Gutter Brook and its tributaries.

Extensive areas of floodplain, both wooded areas and open fields, border on the Connecticut and Mill Rivers. Specifically a small river floodplain forest on the upper Mill River, a transitional floodplain forest along the lower Mill River and a low energy riverbank community along the Connecticut River that are shown on NHESP maps. Their ability to temporarily store floodwaters needs to be protected as a common benefit to all residents of Hatfield, as well as down gradient neighbors.

Isolated wetlands are any of the above wetland types that are separated from other wetlands, and do not have any surface water connection. These wetlands, however, can provide much the same functions and values of the other wetlands systems, and can even have important wildlife habitat characteristics. As of 2012, there were 13 Certified Vernal Pools in Hatfield. However, the Open Space Committee has identified and investigated 4 additional vernal pools since 2008, that private owners have chosen not to certify. There are potentially many more that need to be identified and certified to better protect these resources.

Promoting the value and rationale for protection of all water resources including riparian areas along rivers and streams to townspeople and visitors will be an added goal, as well as putting in place a strategy to reach out to citizens, Town boards and committees regarding wetland protection.

Goal D. Protect Water Supply

Promoting the value of continued drinking water protection is a major goal. Public drinking water in Hatfield is provided by two wells (West Hatfield and Omasta Wells) and Running Gutter Reservoir in West Hatfield. The primary recharge area to these wells is called the Zone II and has been delineated. In addition, some private water supply wells draw ground water for domestic use or landscape irrigation. Contamination threats to both surface and groundwater supplies exist in many forms— road salt, septic systems, pesticides, herbicides, fertilizers, gasoline, and industrial by-products. Hatfield has had at least one instance of private well contamination from pesticides in the Mountain Road area. Likewise, recharge to these areas, particularly the two wells is also as important. Large expanses of impervious surfaces, such as roads and buildings, prevent rainwater from soaking into the ground and recharging the aquifer. Abundant clean recharge is critical to the health of both surface and groundwater supplies. Recent work by Mass GIS online mapping indicates that there may be a substantial previously undetected aquifer lying under the routes 5 and 10 corridor and eastward

towards the Connecticut River, which may be an additional source of drinking water. (See Hatfield Master Plan 2012 update, p. 17.)

Goal E. Protect Woodlands

The wooded areas of Hatfield are extensive and provide many benefits to the Town. Forest resources in Hatfield lie primarily west of the I-91 corridor. They encompass approximately 4,200 acres, which consists of 41 percent of the total land area in the Town. There has been a decline of 13 percent, in forested cover from 1997 - 2005. The residential development that has occurred along Linseed Road, Mountain Road, and in the southwestern corner of town adjacent to Williamsburg accounts for some of this land conversion.

Hatfield is in the enviable position of having significant forest resources in West Hatfield. Protection of these lands is critical for the diversity of wildlife that rely on them such as bears, coyotes, deer, bobcat, grouse, turkey, woodpeckers, squirrels, porcupines, and deep wood songbirds such as wood thrush, scarlet tanager, and veery. The Spring 2013 establishment of the Terry Blunt Watershed and Conservation Area enshrines forest protection of at least 500 acres in this area.

The value of the forest resources to the community extends beyond lumbering and sale of Class I Prime forest species. Trees not harvested for their commercial application provide flood mitigation and protect the water quality of Running Gutter Reservoir by acting as a filter. Protecting this supply will be crucial to the future commercial and residential growth of the Town. Continued deforestation within the water supply recharge area could result in pollution of the supply as oil, fertilizers, and

other chemicals are rapidly washed off developed areas to surface waters. Without forested areas, floodwaters from heavy storms would run off more rapidly, raising flood waters and assuring more property and crop damage. Other environmental impacts such as air quality degradation, reduction of visual buffers from adjacent uses, and elimination of habitat could ensue as well.

Deforested hillsides can also impact down-gradient properties as the rapid runoff causes erosion of stream banks and hillsides, sending sediment downstream and potentially causing greater damage to homes and businesses during major storm events. Erosion causes streams and rivers to fill with silt, resulting in oxygen deprivation to water plants and animal species. Finally, the loss of significant forested areas will visually alter the character of the community. Thus primary goals include identifying and protecting important corridors; supporting sustainable and ecologically sound forestry practices; promoting appropriate and responsible recreational use of town owned forest land.

Goal F: Management of Protected Resources

Since the 2008 OSRP, additional parcels of farmland and watershed land have been protected either through purchase by the Town, implementation of conservation restrictions, or successful application of APR's. As more land is protected, a management strategy needs to be developed and implemented. The establishment of Management Entities in the Town with direct responsibility for overseeing protected resources would be a major goal. It may be that a number of existing Town committees and boards will need to coordinate this effort and create a new framework going forward.

Making users and decision makers aware of the existence of protected lands and the necessity of managing their use and enjoyment will be the first priority. Building a constituency among town residents through the creation of “Friends of” groups which promote good management of natural resources would be an additional goal worth pursuing.

Identifying funding sources for management through grants or through town budgets for items such as signage, sustainable forestry planning, trail building, and stewardship programs need to be planned for and identified each fiscal year.

Goal G. Provide Adequate Recreational Spaces

The playing fields at Smith Academy, Hatfield Elementary School and behind the old Center Street School serve Hatfield’s youth well. Additionally two playgrounds exist at the Elementary School as well as a new playground behind the Safety Complex. Adjacent to the Safety Complex, the Town (2013) now has a new outside basketball court as well. Other desired facilities identified in the 2013 Open Space Committee survey are tennis courts, additional soccer fields, bocce courts, and horseshoe and shuffleboard areas.

With the great expanses of forested land and dirt roads in the Running Gutter watershed, there are many opportunities for hiking and mountain biking. A one-mile walking and mountain biking trail (2013) has been developed with an entrance off Reservoir Road. Other opportunities exist on many dirt roads particularly around Great Pond and the agricultural areas along the Connecticut River. However, much of this land is either privately owned or owned by the Town for the sole purpose of watershed protection.

The Town needs to assess all of the areas that are currently available for passive recreation and work with property owners to develop a management scheme that would be acceptable to all. Likewise, the conflict between motorized recreational use and non-motorized use needs to be addressed, particularly on watershed land and on the Connecticut River shoreline.

SECTION 9 – FIVE-YEAR ACTION PLAN 2014-2019

The Town of Hatfield’s Open Space Committee has identified the following Five-Year Action Plan to meet the town’s goals and objectives for open space and recreation. A responsible board or committee has been identified for each of the actions as well as a prioritization scheme based on the recommended year of implementation.

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|--|---|-----------------------------------|----------------------------------|
| Goal A. Protect Community Character | | | |
| <p><i>Objective:</i> Promote the value of the Town’s defining natural and man-made resources</p> <ul style="list-style-type: none"> • Continue promotion of farmland protection by meeting with farmers • Continue agricultural related events such as the annual agricultural fair and road race as a fundraiser and promotional tool | <p>Agricultural Advisory Commission</p> <p>Agricultural Advisory Commission</p> | <p>2014-2016</p> <p>2014-2019</p> | <p>N/A</p> <p>Event Proceeds</p> |
| <p><i>Objective:</i> Secure long-term protection of scenic landscapes and vistas</p> <ul style="list-style-type: none"> • Promote the value of the Town landscape and vistas through photographic and other exhibits | <p>Open Space Committee</p> <p>Local Cultural Council</p> | <p>2014-2019</p> | <p>LCC Grant</p> |
| <p><i>Objective:</i> Support the protection and restoration of historic buildings and places</p> <ul style="list-style-type: none"> • Continue to promote listing of sites on National Register of Historic Places • Seek funding for the preservation of significant Town artifacts | <p>Historical Commission</p> <p>Historical Society</p> <p>Historical Commission</p> | <p>2014-2019</p> <p>2014-2019</p> | <p>N/A</p> <p>State Grant</p> |

FIVE-YEAR ACTION PLAN Pg2. (continued)

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|--|--|--------------------------------|----------------------------|
| Goal B. Protect Farmland | | | |
| <p><i>Objective:</i> Promote the town’s agricultural economy</p> <ul style="list-style-type: none"> • Support the buy local campaign • Establish educational initiative in the local schools to further understanding of Hatfield’s agricultural economy | <p>Agricultural Advisory Com. Open Space Committee Agricultural Advisory Com. School Committee</p> | <p>2014-2019 2014-2019</p> | <p>N/A State Grant</p> |
| <p><i>Objective:</i> Promote farmland protection opportunities for all landowners</p> <ul style="list-style-type: none"> • Continue promotion of farmland protection by meeting with farmers | <p>Agricultural Advisory Commission</p> | <p>2014-2019</p> | <p>N/A</p> |
| <p><i>Objective:</i> Coordinate technical assistance to landowners to implement protection strategies</p> <ul style="list-style-type: none"> • Apply for grants for technical assistance | <p>Agricultural Advisory Commission</p> | <p>2014-2019</p> | <p>State Grant</p> |
| <p><i>Objective:</i> Establish a local agricultural preservation program</p> <ul style="list-style-type: none"> • Draft a local APR bylaw and present for a vote at Town Meeting | <p>Agricultural Advisory Commission</p> | <p>2015-2016</p> | <p>N/A</p> |
| Goal C. Protect Wetlands and Floodplains | | | |
| <p><i>Objective:</i> Promote the value of the wetlands and floodplains in the community</p> <ul style="list-style-type: none"> • Reach out to owner of the Mill River dam to determine its condition and develop a consensus between Town and landowner regarding the future of the dam | <p>Board of Selectmen Open Space Committee Conservation Commission Historical Commission</p> | <p>2014-2016</p> | <p>N/A</p> |

FIVE-YEAR ACTION PLAN Pg3. (continued)

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|---|---|--|---|
| Goal C. Protect Wetlands and Floodplains (continued) | | | |
| <p><i>Objective:</i> Prevent residential and non-agricultural development from occurring in the floodplains to ensure adequate flood storage capacity and prevent public hazards</p> <ul style="list-style-type: none"> Identify at risk parcels along public roads and acquire the properties or development rights | <p>Open Space Committee Agricultural Advisory Com. Board of Selectmen</p> | <p>2014-2019</p> | <p>N/A</p> |
| <p><i>Objective:</i> Promote land protection tools and strategies</p> <ul style="list-style-type: none"> Continue to engage Conservation Works to work with Mill River landowners to encourage land preservation Work with owners in floodplain on South St. to implement APR's on their parcels Talk with landowners in impoundment area above Mill River dam about protection opportunities Continue with vernal pool investigations and certifications Investigate opportunities for flood plain protection on Bashin Road Work with the City of Northampton on protecting the Skibiski parcel | <p>Open Space Committee Open Space Committee Open Space Committee Open Space Committee Conservation Commission Open Space Committee Conservation Commission Open Space Committee City of Northampton</p> | <p> 2014-2019 2015-2017 2014-2019 2014-2019 2014-2019</p> | <p> N/A N/A Smith Academy Students/Teachers N/A N/A</p> |
| Goal D. Protect Water Supply | | | |
| <p><i>Objective:</i> Promote the value of continued drinking water protection</p> <ul style="list-style-type: none"> Educate the public about the Towns' water supply through signage at the Terry Blunt Watershed and Conservation Area | <p>Open Space Committee Conservation Commission</p> | <p>2014</p> | <p>Community Preservation Act Town Meeting Vote</p> |

FIVE-YEAR ACTION PLAN Pg4. (continued)

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|--|--|-----------|---|
| Goal D. Protect Water Supply (continued) | | | |
| <p><i>Objective:</i> Prevent residential and non-agricultural development from occurring within the drinking watershed area</p> <ul style="list-style-type: none"> Acquire land or purchase development rights in threatened lands in watershed area | Open Space Committee Conservation Commission | 2014-2019 | Community Preservation Act Town Meeting Vote |
| <p><i>Objective:</i> Permanently protect open space within the primary recharge areas to the Town Wells and Running Gutter Reservoir watershed</p> <ul style="list-style-type: none"> Prioritize and acquire land within the Town Well's Zone II or other permanent conservation restriction | Board of Selectmen Open Space Committee Department of Public Works | 2014-2019 | Community Preservation Act Town Meeting Vote |
| Goal E. Protect Woodlands | | | |
| <p><i>Objective:</i> Identify and protect important forested wildlife corridors and other woodland habitat</p> <ul style="list-style-type: none"> Prioritize important forested wildlife corridors and other woodland habitat using BioMap2 | Open Space Committee Broad Brook Coalition | 2016-2018 | N/A |
| <p><i>Objective:</i> Support sustainable forestry practices on private & town-owned lands to ensure healthy forest ecosystems & control of invasive species, and prevent down gradient erosion and flooding</p> <ul style="list-style-type: none"> Annually contract with a forest management consultant for the purposes of implementing best forestry practices on town owned lands | Board of Selectmen Department of Public Works | 2014-2019 | Town Budget |
| <p><i>Objective:</i> Promote appropriate and responsible recreational use of town-owned forest land</p> <ul style="list-style-type: none"> Expand recently establish trail system to other woodland areas of town owned land | Open Space Committee | 2014-2019 | DCR Recreational Trail Grants |

FIVE-YEAR ACTION PLAN Pg5. (continued)

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|---|--|--|---|
| Goal F. Management of Protected Resources | | | |
| <p><i>Objective:</i> Establish or designate management entities in the Town for protected lands</p> <ul style="list-style-type: none"> • Coordinate with DPW on management and investigate possibility of Conservation Manager position | <p>Open Space Committee Department of Public Works Board of Selectmen</p> | <p>2015-2017</p> | <p>Town Budget</p> |
| <p><i>Objective:</i> Promote establishment of “Friends of” stewardship groups and/or build constituencies for protected resources</p> <ul style="list-style-type: none"> • Establish "Friends of Hatfield Conservation", a volunteer organization | <p>Open Space Committee Volunteers</p> | <p>2015-2017</p> | |
| <p><i>Objective:</i> Investigate or establish funding sources for management needs</p> <ul style="list-style-type: none"> • Seek out grants for trails and forestry management | <p>Open Space Committee Board of Selectmen</p> | <p>2014-2016</p> | <p>DCR Recreational Trails Grants</p> |
| <p><i>Objective:</i> Create rules for use of Town lands</p> <ul style="list-style-type: none"> • Bring proposed rules before appropriate town board to finalize them and then purchase and post | <p>Board of Selectmen, DPW Open Space Committee Various Town Boards</p> | <p>2014-2017</p> | <p>N/A</p> |
| <p><i>Objective:</i> Better delineate & enforce areas for motorized recreational use vs non-motorized uses</p> <ul style="list-style-type: none"> • Draw up maps with allowed use zones | <p>Board of Selectmen, DPW Open Space Committee</p> | <p>2014-2017</p> | <p>N/A</p> |
| <p><i>Objective:</i> Promote responsible use of recreational resources in Town</p> <ul style="list-style-type: none"> • Continue to pursue Mill River access • Increase awareness in town of activities sponsored by the Broad Brook Coalition • Promote & coordinate hikes and river trips • Continue trail building | <p>Open Space Committee Open Space Committee Open Space Committee Committees adjacent towns Open Space Committee</p> | <p>2014-2019 2014-2019 2014-2019 2014-2019</p> | <p>N/A N/A N/A To be determined</p> |

FIVE-YEAR ACTION PLAN Pg6. (continued)

| ACTION | RESPONSIBLE PARTY | YEAR | FUNDING SOURCES |
|--|--|--|--|
| Goal G. Provide Adequate Recreational Spaces | | | |
| <p><i>Objective:</i> Establish new recreational opportunities and facilities for picnicking and social events, ice skating, bicycling, passive water craft use, and hiking</p> <ul style="list-style-type: none"> • Redesign and renovate Smith Academy Park to create a more accessible and multi-functional town common. • Create additional soccer fields on town owned lands behind cemetery • Construct tennis courts on town owned land | <p>Open Space Committee Trustees of Smith Academy</p> <p>Recreation Committee Board of Selectmen</p> <p>Open Space Committee Recreation Committee Board of Selectmen</p> | <p>2014-2019</p> <p>2015-2018</p> <p>2014-2019</p> | <p>PARC Grant Community Preservation Act</p> <p>Community Preservation Act</p> <p>Community Preservation Act</p> |
| <p><i>Objective:</i> Expand and improve existing recreational facilities</p> <ul style="list-style-type: none"> • Bashin • Maintenance of fields | <p>Open Space Committee Recreation Committee</p> | <p>2014-2019</p> | <p>To be determined</p> |
| <p><i>Objective:</i> Better delineate and enforce areas for motorized recreational use versus non-motorized uses</p> <ul style="list-style-type: none"> • Bring existing rules to town officials in order to create signage | <p>Board of Selectmen Department of Public Works</p> | <p>2014-2019</p> | <p>Department of Public Works</p> |

SECTION 10 – STATUS of PREVIOUS FIVE-YEAR ACTION PLAN 2008-2013

The following table summarizes the status of the action plan delineated by the Town of Hatfield’s Open Space Committee in the Town’s 2008 Open Space and Recreation Plan

| ACTION | RESPONSIBLE PARTY | YEAR | CURRENT STATUS |
|--------|-------------------|------|----------------|
|--------|-------------------|------|----------------|

Goal A. Protect Community Character

| | | | |
|--|--|-----------|---|
| Improve GIS capacity and natural resource data layers for use by town departments for resource protection planning | Board of Selectmen Assessor’s Office | 2008-2010 | GIS Town website/Main Street maps was created which includes data layers |
| Consult with other town boards about taking advantage of resource planning tools including zoning bylaws | Planning Board Open Space Committee Board of Selectmen | 2008-2013 | Established a Regional Conservation Agent position Master Plan was updated in 2012 |
| Identify Native American sites | Historical Commission Open Space Committee | 2008-2013 | Old Farms Road archaeological study was performed |
| Investigate feasibility of creating a Demolition Delay Bylaw for historical structures | Historical Commission Planning Board | 2010-2012 | By-law was passed at 2012 town meeting |
| Perform Heritage Landscape Survey | Open Space Committee Historical Commission | 2012-2013 | Hatfield Reconnaissance Report Completed in 2009 |
| Continue to promote listing of sites on National Register of Historic Places | Historical Commission | 2008-2013 | Ongoing, currently 8 sites in town |
| Identify roads previously designated at the local level as Scenic Roads | Board of Selectmen Department of Public Roads | 2009 | No action taken |
| Prioritize locally designated scenic roads for protection | Planning Board Open Space Committee | 2009-2013 | No action taken |

Goal B. Protect Farmland

| | | | |
|---|---|-----------|---|
| Perform outreach to farmland owners about opportunities and strategies for long-term land protection | Open Space Committee Agricultural Advisory Committee | 2008-2013 | Spoke with several farmers about farmland preservation |
| Identify high value parcels at risk for development | Open Space Committee Agricultural Advisory Committee | 2008-2013 | Ongoing |
| Acquire restrictions (conservation or agricultural preservation) high value parcels at risk for development | Town Meeting Agricultural Advisory Committee Community Preservation Committee | 2009-2013 | Acquired several APR’s Established a fund for CPA funds for APR local contribution |

STATUS of PREVIOUS FIVE-YEAR ACTION PLAN 2008-2013 Pg.2 (continued)

| Goal C. Protect Wetlands and Floodplains | | | |
|---|---|-----------|---|
| Certify Potential Vernal Pools | Open Space Committee Conservation Comm. | 2008-2013 | Smith Academy students/teachers |
| Advocate for the protection and restoration of the Hatfield Dam | Board of Selectmen Open Space Committee Conservation Comm. Historical Commission | 2008-2013 | Ongoing |
| Provide training to land use boards about zoning bylaws and tools for resource protection | Planning Board Open Space Committee Board of Selectmen | 2008-2013 | Planning Board participated in training sessions. OSC members attended seminar on land use |

| Goal D. Protect Water Supply | | | |
|---|---|-----------|---|
| Prioritize and acquire land within the Running Gutter watershed or other permanent conservation restriction | Board of Selectmen Open Space Committee DPW Community Preserv. Com | 2009-2013 | Acquired 2 parcels in 2010 and in the process of protecting 2 additional parcels in 2013 |
| Prioritize and acquire land within the Town Well's Zone II or other permanent conservation restriction | Board of Selectmen Open Space Committee DPW Community Preserv. Com | 2009-2013 | Ongoing |
| Seek Tax Title Taking on remaining "Owner Unknown" parcels in Running Gutter watershed | Assessor's Office Board of Selectmen | 2009-2010 | 2 parcels of approximately 30 acres identified and they are currently in tax title taking process |
| Approach Valley Land Fund about purchase of parcel in Running Gutter watershed | DPW Open Space Committee Community Preserv. Com | 2009-2010 | Purchase completed |

| Goal E. Protect Woodlands | | | |
|--|--|-----------|---|
| Acquire forestlands within the Running Gutter watershed or other permanent conservation restriction | Board of Selectmen Department of Public Works Community Preservation Committee | 2008-2013 | Acquired 2 parcels in 2010 and in the process of protecting 2 additional parcels in 2013 |
| Develop signage for watershed to inform people about appropriate uses of watershed land | Department of Public Works Open Space Committee | 2008-2009 | Funding approved for signage plan that has been developed |
| Identify unprotected forested land along Mill and Connecticut River corridors and other priority areas | Open Space Committee | 2008-2013 | Worked with Regional Conservation Agent and had discussions with landowners, Division of Fisheries and Wildlife regarding the protection of parcels in the Mill River riparian area |

STATUS of PREVIOUS FIVE-YEAR ACTION PLAN 2008-2013 Pg.3 (continued)

| Goal E. Protect Woodlands (continued) | | | |
|--|---|-----------|---|
| Perform outreach to forestland property owners about sustainable forestry practices and options for the long-term protection of their land | Open Space Committee | 2008-2013 | Discussions with Town Department of Public Works about sustainable forestry on town owned land |
| Seek preservation of a wildlife corridor between Hatfield and Northampton in the Fitzgerald Lake Conservation Area | Broad Brook Coalition Open Space Committee | 2010-2013 | Have identified owner unknown parcel that would be an important addition to the wildlife corridor |
| Implement better forest management practices to retain recreational value of land and sustainable forest ecosystem | Board of Selectmen DPW Community Preserv. Com | 2009-2013 | Ongoing |

| Goal F. Provide Adequate Recreational Spaces | | | |
|---|--|-----------|--|
| Work with Smith Academy to redesign layout of school grounds for building new playing fields and a tennis court | Recreation Committee School Committee Open Space Committee Community Preservation Committee | 2008-2013 | Discussions took place regarding tennis court placements and CPA funding – project ongoing Town purchased 46 acres of land in 2009 adjacent to Town Cemetery which can be used on an interim basis for playing fields |
| Utilize the student design services of the Conway School of Landscape Design or UMASS to design a system of trails and a management plan for the town-owned Running Gutter watershed land | Open Space Committee Conservation Commission Community Preservation Committee | 2009-2010 | One mile trail was completed with assistance of Pioneer Valley Planning Commission, Conservation Works and CPA funding |
| Work with MA Department of Conservation and Recreation to provide better management of Bashin Beach including trash collection | Recreation Committee Open Space Committee | 2008 | DCR was contacted regarding stewardship matters, project is ongoing |
| Develop a management plan for motorized recreational use on town-owned watershed land | DPW Open Space Committee Conservation Comm. Community Preserv. Com | 2008-2013 | New management strategies are being developed |
| Work with property owners to establish low impact access and parking to the Mill River and Great Pond | Recreation Committee Open Space Committee Community Preservation Committee | 2008-2009 | Discussions have taken place with a number of landowners, project is ongoing |
| Perform a feasibility study for unused land on the capped landfill at the Town's transfer station playing fields | Recreation Committee Community Preservation Committee | 2009-2013 | Investigating options for trail around great pond |

STATUS of PREVIOUS FIVE-YEAR ACTION PLAN 2008-2013 Pg.4 (continued)

| Goal F. Provide Adequate Recreational Spaces (continued) | | | |
|--|---|-----------|---|
| Perform feasibility study for bike path from Damon Road in Northampton to Hatfield | Recreation Committee Board of Selectmen | 2011-2013 | In collaboration with the City of Northampton, land has been acquired and plans are in place which the Town has endorsed for a proposed bike path route |
| Enhance pedestrian access and use of dike along Connecticut River | Recreation Committee Open Space Committee | 2009-2010 | No action taken |
| Promote establishment of sidewalks along new and existing roads and establishment of bike lanes where possible | Planning Board Recreation Committee Board of Selectmen DPW | 2009-2013 | Worked with DPW on striping bike lanes on town roads, ongoing project |

SECTION 11 – PUBLIC COMMENTS
Hatfield Open Space and Recreation Survey



1. How often do you use the open space or recreational facilities at:

| | Daily | Weekly | Monthly | Few times per year | Never | Rating Count |
|---|-------------------|---------------|----------------|---|-------------------|---------------------|
| Running Gutter Reservoir Watershed - Mountain, Rocks, and Reservoir Roads | 12.5% (4) | 18.8% (6) | 9.4% (3) | 37.5% (12) | 21.9% (7) | 32 |
| Dike Road | 25.0% (8) | 12.5% (4) | 18.8% (6) | 28.1% (9) | 15.6% (5) | 32 |
| State Boat Ramp | 6.3% (2) | 0.0% (0) | 18.8% (6) | 46.9% (15) | 28.1% (9) | 32 |
| Bashin Beach | 6.3% (2) | 3.1% (1) | 12.5% (4) | 46.9% (15) | 31.3% (10) | 32 |
| Trustees of Smith Academy Park (next to Town Hall) | 9.4% (3) | 6.3% (2) | 9.4% (3) | 40.6% (13) | 34.4% (11) | 32 |
| Lions Club Pavilion | 6.7% (2) | 3.3% (1) | 3.3% (1) | 76.7% (23) | 10.0% (3) | 30 |
| Hatfield Elementary School playgrounds | 13.8% (4) | 6.9% (2) | 3.4% (1) | 34.5% (10) | 41.4% (12) | 29 |
| Smith Academy athletic fields | 13.8% (4) | 6.9% (2) | 3.4% (1) | 24.1% (7) | 51.7% (15) | 29 |
| Former Center School field | 6.7% (2) | 16.7% (5) | 6.7% (2) | 13.3% (4) | 56.7% (17) | 30 |
| Sidewalk network in town center | 33.3% (10) | 26.7% (8) | 20.0% (6) | 20.0% (6) | 0.0% (0) | 30 |
| | | | | Identify 'Other' Parks/Conservation Areas | | 3 |
| | | | | answered question | | 32 |
| | | | | skipped question | | 0 |

2. How often do you use these water resources for recreation (e.g. fishing, boating, swimming)

| | Often | Sometimes | Never | Rating Count |
|---|-------------------|-------------------|-------------------|--------------|
| Connecticut River | 43.8% (14) | 40.6% (13) | 15.6% (5) | 32 |
| Bashin Beach | 28.1% (9) | 37.5% (12) | 34.4% (11) | 32 |
| Mill River | 16.1% (5) | 35.5% (11) | 48.4% (15) | 31 |
| Great Pond between Cronin Hill Road and Main Street | 12.5% (4) | 21.9% (7) | 65.6% (21) | 32 |
| answered question | | | | 32 |
| skipped question | | | | 0 |

3. Are there any other places you use for recreation? What activities do you participate in?

| | | Response Percent | Response Count |
|--------------------------|--|------------------|----------------|
| Other Location: |  | 55.6% | 5 |
| Other Activity: |  | 88.9% | 8 |
| answered question | | | 9 |
| skipped question | | | 23 |

4. Please identify all of the activities you do in Hatfield.

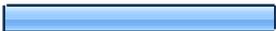
| | | Response Percent | Response Count |
|---|---|------------------|----------------|
| Swimming |  | 62.5% | 20 |
| Non-motorized trail use (hiking, snowshoeing, skiing, biking, etc.) |  | 81.3% | 26 |
| Walking/jogging on sidewalks/roads (not on trails) |  | 90.6% | 29 |
| Motorized trail use (snowmobiles, ATVs, etc.) |  | 28.1% | 9 |
| Road biking |  | 50.0% | 16 |
| Ice Skating |  | 15.6% | 5 |
| Ice Hockey |  | 15.6% | 5 |
| Hunting |  | 18.8% | 6 |
| Fishing |  | 40.6% | 13 |
| Birdwatching |  | 46.9% | 15 |
| Tennis |  | 3.1% | 1 |
| Team Sports (e.g. soccer, softball, football) |  | 34.4% | 11 |
| Horseback Riding |  | 12.5% | 4 |
| Boating |  | 56.3% | 18 |
| Other |  | 9.4% | 3 |

If other, please specify: 4

answered question 32

skipped question 0

5. Which recreational opportunities do you feel need to be expanded / enhanced / created?

| | | Response Percent | Response Count |
|--------------------------------------|---|------------------|----------------|
| Playgrounds |  | 11.1% | 3 |
| Parks |  | 40.7% | 11 |
| Picnic Areas |  | 33.3% | 9 |
| Nature Trails |  | 55.6% | 15 |
| Motorized Trail Use |  | 18.5% | 5 |
| Bike Paths |  | 48.1% | 13 |
| Tennis Courts |  | 18.5% | 5 |
| Soccer Fields |  | 25.9% | 7 |
| Bocce Courts |  | 18.5% | 5 |
| Shuffleboard |  | 11.1% | 3 |
| Horseshoes |  | 11.1% | 3 |
| Ice skating / Ice Hockey |  | 33.3% | 9 |
| Art and Cultural Events |  | 33.3% | 9 |
| Outdoor Basketball/Volleyball Courts |  | 7.4% | 2 |
| Baseball / Softball Field |  | 22.2% | 6 |
| Horseback Riding Trails |  | 14.8% | 4 |
| Pool |  | 22.2% | 6 |
| Skateboarding |  | 3.7% | 1 |
| Other Water Resources |  | 11.1% | 3 |

Other (please specify) 7

answered question 27

skipped question 5

6. How satisfied are you with the places in the community for the following activities?

| | Very Satisfied | Satisfied | Somewhat Satisfied | Not Satisfied | N/A | Rating Count |
|--|----------------|-------------------|--------------------|---------------|--------------------------|--------------|
| Team sports (soccer, softball, football) | 19.4% (6) | 32.3% (10) | 19.4% (6) | 9.7% (3) | 19.4% (6) | 31 |
| Walking/running trails | 22.6% (7) | 35.5% (11) | 38.7% (12) | 3.2% (1) | 0.0% (0) | 31 |
| Motorized trail use | 9.7% (3) | 6.5% (2) | 12.9% (4) | 3.2% (1) | 67.7% (21) | 31 |
| Fishing | 12.9% (4) | 29.0% (9) | 9.7% (3) | 0.0% (0) | 48.4% (15) | 31 |
| Hunting | 10.0% (3) | 23.3% (7) | 3.3% (1) | 3.3% (1) | 60.0% (18) | 30 |
| Ice hockey/skating | 3.3% (1) | 3.3% (1) | 10.0% (3) | 26.7% (8) | 56.7% (17) | 30 |
| Boating/canoeing | 26.7% (8) | 30.0% (9) | 26.7% (8) | 3.3% (1) | 13.3% (4) | 30 |
| Picnicking | 13.3% (4) | 10.0% (3) | 23.3% (7) | 20.0% (6) | 33.3% (10) | 30 |
| Swimming | 13.8% (4) | 17.2% (5) | 31.0% (9) | 13.8% (4) | 24.1% (7) | 29 |
| Nature Observation | 13.3% (4) | 56.7% (17) | 6.7% (2) | 0.0% (0) | 23.3% (7) | 30 |
| Camping | 10.0% (3) | 16.7% (5) | 3.3% (1) | 16.7% (5) | 53.3% (16) | 30 |
| Dog Walking | 23.3% (7) | 20.0% (6) | 6.7% (2) | 3.3% (1) | 46.7% (14) | 30 |
| | | | | | Other (please specify) | 1 |
| | | | | | answered question | 31 |
| | | | | | skipped question | 1 |

7. Which of the following resources are you most concerned about? Rank them in order of most concerned (#1) to least concerned (#8).

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Rating Average | Response Count |
|---------------------------------------|----------------------|----------------------|---------------------|--------------|---------------------|--------------|---------------------|---------------------|----------------|----------------|
| Surface Water (lakes, ponds, streams) | 6.9% (2) | 41.4% (12) | 10.3% (3) | 10.3% (3) | 13.8% (4) | 6.9% (2) | 6.9% (2) | 3.4% (1) | 3.48 | |
| Groundwater / Aquifer | 48.3% (14) | 20.7% (6) | 6.9% (2) | 0.0% (0) | 0.0% (0) | 10.3% (3) | 0.0% (0) | 13.8% (4) | 2.83 | |
| Wildlife Habitat | 3.4% (1) | 0.0% (0) | 27.6% (8) | 3.4% (1) | 17.2% (5) | 20.7% (6) | 20.7% (6) | 6.9% (2) | 5.10 | |
| Farmland | 24.1% (7) | 17.2% (5) | 13.8% (4) | 17.2% (5) | 3.4% (1) | 17.2% (5) | 3.4% (1) | 3.4% (1) | 3.41 | |
| Forests | 3.4% (1) | 0.0% (0) | 6.9% (2) | 17.2% (5) | 20.7% (6) | 17.2% (5) | 13.8% (4) | 20.7% (6) | 5.62 | |
| Scenic Views | 6.9% (2) | 3.4% (1) | 13.8% (4) | 17.2% (5) | 6.9% (2) | 6.9% (2) | 31.0% (9) | 13.8% (4) | 5.28 | |
| Open Space | 6.9% (2) | 17.2% (5) | 6.9% (2) | 10.3% (3) | 31.0% (9) | 10.3% (3) | 10.3% (3) | 6.9% (2) | 4.48 | |
| Historic and Cultural Resources | 0.0% (0) | 0.0% (0) | 13.8% (4) | 24.1% (7) | 6.9% (2) | 10.3% (3) | 13.8% (4) | 31.0% (9) | 5.79 | |
| answered question | | | | | | | | | | |
| skipped question | | | | | | | | | | |

8. Is there a park or conservation area within a 10 minute walk or drive from your home that you use?

| | | Response Percent | Response Count |
|---|--|------------------|----------------|
| Yes, there is a park or conservation area within a 10 minute walk or drive from my home and I use it. |  | 83.9% | 26 |
| There is a park or conservation area within a 10 minute walk or drive from my home but I do not use it. |  | 9.7% | 3 |
| There are no parks or conservation areas within a 10 minute walk or drive from home. |  | 6.5% | 2 |
| answered question | | | 31 |
| skipped question | | | 1 |

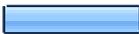
9. Do you have anything else to tell us about your thoughts on Hatfield's open spaces and/or recreational opportunities?

| | Response Count |
|--------------------------|----------------|
| | 15 |
| answered question | 15 |
| skipped question | 17 |

10. Gender

| | | Response Percent | Response Count |
|-------------------|---|------------------|----------------|
| Male |  | 50.0% | 15 |
| Female |  | 50.0% | 15 |
| answered question | | | 30 |
| skipped question | | | 2 |

11. Age

| | | Response Percent | Response Count |
|-------------------|---|------------------|----------------|
| <19 |  | 16.7% | 5 |
| 20-34 | | 0.0% | 0 |
| 35-49 |  | 20.0% | 6 |
| 50-54 |  | 16.7% | 5 |
| 55-65 |  | 30.0% | 9 |
| 65+ |  | 16.7% | 5 |
| answered question | | | 30 |
| skipped question | | | 2 |

12. How many people live in your home?

| | Response Count |
|-------------------|----------------|
| | 30 |
| answered question | 30 |
| skipped question | 2 |

13. What are their ages? Please list the number of people in each age bracket.

| | | Response Percent | Response Count |
|-------|---|-----------------------------|---------------------------|
| <19 |  | 50.0% | 15 |
| 20-34 |  | 43.3% | 13 |
| 35-49 | | 33.3% | 10 |
| 50-54 |  | 40.0% | 12 |
| 55-65 |  | 43.3% | 13 |
| 65+ |  | 13.3% | 4 |

SECTION 12- REFERENCES

Footnotes:

¹ 1980, 1990, 2000, and 2010 U.S. Census.

² DemographicsNow, 2007 based on 1980, 1990 and 2000 U.S. Census data. For 2010-11 figures, see, Town of Hatfield, Update of the Hatfield Master Plan, 2012.

³ Massachusetts Department of Revenue Division of Local Services Municipal Databank

⁴ Hatfield Master Plan, 2001

⁵ Parasiewicz, Piotr et al., *Advocate Dam Feasibility Study, Mill river, Hatfield, Massachusetts*. Northeast Instream Habitat Program, Department of Natural Resources conservation, University of Massachusetts. January 2007.

⁶ *BioMap2 Conserving the Biodiversity of Massachusetts in a Changing World*
http://maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Hatfield.pdf

⁷ MA Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, August 13, 2013

Other References:

1. The Open Space Planner's Workbook.
2. Massachusetts Statewide Comprehensive Out-door Recreation Plan.
3. Pioneer Valley Planning Commission (PVPC).
4. Town of Hatfield, Annual Census.
5. U.S. Bureau of the Census, "Fact Finder 2, Selected Economic Characteristics 2007-2011, American Community Survey 5-Year Estimates: Hatfield."
U.S. Bureau of the Census, "2010 Census Interactive Population Search, Hatfield MA."
6. Hatfield Conservation and Recreation Plan – 1989. (Referred to throughout this document as the 1989 Hatfield Open Space and Recreation Plan.)
7. Hatfield's Master Plan for the Twenty-First Century, 2001.
8. Pioneer Valley Planning Commission, "Hatfield Master Plan Update, 2012, Section B: Growth and Development; How Land is Used," 2012.

References, continued

9. Open Space and Recreation Plan Requirements, Executive Office of Environmental Affairs, 2001.
10. Day, Colonel James, Hatfield Massachusetts 1670-1970.
11. Tercentenary Historical Commission, Hatfield, Massachusetts 1679-1970, Northampton, Ma: Gazette Printing Company, 1970.
12. Hatfield Open Space and Recreation Plans, 2003 and 2008.
13. MacConnell Land Use Survey, and Massachusetts Geographic Information System.
14. Town of Hatfield By Laws, 2004.
15. “Comprehensive Nonpoint Source Management in the Mill River Subwatershed.” 1999.
16. “Developing a Regional Wellhead Protection Program.” 1994.
17. The Massachusetts Natural Heritage Program.
18. The Massachusetts Division of Fisheries and Wildlife’s Natural Heritage and Endangered Species Program.
19. The National Register of Historic Places.
20. The Hatfield Historic Commission.
21. Department of Environmental Management, Commonwealth Connections: A Greenway Vision for Massachusetts.
22. Greenway Plans for the Town of Hatfield. Reports presented to the Town of Hatfield by the students of Professor Robert L. Ryan’s course, “Landscape Architecture,” Department of Landscape Architecture and Regional Planning, University of Massachusetts at Amherst, Spring 2001.
23. PVPC, Hatfield Reconnaissance Report, Connecticut River Valley Reconnaissance Survey, Massachusetts Heritage Landscape Inventory Program, 2009.
24. PVPC, Town of Hatfield Town Center Study: Summary Report, 2010.
25. Survey Monkey, Open Space and Recreation Plan Questionnaire, 2013.

References, continued

Tables: Contained in the body of the text.

Table 1: Population Changes 1990-2010 (p.9; Section 3)

Table 2: Number of Single Family Residence Parcels (p.10; Section 3)

Table 3: Land Uses in Hatfield 1971 – 2005 (p.13; Section 3)

Table 4: Business and Industrial Zoned Acreage in Hatfield to 2005 (p.14; Section 3)

Table 5: Source of Hatfield Public Water (p.26; Section 4)

Table 6: Rare Species & Natural Communities Documented in the Town of Hatfield (p.31; Section 4)

Table 7: National Register of Historic Districts and Places (p.36; Section 4)

Table 8: Hazardous Release Sites, 21E (p.38; Section 4)

Table 9: Agricultural Preservation Restrictions, APR. (p.40; Section 5)

Table 10: Private Fee Owner with Conservation Restrictions (p.41; Section 5)

Table 11: Open Space and Recreation Lands Owned by City of Northampton (p.43; Section 5)

Table 12: Inventory of Municipal Recreation and Conservation Lands (p.44, 45, 46; Section 5)

SECTION 13: MAPS

Action Plan Map, 2014

Unique Features Map, 2014

Water Resources Map, 2014

Flood Map, 2014

Zoning Map, 2014

Zone C Watershed Map

Hatfield Soils Map, Soil Class, 2013

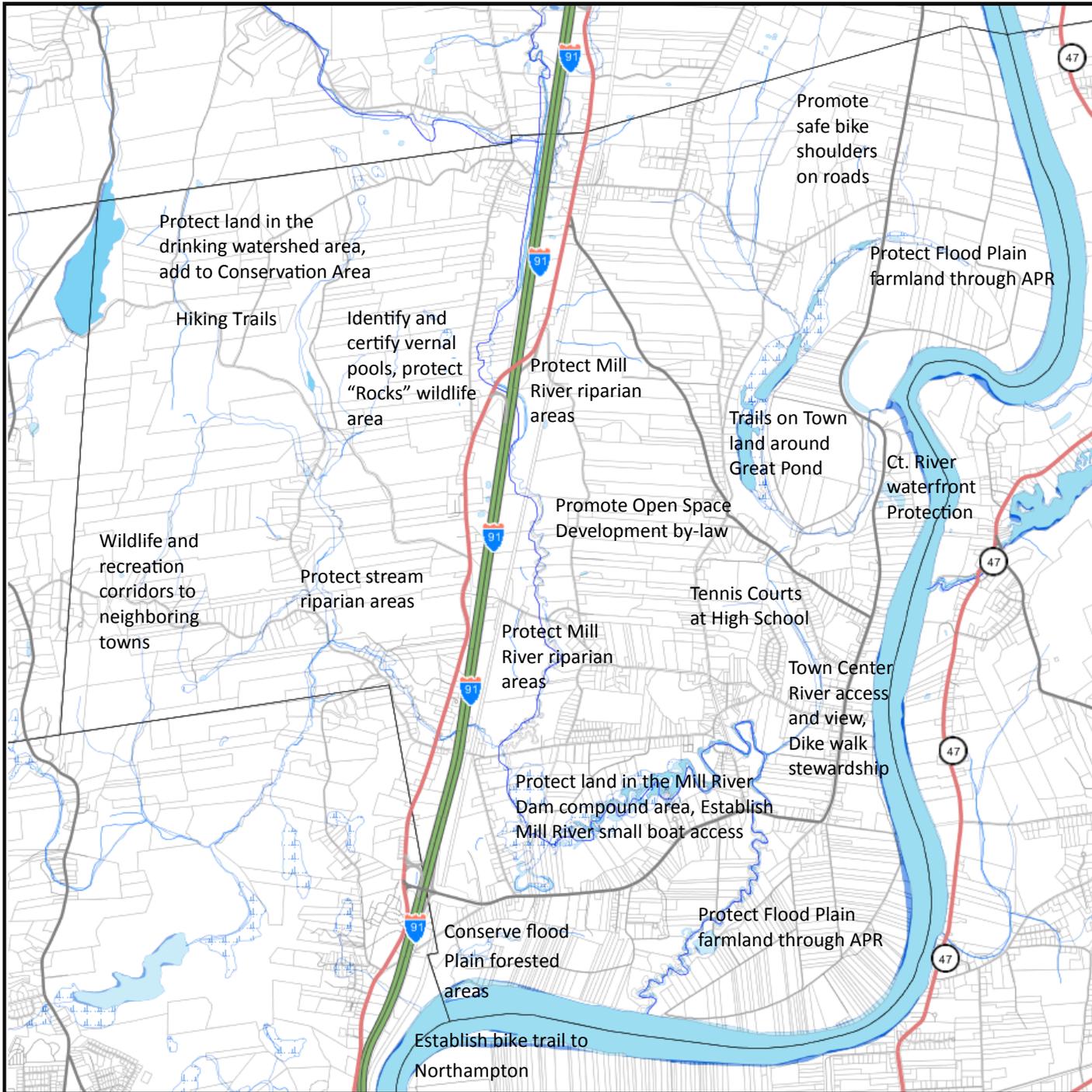
Hatfield Soils Map, Prime Farmland, 2013

BioMap 2, Topographical, 2013

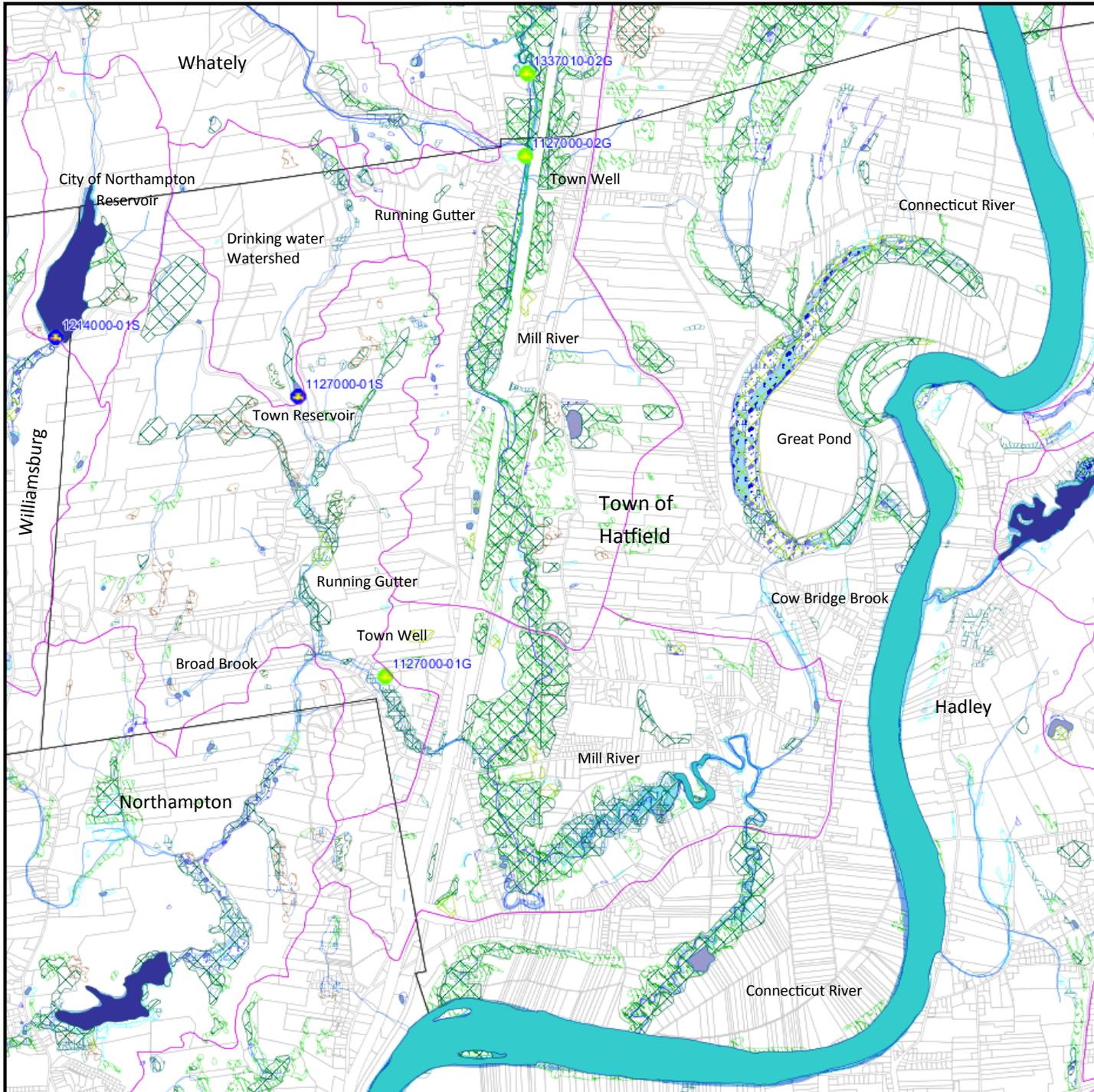
Priority and Estimated Habitats Map, 2013

Natural Communities & Vernal Pools Map, 2013

Hatfield Action Plan
For Hatfield Open Space and
Recreation Plan 2014



Hatfield Water Resources For Hatfield Open Space and Recreation Plan 2013



Subbasins Outlines



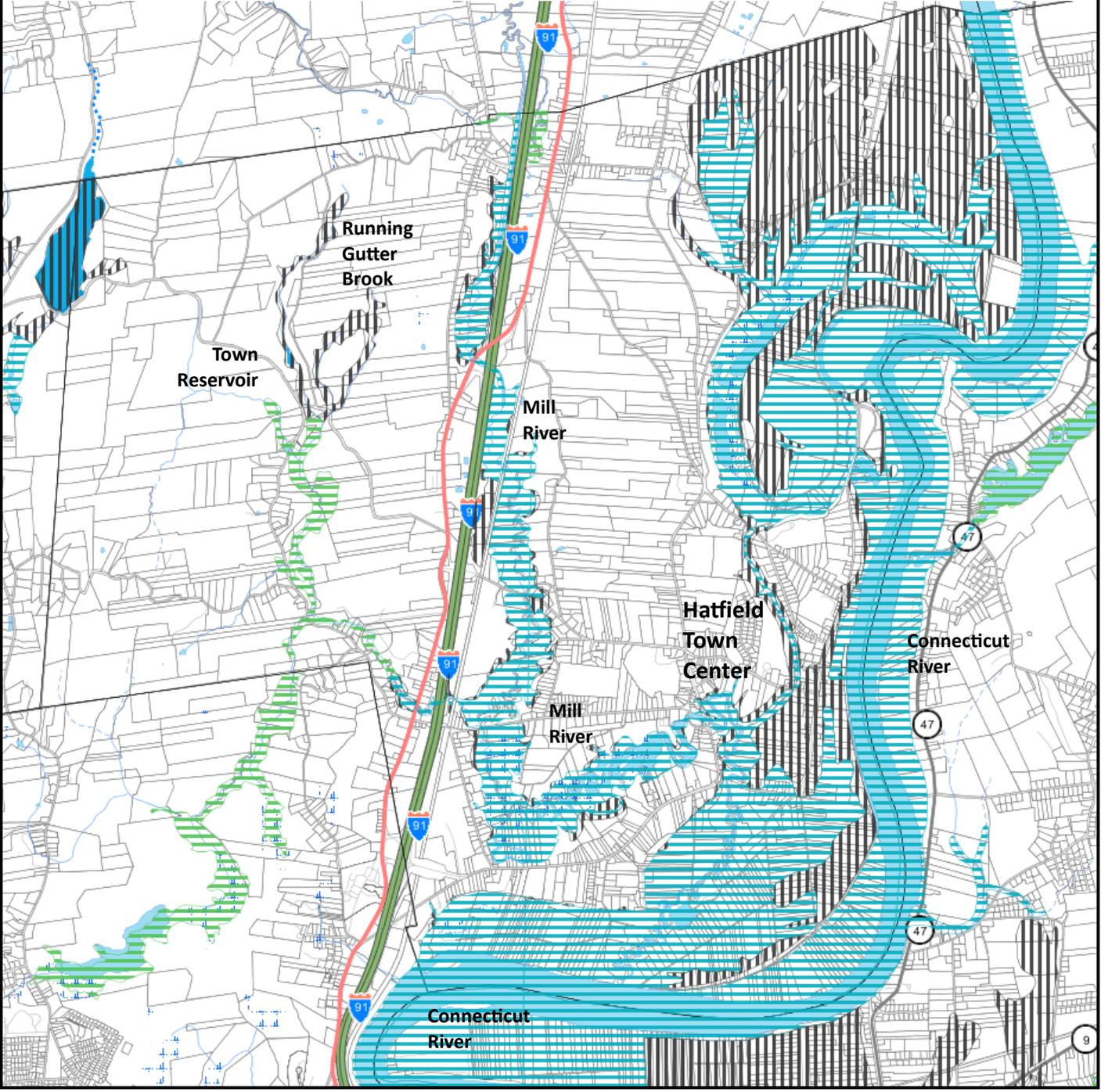
Public Water Supplies

-  Community Groundwater Well
-  Non-Community Groundwater Well
-  Surface Water Intake
-  Emergency Surface Water Intake
- Community Labels
- Non-Community Labels

NWI Wetlands Solid

-  Estuarine and Marine Wetland
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Estuarine and Marine Deepwater
-  Freshwater Pond
-  Lake
-  Riverine
-  Other

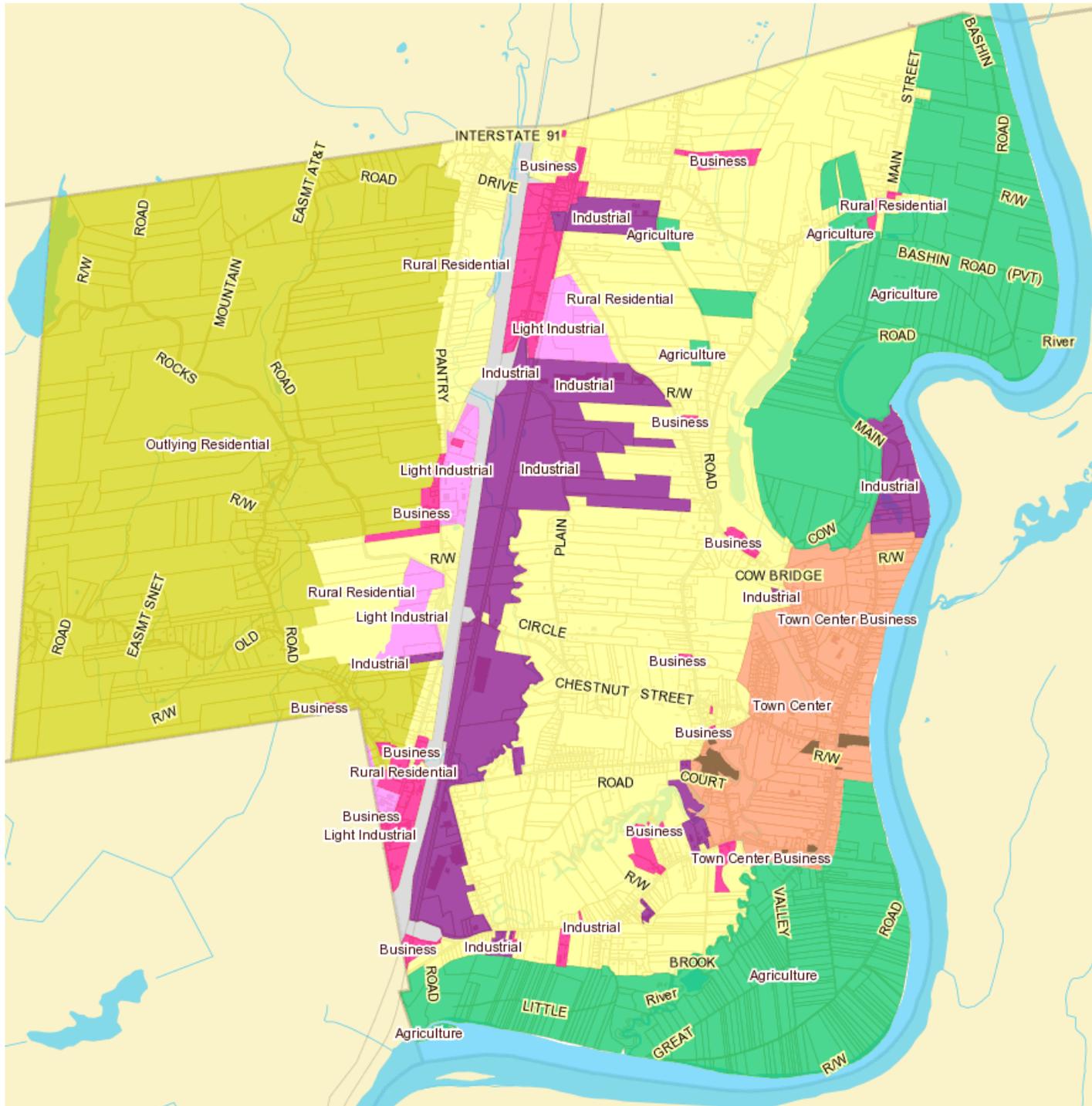
Hatfield Flood Zones For Hatfield Open Space and Recreation Plan 2014



Key

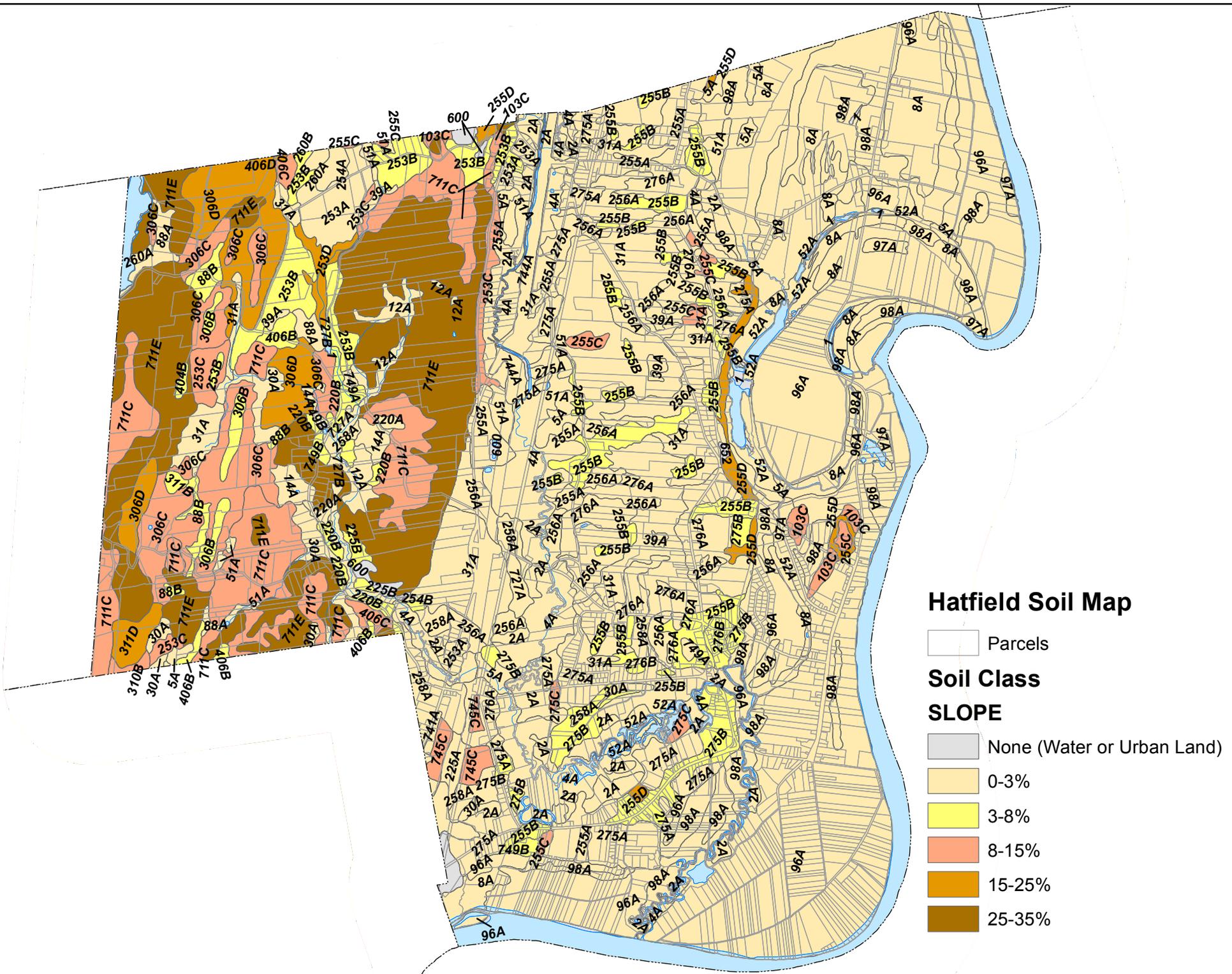
-  500 year flood Zone
-  AE: 100 year flood Zone
-  A: 100 year flood Zone

Hatfield Zoning Map For Hatfield Open Space and Recreation Plan 2014



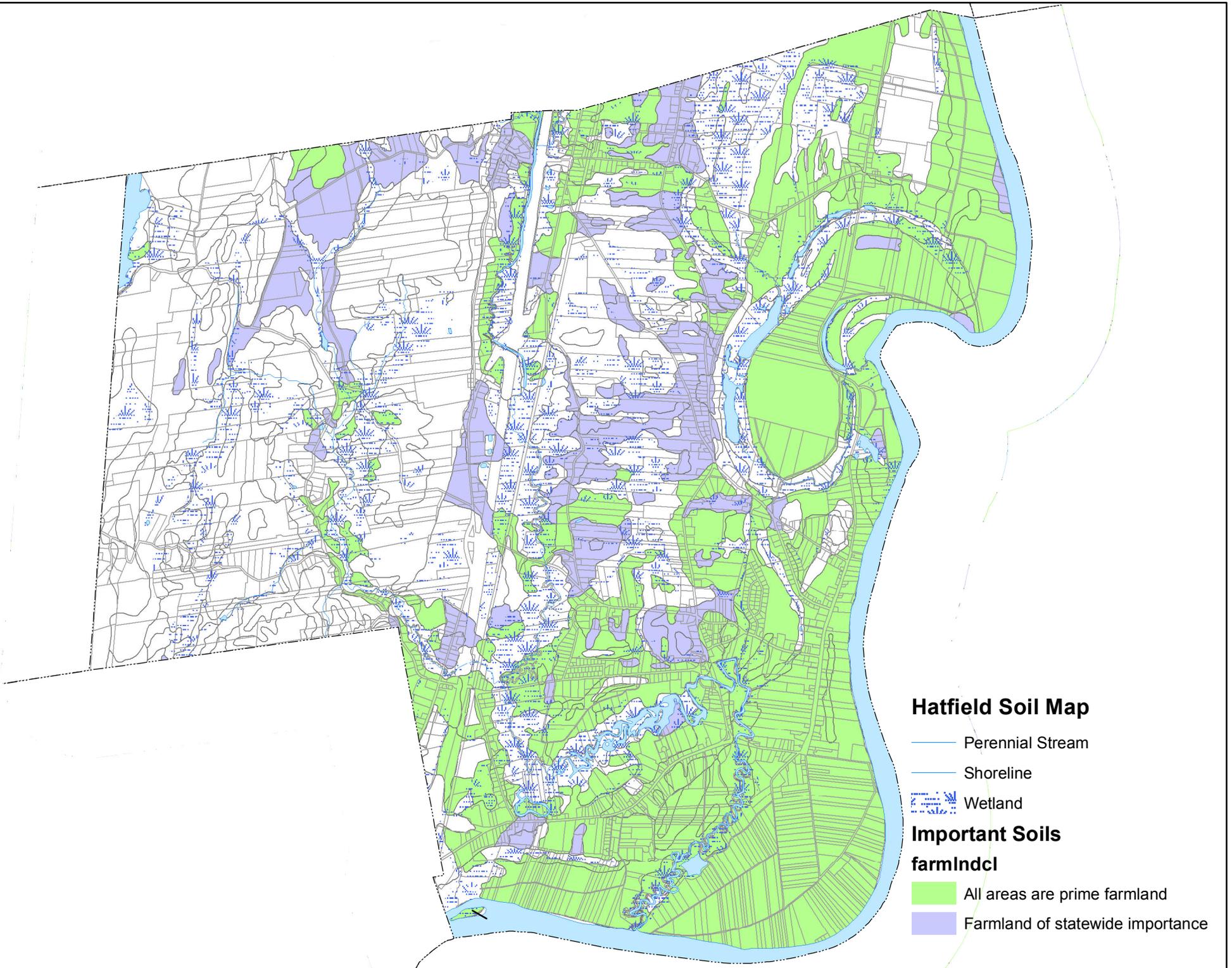
Key

- Outlying Residential
- Rural Residential
- Town Center
- Agricultural
- Business
- Light Industrial
- Industrial



Hatfield Soil Map

-  Parcels
- Soil Class**
- SLOPE**
-  None (Water or Urban Land)
-  0-3%
-  3-8%
-  8-15%
-  15-25%
-  25-35%



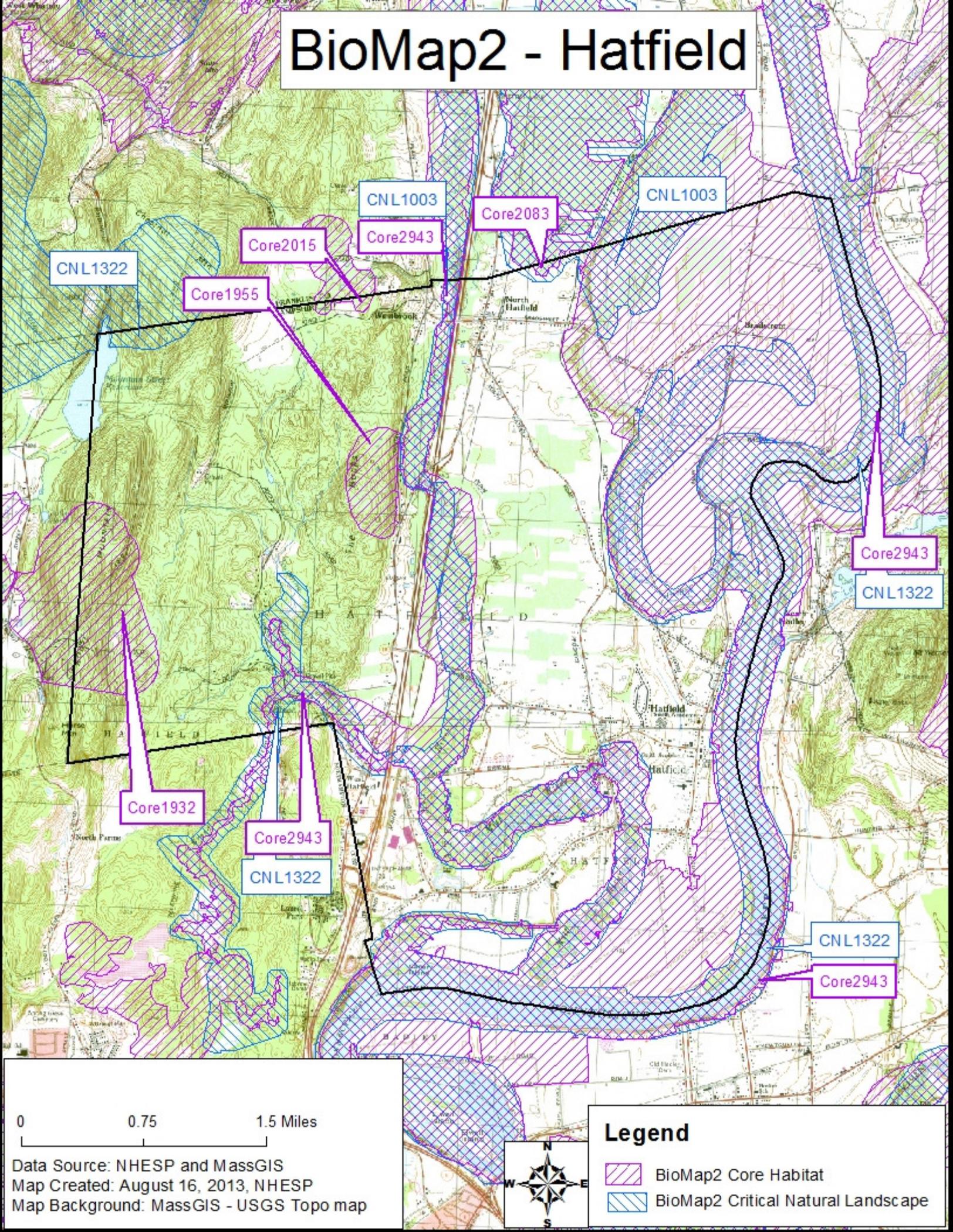
Hatfield Soil Map

- Perennial Stream
- Shoreline
- Wetland

**Important Soils
farmIndcl**

- All areas are prime farmland
- Farmland of statewide importance

BioMap2 - Hatfield



0 0.75 1.5 Miles

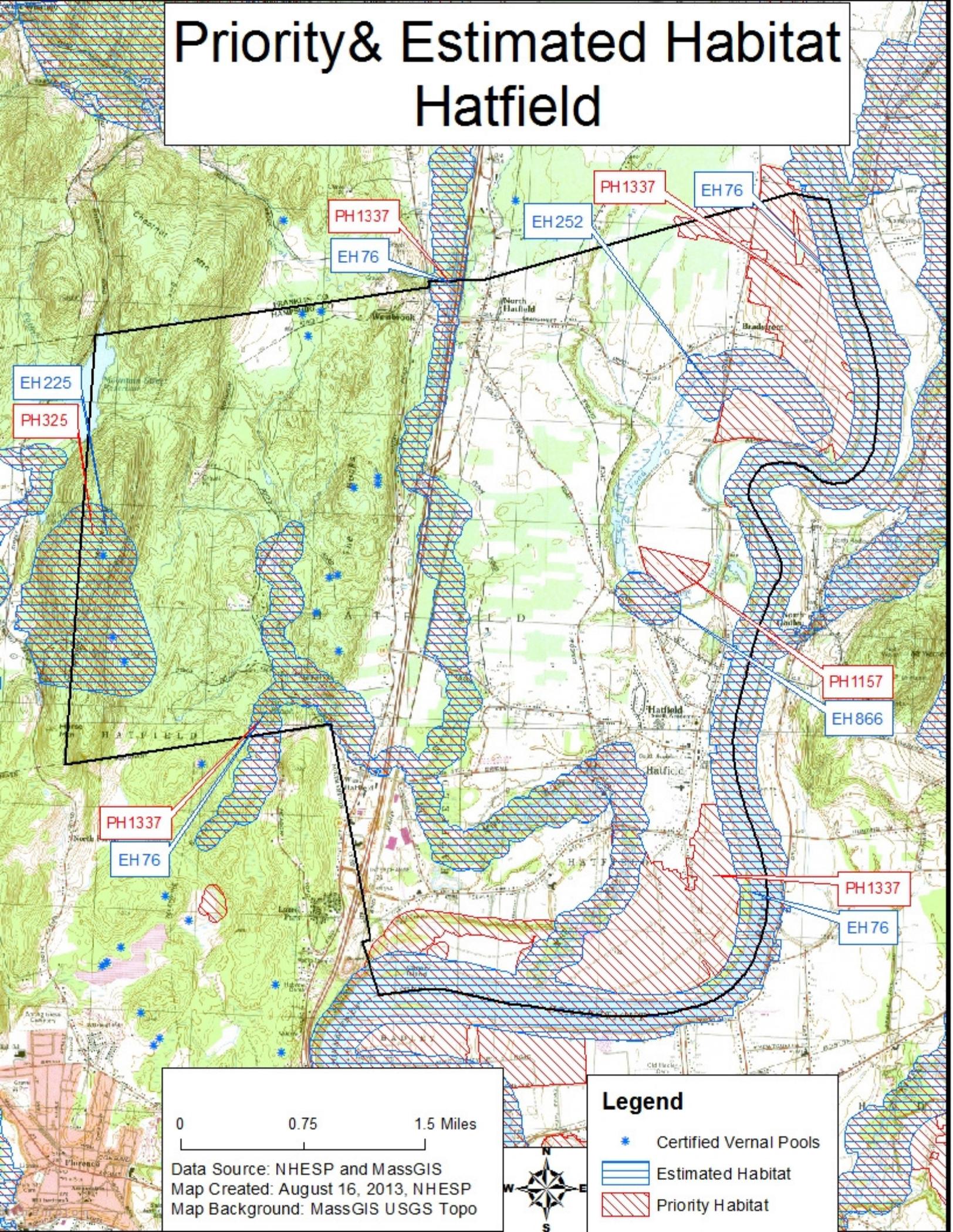
Data Source: NHESP and MassGIS
Map Created: August 16, 2013, NHESP
Map Background: MassGIS - USGS Topo map



Legend

-  BioMap2 Core Habitat
-  BioMap2 Critical Natural Landscape

Priority & Estimated Habitat Hatfield



0 0.75 1.5 Miles

Data Source: NHESP and MassGIS
 Map Created: August 16, 2013, NHESP
 Map Background: MassGIS USGS Topo

Legend

-  Certified Vernal Pools
-  Estimated Habitat
-  Priority Habitat

Hatfield Natural Communities and Potential Vernal Pools

Black Gum-Pin Oak-Swamp White Oak "Perched" Swamp

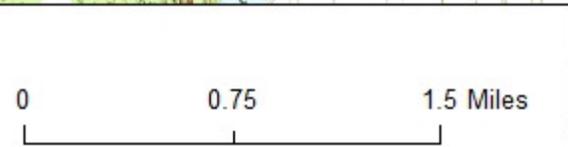
Small-river Floodplain Forest

High-terrace Floodplain Forest

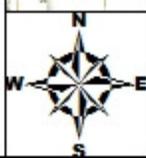
Low-energy Riverbank community

High-terrace Floodplain Forest

Transitional Floodplain Forest



Data Source: NHESP and MassGIS
Map Created: August 19, 2013, NHESP
Map Background: MassGIS USGS Topo



Legend

-  Potential Vernal Pools
-  NHESP Natural Communities

