



TOWN OF PETERSHAM

OPEN SPACE & RECREATION PLAN

2014

Prepared by

Robert A. Clark

Chair, Petersham Conservation Commission
Chair, Open Space & Recreation Committee



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July 2, 2014

RECEIVED JUL 07 2014

Robert A. Clark
Conservation Commission
3 South Main Street
P.O. Box 486
Petersham, MA 01366-0486

Re: Open Space and Recreation Plan

Dear Mr. Clark:

Thank you for submitting Petersham's Open Space and Recreation Plan to this office for review for compliance with the current Open Space and Recreation Plan Requirements. I am pleased to write that the plan is approved. This final approval will allow Petersham to participate in DCS grant rounds through October 2018.

Congratulations on a great job. Please call me at (617) 626-1171 if you have any questions or concerns about the plan.

Sincerely,

Melissa Cryan
Grants Manager

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A. PLAN SUMMARY

Petersham is a unique and beautiful community in north-central Massachusetts whose rural character is defined in large part by its abundant open spaces. Although more than half of the Town's land is protected open space, it would be a mistake to assume that Petersham's rural character and natural resources are adequately safeguarded for the future. In fact, the Town contains more than 11,000 acres of buildable land. If all or even a major portion of this land were developed in a conventional manner, it would change Petersham from a small rural town to a sprawling suburb, with significant consequences for the Town's water resources, ecosystems, and overall character. Based on the community survey conducted in 2003 as part of this planning project, Petersham's residents feel strongly about preserving the Town's natural environment and open space, and about maintaining outdoor recreational opportunities.

The DCR **PETERSHAM RECONNAISSANCE REPORT**, Spring 2008, as part of the Massachusetts Heritage Landscape Inventory Program, states on page 39:

“Due to accidents of history and geography, the town was largely bypassed by the industrial revolution, and the creation of the Quabbin Reservoir turned it into a community that has been called “centrally remote.” Along the way a series of far-sighted citizens like James Brooks helped to preserve the historic town center and thousands of acres of land in the countryside. The result is a community which has changed little for a century, one with a rich sense of place and residents that are passionate about preserving what they love about the town.”

The **Report** lists five Priority Heritage Landscapes that residents found most important:

- Petersham Common and Center Village
- Nichewaug Inn and Academy
- North Main Street Corridor
- Nichewaug Village and the East Branch of the Swift River
- Eastern Agricultural Area

This Open Space and Recreation Plan is an attempt to help the Town meet its conservation and recreation objectives. It consists of eleven chapters. The Plan begins by identifying Petersham's community setting and development patterns and trends (**Chapter C**). **Chapters D** and **E** provide an inventory of the Town's existing natural resources, historic resources, open spaces, and recreation sites, and the extent to which these resources are protected. Petersham has several critical natural resources, including at least two of statewide importance: 1) the Town's network of streams and wetlands draining to the Quabbin Reservoir, and 2) the Town's large, un-fragmented habitat areas. Petersham is an integral part of the North Quabbin Landscape, one of the state's largest, best connected, and most intact network of native habitats and ecosystems.

Based on this inventory of the Town's natural, historic, open space, and recreation resources, as well as public input from Petersham's residents, the Plan then identifies goals, needs, and specific objectives for preserving or enhancing each of these resources (**Chapters F, G, and H**). Eight overall goals became apparent. With regard to open space, these include increasing the amount of protected land in Town and encouraging the maintenance of Petersham's “working landscape” of viable farm and forest products businesses. Recreation goals focus on maintaining public access to a large portion of the Town's open

space as well as opportunities for facility-based recreation activities. Natural resource goals include protecting the Town's surface water and groundwater resources, protecting native habitats and ecosystems, and promoting optimal land management. Finally, the Town would like to protect its historic buildings and landscapes while encouraging appropriate adaptive reuse of historic structures.

The final chapter of the Plan (**Chapter I**) presents a "Five-Year Action Plan" consisting of specific steps that the Town intends to take over the next five years to implement each of the eight goals. The tasks described in the Action Plan will require the effort and commitment of numerous Town boards and departments, as well as dedicated volunteers. Key action items include the following:

- Continue through Town actions and collaboration with other organizations to protect additional open space according to the priorities shown on **Figure I-1**, the Open Space Action Map.
- Encourage or require new development to set aside open space by allowing for flexible site layout patterns.
- Adopt and implement an environmentally-based site planning process that require the consideration of ecological form and function when designing new developments.
- Establish an Agriculture and Rural Development Committee (ARDC) to promote profitable farming, forestry, and other natural resource based businesses in Petersham.
- Continue to identify and act upon opportunities to connect and expand the Town's network of trails that are open to the public.
- Encourage or require environmentally friendly storm water management techniques in new developments.
- Improve parking areas at trail entrances, especially for equestrian use.
- Continue to improve existing trails and establish new trails as needed, especially for equestrian use, at the Davenport Pond Property.
- Establish cooperative arrangement for trail and property management.
- Establish plans and programs for mitigating the effects of climate change.
- Adopt a Demolition Delay Bylaw to discourage the demolition of historically significant buildings more than 100 years old.

With foresight and persistence, Petersham's current residents can leave future generations a legacy of protected open space, clean water, thriving plant and wildlife communities, and a beautiful rural town in which to live, work, and play.

B. INTRODUCTION

B1. STATEMENT OF PURPOSE

This first Open Space and Recreation Plan (OS&RP) was prepared simultaneously with Petersham's Town Master Plan. The Master Plan and the OS&RP serve complementary functions in promoting sound land use and planning decisions for Petersham's future. The Master Plan is a comprehensive document and guide that includes a Town-wide land use plan as well as associated plans for housing, economic development, public facilities and services, and transportation. Although a number of recommendations of the Master Plan have been implemented, the Master Plan was never adopted by the Town.

The OS&RP is a more specific document that addresses issues of open space, natural resources, historic resources, and recreation. The OS&RP has a shorter-term planning horizon (7 years), and accordingly focuses on action steps that the Town can take over the next several years. The goals of the OS&RP are to:

- Identify existing open spaces, recreational facilities, and natural and historic resources in the Town of Petersham;
- Increase awareness of Petersham's existing open space and recreational resources, deficiencies, and opportunities for improvement;
- Promote a citizen-based planning process to identify open space, recreation, and natural and historic resource protection needs in Petersham;
- Develop an achievable set of strategies to protect the Town's threatened open space, environmental, and historic resources, and to expand recreational opportunities; and
- Outline a specific Five-Year Action Plan to help Petersham's residents and leaders implement the Open Space and Recreation Plan.

B2. PLANNING PROCESS AND PUBLIC PARTICIPATION

The Petersham Planning Board began to set the planning process in motion in late 2000, when it recognized that Petersham could be faced with unprecedented growth in the upcoming years and that the Town had no coherent strategy and very few growth management tools to address this potential influx. In 2001, the Board applied for and was awarded a grant from the former Metropolitan District Commission (MDC) to help fund a Town Master Plan, an Open Space and Recreation Plan, and the preparation of regulatory implementation tools to help put these plans into action. The Town appropriated matching funds, issued a Request for Proposals for planning services, and, in January 2002, selected Daylor Consulting Group of Braintree, Massachusetts, as the consulting team that would assist the Town with its planning efforts. After a delay of several months in receiving the MDC funds, the project began in the fall of 2002.

The first Open Space & Recreation Plan was prepared simultaneously with the Town's Master Plan and contained eight goals and objectives as follows in the table with the actions that were taken:

Goal 1: Protect a significant portion of Petersham’s remaining unprotected open space in order to preserve the Town’s rural character, protect its natural resources, and minimize development in inappropriate areas.	
a. Establish the Petersham Open Space Task Force (POST) to lead the Town’s efforts to conserve priority open space.	Completed with the establishment of the Open Space & Recreation Committee
b. Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on Figure I-1 , the Open Space Action Map.	330.6 acres of additional open space have been protected through LAND Grants and Forest Legacy and many hundreds of acres through DCR Watershed Preservation Restrictions.
c. Encourage or require new development to set aside open space by allowing for flexible site layout patterns.	No new developments
d. Adopt and implement a “Greenprint for Growth” so that the most important open space lands may be identified, targeted for protection, and set aside as part of the development process whenever possible.	Developments have not taken place.
e. If future opportunities arise, use Petersham’s legal authority to acquire tax title lands for open space.	There has been no need to do so.
Goal 2: Maintain and expand the Town’s “working landscape” of farming and forestry operations.	
a. Establish an Agriculture and Rural Development Committee to promote profitable farming, forestry, and other natural resource based businesses.	This has yet to be done but a local farm group has been established.
b. Work with owners of existing and prospective farm, forestry, and tourism businesses in Town to deliver educational, technical, and financial resources to help these businesses thrive.	Some workshops, mostly land protection and forestry have been offered through the NQRLP.
c. Seek conservation easements on agricultural and forest land that promote continued farming or forestry activities while prohibiting development.	Conservation easements on 8.7 acres of agricultural have been completed with additional acreage in progress.
d. Work with the New England Forestry Foundation’s North Quabbin Woods Project to encourage private forest landowners who are not enrolled in Chapter 61 or 61A to prepare forest management plans.	The NQRLP has had numerous workshops encouraging landowners to enroll in Chapter 61 and 61A.
Goal 3: Ensure that large portions of the Town’s open space remain open to the public.	
a. Prepare a townwide recreation, trails, and attractions map for use by residents and visitors.	This has been done through the MRPC.

b. Identify and act upon opportunities to connect and expand the Town's network of trails that are open to the public.	This has been done with the nearly completed Bob Marshall Trail.
c. Obtain public trail easements and/or access to open space as part of new development projects.	Trail easements have not been necessary to date.
d. Work with the DCR as necessary to provide access to the Quabbin Reservation lands for appropriate low-impact recreational activities.	Access to the Quabbin Reservation lands is controlled by DCR and is adequate.
Goal 4: Provide adequate access to active recreation facilities for field sports, court sports, and swimming.	
a. Implement a regular maintenance program for the sports fields at the Center School to help improve their condition.	This has been done by the Center School.
b. Identify land at the Center School site and/or elsewhere in Town that may be used for additional sports fields in the future.	The Nichewaug Inn land has been identified.
c. Work with the future owner of the Nichewaug Inn property to arrange for the use of the tennis courts on the property by Town residents, if possible.	The Town now owns the Nichewaug Inn and property.
d. Investigate options for additional swimming areas in Town.	There are no viable options.
Goal 5: Protect the Town's surface water, ground water, and wetland resources.	
a. Adopt and implement growth management regulations and site planning standards that steer development away from sensitive water resource areas.	This has not been done.
b. Encourage or require environmentally friendly stormwater management techniques in new developments.	This has not been done.
c. Revise the way in which lot area is calculated to reduce the incentive to build in environmentally sensitive areas.	This has not been done.
d. Work to remediate wastewater disposal problems in the town center.	This has been accomplished through Title V requirements.
e. Investigate the need for more stringent standards for subsurface wastewater disposal to protect sensitive surface and ground water resources.	Title V regulations and the Watershed Protection Act have been adequate to date.
f. Work with MassHighway to designate lower salt areas on portions of state highways near sensitive water resources.	This is something that should be done in cooperation with DCR.

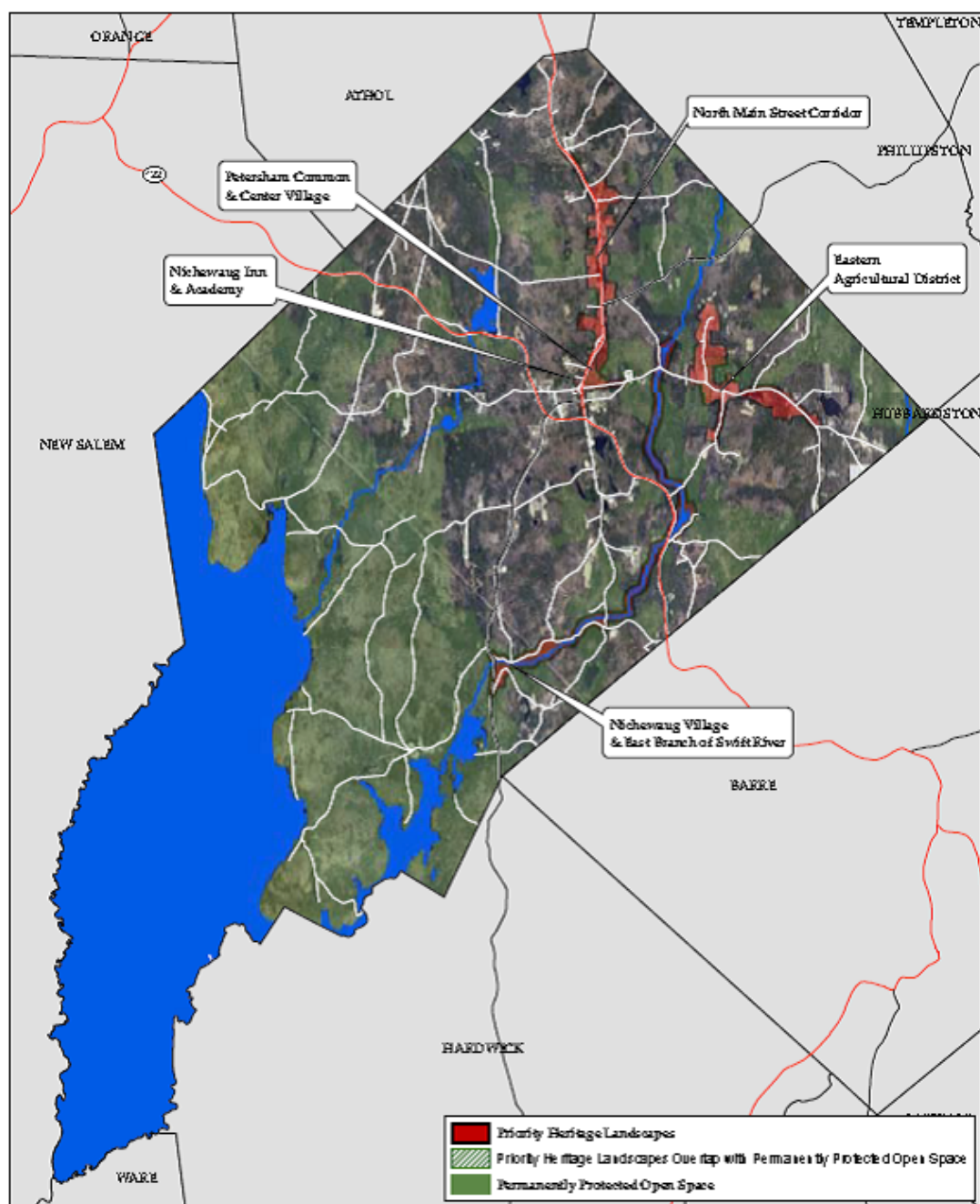
Goal 6: Minimize the destruction and fragmentation of natural ecosystems through carefully targeted open space protection and ecologically-based land development regulations.	
a. Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on Figure I-1 , the Open Space Action Map.	This has been done (see above).
b. Adopt and implement a townwide “Greenprint for Growth” and an environmentally-based site planning process that require the consideration of ecological form and function when designing new developments.	There have been no developments.
c. Certify vernal pools in Petersham through the Mass. Natural Heritage and Endangered Species Program so that they will be protected by state regulations.	Over seven have been done and more are planned.
Goal 7: Manage the Town’s open space to achieve an optimal balance between habitat and water resource conservation values and various recreational and revenue-generating uses.	
a. Implement the recommendations of the 1999 Davenport Committee report so as to provide for conservation, recreation, and revenue generating uses from the Davenport property.	This has been done and 87 acres of the property are protected in perpetuity for the public.
b. In collaboration with state and nonprofit landowners, review the management of existing conservation lands in Petersham and identify any need for change.	This has been done to some extent and is ongoing.
Goal 8: Protect historic buildings and landscape features from destruction or inappropriate alteration, and encourage the adaptive reuse of historic buildings.	
a. Inventory additional historic properties and evaluate the potential to expand the Petersham Historic District, create additional historic district(s), and/or designate additional historic properties.	This has been explored through the Historic District Commission.
b. Adopt a Demolition Delay Bylaw to discourage the demolition of historically significant buildings more than 100 years old.	This has not been done.
c. Implement a historic plaques program in Petersham to commemorate and to educate residents and visitors about the Town’s history.	This has been explored through the Historic District Commission.
d. Adopt a Scenic Overlay District to ensure that new development along scenic roads is aesthetically compatible with the road’s character.	This has not been done.

e. Prepare and adopt a set of guidelines for the future management and maintenance of Town historic and scenic roads that addresses issues such as the paving of roads; the planting, thinning, and pruning of street trees; and the placement of utility poles.	A MOU was established with the Selectboard and this is currently a very active topic.
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The second and current OS&RP draws on the work and information gathered for the DCR **PETERSHAM RECONNAISSANCE REPORT**, Spring 2008, Massachusetts Heritage Landscape Inventory Program, and on two Special Public Meetings to discuss the Draft Open Space & Recreation Plan and input from public meetings held on September 12, 2013 and November 7, 2013.

The DCR **PETERSHAM RECONNAISSANCE REPORT** identifies five Priority Heritage Landscapes: Nichewaug Inn and Academy, Petersham Common and Center Village, North Main Street Corridor, Eastern Agricultural District, and Nichewaug Village and the East Branch of the Swift River (see map). The public meeting for input for the **PETERSHAM RECONNAISSANCE REPORT** was held on March 7, 2008 with 29 community members present.

As much of the town is within the Quabbin Reservoir watershed, protecting tributaries and their associated wetlands has been and continues to be of the highest priority. The pristine quality of our ponds, rivers, and streams ensures habitat for rare and endangered species and provides for excellent fishing. Preservation of agricultural lands is a priority for not only for scenic value but for the increasing demand for local organically grown produce. Preservation of wildlife corridors to maintain the variety and abundance of wildlife affords excellent opportunities for wildlife observation and hunting of game species. Connecting our abundant trail system provides for even greater opportunities for hiking, snowshoeing, cross country skiing, nature observation, mountain biking, and horseback riding on selected trails. Our trail system encourages ecotourism which will help the local economy. These factors have considerable weight in the Goals and Objectives of this Plan.



Priority Heritage Landscapes

Petersham, Massachusetts

Prepared for: Massachusetts Department of Conservation and Recreation, Heritage Landscape Inventory Project in the Upper Quabbin Watershed and North Quabbin Region
Prepared by: Dodson Associates, Ltd., Landscape Architects and Planners
Ashfield, Massachusetts

25 June 2008

0 0.5 1 2 3 4 Miles



"Office of Geographic and Environmental Information (Mass GIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs"
Mass GIS 2005 Orthophotos

For Planning Purposes Only

Public Meetings

A number of meetings were held in preparation for the DCR ***PETERSHAM RECONNAISSANCE REPORT***, Spring 2008, as part of the Massachusetts Heritage Landscape Inventory Program. The public meetings confirmed earlier information as to what residents felt most important. In preparation for the 2013 Open Space and Recreation Plan, one two public meetings were held to seek input for the current Open Space & Recreation Plan.

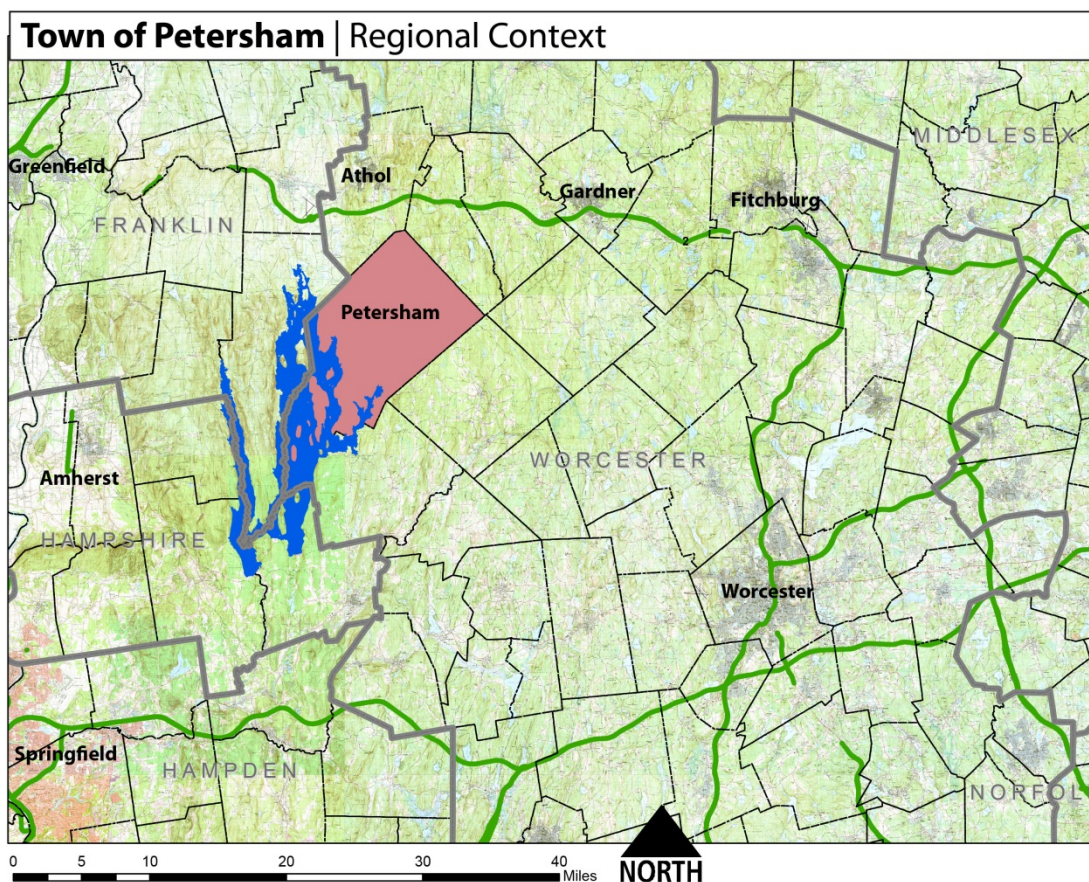
C. COMMUNITY SETTING

C1. REGIONAL CONTEXT

Petersham is a rural community located in the north Quabbin region of north-central Massachusetts. The Town is situated almost entirely within the Chicopee River Watershed, although the northern tip of the Town is within the Millers River Watershed. In terms of physical characteristics, Petersham shares much in common with its immediate neighbors—a mostly wooded landscape of rolling hills, streams, and scattered wetlands. Although the entire region was extensively farmed in the 1700s and 1800s, little agriculture remains today.

Until recently, the north Quabbin sub-region was relatively inwardly-focused, with the smaller towns like Petersham looking to the nearby commercial centers of Athol, Orange, or perhaps Gardner for jobs, shopping, and services. However, the progressive improvement of roads and cars following World War II, as well as the outward expansion of job opportunities from Boston and Worcester in the 1980s and 1990s, has changed this. Petersham and its neighbors are now within reasonable commuting distance of jobs in the Boston area, Worcester area, and Connecticut River Valley, and many residents do, in fact, work in these locations. The recent affordable housing crisis in Massachusetts and families' growing emphasis on "quality of life" as a factor in choosing a home have made rural areas like Petersham an even more attractive place to live. This "exurbanization" of the north Quabbin sub-region is still in its early stages, but the factors that are driving it show no signs of abating.

Despite these recent changes, the north Quabbin is still a mainly rural region. Significant portions of the local economy consist of traditionally rural enterprises, such as home occupations and cottage industries, forestry, outdoor recreation, tourism, and retail and service businesses serving a local clientele. With regard to recreation and tourism, the region appears to have considerable potential. With tens of thousands of acres of woods; numerous rivers, streams, and lakes; and a quaint historic charm, the region has many assets that could potentially yield economic benefits. Many state and non-profit organizations are actively involved in keeping the north Quabbin region rural through efforts such as conserving open space, working with private landowners on forestry plans, and promoting ecotourism. Ultimately, however, it is up to the towns themselves whether they will gradually suburbanize or remain truly rural communities.



C2. HISTORY

The following history of Petersham is paraphrased from the 1952 study entitled *Planning One Town: Petersham – A Hill Town in Massachusetts*, with more recent history gleaned from various local sources.

Petersham was first settled in the mid-1730s, when Massachusetts granted to 71 proprietors house lots ranging from 55 to 100 acres arrayed around Petersham's central ridge. The remainder of the land which includes the wet meadows essential for feeding the oxen and cattle was identified in the proprietor's map of 1736 and assigned to these same proprietors in four subsequent subdivisions, the last of which occurred in 1770. In most cases, the proprietors themselves did not settle on these lots, but relatives or other representatives came instead. Petersham was incorporated as a town in April 1754. The Town's boundaries expanded in 1936, when, following the completion of the Quabbin Reservoir, a good portion of what was left of the Town of Dana (one of the towns that was flooded to make way for the reservoir) was added to Petersham. This land amounted to about 10,000 acres, most of which is woods and is now owned by the DCR and managed by the Office of Watershed Management.

Agricultural development in Petersham was rather slow since there was better farmland to be found in the Connecticut River valley and elsewhere. Nevertheless, by 1840, 80% of the Town's land was in agricultural use, and the community reached what would turn out to be the peak of its population—1,775

residents. Early agriculture in Petersham consisted of cattle and sheep production, grain and fruit cultivation, and timber cutting. Small industries developed to process these products, such as saw mills, grist mills, and tanneries. Numerous small factories (most employing two to four men) operated in Petersham from 1770 until the mid-1800s. These included operations producing casks, boxes, chairs, plows, wagon boxes, woolen products, lightning rods, and tin ware. In addition, until about 1870, many farm families employed themselves in the winter by making boots, shoes, and other products under the “putting out” system of dispersed production that was common at that time.

The construction of railroads in the mid-1800s dramatically altered the course of Petersham’s development. Railroads allowed inexpensive farm products from New York State and the Midwest to reach major northeast markets, thus driving many New England farms out of businesses and setting in motion the long, gradual decline of agriculture in New England. In many New England communities, this loss was offset by the arrival of new industries, made possible by rail transport to the wider marketplace. The railroads, however, bypassed Petersham. East-west lines were constructed roughly parallel to the present-day Route 2 and I-90 corridors, while north-south lines also skirted the Town. With the Town’s farming in decline and its small industries rendered obsolete by larger-scale production, many residents left the Town to seek better opportunities elsewhere.¹ The Town’s population fell from a peak of 1,775 people in 1840 to a low of 642 persons in 1920. Farmland was abandoned and allowed to reforest, and the percentage of the Town’s land devoted to agriculture fell from about 80% in 1840 to only 37% in 1945.

The railroad had another major influence: it made Petersham accessible to summer vacationers who discovered that the Town was cooler in the summer than Boston and other urban areas. Thus, beginning around 1850, Petersham became a summer colony of second homes for the wealthy. This development introduced a kind of social dichotomy in the Town: in one group, the old families who had lived on the farms and in the village, in many cases for more than 100 years; in another group, the summer colonists and their domestic servants. Petersham remained a thriving summer colony for close to 100 years, but the number of summer residents declined rapidly in the mid-1900s as improved transportation allowed vacationers to travel to more distant and exotic destinations. The Nichewaug Inn—a backbone of the summer colony—ceased operation and was converted to a girls’ school in 1951. The 1952 planning report indicated that “Petersham summer houses on the market are selling at depression prices if at all.”

In the mid-1800s, the nearby industrial towns of Athol and Gardner began to develop, which provided jobs for members of farm families in nearby communities, including Petersham. Some of these families came to rely largely on their city jobs and became part-time farmers. Similarly, some urban families moved into the houses and onto the farms that were being abandoned and perhaps did a little farming on the side. The coming of the automobile greatly expanded this movement: families could live in Petersham and wage-earners could drive or ride to work as far away as Gardner. Thus, by the early 1900s, the Town had acquired a third social group—the urban-employed—with points of view and attitudes sometimes differing sharply from those of either of the other two groups.

¹ When one compares the growth and development of north-central Massachusetts towns, the influence of the railroad becomes clear. In 1840, Petersham, Hardwick, Templeton, Athol, and Gardner and all had between 1,000 and 2,000 residents. By 1940, however, Petersham’s population had dropped to 923, while that of the other communities had risen to 2,154, 4,601, 11,180, and 20,206, respectively.

The trend toward out-of-town commuting in Petersham has, of course, continued and even accelerated since the mid-1900s. A few distinct events as well as several broader trends have contributed to this progression. In the 1940s, Route 122 was resurfaced and widened, providing a convenient route for commuting to Worcester. This was accompanied later by the development of Route 2 and the trend toward faster, more reliable automobiles that further facilitated commuting. The outward migration of jobs from city centers, problems of urban decay and crime, and an increased interest in country living have all made Petersham a more attractive place from which to commute.

A final note of interest is that Petersham has faced budgetary challenges throughout its recent history: the 1952 planning report stated that “the town now has too small a tax base to support its present program of public services” and indicated that the Town would either need to develop additional private land uses or cut or find lower-cost alternatives for services. At that time, the greatest fiscal concerns were the decline in local forestry income (after much of the Town’s marketable timber was destroyed in the 1938 hurricane) and the withering of the summer community, with its high-value houses. Now, fiscal concerns relate more to the dearth of commercial activity in Town, the large amount of tax-exempt or tax-reduced lands, and, especially, the escalating costs of providing adequate local government services.

C3. DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

The following are the key conclusions of statistical and trends analysis for Petersham as they relate to the community’s open space and recreation needs:

- Population in Petersham has grown at a modest rate in the past (an average of about 8% per decade from 1950 to 2000). This rate of growth has slowed between 2000 and 2013. Although the impact of new development (e.g., the number of new households) seen in nearby communities could take place in Petersham and potentially outstrip population growth in the future. Residents are concerned with the potential impact on Town services and increases in the property tax rate. Open space protection preserves the character of the community that can accommodate moderate growth. It is important to continue to protect the most sensitive, ecologically valuable, and vulnerable open space which could be lost to development if deliberate action is not taken to prevent this from happening.
- Petersham has a smaller proportion of young adults (aged 20-29) and a larger proportion of older persons (aged 45-64 and older) than is typical for the state. From 2000 to 2013, this trend has continued. Recreation needs are primarily for middle aged and older residents.
- The Town has a very small non-residential tax base, which has actually declined over the past decade. There is ongoing concern in Petersham about the ability of residential landowners to shoulder most of the Town’s tax burden, and a related concern that open space properties that are removed from the tax rolls will only worsen this situation. It should be noted, however, that payments in lieu of taxes from the Metropolitan District Commission comprise a major portion of the Town’s income—about one-sixth in recent years.
- The town has a well-mixed population with no distinction as to ethnicity. The 2010 Census shows no data Environmental Justice Populations for Petersham.

C4. GROWTH AND DEVELOPMENT

When people think of small-town New England, they think of a place like Petersham with its tight-knit center; of a town green on a hilltop ringed by historic buildings and a country store; of a landscape where farms and woods stretch in all directions, interrupted only by the occasional road, gravel lane, or farmhouse. They think of a place where residents know one another by name, and share common values and interests. And they think of a place where the fields and woods and buildings themselves contain the history and character of the town — stone walls, cellar holes, and other reminders of our early American ancestors.

However, time has not stood still in Petersham. Growth pressures spreading outward from the Worcester and Boston areas have not yet overwhelmed the Town, but they have encroached and are changing it, bit by bit. Gradually, the Town is becoming less of an inward-focused rural community and more of an outward-focused bedroom community, with associated shifts in the Town's demographics, economy, landscape, and sense of community. These changes are not unusual, and are now being witnessed throughout much of rural New England.

Overall, the Town added 366 new people over the past half-century, or about seven persons per year. While this growth rate may seem trivial, especially in relation to other Massachusetts communities, it tells only part of the story. Two other factors are critical to understanding growth trends in the community. First, recent development in Petersham may be having an impact that is out of proportion to the relatively modest increase in population. The reason for this is that the number of households — and thus new homes — has been growing much faster than the established population, at least since 1990. The census in 2010 shows a population of 1,234, up from a population of 1,180 in 2000, a change of 4.58%. The census of 2012 shows a population of 1,239 and the rate of growth appears to have slowed.

A review of the growth rates of nearby communities indicates that many towns that are just slightly closer to Boston and Worcester than Petersham have been growing much more rapidly, which suggests that growth pressures may be on the rise in Petersham. This trend is supported by the recent spike in the number of building permits issued—from approximately five per year from 1995 through 2001 to 17 in 2002 alone although the number has dropped in more recent years. In addition, in the past development in Petersham has probably been somewhat curtailed by the fact that much of the Town's road frontage is held in large, undivided parcels whose owners have not wanted to subdivide and sell their land piecemeal. However, the Town cannot count on this trend continuing into the future, and the sale of some of these large parcels could open the door for major development.

About one-third of the Town's land area (over 11,000 acres) is buildable land. It is unlikely that the Town could ever protect all of this land from development. Therefore, the Town's growth management strategy needs to include not only tools for land conservation but also mechanisms to encourage any development that does occur (as it inevitably will) to be as consistent as possible with the Town's goals for environmental protection and community character.

For many years, land protection had focused on stream corridors, wetlands, and valuable watersheds to ensure continued water quality throughout the portion of town that lies within the Quabbin watershed. In more recent years, land protection has included valuable wildlife corridors and connections to adjacent protected parcels which allows our vast trail system to be interconnected.

Petersham has no industrial tax base. There are a number of businesses operated from people's homes but no industrial establishments. Employment is in neighboring communities and further out, especially Worcester and even as far as Boston. The 2011 DOR Income per Capita was \$26,861 and the average tax bill was \$3,741. The Town has a total budget of \$4,235,742 with a tax levy of \$2,332,900 representing 55.08 % of the budget. State aid was \$1,011,214 representing 23.87% of the budget, local receipts \$678,465, and other revenue \$213,163. Payment in lieu of taxes from DCR for lands held by DCR Office of Watershed Management for Fiscal 3013 was \$296,722 and for land annexed for the Quabbin Reservoir \$203,306.

Petersham has approximately seventy miles of roads. A few roads and portions of others where there are no homes or the need for access to homes are closed for the winter thus reducing the need for snowplowing, sand, and salt. There is no bus service to Petersham or public transportation within the town. Transportation is primarily by private vehicles although a small but growing number of people are using bicycles. There are no bicycle lanes on town roads.

Organized bicycle groups frequently use the main highways, Route 32 and 32A and Route 122, especially when having tours on highways surrounding the Quabbin reservoir. There are no bicycle lanes on these highways and Route 122 has no shoulders which possess dangerous conditions when there are numbers of bicyclists considering the amount of traffic on Route 122. Petersham Common has become a destination for bicyclists to rest and have lunch and refreshments at the Country Store which is now owned by the East Quabbin Land Trust and protected in perpetuity as a Country Store.

Sidewalks including handicapped access along Route 32 extend from the Common north to the beginning of North Street, approximately one half mile north of the center of town, and south almost to the intersection of Route 122, approximately one quarter mile to the south. A sidewalk also extends from the Common along the north side of West Street to the junction of Hardwick Road, approximately one third mile. Improvements and expansion of sidewalks would be of considerable benefit to the growing number of people using sidewalks and roadsides.

Petersham has no municipal water supply or sewerage systems. There are public water supplies, drilled wells, for the Petersham Center School and for the Town Office Building and Town Hall. All public facilities and private residences have individual wells and septic systems.

The whole of Petersham is zoned for residential and agricultural use with businesses and other uses allowed by special permit. There has been no demand nor need for a change in zoning. Preserving the rural character of the community is a high priority among residents.

D. ENVIRONMENTAL INVENTORY AND ANALYSIS

Planning should not just examine the human aspects of a community, but also its “green infrastructure”—the natural systems upon which humans depend. These systems, which include soils, surface water, groundwater, and vegetational communities, are described and analyzed in this chapter.

D1. GEOLOGY, SOILS AND TOPOGRAPHY

Petersham consists of primarily till or bedrock rolling terrain, with soils and geology characteristic of Massachusetts’ glaciated landscape. This section describes the town’s surficial geology, soil classifications, and topography based on information from the United States Geological Survey (USGS), the *Preliminary Soil Survey of Worcester County (Northwest)*, and MassGIS.² General information related to surficial geology and topography is shown in **Figure D-1**.

Geology

The geologic formation of Petersham dates back to the Middle Paleozoic era, which includes the Silurian, Devonian, and Mississippian periods (440-400, 400-350, and 350-305 millions of years ago, respectively). The East Branch of the Swift River corridor, which was also formed in the same era, primarily consists of mafic rocks, which are minerals or igneous rocks that are rich in iron and magnesium, dense, and typically dark in color.

Petersham’s surficial geology is a result of glaciers moving and depositing sediment during the most recent ice age, which ended about 10,000 years ago. Generalized surficial geology consists mostly of till and bedrock with sand and gravel deposits in many of the stream channels, and floodplain alluvium in a few low-lying wetland areas. Sand and gravel deposits are relatively well-sorted (meaning that grain size tends to be relatively consistent) and porous, and are the most likely places to find productive groundwater aquifers. Till is unsorted, non-stratified glacial drift consisting of clay, sand, cobbles, and boulders transported and deposited by glacial ice. Till deposits are relatively packed, transmit groundwater poorly, and often serve as the boundaries between aquifers. Floodplain alluvium consists of fine-grained particles, and also transmits groundwater poorly.

Soils

Soils are a primary determinant of the most suitable uses for a particular piece of land. For example, soil composition affects the land’s suitability for farming, forestry, recreation, construction, and subsurface wastewater disposal. For this reason, soils information is very useful in land use, conservation, and recreation planning.

Petersham’s soils are comprised of the following soil series:

Canton Series: These are well drained soils that have developed a fine sandy loam mantle, 20 to 30 inches thick, over a gravelly loamy sand glacial till derived mainly from granite and gneiss. They usually have a fine sandy loam surface soil and subsoil and a gravelly loamy sandy substratum. They are on

² Massachusetts Geographic Information System (MassGIS) is the state agency charged with creating, collecting, and distributing geographic information for Massachusetts.

nearly level to very steep glaciated plains, hills, and ridges. They are crumbly to a depth of 40 inches or more. The permeability is moderately rapid or rapid in the surface soil and subsoils and rapid in the substratum. In places, the permeability in the substratum may be slower. The Canton soils are usually very stony and may have boulders on the surface.

Hinckley Series: These are excessively drained soils developed in thick deposits of sand and gravel mainly from granite and gneiss. They are very sandy and gravelly. They commonly have a gravelly loamy sand surface soil and a sandy and gravelly subsoil underlain by gravel. Hinckley soils are loose throughout and water moves rapidly through them. They are usually free of large stones but may contain cobblestones. In a few places the surface may be stony. They occur on level to very steep slopes on terraces, outwash plains, deltas, kames, and eskers.

Marlow Series: The Marlow series consists of well drained soils that formed in loamy till on drumlins and glaciated uplands. They are moderately deep to a densic contact and very deep to bedrock. Permeability is moderate in the solum and moderately slow or slow in the densic materials. Slope ranges from 0 to 60 percent.

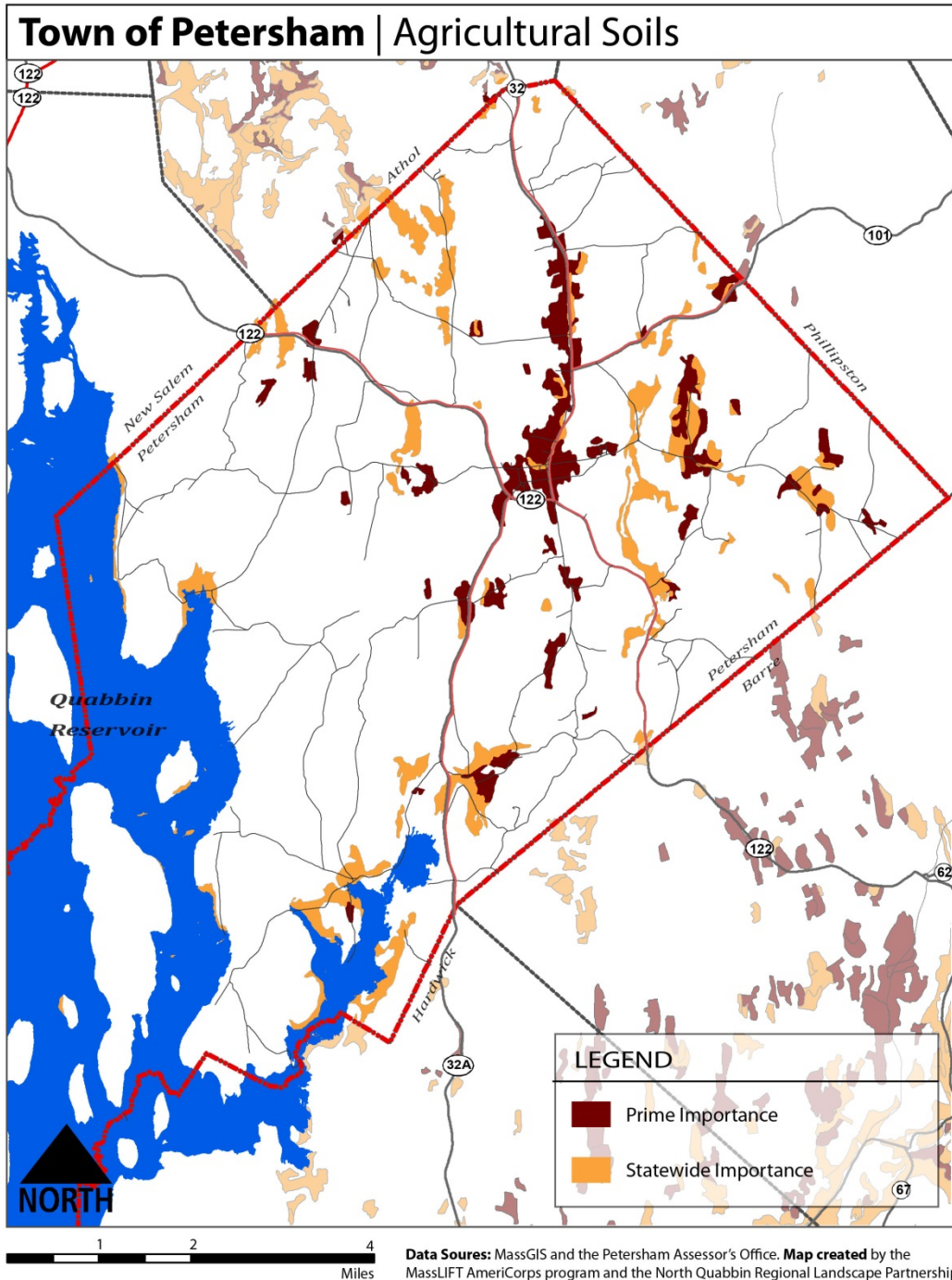
Paxton Series: The Paxton series consists of well drained loamy soils formed in subglacial till. The soils are very deep to bedrock and moderately deep to a densic contact. They are nearly level to steep soils on till plains, hills, and drumlins. Slope ranges from 0 to 45 percent. Permeability is moderate in the surface layer and subsoil and slow or very slow in the dense substratum.

Peru Series: The Peru series consists of very deep, moderately well drained soils that formed in dense, loamy glacial till. Permeability is moderate in the solum, and moderately slow to slow in the dense substratum. Slope ranges from 0 to 35 percent.

Muck: These are very poorly drained bog soils formed in accumulations of organic deposits that are underlain by mineral soil materials. The upper portion of the organic material is generally black and has decomposed to such a degree that plant remains cannot easily be identified. Decomposition of the materials in the lower part of the deep muck soils varies from this condition to one of practically no decomposition in which plant remains are readily identifiable. Muck soils occur in depressions and potholes. The water table in these soils is at or near the surface most of the year. Shallow muck soils have only 1 to 2½ feet of organic matter over mineral soil materials. In deep muck soils, the organic deposits are many feet thick.

Topography

Petersham consists primarily of rolling hills interspersed with ponds and rivers, most of which are in the Quabbin Reservoir watershed. In general, the terrain slopes downward as one moves from north to south or northeast to southwest, with elevations ranging from about 1279 ft. in the northern corner of the Town to about 574 ft. along the Quabbin Reservoir. A central ridge that roughly parallels North Main Street runs from the Athol border south to the town center, and ranges in elevation from more than 1,200 feet at the Athol border to about 1,080 feet at the town common.



D2. LANDSCAPE CHARACTER

Petersham is a rural community with a population of less than 1,200 spread over a land area of more than 54 square miles, yielding a population density of about 21 persons per square mile or one person per 30 acres. The Town is distinguished by its vast landscape of forests, which comprise almost 90% of the Town's land area. Within this forested matrix, the Town's fields, water bodies, and wetlands provide visual interest and landscape diversity. For example, farms and open fields are visible from North Main Street, East Street, South Street, and Hardwick Road, and other open lands such as the golf course on North Main Street provide a beautiful perspective on the landscape as one travels through the Town. Further south, the land slopes down toward the Quabbin Reservoir. Here, the landscape is virtually entirely wooded, and much of the land is under DCR ownership.

Unforested wetlands only comprise 3.3% of the Town's land area. Some of the most prominent wetlands are Tom Swamp and the wetlands along the East Branch of the Swift River, which fan out into a wide expanse on both sides of Popple Camp Road (Route 101) as one heads toward Phillipston. As with other parts of the town, there is considerable beaver activity in Harvard Pond bordering Tom Swamp on the south and numerous beaver ponds along the East Branch of the Swift River. These areas are the same as those identified in the Proprietors' Map of Nepischoogg of 1736 as fresh meadows which were essential for feeding the oxen and cattle. As the beavers had been trapped out before 1736, the dams had collapsed and the ponds had become fresh meadows. This allowed the town to be colonized.

Throughout the Town, the sense of historic rural character is reinforced by numerous landscape details: the stone walls that parallel the roads and crisscross the forests, the rows of old sugar maples along a country lane, or the 19th century farmhouse with a stone foundation and lilacs out front. The fingerprint of human activities can be seen throughout the Town if one looks closely, but is most apparent in the town center. The Petersham Historic District contains the greatest concentration of historic buildings in the Town—some 45 historic buildings, mostly built in the early nineteenth century. As was the case centuries ago, the town center is still the place where Town residents gather, and is still ringed by forests and fields. Residents still shop at the country store, take in the views across the North Common Meadow, and cool off at Brown's Pond during warm summer evenings.

D3. WATER RESOURCES

This section identifies Petersham's water resources based on information from MassGIS and other sources.

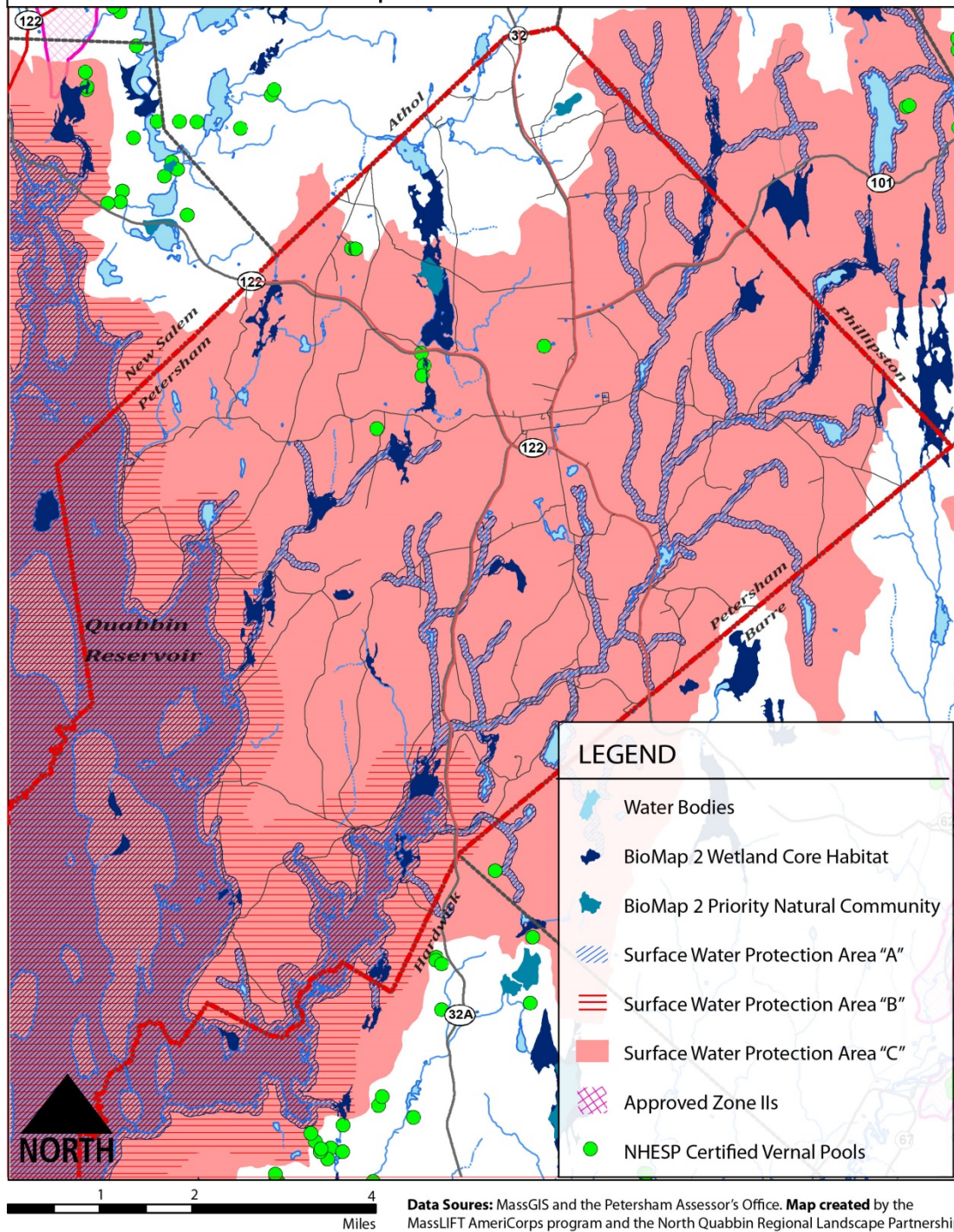
Surface Water Resources

The majority of Petersham is located within the Chicopee River Watershed with the northern tip located in the Millers River Watershed. The Chicopee River Watershed drains more than 720 square miles of central Massachusetts before emptying into the Connecticut River in the City of Chicopee. As such, the Chicopee River Watershed is the largest of the 27 major drainage basins in Massachusetts, and is also the largest tributary to the entire Connecticut River. The watershed encompasses numerous rivers, streams, lakes, and ponds, including the Quabbin Reservoir, which is one of the largest man-made reservoirs in the United States. This magnificent reservoir, named after the Native American chief "Nani-Quaben," whose name translates as "place of many waters," is one of the most unique features of the Chicopee River Watershed.

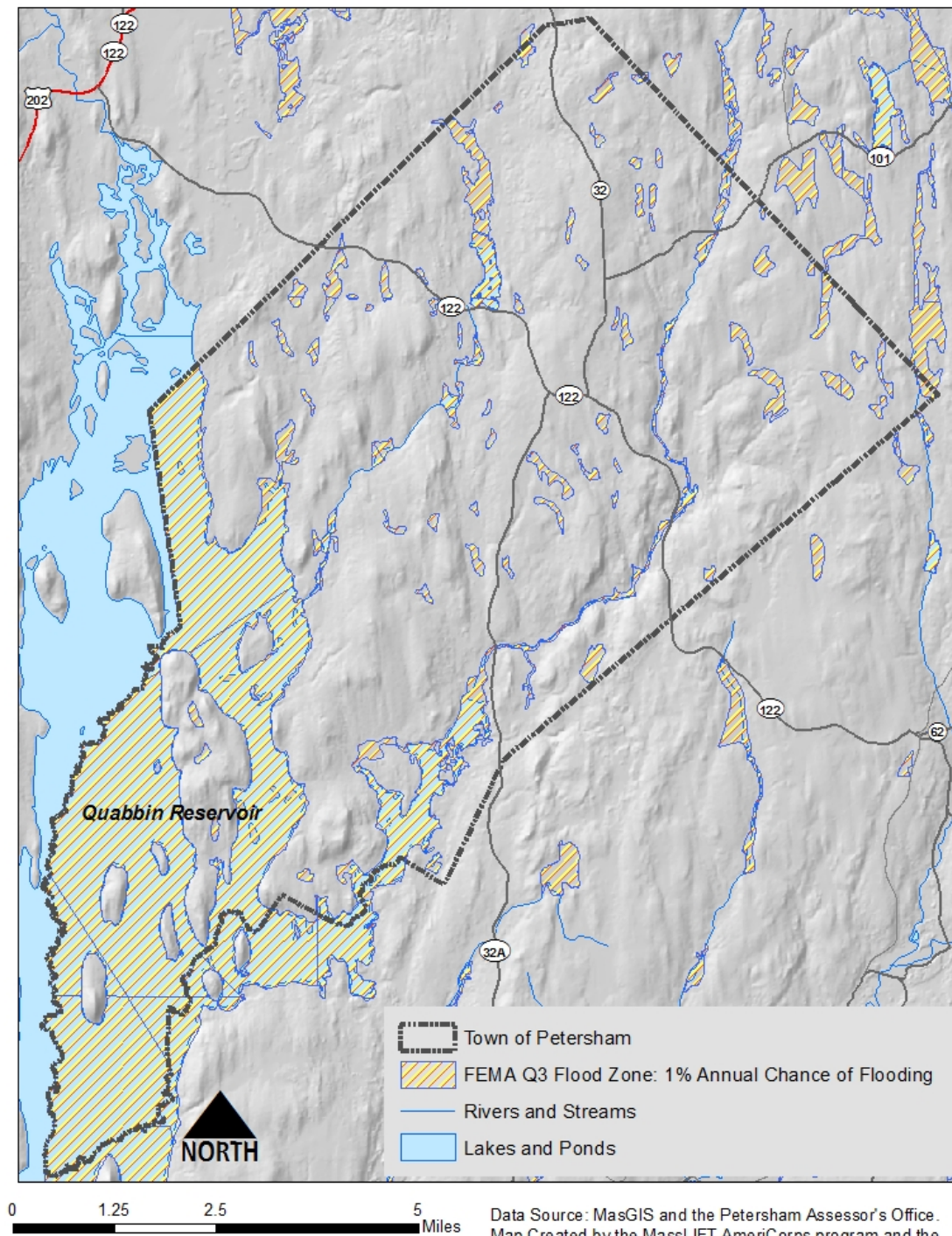
The eastern half of the Town is within the East Branch of the Swift River sub-watershed which discharges into the Quabbin Reservoir north of Pottapaug Pond. The western portion of the Town is within the Fever Brook sub-watershed (east and west branches) with the east branch discharging into the Quabbin Reservoir southeast of Rattlesnake Hill and the west branch discharging into the Quabbin southeast of Soapstone Hill. The water resources within each sub-watershed, including streams, ponds, and wetlands, are identified below.

- The **Quabbin Reservoir** is one of the largest man-made public water supplies in the United States. Created in the 1930s by the construction of two huge earthen dams, the reservoir is fed by the three branches of the Swift River, and seasonally by the Ware River. To make way for the reservoir, four former towns in the Swift River Valley were evacuated, bulldozed or burned, and then flooded. The construction of the reservoir remains a great engineering feat, and Quabbin is one of the largest unfiltered water supplies in the world. The reservoir is 18 miles long and has 181 miles of shoreline including 61 miles along the reservoir's 60 islands. Quabbin collects as run-off an average of one-half of the water that falls as rain or snow in the watershed. When full, the reservoir holds 412 billion gallons of water. Water from the Quabbin is conveyed eastward to the Wachusett Reservoir to supply communities in the Boston Metropolitan area.
- The **East Branch of the Swift River** starts at the confluence of Bigelow, Popple Camp, and Shattuck Brooks in Popple Camp State Wildlife Management Area close to Petersham's northeastern border with Phillipston. The Swift River is fed by Stony Brook from the west and Moccasin Brook from the east before it flows through Connor Pond, where it is also joined with the waters of Rutland Brook. After the river leaves Connor Pond, it is fed by several smaller brooks before joining Pottapaug Pond and the Quabbin Reservoir.
- The **West Branch of Fever Brook** flows through the Federated Women's Club State Forest. The **East Branch of Fever Brook** begins at Harvard Pond and flows southwest toward its mouth at the Quabbin Reservoir southeast of Rattlesnake Hill.
- **Nelson Brook and Riceville Pond** are located in the northern corner of Petersham and drain north into the Millers River watershed.
- **Other riparian wetlands** border portions of several streams and ponds in Petersham, including Harvard Pond, Riceville Pond, Pottapaug Pond, and all three major streams. Petersham does not have an official wetlands map. There are numerous wetlands along streams and draining into streams which are ever changing and increasing as the beaver population continues to grow and flood new land.
- **Flood hazard areas are minimal and are shown in the FEMA Flood Data Q3 Flood Zones data layer and occur along ponds, streams, and the East Branch Swift River. The failure of beaver dams during sudden storm events causes temporary flooding.**

Town of Petersham | Water Resources



Town of Petersham | FEMA Q3 Flood Zones



Groundwater Resources

As discussed in **Section D1**, above, stratified sand and gravel deposits tend to be permeable to groundwater while till deposits are relatively packed, transmit groundwater poorly, and serve as the boundaries between aquifers. Groundwater recharge occurs primarily through sand and gravel formations, wetlands, and surface water bodies. As shown in **Figure D-2**, Petersham does not have any high yield or medium yield aquifers mapped by MassGIS. Generally, high yield aquifers are those capable of sustaining a pumping rate of more than 300 gallons per minute (gpm), while medium yield aquifers can sustain a pumping rate of between 100 and 300 gpm.

Smaller, less productive aquifers of alluvial and glacial origin, as mapped by the USGS, are located primarily in the riparian areas along the East Branch of the Swift River and around the Quabbin. Many of the Town's residents obtain their water from deeper wells, which tap layers of rock that are generally poorly permeable but adequate to support the relatively low water needs of single-family houses and small businesses.

Existing Protections for Water Resources

The critical role of the Quabbin Reservoir in supplying metropolitan Boston's water has resulted in regulations being enacted to limit pollution within the reservoir's drainage area. These regulations are in addition to statewide regulations pertaining to wetlands and stream corridors. Each of these regulations is summarized briefly below.

Massachusetts Watershed Protection Act

The Watershed Protection Act (WsPA), otherwise known as the Cohen Act, regulates land use and activities within critical areas of the Quabbin Reservoir, Ware River, and Wachusett Reservoir watersheds for the purpose of protecting the quality of drinking water. Administered by the Department of Conservation and Recreation Office of Watershed Management, the WsPA applies only within these watersheds. The WsPA regulations are contained in 350 CMR 11.04.

The WsPA defines two different resource areas, each of which has a different level of protection. (See **Figure 4-2** in the Master Plan for an approximate delineation of the areas within Petersham subject to the WsPA.) Within 400 feet of the Quabbin or Wachusett reservoirs or within 200 feet of tributaries and surface waters that drain to these reservoirs (the "Primary Zone"), any alteration of land or water resources is prohibited. "Alteration" includes a variety of activities, such as construction, excavation, grading, paving, and dumping. The generation, storage, disposal, or discharge of pollutants is also prohibited in the Primary Zone.

Between 200 and 400 feet of tributaries and surface waters, and on land within flood plains, over some aquifers, and within bordering vegetated wetlands (the "Secondary Zone"), certain activities are specifically prohibited. These include the storage, disposal, or use of toxic, hazardous, and certain other materials; alteration of bordering vegetated wetlands; and other activities. The density of development in the Secondary Zone is limited by a requirement that no more than 220 gallons per day of wastewater per acre may be discharged by the development. For residential development, this is the equivalent of two bedrooms per acre. In addition, development may not render impervious more than 10% of the lot or 2,500 square feet, whichever is greater.

While these protections appear to be quite strong, it is important to note that the WsPA regulations contain a few key exceptions. The most notable of these is that the owner of any lot pre-existing at the time the regulation was enacted (1992) is generally allowed to build a single dwelling unit on that lot, providing that other zoning, health, and environmental standards can be met. A pre-existing owner-occupied parcel may also be subdivided to create one additional building lot. Minor changes to existing structures are also exempted from the regulations. While these exceptions do not allow for the large-scale subdivision of land to accommodate new development, they do allow some development within sensitive watershed protection areas.

Surface Water Supply Protection Zones

Surface Water Supply Protection Zones are established under the Massachusetts Drinking Water Regulations (310 CMR 22.00) to protect active and emergency surface water supplies. Three protection zones are defined in the regulations: Zone A, Zone B, and Zone C. These protection zones are shown on **Figure D-2**. Zone A includes land between the surface water source and the upper boundary of the bank; land within 400 feet of the upper boundary of the bank of a Class A surface water source (such as the Quabbin Reservoir); and land within 200 feet of the upper boundary of the bank of a tributary to the water source. Zone B generally includes land within one-half mile of the water source that is also within the source's watershed. Zone C includes all land within the watershed of a Class A surface water source other than those lands designated as Zone A or Zone B.

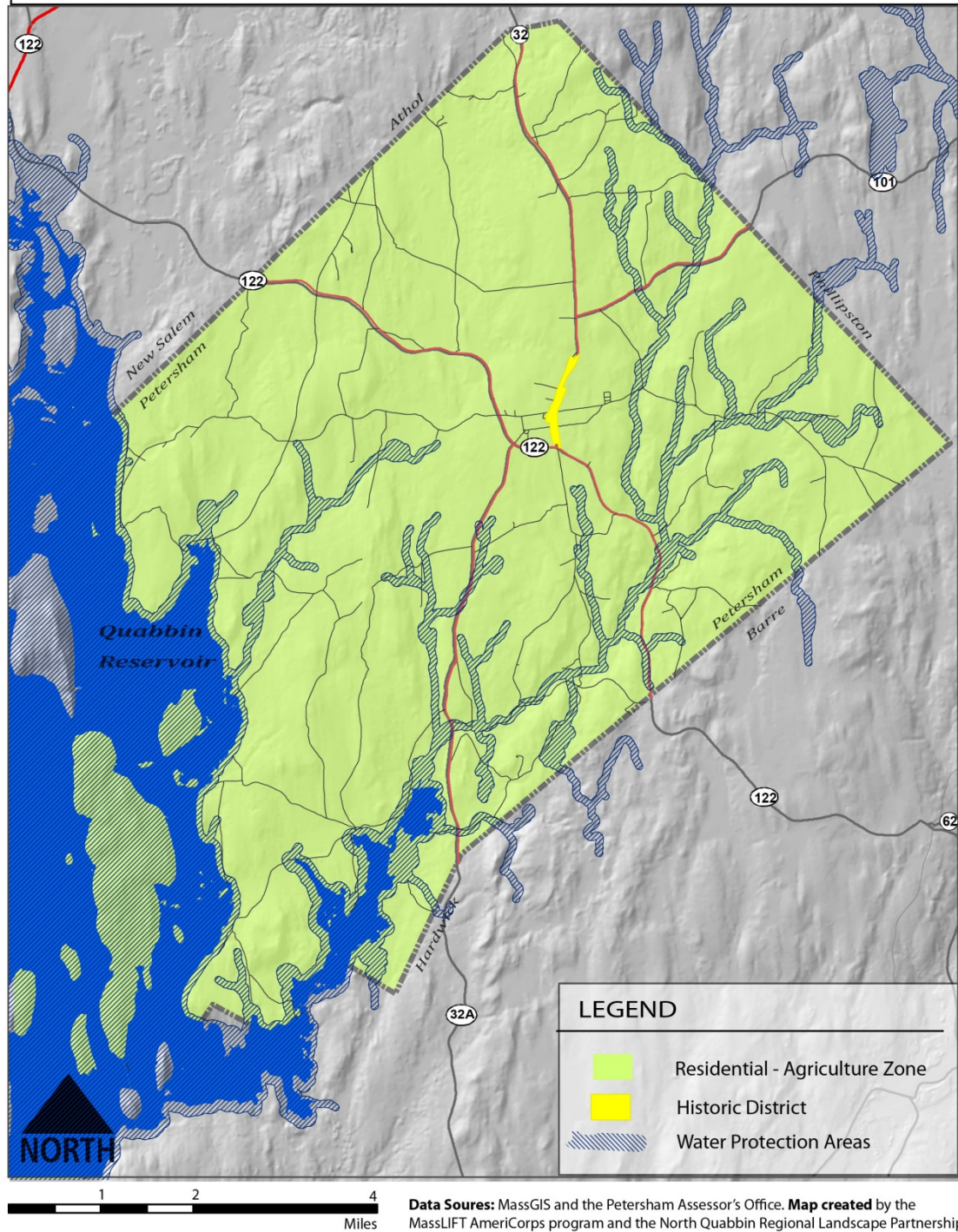
To protect surface water sources, the Drinking Water Regulations prohibit potentially hazardous land uses within Zone A, such as underground storage tanks, storage of liquid hazardous materials, and sewage treatment or disposal works. In general, Watershed Protection Act tends to supercede the Drinking Water Regulations with stricter land use controls within the critical Zone A areas.

Massachusetts Wetlands Protection Act

Wetlands have both human and ecological importance for pollution control, flood control, storm damage protection, wildlife habitat, fisheries, groundwater supply, and recreation. Wetlands in Massachusetts are regulated under the Wetlands Protection Act (310 CMR 10.00). Some cities and towns in the Commonwealth have supplemented these state regulations with local wetland protection bylaws or ordinances, but, to date, Petersham has not done so.

The Massachusetts Wetlands Protection Act applies to activity within 100 feet of bordering wetlands (wetlands bordering ponds, streams, and other water features) and within certain isolated wetlands. The Petersham Conservation Commission administers this law, and considers applications for activities in wetlands and buffer zones. Generally wetland alteration is allowed only in small areas when there are no feasible alternatives, and is subject to the condition that an equivalent amount of wetland must be replicated elsewhere. In wetland buffer zones, work is often allowed subject to an Order of Conditions from the Conservation Commission. Although the Conservation Commission has some discretion in deciding how much development to allow in wetlands and buffer zones, the MA Department of Environmental Protection has the authority to override any Conservation Commission decision. The Wetlands Protection Act does **not** provide protection for many small isolated wetlands, or for vernal pools.

Town of Petersham | Zoning & Regulated Areas



Rivers Protection Act

According to the recent studies in the scientific literature, the area within 200 feet of the riverbank can play an important ecological role by filtering sediment and pollutants out of runoff before it reaches the river; serving as the hydrologic recharge area for rivers; providing complementary habitat for riparian species requiring upland resources; and allowing riparian corridors to serve as wildlife migration routes. The Massachusetts Rivers Protection Act, incorporated into the Wetlands Protection Act in 1996, regulates development within 200 feet of perennial rivers and streams (defined provisionally as those streams that appear as dark blue lines on USGS topographic maps). The Petersham Conservation Commission administers this Act locally. Typically, development is allowed within 100 feet of streams only under extraordinary circumstances, but certain types of development are sometimes allowed between 100 and 200 feet of streams.

D4. VEGETATION

Vegetation not only provides aesthetically pleasing views and landscape diversity; it is also a critical natural resource that forms the basis for habitats and ecosystems that support wildlife and humans alike. In addition, vegetation helps to stabilize soils and prevent erosion, contributes to groundwater infiltration, serves as a visual and noise buffer between land uses, and improves local air quality.

Research conducted on the forests of the area reveals that the vegetation today is quite different than what the colonists found when they began arriving in Petersham in the mid-1730s. The forests of the early 1700s were a two-tone quilt, with northern hardwoods on the cooler highlands and oak-hickory on the warmer lowlands.³ Chestnut ran through both types of forest as did patches of white pine and areas of Eastern hemlock. Since that time, several changes have occurred. Most notably, about 80% of the Town's forests were at one time cleared for farming. This not only changed the vegetation in the short-term, but also resulted in changes to the soil composition, nutrient content, and seed bank—such that the forests that eventually recolonized the landscape were often different than those that had existed previously. For example, in the late 1800s, many overgrown fields were taken over by pure stands of white pine, while others sprouted fast-growing hardwoods such as gray birch, poplar, and red maple. The chestnut blight of the early 1900s had another major effect on the forest, essentially eliminating what had once been a dominant species in many of the Town's forests. A final major factor was the hurricane of 1938, which destroyed or damaged large amounts of the Town's forests; as a result of this storm, a 1952 study reported that “there is little merchantable sawtimber standing in the Petersham forests today.”⁴ The forest has recovered since then and valuable sawtimber is regularly harvested. Local forests are also a valuable source of cordwood.

Today, the forest canopy is more like one large piece of mottled cloth, a mix of hardwoods and some softwoods. Logging occurs throughout the Town as the forests mature. And, the evolution of the Town's forests is far from over. Residential development, although slow, has created human disturbances while the invasion of the hemlock woolly adelgid, an introduced aphid-like insect from Asia that feeds on and

³ Source: <http://www.lib.duke.edu/forest>.

⁴ *Planning One Town: Petersham – A Hill Town in Massachusetts*, John D. Black and Ayers Brinser, Cambridge: Harvard University Press, 1952.

often eventually kills hemlock trees, the emerald ash borer, and other insects and tree diseases have spread rapidly in recent years and have begun to alter the composition and ecology of the Town's forests.

Vegetation varies considerably throughout the town from areas of conifers mostly of Eastern hemlock and white pine to areas of mixed hardwoods. Roadsides reflect the neighboring forest and the character of the town's roads has become increasingly important to townspeople. Petersham has adopted the Shade Tree Act and Scenic Roads Act for the following roads:

Amidon Drive	Narrow Lane
Birch Hill Drive (now Birch Drive)	Nelson Road
Briggs Road	Baldwin Drive (now New Athol Road)
Camels Hump Road (now Camel Hump Road)	New Salem Road
Carberry Lane (now Carberry Road)	Nichewaug Road
Carter Pond Road	Craft Center Cut-off (now North Street)
Choate Drive (now Choate Road)	Old Hardwick Road
Church Road (disc.)	Oliver Street
Common Street	Pat Connor Road
Conyonker Road (disc.)	Phillips Drive
French Road (disc.)	Pierce Road (disc.)
Gay Drive	Poor Farm Road (disc.)
Glasheen Road	Prospect Hill Road
Glen Valley Road	Quaker Drive
Hall Road	Russell Road (now part of South Street)
Hammon Road (now Hammond Lane)	Shaw Road
Hardwick Road	South Street
Harty Drive	Spring Street
Leighton Road	Sunset Lane
Loring Hill Road	Tom Swamp Road
Maple Lane	West Street
Turnpike Road (now Monson Turnpike)	Woodward Road

There is interest in planting native shrub species, especially flowering shrubs, along roadsides to control vegetation appropriate to roadsides and reduce roadside maintenance.

Public shade trees on the common and in the Town cemeteries are especially prized. When trees have to be removed due to damage or decay, replacement trees are planted.

D5. FISHERIES AND WILDLIFE

Petersham contains large woodland and wetland habitats for numerous bird and mammal species. In particular, the protected land around the Quabbin Reservoir is a major habitat resource that contains hundreds of different tree, shrub, wildflower, and wildlife species, including many species that are rare or endangered in Massachusetts. These include the American Bittern, Sedge Wren, Bald Eagle, Spatterdock Darter, Long Bitter's Cress, Dwarf Rattlesnake Plantain, Tiny Cow-lily, and Hairy Beardtongue.

An outstanding feature of Petersham is its wealth of conservation land, including not only the thousands of acres of the DCR's Quabbin Reservation, but also a large number of tracts maintained by the Division

of Fisheries and Wildlife, Department of Environmental Management, Harvard Forest, the Audubon Society, and the Trustees of Reservations. As a result, the sighting of bald eagles, white-tailed deer, wild turkeys, raccoons, and many other forms of wildlife is common. The Division of Fisheries and Wildlife reports numerous wildlife and game bird species within its three wildlife management areas in Petersham, including deer, gray squirrel, raccoon, coyote, fisher, snowshoe hare, cottontail rabbit, aquatic fur-bearers, turkey, grouse, woodcock, and pheasant. Evidence of beaver activity can be found along brooks and streams throughout the Town. Most of the Town's streams support native brook trout populations, which are generally an indicator of ecologically healthy streams that are clean, cold, and free-flowing.

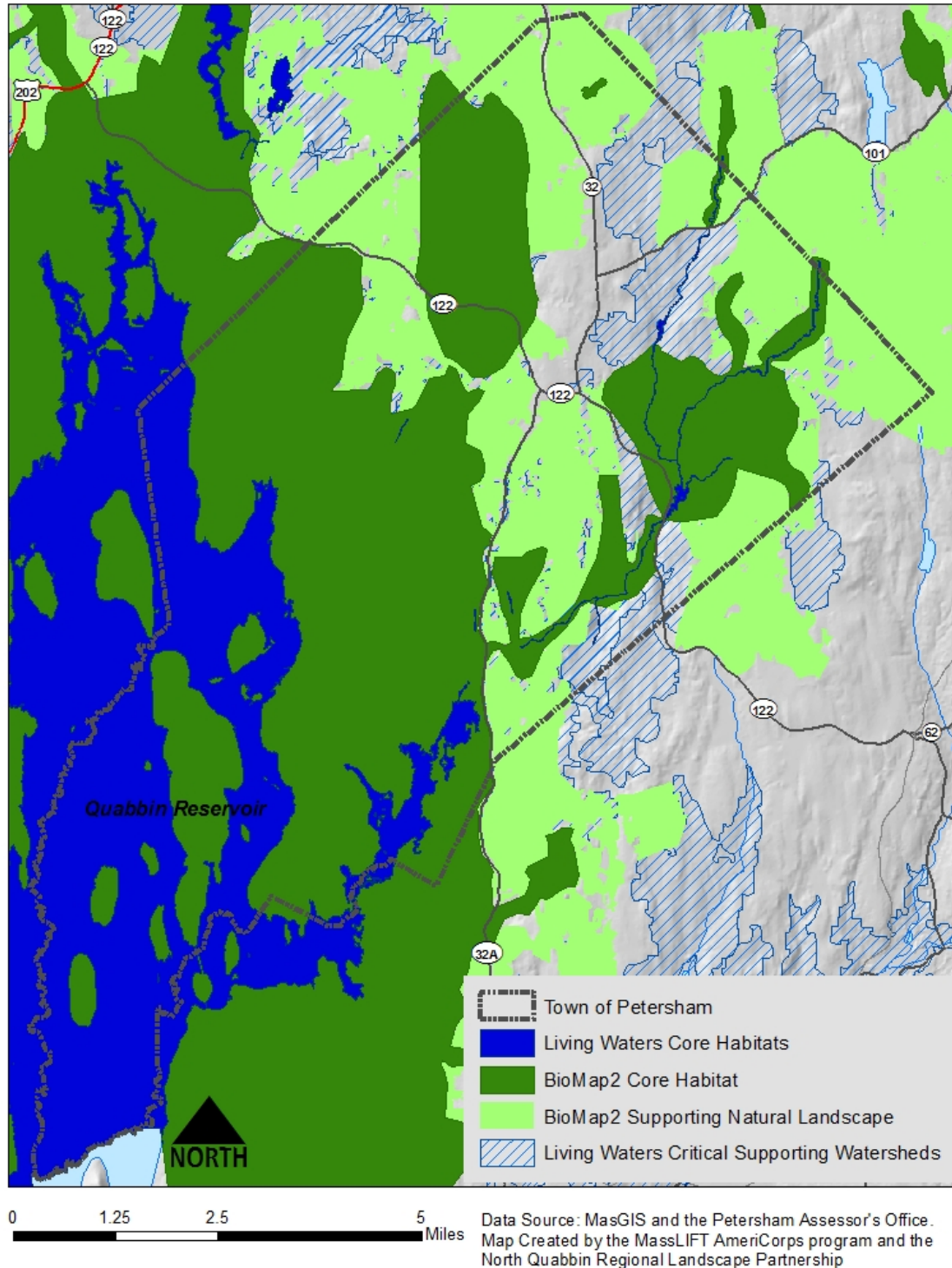
The Massachusetts Natural Heritage and Endangered Species Program (NHESP) provides an inventory of rare and endangered species and their habitats throughout the Commonwealth. This inventory includes the following classifications, which are shown on **Figure D-3**:

- **Estimated Habitat of Rare Wildlife:** These areas consist of wetland habitats used by state-listed rare animal species, and are regulated under the MA Wetlands Protection Act. Anyone proposing a project within an Estimated Habitat area must submit a Notice of Intent and undergo project review by the NHESP. Four separate areas in Petersham are listed as Estimated Habitats of Rare Wildlife in the 1999-2001 Natural Heritage Atlas (see **Figure D-3**). These areas include the Quabbin Reservoir and the East Branch of the Swift River up to Connor Pond; Harvard Pond and the contributing wetland area of Tom Swamp; north of Connor Pond where the Moccasin and Rutland Brooks join the East Branch of the Swift River; and along the East Branch of the Swift River north of its confluence with Stony Brook.
- **Priority Habitat for State-Listed Rare Species:** These areas indicate the most important habitats for *all* state-listed rare species, including both upland and wetland species, and both plant and animal species. These areas are intended for land planning purposes, and their status does not confer any protection under state law. Petersham's Priority Habitat areas coincide with the Estimated Habitats, with the addition of one area south of the East Branch of Fever Brook (see **Figure D-3**).
- **BioMap Core Habitat and Supporting Natural Landscape:** NHESP developed BioMap as a conservation planning tool based on verified natural community and rare species data that correspond to actual locations on the ground. Based on available data, NHESP scientists mapped areas needed to support viable populations of each of the target species. BioMap Core Habitats are the most critical of these areas, while Supporting Natural Landscapes are additional areas of importance that provide natural buffers, corridors, or expanded home ranges for species that live in the Core Habitat areas. As shown in **Figure D-3**, the BioMap project has designated the majority of Petersham as either Core Habitat or Supporting Natural Landscape. These designations do not afford any legal protection to land, but should be used for land use planning purposes.
- **Certified and Potential Vernal Pools:** Vernal pools are small, seasonal water bodies occurring in isolated basins that are usually wet during the spring and early summer and dry up during the later summer months. Vernal pools typically lack fish populations, making them excellent breeding habitat for many amphibian species and larval and adult habitat for many insect species, as well as other wildlife. It is important to note that many of these species rely on not just the vernal pool itself, but also the adjacent upland area, for their survival. Certified Vernal Pools are vernal pools that have been inventoried by local volunteers and certified under NHESP's certification process. Potential Vernal Pools identify the estimated locations of additional vernal pools based on interpretations of aerial photographs.

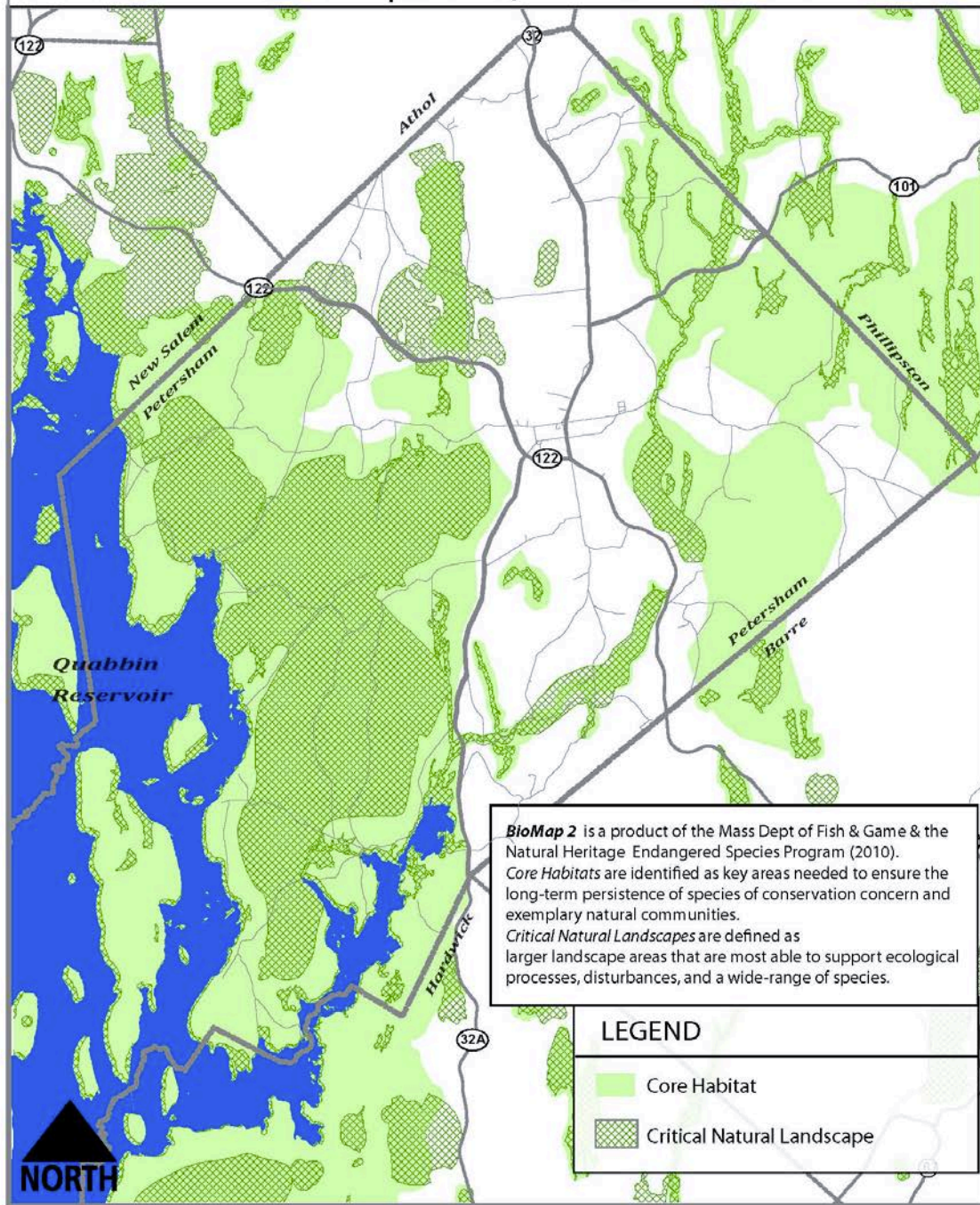
Certified vernal pools that are located within Areas Subject to Flooding (as defined by the MA Wetlands Protection Act) are protected under the Wetlands Protection Act for their wildlife habitat value. However, certified vernal pools outside of Areas Subject to Flooding are not protected by state or local law. Uncertified vernal pools (including Potential Vernal Pools) are also unprotected. Because vernal pools are temporary and seasonal, they can easily be developed unless they have been certified with the NHESP and have protection under the Wetlands Protection Act. Petersham contains eight certified vernal pools but has a number of potential vernal pools.

Wildlife Corridors: Wildlife corridors generally follow river and stream systems but uplands and ridges are important as well, especially with bird migration. Forest type is also important such as hemlock stands in mid and late winter where deer tend to congregate for protection from heavy snow and ice. Petersham's mix of uplands, wetlands, and rivers is an ideal combination for many wildlife species such as deer and a growing moose and black bear population. Predators, such as bobcats and the New England coyote have maintained healthy populations over many years. The **Terrestrial and Aquatic Habitat** map and **BioMap 2 Core and Critical Areas** map is an indicator of wildlife corridors, but it must be noted that many important wildlife corridors are not shown or known by state wildlife personnel but are well known by many residents in town who know the forest intimately, many of whom are hunters, loggers, and people who have studied wildlife and know their habits well.

Town of Petersham | Terrestrial and Aquatic Habitat



Town of Petersham | BioMap 2 Core and Critical Areas



Data Sources: MassGIS and the Petersham Assessor's Office. **Map created by** the MassLIFT AmeriCorps program and the North Quabbin Regional Landscape Partnership.

D6. SCENIC RESOURCES AND UNIQUE ENVIRONMENTS

Scenic resources and unique environments are landscape features that help define a community's character and visual appearance. Petersham has numerous such landscape features. Most people observe Petersham's scenic beauty as they drive, bike or walk along the Town's roads or use the many trails, virtually all of which (except for the state highways) have been designated as Scenic Roads under the Town's scenic roads provision (see section **D4** on page 28).

Open fields and farmland are among the most beautiful landscape features in Petersham (the location of these lands is well described in the DCR **PETERSHAM RECONNAISSANCE REPORT** and shown on the **Priority Heritage Landscape map** on page 8. These areas offer a window into Petersham's agricultural past, and in many cases also provide sweeping vistas of the surrounding hills. The most extensive open fields are along East Street and especially on Maple Lane, where the Town's last remaining cattle farm is located. Other notable open lands are located on North Main Street, off of Nichewaug Road, and at the North Common Meadow in the town center. Open landscapes are increasingly rare in Petersham, and are continually at risk of growing up to become forests if they are not mowed or grazed. Once these landscapes revert to forest, it is rarely economically feasible to return them to farmland again. The Conservation Commission has been very supportive of pasture reclamation.

Petersham has a wide variety of beautiful wooded landscapes laced with brooks and streams. The Swift River Reservation and the area around Connor Pond are among the most gorgeous of these. Petersham's landscape is fairly hilly, and offers several beautiful hilltop vantages. For example, panoramic views of the Quabbin Reservoir can be enjoyed from the top of Soapstone Hill in the Federated Women's Club State Forest, while a 360-degree view of Petersham and the surrounding towns is available from the fire tower on Prospect Hill, which is on Harvard Forest land (the tower itself is just over the border in Phillipston).

SPECIAL PLACES IN PETERSHAM compiled January 2004

- 1 scenic / Tumbledown Hill - Brooks Woodland Preserve Parcel No. 288
- 2 aquatic / Cardinal Brook at old mill wall Parcel No. 440
- 3 aquatic East Branch Swift River River system
- 4 natural / Drumlin - North of East Street just east of Quaker Drive Parcel No. 407
- 5 aquatic / Sputtermill Brook East of Monson Turnpike
- 6 open space / Orchard and corn field on Quaker Drive Parcel No. 293
- 7 aquatic / Beaver pond on East Branch Fever Brook "Phillips Swamp" Parcel No. 658 & 660
- 8 scenic / View from top of hay field at north end of Harty Drive Parcel No. 432
- 9 open space / Open field south of East Street opposite Maple Lane Parcel No. 353 & 355
- 10 natural / Strawberry Rock (glacial erratic) Parcel No. 695 ?
- 11 aquatic / Carter Pond Parcel No. 199
- 12 aquatic / Moccasin Brook River system
- 13 open space / North Common Meadow Parcel No. 377
- 14 aquatic / Connor's Pond Parcel No. 299
- 15 scenic / Sherman Hill Parcel No. 320
- 16 aquatic / Brown's Pond and Mill site Parcel No. 363 & 364
- 17 historic / Nichewaug Hotel Parcel No. 049
- 18 open space / Open fields along North Main Street
- 19 scenic / Soapstone Hill Quabbin Reservation
- 20 aquatic / Davenport Pond Parcel No. 504

21 historic / The Common Parcel No. 001 & 050
 22 aquatic / Popple Camp Brook and headwaters Northeast portion
 23 historic / Poor Farm Road (foot path) east of North Main Street
 24 scenic / Glen Valley Road, Nichewaug
 25 scenic / Quaker Drive - East Street to Barre Road
 26 scenic / Maple Lane north of East Street
 27 scenic / Oliver Street South part First Flat Iron
 28 natural / Trail east of Bald Hill Parcel No. 674 & 676
 29 historic / School District No. 1 - Central Parcel No. 026
 30 historic / School District No. 2 - North or Bell (site) Parcel No. 543
 31* historic / School District No. 3 - Second North (site) Parcel No. 487 & 519
 32 historic / School District No. 4 - First East or Ledgeville Parcel No. 405
 33 historic / School District No. 5 - Second East Parcel No. 417
 34 historic / School District No. 6 - First South (site) Parcel No. 149
 35 historic / School District No. 7 - Second South or Factory Village (site) Parcel No. 176
 36 historic / School District No. 8 - Second West (site) Parcel No. 630
 37 historic / School District No. 9 - First West (site) Parcel No. 667
 38 historic / School District No. 10 - North West (site) Parcel No. 607
 39 historic / School District No. 11 - North East or Popple Camp (site) Parcel No. 458.2
 40 historic / School District No. 12 - South East (site) Parcel No. 306
 41 historic / School District No. 13 - South West (site) Parcel No. 713
 42 historic / Old Petersham Center School or Petersham High School Parcel No. 098
 43 historic / East Street Cemetery Parcel No. 370
 44 historic / The Indian Cemetery Parcel No. 425
 45 historic / West Road Cemetery Parcel No. 698
 46 historic / Center or Village Cemetery Parcel No. 024
 47 historic / North or Mann Cemetery Parcel No. 483
 48 historic / Ledgeville, Second East, or Gates Cemetery Parcel No. 357
 49 historic / Coolidge/Goddard or Hardwick Road Cemetery Parcel No. 137
 50 historic / Nichewaug or Second South Cemetery Parcel No. 171
 51 historic / Flat Rock Road or Northwest Cemetery Parcel No. 600
 52 historic / Poor Farm Burial Plot Parcel No. 471
 53 historic / Howe Family Plot (private) - Maple Lane Parcel No. 440
 54 historic / Lincoln Cemetery (site) - south of Meadow Water Parcel No. 684
 55 historic / "Indian Caves" - Glasheen Road Parcel No. 410
 56 historic / Stone Water Trough - Old New Salem Road Parcel No. 568
 57 historic / Stone Water Trough - east end Ward Hill Road East end Ward Hill Rd.
 58 historic / Babbitt house (James Baird) - Gay Drive Parcel No. 150.1
 59 historic / Negus celler hole Parcel No. 148
 60 natural / Boiling spring - Lewis and Corinne Babbitt Wildlife Sanctuary Parcel No. 150
 61 natural / Quabbin Reservation
 62 natural / Kettle holes west of gate 41, Quabbin Reservation
 63 aquatic / "Cinderella Steps" - Roaring Brook - north of East Street Parcel No. 384
 64 scenic / View of Mt. Monadnock from north end of Maple Lane Parcel No. 440
 65 scenic / Slab City Parcel No. 239
 66 historic / Mill site on Swift River down stream from the Carruth Road Parcel No. 219
 67 historic / Mill site on East Branch Fever Brook south of Route 122 Parcel No. 684
 68 historic / Mill site on East Branch Fever Brook east of Camel's Hump Road Parcel No. 699
 69 historic / Mill site on East Branch Fever Brook - Doubleday Village, Quabbin Reservation
 70 historic / Steam Powered mill site on northwest side of Meadow Water Parcel No. 572
 71 historic / Parlan's Mill site on Swift River - Factory Village - Nichewaug Parcel No. 178

72 natural / Tom Swamp Parcel No. 583
73 natural / Black Rock Parcel No. 282
74 natural / Choat Ledges - Nichewaug Tract - Swift River Reservation Parcel No. 232
75 natural / Rocky hillside on Woodward Road Parcel No. 192.2 & 192.3
76 natural / East side Camel's Hump Hill Parcel No. 700
77 historic / "Petrified Man" Tomb - Carter Pond Road Parcel No. 194
78 historic / Lion's Den Parcel No. 181
79 historic / Woodward Cemetery (site) - Dana Road (Gt. 40) Parcel No. 726
80 historic / Peter Gore's Spring - Popple Camp Road Parcel No. 451
* 2 locations School District No. 3 - Second North (site)

D7. HISTORIC AND CULTURAL RESOURCES

The Petersham Historic District, which is listed on the National Register of Historic Places, extends along from the northern end of North Street and along Route 32 to Barre Road (Route 122) in the south, and along the full length and both sides of the of Common. The district includes 32 homes and fourteen properties, many of which date from the early nineteenth century. The district was designated as a Local Historic District in 1966—one of the first historic districts in Massachusetts. In 1982, it was expanded and listed on the National Register.

Notable buildings within the Petersham Historic District include the Country Store, Nichewaug Inn, Petersham Memorial Library, Sims Property, Brooks Law Office, Winterwood at Petersham, and the Petersham Craft Center. Buildings within the district date from 1735 to 1899, and include a variety of architectural styles such as Greek Revival, Colonial, Georgian, Federal, and Victorian. In addition to the historic buildings, key properties in the District include the town common, North Cemetery, and North Common Meadow.⁵

Four buildings in Petersham are listed individually on the National Register of Historic Places: Gay Farm on Gay Drive off of Nichewaug Road; the Holland Towne House on Ward Hill Road off of Route 32; the Petersham Craft Center at 8 North Main Street; and the Prescott Town House on Route 32.

The Town's landscape, of course, is one of its most important historic resources. Stone walls, cellar holes, and other remnants of early farmstead life may be found throughout the Town, although some of these artifacts have been obscured and blended into the natural landscape with the passage of time. The Town also has eleven cemeteries, eight of which are historic cemeteries no longer in use.

Cultural and recreational facilities in Petersham are many and varied, including the Petersham Craft Center, the Historical Society with its museum, the Memorial Library, Petersham Country Club, Curling Club, the Fisher Museum at Harvard Forest, summer band concerts staged at the renovated bandstand, impressive Memorial Day ceremonies, numerous hiking and skiing trails, the Petersham Gun Club, Elizabeth Carpenter Concerts, and the antique show and other events sponsored by the American Legion, Grange, Lions Club and the Town's three churches.

⁵ Source: *A Guide to Petersham's Historic District* and *Historic District Fact Sheet*, both prepared by the Petersham Historic District Commission and Historic Commission.

Protections for Historic Resources

Three groups within Petersham are active in protecting and celebrating the Town's historic resources. The Historic District Commission works to preserve and promote the historic character of the properties within the Petersham Historic District. The Historic Commission has a similar mission, but applied to properties outside the Historic District. The Historic Commission and Historic District Commission both have the same members, which are appointed by the Board of Selectmen. The Petersham Historical Society is a separate group that is devoted to acquiring and sharing knowledge about Petersham's history. The Historical Society building on North Main Street, which is generally open to the public for a few hours on weekends, offers displays that showcase the Society's collection of historical artifacts from the Town. Volunteers staff this museum. In addition, the Historical Society owns the Second East Street school building, which is located on East Street just beyond Harty Drive.

The Historic District Commission administers review of any proposed construction or demolition project within Petersham's historic district with the stated goal of retaining the district's historic character. It should be noted that most of the Town's historic buildings and landscape features outside of the historic district have little or no protection from alteration or destruction, especially if they are privately owned, as most are. Fortunately, over the years, many of Petersham's historic homes have been carefully repaired and restored rather than demolished.

D8. ENVIRONMENTAL PROBLEMS

Because Petersham is not heavily developed and does not have a history of major industry, it is fortunate to have escaped many of the environmental problems that plague other New England communities. Nevertheless, there have been a couple of environmental problems worth noting. The first problem pertains to the treatment and disposal of wastewater in the town center, where the low permeability of soils has led to problems associated with malfunctioning on-site wastewater systems. This problem has been corrected and wastewater systems are monitored by the Board of health.

A more general potential concern in Petersham—as in every community—is nonpoint source pollution (NSP). This issue is of special importance within the Quabbin watershed, where water-borne pollutants contribute directly to the water supply. NSP refers to pollution generated by human activities on the landscape, rather than pollution emanating from a specific outfall pipe. Common sources for NSP include road salt, septic systems, runoff from paved surfaces, animal wastes, and lawn chemicals. The Town's Highway Department yard is located adjacent to wetlands; however, the sand that is mixed with salt is kept in a covered shed. The NSP impact of new development is greatly influenced by the style and layout of the development. For example, providing narrower roadways, managing stormwater with vegetated swales and filters, and retaining native vegetation rather than replacing it with large lawns are all ways to reduce the NSP impact of new development.

There are no hazardous waste sites in Petersham. The former landfill was properly closed and monitored for a number of years. Toxic materials were not found and the site has become the Town Transfer Station.

Petersham has not had a problem with erosion as farmers have used good management practices and our wetlands and streams are well protected with adequate buffer zones and the soils are not conducive to

erosion. There has not been any chronic flooding due to our well drained landscape and streams that are adequate to handle significant sudden storm events. Insignificant amounts of sedimentation occasionally occurs along roadsides but is controlled through proper maintenance. Development impacts have been avoided through the lack of any development. Thus, Petersham's forests and streams are known for their pristine condition.

There have been forestry issues that have been dealt with by both the DCR Service Foresters and the Conservation Commission.

Open space and recreational opportunities enjoyed by most townspeople are well distributed. Petersham is a very rural community and the people who choose to live in Petersham do so because they value the environment it affords.

E. CONSERVATION AND RECREATION INVENTORY

The term “open space” means different things to different people. In the strictest sense of the term, open space can be taken to mean any land that is not built upon. In planning, however, it is useful to distinguish among different types of open space land based on who owns it, how it is used, and whether or not it could be developed in the future (i.e., level of protection). This Open Space and Recreation plan focuses mainly on open space that meets one of the following three criteria:

- Land that is permanently protected from development. Protected open space refers to open space owned by a municipality, a state or federal agency, a non-profit land protection agency, or private entities, and managed primarily for conservation, recreation, or environmental protection.
- Land that is not permanently protected but is actively used for farming, forestry, or recreation.
- Land that does not meet one of the first two criteria but nevertheless serves an important conservation or recreation function. In a rural community such as Petersham, where undeveloped land functions as high-quality wildlife habitat, this means almost any plot of undeveloped land larger than a few acres.

Open space makes an important contribution to quality of life. Public recreation areas and open space provide a focus for community life and promote a unique and identifiable community character. Open space also has important economic benefits by protecting and enhancing the property values of nearby land. Proximity to recreation and open space is an important factor in choosing the location of a small business. Additionally, proximity to recreation and open space is a major factor in attracting new residents and has been identified as a major component of the quality of life.

This chapter provides an inventory of the Town’s open space and its relation to the “green infrastructure” discussed in **Chapter D**.

E1. OPEN SPACE INVENTORY

Petersham’s open space lands were identified using information from MassGIS, Harvard Forest, the Petersham Assessor’s Office, and other sources. These lands are classified according to ownership and level of protection in **Table 5-1** and on the **Open Space, Scenic, & Historic map**. In **Table 5-1**, “Level of Protection” refers to the potential of the property to be legally developed. For example, lands owned by the Department of Environmental Management or subject to a conservation restriction are constrained by legal restrictions that prevent their development. In contrast, lands owned by the Town of Petersham that have not been explicitly designated for conservation could be developed by the Town, or may be sold to another party who could develop them. The following narrative describes some of the Town’s key public and private open space lands.

Public Land

About 85% of Petersham’s protected open space is publicly owned. The Department of Conservation and Recreation (DCR) owns more than 35% of the Town’s land area (or almost 50% of the Town if water is included). Most of the DCR lands in Petersham are located in a contiguous swath in the southern section of the Town, buffering the Quabbin reservoir with a greenbelt up to two miles wide in some places. These lands are part of the **Quabbin Reservation**, a continuous circuit of green space around the

reservoir. The DCR also owns several parcels of land, along north and south of Route 122, which it has acquired for watershed protection purposes as well as the DCR **Petersham State Forest** and **Federated Women's Club State Forest**. All of the DCR lands in Petersham are open to the public with the exception of the islands within the Quabbin Reservoir, which are closed to public access. See **Section E3**, below, for a discussion of recreational activities allowed on the DCR lands.

The DCR owns and manages the 984 acre **Federated Women's Club State Forest**, which lies in Petersham and New Salem south of Route 122. The forest's groves of pine and stands of maple, birch, and hemlock invite the visitor along the wooded roads. The road along the West Branch Fever Brook is outstanding for its scenery. A wildlife sanctuary of 140 acres has been set aside in the center of the forest, and a dam on Fever Brook holds back sufficient water to attract migrating and native waterfowl. In the southwest section is the forest's chief geological feature, the Gorge.

Data Sources: Historic data from MassGIS MHC Inventory. **Map created** by the MassLIFT AmeriCorps program and the North Quabbin Regional Landscape Partnership, July 2013

Town Owned Conservation & Recreation Properties

All properties have public access. Petersham has only one zone: residential – agricultural

Property	Agency	Use	Condition	Recreation Potential	Grants for Protection	Public Access	Degree of Protection
Petersham Center School	School Dept.	Baseball Soccer Play-ground	Excellent	Nature Study School Gardens	None	Yes	High
Babbitt Wildlife Sanctuary	Con. Com.	Nature viewing & study Trails	Fair	Current use	None	Yes	High
Halberg Parcel	Con. Com.	Nature viewing & study Trails	Fair.	Current use	None	Yes	High
Ganson Parcel	Con. Com.	Nature viewing & study Trails	Fair	Current use	None	Yes	High
Davenport Pond Property	Con. Com.	Nature viewing & study Trails	Fair	Current use	Forest Legacy	Yes	High

Table 5-1
Protected and Unprotected Open Space in Petersham

Level of Protection and Owner	Acres (Excluding Water)	% of Town (Excluding Water)
Protected Open Space – Public Ownership		
State–Dept. of Conservation and Recreation	1,378.1	4.0
State–Division of Fisheries and Wildlife	1,567.2	4.5
State–DCR Office of Watershed Management	12,429.7	35.8
Town of Petersham	272.6	0.8
Subtotal	15,647.6	45.1%
Protected Open Space – Private Ownership		
Trustees of Reservations	986.0	2.8
Massachusetts Audubon Society	678.6	2.0
Harvard University – Harvard Forest	699.0	2.0
Private Land w/ CRs (including DCR-WPRs)	2,675.8	9.5
Other Private Protected Land	96.5	0.3
Subtotal	3,524.9	16.6%
Total Protected Open Space	19,172.5	61.7%
Temporarily Protected Open Space		
Chapter 61 (Forestry)	4,532.8	13.1
Chapter 61A (Agriculture)	1,484.1	4.3
Chapter 61B (Recreation)	120.8	0.4
Subtotal	6,137.7	17.8%
Unprotected Open Space		
Town of Petersham	152.1	0.4
Harvard University – Harvard Forest	2,911.0	8.4
Private – Other Institutional Owner	421.6	1.2
Subtotal	3,171.4	10.0%

Sources: MassGIS, Petersham Assessor's Office, Harvard Forest, Mass. Division of Conservation Services, Mount Grace Land Conservation Trust, Petersham Board of Assessors.

The Division of Fisheries and Wildlife (DFW) is the final state landowner in Petersham. As shown on the **Open Space, Scenic, & Historic map**, DFW owns land in three separate wildlife management areas (WMAs) in the Town: the Popple Camp WMA, Phillipston WMA, and Raccoon Hill WMA. The **Popple Camp WMA** straddles the Petersham-Phillipston border, mostly north of Route 101. This WMA contains almost two miles of the East Branch of the Swift River and its broad valley, as well as portions of Popple Camp Brook, Bigelow Brook, and Shattuck Brook. The 1,284-acre area is dominated by mixed hardwood and conifer forest interspersed with wooded swamp, some open marsh, and a few old brushy fields. The **Phillipston WMA** is the largest of the three WMAs, containing a total of 3,266 acres in four parcels in Petersham and Phillipston. Its landscape also consists of mixed hardwood and softwood forests interspersed with open marshes, wooded swamps, and overgrown fields. A large stretch of Moccasin Brook flows through this property. Finally, **Raccoon Hill WMA** is a 437-acre reservation located on

three parcels in Petersham and Barre. The northernmost parcel is located in Petersham and can be accessed from Glen Valley Road or Carter Pond Road. Virtually the entire area is covered with mixed hardwood and conifer forest, and most of it is moderately to steeply sloping.

The Town of Petersham owns about 270 acres of protected open space and 150 acres of unprotected land. The largest block of protected open space is the **Babbitt Wildlife Sanctuary** (61 acres), the adjacent **Halberg Parcel** (86.4 acres), and the **Ganson Parcel** (23 acres) located off of South Street and Nichewaug Road. The Babbitt Sanctuary was a gift to the Town in 1976, while the Halberg Parcel was acquired later when the Mount Grace Land Conservation Trust purchased the land and granted it to the Town Conservation Commission. The **Ganson Parcel** was acquired more recently when the Mount Grace Land Conservation Trust acquired the land and granted it to the Town Conservation Commission. All three parcels are managed by the Conservation Commission. The deed on the Babbitt Sanctuary requires that part of the land be retained as an open field, which continues to be done by annual mowing and cutting but could be done through haying in the future. Hunting is allowed on the Halberg Parcel and Ganson Parcel but not within the original Babbitt Wildlife Sanctuary. Although there are trails through the properties, they are not currently accessible except through private land. For this reason, the adjacent Gansen property was acquired to provide public access from South Street and Nichewaug Road and to expand the size of the reserve.

Other sizeable Town-owned parcels include the **Town Forest** (30 acres) off of Poor Farm Road and the **Davenport Property** (80.7 acres) owned and managed by the Conservation Commission in the northern corner of the Town. The Town Forest, which is protected open space, is managed for forestry. The Board of Selectmen periodically authorizes selective cuts on this land. The 80.7 acre Davenport Property was acquired in 1986 for failure to pay taxes. An abutting parcel in Athol was acquired around the same time, also for unpaid taxes. The Davenport Pond Property was protected in perpetuity with a Forest Legacy grant as Article 97 land and deeded to the Petersham Conservation Commission.

There are five discontinued roads that the Town voted in 1978 to become Public Footpaths. They are not public ways for vehicular use and the lots along them cannot be developed.

French Road from Route 32 to a dead end.

Pierce Road from Route 32 to the Phillipston Town Line.

Poor Farm Road from Route 32 to the Phillipston Town Line.

Church Road from Glen Valley Road to a dead end.

Camel Hump Road from Fever Brook south to the DCR gate 38 of the Quabbin Reservation.

Private Conservation Land

Petersham is somewhat unique in the large number of nonprofit organizations that own land and/or are active in land conservation in the Town. These organizations include the Trustees of Reservations, Massachusetts Audubon Society, Harvard Forest, and the Mount Grace Land Conservation Trust. Generally, the involvement of these organizations in Petersham is based on their perception that the Town's open space is important to the furthering of their missions—whether that mission is protecting wildlife populations, connecting and preserving wildlife habitat, or safeguarding the most outstanding landscapes in Massachusetts. Major private open space holdings are described below.

The Trustees of Reservations own and manage three major properties in Petersham: the Brooks Woodland Preserve, the North Common Meadow, and the Swift River Reservation. The 558-acre **Brooks Woodland Preserve** is an undisturbed forest of towering red oaks, hemlocks, and white pine that is being managed to re-create a forest typical of central Massachusetts at the time of its settlement (to the extent that is possible). Visitors may hike or cross-country ski along many miles of woodland trails and former woods roads. Old stone walls, reminders of former agricultural use, cross the forest floor passing through patches of maidenhair ferns, winterberry, and partridgeberry. Some of the original farmland has been kept as open fields within the forest. Along parts of the Swift River, Moccasin Brook, and Roaring Brook, beavers have dammed the stream, creating ponds. Cascades of glacial boulders near outcrops of granite ledge provide dens for porcupines. Six early 19th-century farmsteads can be rediscovered in the Preserve. Fieldstone cellar walls, porch steps, and a chimney support are all that remain of the former Dudley Farm.

The **North Common Meadow**, located adjacent to the Brooks Woodland Preserve and across North Main Street from the town common, was once pastureland and, later, part of a golf course for the Nichewaug Inn. The 25-acre meadow now preserves the rural charm and character of Petersham's town center. The upper meadow produces hay that is cut by a local farmer. The lower meadow supports a variety of wildflowers and features a small lily-covered pond. From the field adjacent to the Petersham Historical Society building on North Main Street, visitors can take in a sweeping view of Mount Wachusett to the east.

The 439-acre **Swift River Reservation** is made up of three tracts—the Nichewaug, Davis, and Slab City tracts—linked together by the East Branch of the Swift River. The Nichewaug Tract includes extensive rocky ledges, a moist ravine, open fields, a beaver-dammed swamp, vernal pools, riverside habitat, and forest edges along woods roads. These habitats support many small mammals, reptiles, amphibians, fish, insects, and birds. In the late 18th century, much of the Reservation was cleared for farms that conducted small-scale agriculture, subsistence livestock grazing, and firewood collection. These activities, plus local industries such as saw and woolen mills, a box company, a tannery, and a hat company, placed greater demand on the area's natural resources. The forest was largely cut, sparing trees only on steep, rocky hillsides, on ledges, and in wetlands. Several reclaimed fields in the Slab City Tract re-create the open setting around the Avery Williams farmstead as it may have appeared around 1890. After farm abandonment in the early 20th century, the forest returned, only to be decimated by the hurricane of 1938. Today, most of the Reservation's white pine and mixed hardwood forest dates from approximately 1938.

The **Massachusetts Audubon Society** owns the 1,500+ acre Rutland Brook Sanctuary in Petersham and Barre. This sanctuary, which includes about 690 acres of land in Petersham, forms part of a continuous greenbelt running from the North Common Meadow in Petersham's town center, through the Brooks Woodland Preserve, through the Rutland Brook Sanctuary, and connecting finally to DEM land in Barre. The property is managed as a wildlife sanctuary, and consists of mixed woodland with a beaver meadow. Although public access is allowed, there are no advertised trails, trailhead, or trail map.

Harvard Forest was founded in 1907, when two graduates of Harvard offered the University a large tract of land in Petersham for their new School of Forestry. Harvard's school of forestry was one of the first in the nation, responding to region-wide concerns at the time about a "timber famine." Soon after its establishment, Harvard Forest became a year-round headquarters for professional foresters studying silviculture and forest management. Harvard Forest is no longer a school of forestry but has become a

world class center for research and education in forest biology. Research at the forest seeks to understand historical and modern changes in the forests of central New England resulting from human and natural disturbance. Over 3,000 acres of Harvard Forest lands plus the forest's Fisher Museum on North Main Street are open to the public. The two-self-guided nature trails—the Natural History Trail through John Sanderson's Farm and the Black Gum Trail—offer an excellent way to enjoy a hike in the woods. It should be noted that although Harvard Forest is widely regarded as conservation land, there is no deed restriction preventing this land from being sold or developed in the future. Thus, at present it is considered “unprotected open space.”

A final important category of private conservation land is **private land with conservation restrictions**. Conservation restrictions (CRs) are legally binding agreements that specify how land may or may not be used for a period of years or in perpetuity. The CRs identified in this plan are permanent restrictions that prohibit further development on private lands.⁶ More than 2,000 acres of land in Petersham have been protected in this manner. CRs are usually the result of a mutual agreement between the grantor of the CR (i.e., the landowner) and the grantee of the CR (often a state agency such as the DCR Office of Watershed Management or a nonprofit conservation organization). The DCR Office of Watershed Management holds 27 Watershed Protection Restrictions in Petersham, totaling 1,611 acres. Landowner usually are compensated in exchange for placing the CR on their land. There are numerous CRs scattered throughout the Town. In many cases, the owner of the land that is subject to the CR continues to live on or near the property, or to farm or log the land.

Chapter 61 Private Lands in Active Use

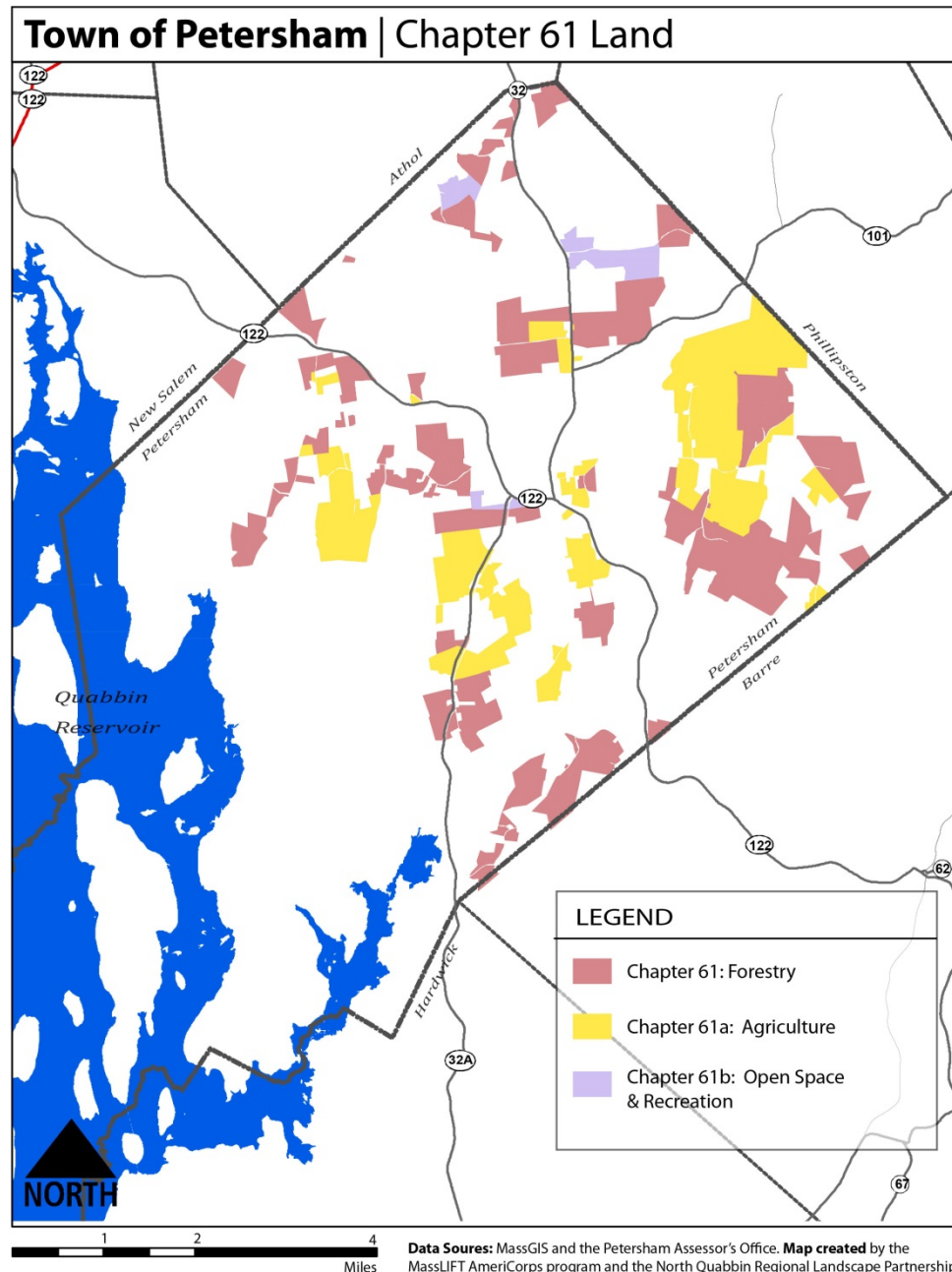
Chapters 61, 61A, and 61B of the Massachusetts General Laws provide an abatement of local property taxes to landowners who retain their land in forestry, agricultural, or recreational uses, respectively, rather than selling or developing this land. To qualify for Chapter 61 status, a landowner must prepare a forest management plan for approval by the Department of Environmental Management. The minimum tract size is 10 acres. Chapter 61 status will typically result in a reduction of 95% in the assessed value of the land. However, the landowner must pay a tax on the proceeds from his or her forestry operations.

Chapter 61A is most commonly applied to agricultural or horticultural land but can be used for the forested portions of a farm, provided a forest management plan is approved by the Department of Environmental Management. To qualify for Chapter 61A, a farm owner must have five or more contiguous acres being used for agricultural or horticultural purposes. Property under Chapter 61A is assessed at rates that vary for different agricultural uses. Generally, classification will result in a reduction of 80% in assessed value. Chapter 61B functions in a similar manner, but applies to outdoor recreational facilities such as golf courses and campgrounds.

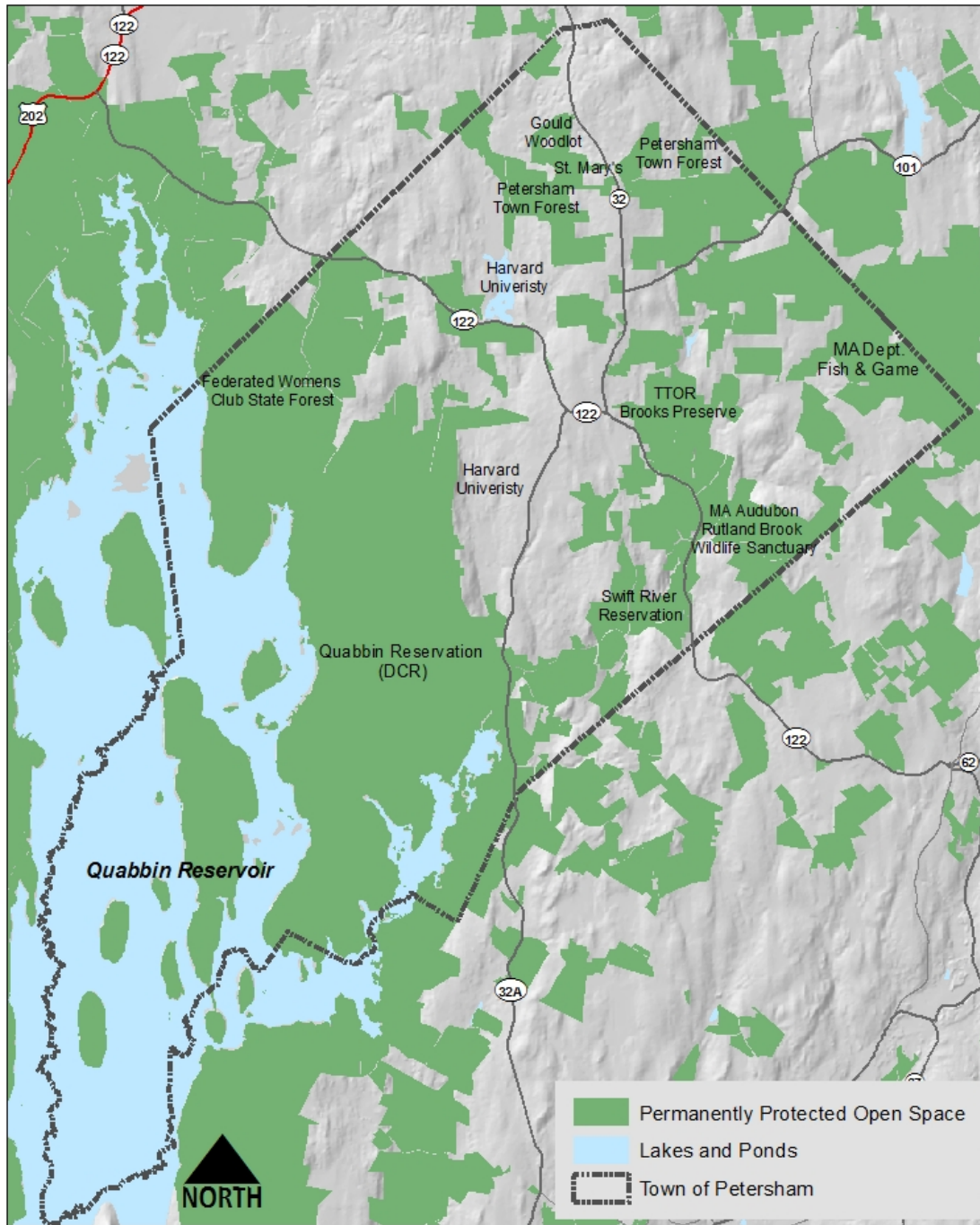
The Chapters 61, 61A, and 61B classifications run for a period of ten years, during which time the property owner may not convert the land to another use, except by paying a penalty that includes back taxes plus interest. At the end of the classification period, the owner may convert the land to another use, penalty-free, or renew the reduced-tax classification status. If Chapter 61/61A/61B land is placed on the

⁶ The provisions of each CR are unique to the language and details of that CR. For example, in some cases, CRs may allow the development of one additional dwelling unit on a large parcel of land, while other CRs explicitly prohibit any new development. CRs can also provide for the continuation of certain activities on the land, such as farming or logging.

market, the Town has the “right of first refusal” for purchase of the land for 120 days. This right may also be assigned to a non-profit conservation organization such as a land trust. In reality, towns often have trouble taking advantage of the right of first refusal, because they must have available a large cash reserve to buy the land, as well as a political structure that can quickly approve the purchase. Even the ten-year classification period sometimes proves ineffectual during hot real estate markets, when developers may be willing to pay the back taxes in order to obtain the land for development. For practical purposes, Chapter lands are protected only tenuously and temporarily.



Town of Petersham | Permanently Protected Land



0 1.25 2.5 5 Miles

Data Source: MasGIS and the Petersham Assessor's Office.
Map Created by the MassLIFT AmeriCorps program and the
North Quabbin Regional Landscape Partnership

E2. OPEN SPACE ISSUES AND TRENDS

As discussed above, many state agencies and nonprofit organizations are active in land conservation in Petersham. The specific missions of these agencies and organizations vary, but their interests in preserving certain parcels of land or areas of Town often overlap. The DCR continues to seek to improve the protection of its reservoirs by safeguarding land within the Quabbin and Wachusett watersheds. Their greatest interest is in lands that drain most directly to the rivers, streams, and wetlands that flow into the reservoirs. Recently, the DCR has begun to increase its use of conservation restrictions rather than outright purchase of lands as a way of keeping land in local control, keeping land on the local tax rolls, and minimizing the DCR's payment in lieu of tax liabilities. The Trustees of Reservations continues to be interested in land protection in Petersham, and seeks land with a variety of attributes ranging from wildlife habitat to unique landscape character.

Finally, the Mount Grace Land Conservation Trust and more recently the East Quabbin Land Trust are major participants in land conservation in the north Quabbin region and have expressed interest in future land protection projects in Petersham. Part of the reason for this interest is a desire to create a contiguous large-scale network of conservation lands stretching from the Quabbin Reservoir to the New Hampshire border, and providing viable long-term habitat for all of the area's native species. This vision is beginning to take form in the shape of a large "donut" of conservation lands encircling Athol and Orange. Recent progress was made in securing the northern section of this "donut" in Warwick and Royalston, and attention may now be shifting to other areas. The various agencies and organizations involved in land conservation in the north Quabbin region have formed the North Quabbin Regional Landscape Partnership to coordinate their efforts.

One major concern among the professionals and volunteers who are stewards of Petersham's protected open space is providing adequate connections among the various blocks of protected land for wildlife and recreation use alike. For example, linkages of protected land have not yet been made between the lands along Route 101 and Harvard Forest (in a north-south direction), or between the Brooks Woodland Preserve and the Phillipston Wildlife Management Area (in an east-west direction). The **Permanently Protected Land** map (page 47) shows the location of protected lands, which are shown in green. Land connectivity is a high priority for most of those involved in land conservation in Petersham.

A final issue worth discussing is the impact of protected open space on the Town's tax base. At first, it might appear as though open space has a detrimental effect on the tax base because it contributes little assessed value—and this is indeed one widely held view among some Petersham residents. In reality, though, the situation is far more complicated. First, the impact of open space on the tax base must be compared to the impact of alternative land uses. This comparison has been made in many other communities, and typically the finding is that open space and commercial land uses both contribute much more to a town's tax base than they cost in public services, while residential land results in a net revenue shortfall.⁷

Another unexpected finding is that land in public ownership is actually somewhat of a windfall for the Town. For example, in fiscal year 2003, the former MDC (now DCR) paid the Town about \$323,000 as a payment in lieu of taxes for the land that they owned in the Town. This is more than the amount of

⁷ See, for example, the Cost of Community Services studies conducted by the American Farmland Trust.

revenue the Town derived from all other commercial and open space land uses combined, and possibly more than the Town would earn from taxes if the land were in private ownership. A final point with regard to the fiscal impact of open space is that, because of the reduced tax assessment, Chapter 61, 61A, and 61B lands bring in very little revenue. For example, the Town's 5,381 acres of Chapter 61 (forestry) land generate less than \$2,500 in annual property tax revenue.⁸ Farmland brings in slightly more money per acre, but even when land and farm improvements are taken together, the total revenue in fiscal year 2002 from the Town's 1,800 acres of farmland was just over \$10,000. Thus, despite widespread local opinions about the importance of keeping open space in private ownership so that it stays on the tax rolls, in reality there is only a small difference in tax revenue between Chapter lands and tax exempt lands.

E3. RECREATIONAL OPPORTUNITIES

Petersham offers several opportunities for facility-based "active recreation" and ample options for nature-based "passive recreation." These opportunities are described below.

Active Recreation Facilities

Although Petersham does not have a recreation department or commission, it nevertheless manages to provide several active recreation opportunities through the efforts of local volunteers as well as collaborations with neighboring towns. Most of the active recreation facilities in Petersham are located at the Center School. These include a little league field, softball field, soccer field, and indoor gymnasium that is suitable for basketball or volleyball. Another recreation facility in Petersham include the Petersham Curling Club. There is no indoor pool in Petersham, but the Athol YMCA offers an indoor pool plus other indoor sports and recreation facilities.

Soccer and baseball programs for Petersham residents in grades K-6 are conducted as part of the Quabbin regional school district, which includes Barre, Hardwick, Hubbardston, New Braintree, and Oakham. Basketball for grades 1-6 is organized locally by volunteers, who collect a small fee for each participant to pay for usage of the school gymnasium for games. All sports for grades 7-12 are organized and provided through the Mahar Regional School, which offers more extensive sports fields and teams for its middle school and high school students. Adult leagues or informal groups sometimes form in Petersham to play basketball or other sports. These groups are generally allowed to use the gym at the Center School for a small fee. In addition, the outdoor fields at the Center School are available for open play when they are not being used for scheduled events.

As noted above, virtually all of the sports and recreation programs in Petersham (except for the Mahar teams) are initiated and managed by local volunteers, without financial assistance from the Town. This is also true of the outdoor fields. While the school mows the grass on the fields, volunteers are currently responsible for most other maintenance or upgrades. The Town recently spent \$2,500 to install a new fence around the little league field to bring it up to regulation standards, but this appears to have been a one-time appropriation.

As part of the community survey, residents were asked to identify recreation needs within the Town. The top active recreation needs that were identified included swimming at a natural lake or pond (39%);

⁸ For Chapter 61 land, the Town is also entitled to tax income derived from the sale of timber. However, this amount is quite small.

swimming at a pool (26%); tennis courts (20%); basketball courts (19%); baseball or softball diamonds (19%); and soccer, field hockey, or football fields (16%).⁹

Passive Recreation Facilities

Petersham has excellent opportunities for passive recreation thanks to its thousands of acres of conservation land open to the public. In general the vast majority of land owned by the state, Town, or private nonprofit conservation organizations is open to the public for various recreational uses. All of the DCR-owned property in Town (except for the islands in the Quabbin Reservoir) is open to the public, as well.

Many of the conservation areas alluded to earlier in this chapter contain trails for non-motorized recreation such as hiking, cross-country skiing, snowshoeing, and, in some instances, mountain biking. Official mapped hiking trails are available at Harvard Forest, the Federated Women's Club State Forest, the Swift River Reservation, Brooks Woodland Preserve, and the North Common Meadow. Roadside parking lots are available to access the Popple Camp, Phillipston, and Raccoon Hill Wildlife Management Areas, from which a network of woods roads and some paths lead into the forest. Many of the trails in Petersham are mapped by the managers of the individual properties, but there is no coordinated town-wide trails map. In addition to these trails on public and nonprofit lands, there are some "unofficial" trails on private property. In some instances these trails are used only by the landowner; in other cases, neighbors and others use them as well. Since motorized activities such as snowmobiling and riding all-terrain vehicles is generally prohibited on the public and nonprofit lands, most of these activities occur on private trails.

In addition to trail-related activities, there are numerous other passive recreation other available in Petersham, such as hunting, fishing, picnicking, camping, photography, and boating. **Table 5-2** summarizes some of the activities that are allowed at the various conservation areas in Petersham. This table is based on information from the agencies or organizations that manage each tract of land, and is current as of the spring of 2003. Management of these lands, including the allowed recreational activities, is subject to change.

⁹ See **Appendix A** of the Master Plan for detailed survey results.

Table 5-2
Passive Recreation Activities Allowed on Petersham's Conservation Lands

<ul style="list-style-type: none"> ● Allowed activity ● Allowed subject to restrictions noted 	Hiking	X-C Skiing and Snowshoeing	Horseback Riding	Mountain Biking	Camping	Fishing	Hunting	Canoeing and Kayaking	Swimming
Quabbin Reservation (DCR)	●			● ¹		● ²	● ³		
Other DCR Lands	●	●		● ⁴		●	●		
Brooks Woodland Preserve (TTOR)	●	●	●	●		●			
North Common Meadow (TTOR)	●	●	●	●					
Swift River Reservation (TTOR)	●	●	●	●		●	●		
Rutland Brook Preserve (Mass. Audubon)	●					●			
Harvard Forest	●	●	● ⁵	●		●	●		
Babbitt Wildlife Sanctuary (Conservation Commission)	●	●		●					
Davenport Pond Conservation Area (Conservation Commission)	●	●	●	●		●			
Petersham State Forest (DCR)	●	●				●	●		
Federated Women's Club State Forest (DCR)	●	●			●		●		
Popple Camp WMA	●	●				●	●		
Phillipston WMA	●	●				●	●		
Raccoon Hill WMA	●	●				●	●		

Notes: (1) Allowed on designated roads through gates 29, 30, 35, 40, 43, and 44. (2) All sections of the Petersham shoreline are open for fishing. However, all of the Quabbin islands, some of the reservoir, and some of the shoreline in other towns are closed to fishing. The fishing season runs from mid-April through mid-October. (3) Only allowed by special permit during the Quabbin Controlled Deer Hunt. (4) Allowed on main forest roads. (5) Allowed except where posted.

Source: Information from the websites of the DCR, Trustees of Reservations, and Division of Fisheries and Wildlife, and conversations with local land managers.

F. COMMUNITY VISION

F1. DESCRIPTION OF PROCESS

- The original Open Space and Recreation Plan was developed during the winter, spring, and summer of 2003 with input from Petersham's residents, guidance from the Petersham Ad Hoc Planning Committee, and technical assistance from the Daylor Consulting Group. In addition, input on open space and recreation provided through the community survey for the first Open Space and Recreation Plan represented the views of more than 30% of Petersham's households.
- The current plan is a major revision with substantial additions based on the DCR **PETERSHAM RECONNAISSANCE REPORT**, Spring 2008, Massachusetts Heritage Landscape Inventory Program, and on two Special Public Meetings to discuss the Draft Open Space & Recreation Plan and to seek public input held on September 12, 2013 and November 7, 2013. This Open Space & Recreation Plan meets changing needs in addition to furthering long term goals.

F2. PETERSHAM'S VISION FOR THE FUTURE

The planning framework for the first Open Space and Recreation Plan allowed the Town to develop a comprehensive vision for its future while acknowledging and addressing the conflicts and tradeoffs that are sometimes inherent in the Town's different goals. This vision has been corroborated from the public input in the preparation of the DCR **PETERSHAM RECONNAISSANCE REPORT**, Spring 2008. The broadest expression of the Town's planning framework is in the **Vision Statement**, a broad set of themes identifying what type of community Petersham would like to be in the future. This statement is intended to be general, and to capture the overall consensus of the majority of Petersham's residents as expressed in the resident survey and at the public meetings.

Petersham's Vision for the Future

The rural agricultural character of Petersham should be preserved. Development should harmonize with the Town's rural character and environment through careful selection and protection of open space and agricultural lands. The Town's "working landscape" of forests and farms should be promoted and protected and historic buildings and sites preserved.

The town center should remain a small but friendly gathering place. This should be an area of mainly residences and civic institutions, with a few small businesses catering to townspeople and visitors. The preservation in perpetuity of the Country Store is key to this vision and the Historic District an essential element in preserving the character of a mid-nineteenth century village.

Petersham's residents help make the Town what it is. The choices made about housing and public services should strive to keep Petersham a town that is welcoming to people of different ages, income levels, and cultural backgrounds. Petersham's tight-knit community and participatory government is highly valued and will work to maintain both, even as the Town's population grows in the future.

The Town will continue to meet the challenges that lie ahead and will work cooperatively to address them. Fair but effective planning tools will help prepare the Town to handle future growth pressures. The Town's public facilities should be upgraded in a cost-effective and appropriate manner that minimizes the tax burden to the Town's residents.

The character that makes Petersham special is why people choose to live here. Residents and visitors like our town without strip malls, tacky signs, endless subdivisions, and wide roads—and want to ensure that it stays that way. Twenty years from now, Petersham will still be a unique and beautiful place in which to live.

F3. GOALS STATEMENT

The **Goals Statement** expands upon Petersham’s Vision for the Future by describing, in general terms, the Town’s desired approach to specific issues: in this case, open space conservation, recreation, natural resource protection, and historic resource protection.

These “big picture” goals, combined with the needs analysis in **Chapter G**, form the basis for the specific Goals and Objectives outlined in **Chapter H**. It is these more detailed Goals and Objectives that guide the specific steps outlined in the Five Year Action Plan (**Chapter I**).

Open Space and Recreation Goals

- Goal 1:** Protect a significant portion of Petersham’s unprotected open space in order to preserve the Town’s rural character, protect its natural resources, and minimize development in inappropriate areas.
- Goal 2:** Maintain and expand the Town’s “working landscape” of farming and forestry operations and promote ecotourism.
- Goal 3:** Ensure that large portions of the Town’s open space remain open to the public.
- Goal 4:** Provide adequate access to active recreation facilities for field sports, court sports, skating, and swimming.

Natural and Historic Resource Goals

- Goal 5:** Protect the Town’s surface water, ground water, and wetland resources.
- Goal 6:** Minimize the destruction and fragmentation of natural ecosystems through carefully targeted open space protection and ecologically-based land development regulations.
- Goal 7:** Manage the Town’s open space to achieve an optimal balance between habitat and water resource conservation and various educational, recreational, and potential revenue-generating uses.
- Goal 8:** Protect historic buildings and landscape features from destruction or inappropriate alteration, and encourage the adaptive reuse of historic buildings.
- Goal 9:** Provide Natural History Programs at the Petersham Center School and for the community
- Goal 10:** Establish plans and contingencies for mitigating the effects of climate change.

G. ANALYSIS OF NEEDS

Through the public meetings, the community survey, and discussions with Petersham's various boards and commissions, several issues and needs became apparent. Several of these needs will require Town action, such as the institution of new zoning bylaws or amendments to existing bylaws, the protection of specific parcels of land, or the completion of specific projects. Some, such as issues of public education or landowner interface, can be addressed through the Town's boards, commissions, and volunteers.

The **Massachusetts Statewide Comprehensive Outdoor Recreation Plan 2012 (SCORP)** shows that land conservation is important for central region residents. The inferred demand for resource types shows that rivers and streams, trails and greenways are in the top five resource areas needed in the central region.

The four goals of the 2012 Massachusetts SCORP are as follows:

1. Increase the availability of all types of trails for recreation
2. Increase the availability of water-based recreation
3. Invest in recreation and conservation areas that are close to home for short visits
4. Invest in racially, economically, and age diverse neighborhoods given their projected increase in participation in outdoor recreation

The Goals and Objectives of the 2013 Petersham Open Space and Recreation Plan not only meet but exceed the four goals of the Massachusetts SCORP. The needs analysis, in combination with the general Community Goals identified in **Chapter F**, form the basis for the specific, policy-oriented Goals and Objectives in **Chapter H** as well as the Five Year Action Plan in **Chapter I**.

G1. LAND CONSERVATION NEEDS

In the earlier community survey, a majority of residents indicated that Petersham should protect more open space to safeguard the Town's natural resources and/or rural character. A minority felt that the Town already has enough protected open space. The responses to survey Question 11—prioritizing important issues—sheds additional light on these responses. When asked to select the most important goals for the Town to pursue over the next few years, residents overwhelmingly picked the following three: “maintain the Town's rural character,” “control tax rate,” and “control residential growth.” This sentiment has not changed. Many residents believe that open space protection is a worthy end in itself, while others might view it as one of several appropriate strategies for maintaining rural character and controlling growth. There remains strong support for maintaining the Town's traditional “working landscape” of farms and forests. Recent land protection has been accomplished without cost to the Town, with LAND grants and private contributions fully funding the projects.

Based on this input and an analysis of the data presented in **Chapters D and E**, the following are some of the Town's land conservation needs, in approximate order of priority:

- Developing an effective growth management strategy with regulatory and incentive-based tools that encourage or require an evaluation of open space and resource values on any potential development site, the use of ecologically sensitive design and development practices, and the preservation of open space as part of new developments.

- Expanding the Town's network of protected open space, focusing particularly on forming connections among the conservation lands in the eastern half of the Town.
- Conducting additional study of the fiscal impact of various open space land uses and ownership arrangements on the Town's financial condition, and, based on this information, developing strategies for enhancing local revenue from open space lands.
- Developing strategies to maintain the Town's working landscape of farms and forestry operations.
- Developing funding sources for land conservation such as state and federal grants and assistance from nonprofit organizations.

G2. NATURAL AND HISTORIC RESOURCE PROTECTION NEEDS

In the community survey, residents were asked to rate the importance on a scale of 1 to 7 of various resources such as forests, farmland, historic buildings, and scenic roads. All of the resources received an average score of between 5.5 and 6.2, suggesting that residents place a high value on all aspects of Petersham's natural environment, rural character, and historic heritage. These local values are consistent with Petersham's role as the steward of natural resources of statewide importance, including the Quabbin Reservoir watershed and some of the largest blocks of un-fragmented natural habitat in the Commonwealth. These findings suggest the following natural and historic resource protection needs in the Town:

- Assessing the specific threats to the Town's scenic rural character—especially as viewed from the Town's roadways—and implementing a strategy to address these threats.
- Taking steps to minimize nonpoint source pollution (i.e., polluted runoff) from existing development, new development, and Town operations.
- Inventorying and evaluating the Town's historic heritage outside of the Petersham Historic District and taking any necessary steps to safeguard these resources.
- Evaluating and addressing land management needs and threats on the Town's conservation lands, such as threats related to invasive species.
- Connecting conservation land with riparian and upland corridors to enhance the value of the Town's habitat areas for plant and animal species.

G3. RECREATION AND SPECIAL GROUP NEEDS

The recreational needs mentioned in the community are swimming, ice hockey, and tennis with swimming and ice hockey popular with the young and middle-aged and tennis with all age groups including the elderly. The Petersham Center School Gymnasium and outdoor court are available for basketball and a number of groups use the baseball field. In addition, the field behind the school is used for soccer. These facilities can accommodate wheelchair access,

A very popular activity throughout the year except for inclement weather is walking Old Maids Mile which encompasses West Street from the Common to Hardwick Road, from Hardwick Road to Spring Street, from Spring Street to South Main Street, and from South Main Street back to the Common. This is especially popular with older residents who tend to live in the center of town and one of the Goals items

is to explore the possibility of sidewalks where they currently do not exist to allow for safer walking conditions. However, this improvement is complicated with insufficient space between the edge of the road and the right-of-way.

The Town owned Nichewaug Inn property has tennis courts which could be refurbished. Community gardens have been established on this property which had become a successful pastime.

The school facilities are managed by the Petersham Center School and groups such as the Little League. Management of the tennis courts at the Nichewaug Inn property would be the responsibility of the Town. Petersham is fortunate to have many eager volunteers.

Table G-1
Results of Survey Question on Recreational Activities in Petersham

Activity	Participate; Enough Opportunity in Petersham	Participate; Not Enough Opportunity in Petersham	Do Not Participate	Prefer That This Activity Not Occur in Petersham
Hunting	22%	4%	60%	13%
Fishing	48%	10%	41%	1%
Hiking	74%	10%	15%	0%
X-C Skiing or Snowshoeing	54%	11%	35%	1%
Fitness Walking or Jogging	74%	15%	11%	0%
Horseback Riding	13%	13%	73%	1%
Mountain Bicycling	32%	9%	56%	2%
Four-Wheeling/Dirt Biking	4%	7%	60%	28%
Snowmobiling	11%	8%	61%	20%
Boating – Motorized	6%	9%	64%	20%
Boating – Nonmotorized	35%	18%	46%	0%
Camping	22%	23%	53%	2%
Bird Watching/Nature Study	67%	10%	22%	1%
Baseball or Softball	18%	19%	64%	0%
Soccer, Field Hockey, or Football	16%	16%	69%	0%
Basketball	12%	19%	69%	0%
Tennis	6%	20%	73%	0%
Golf	29%	4%	67%	0%
Swimming – Lake or Pond	40%	39%	21%	0%
Swimming – Pool	25%	26%	44%	6%

Source: Petersham Community Survey, March 2003.

H. GOALS AND OBJECTIVES

In this chapter, the “big picture” vision and goals identified in Chapter 6 are expanded upon to establish specific achievable planning “objectives.” These goals and objectives address the four goals of the 2012 Massachusetts SCORP:

1. Increase the availability of all types of trails for recreation
2. Increase the availability of water-based recreation
3. Invest in recreation and conservation areas that are close to home for short visits
4. Invest in racially, economically, and age diverse neighborhoods given their projected increase in participation in outdoor recreation

The Goals and Objectives are more focused statements of what the Town would like to accomplish over the next five years with regard to the protection of open space, natural resources, and historic resources, and the promotion of recreational opportunities. The Five-Year Action Plan discusses these objectives in more detail, and, for each objective, specifies the timeframe for implementation as well as the group or groups responsible for accomplishing each objective.

H1. KEY ACTION ITEMS

- Continue through Town actions and collaboration with other organizations to protect additional open space according to the priorities shown on **Figure I-1**, the Open Space Action Map.
- Encourage or require new development to set aside open space by allowing for flexible site layout patterns.
- Adopt and implement an environmentally-based site planning process that require the consideration of ecological form and function when designing new developments.
- Establish an Agriculture and Rural Development Committee (ARDC) to promote profitable farming, forestry, ecotourism, and other natural resource based businesses in Petersham.
- Continue to identify and act upon opportunities to connect and expand the Town’s network of trails that are open to the public.
- Encourage or require environmentally friendly storm water management techniques in new developments.
- Improve parking areas at trail entrances, especially for equestrian use.
- Continue to improve existing trails and establish new trails as needed, especially for equestrian use, at the Davenport Pond Property.
- Establish cooperative arrangement for trail and property management.
- Establish plans and programs for mitigating the effects of climate change.

- Adopt a Demolition Delay Bylaw to discourage the demolition of historically significant buildings more than 100 years old.

Through foresight and dedicated effort, Petersham's current residents can leave future generations a legacy of protected open space, clean water, thriving plant and wildlife communities, and a beautiful rural town in which to live, work, and play.

H2. OPEN SPACE AND RECREATION OBJECTIVES

Goal 1: Protect a significant portion of Petersham's unprotected open space in order to preserve the town's rural character, protect its natural resources, and minimize development in inappropriate areas.

- Continue close cooperation between the Open Space and Recreation Committee and the Conservation Commission to conserve priority open space
- Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on the Open Space Action Map.
- Work with the Planning Board to improve bylaws for new development that would allow for flexible site layout patterns and identify the most important open space lands for protection.
- Incorporate BioMap2 core habitat and critical natural landscapes into planning for open space protection.
- As opportunities arise, use Petersham's legal authority to acquire tax title lands for open space.

Goal 2: Maintain and expand the town's "working landscape" of farming and forestry operations and promote ecotourism.

- Establish an Agriculture and Rural Development Committee to promote profitable farming, forestry, ecotourism, and other natural resource based businesses.
- Work with the Harvard Forest, North Quabbin Regional Landscape Partnership, Mount Grace Land Conservation Trust, East Quabbin Land Trust, The Trustees of Reservations, and Massachusetts Audubon Society to provide educational, technical, and financial resources to owners of existing and prospective farm, forestry, and tourism businesses in town.
- Continue to seek conservation easements on agricultural and forest land that promote continued farming or forestry activities while prohibiting development.
- Work with the North Quabbin Regional Landscape Partnership, local and statewide land trusts, Harvard Forest, and State agencies to encourage private forest landowners who are not enrolled in Chapter 61 or 61A or have Conservation Restrictions to prepare forest management and stewardship plans.

Goal 3: Ensure that large portions of the town's open space remain open to the public.

- Prepare a town wide recreation, trails, and attractions map for use by residents and visitors.
- Identify and act upon opportunities to connect and expand the town's network of trails that are open to the public to allow for circumnavigation of the town and connections to trails in other towns.

- g. Cooperate with local horse owner and mountain bicycle organizations to assist in creating and improving trails, develop parking for horse trailers at appropriate sites, and to seek trail easements for public access over private lands.
- h. Urge the Town to explore extending the network of sidewalks for safe recreational walking around the center of the town, Spring Street, and upper portion of Hardwick Road.
- i. Obtain public trail easements and/or access to open space as part of new development projects.

Goal 4: Provide adequate access to active recreation facilities for field sports, court sports, skating, and swimming.

- e. Identify land at the Center School site and/or elsewhere in town that may be used for additional sports fields in the future.
- f. Work to renovate the tennis courts on the Nichewaug Inn property for use by town residents, if possible.
- g. Seek arrangements with neighboring towns to allow Petersham residents access to safe swimming areas.
- h. Investigate options for additional swimming areas in town.
- i. Facilitate and promote the use of ponds in town for recreational skating and ice hockey.

H2. NATURAL AND HISTORIC RESOURCE OBJECTIVES

Goal 5: Protect the Town's surface water, ground water, and wetland resources.

- g. Work with the Planning Board to adopt site planning standards that steer development away from sensitive water resource areas.
- h. Work to ensure remediation of future wastewater disposal problems in the town center.
- i. Investigate the need for more stringent standards for subsurface wastewater disposal to protect sensitive surface and ground water resources.
- j. Work with MassHighway to designate lower salt areas on portions of state highways near sensitive water resources.

Goal 6: Minimize the destruction and fragmentation of natural ecosystems through carefully targeted open space protection and ecologically-based land development regulations.

- d. Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on the Open Space Action Map.
- e. Work with the Planning Board to adopt an environmentally-based site planning process that requires consideration of ecological form and function when designing new developments.
- f. Continue to certify vernal pools in Petersham through the Mass. Natural Heritage and Endangered Species Program so that they will be protected by state regulations.

- g. Establish a comprehensive cooperative arrangement between the Town, Harvard Forest, MassHighway, The Trustees of Reservations, the Massachusetts Audubon Society, and private property owners to provide action in the control of invasive species.

Goal 7: Manage the Town's open space to achieve an optimal balance between habitat and water resource conservation and various educational, recreational, and potential revenue-generating uses.

- c. Provide parking, trail construction, and maintenance, at the Babbitt Wildlife Sanctuary and improve the entrance and parking area and establish new trails as needed, especially for equestrian use, at the Davenport Pond Property.
- d. Provide interpretive and educational materials for the Babbitt Wildlife Sanctuary and Poor Farm.
- e. Develop interpretive nature trails and trails for handicapped, seniors, and the visually impaired at appropriate locations.
- f. Provide and make available interpretive and educational materials for important, natural, and historic areas.
 - g. Establish a comprehensive cooperative arrangement between the Town, Harvard Forest, The Trustees of Reservations, and the Massachusetts Audubon Society to facilitate coordinated trail construction and maintenance and property management.
 - h. In collaboration with state and nonprofit landowners, review the management of existing conservation lands in Petersham and identify any need for change.

Goal 8: Protect historic buildings and landscape features from destruction or inappropriate alteration, and encourage the adaptive reuse of historic buildings.

- f. Encourage the Historic District Commission/Historical Commission to inventory additional historic properties and evaluate the potential to expand the Petersham Historic District, create additional historic district(s), and/or designate additional historic properties and to adopt a Demolition Delay Bylaw to discourage the demolition of buildings more than 75 years old.
 - g. Work with the Planning Board to explore a Scenic Overlay District to ensure that new development along scenic roads is aesthetically compatible with the road's character.
- h. Prepare and adopt a set of guidelines for the future management and maintenance of Town historic and scenic roads that addresses issues such as the paving of roads; the planting, thinning, and pruning of street trees; and the placement of utility poles.

Goal 9: Provide Natural History Programs at the Petersham Center School and for the community.

- a. Ensure the continuation in perpetuity of the Natural History Programs at the Petersham Center School.
- b. Work with the school to establish a native pollinator garden and expand onsite natural history education opportunities.

Goal 10: Establish plans and contingencies for mitigating the effects of climate change.

- a. Work with the Conservation Commission and Highway Department in cooperation with the Emergency Management Committee and Police Department, Harvard Forest, The Trustees of Reservations, and the Massachusetts Audubon Society to develop plans and procedures in the event of extreme storm events.
- b. Review and inventory local water resources that would be available for agriculture in the event of prolonged drought.
- c. Work with Harvard Forest to encourage landowners to use forest management practices that optimizes carbon sequestration.

I. FIVE-YEAR ACTION PLAN

The Five-Year Action Plan spells out specific steps that each of Petersham's boards, commissions, committees, and other groups should take over the next five years to implement the Open Space & Recreation Plan. To help coordinate the implementation of this plan and ensure that the action steps are followed, the Open Space and Recreation Committee is specifically dedicated to this purpose.

The content of the Five-Year Action Plan is presented below in two different formats. The first eight subsections of this chapter provide a narrative discussion of the major recommendations of the Open Space and Recreation Plan, explaining the rationale for and the details of each one. At the end of the chapter, these various action steps are presented in a matrix format that identifies the timeframe for implementation as well as the group or groups responsible for spearheading each action item.

I1. PROTECTING OPEN SPACE

With over 50% of Petersham's land area already protected as open space, it may not be readily apparent why the Town should conserve additional land as open space. However, the results of the community survey and an analysis of future growth scenarios both provide strong support for conserving additional open space in Petersham. When asked directly about the desirability of protecting additional open space, more than half of the 151 households who responded to the survey stated that the Town should protect additional land to safeguard water resources, habitat, and/or rural character. Only 19% felt that the Town should not take any steps to protect additional open space. Even more revealing is a ranking of residents' priorities for the Town's future. Residents' top three priorities, by a large margin, are to "control the tax rate," "maintain the Town's rural character," and "control residential growth." The next two priorities (#4 and #5 out of 9) are to "protect natural resources" and "protect more open space." Since all three of the top priorities can be furthered through the protection of open space, it appears that there is very strong support—both direct and indirect—for conserving additional land.¹⁰

Perhaps even more important is to consider the alternative to protecting additional open space. Petersham has roughly 11,000 acres of buildable land, which, if fully developed, could accommodate over 6,000

¹⁰ See **Appendix A** of the Master Plan for the full survey results.

dwelling units.¹¹ Even if full buildout is never reached, future development along Petersham’s roadsides that is not carefully planned could quickly change the character of the Town from “rural” to “suburban” while degrading local water resources and fragmenting intact habitat areas. If this happens, many of Petersham’s greatest assets will be lost or spoiled—a scenario that residents strongly oppose. Thus, if for no other reason, additional open space needs to be protected as a safeguard against suburban sprawl.

During the planning process, some residents proposed arguments against the protection of additional open space—the most common argument being that open space costs the Town money in lost tax revenue. However, this argument does not hold up to a closer examination of the facts. First, Petersham’s tax-exempt land currently contributes greatly to the Town’s revenue stream, mainly through the DCR’s annual payment in lieu of taxes. This payment may exceed what the Town could collect if the same property were vacant land held in private ownership. Second, private land enrolled in Chapter 61, 61A, and 61B generates very little tax revenue—only 0.4% of the Town’s total tax revenue although it comprises 14% of the Town’s land area.¹² Thus, there is very little difference in tax revenue between tax-exempt land and land enrolled in one of the Chapter 61 programs. Finally, numerous studies have found that residential development tends to cost municipalities more (in terms of requiring new services and facilities) than it generates in tax revenue—a generalization that has been borne out in many suburbanizing towns that have had to increase their local tax rates to pay for new schools, police cars, and other spending.¹³ In this sense, open space is a “cost effective” land use for Petersham’s future. The following paragraphs discuss the Town’s strategy for conserving additional open space.

Priorities and Mechanisms for Open Space Protection

Box 1: Land Conservation Priorities in Petersham

The first step of an open space protection program is to identify priorities for land conservation. Over the years, many different state and nonprofit organizations have been active in open space conservation in Petersham — each with its own set of priorities. Going forward, the Town would like outside organizations to consider the Town’s own priorities when selecting lands for acquisition or protection. These priorities will also guide Town-initiated land protection efforts, whether through direct Town action or in conjunction with new development. The following table identifies those types of lands that the Town considers most important for protection. These priorities are illustrated on **Figure I-1**, the Open Space Action Map.

Priorities	Rationale
1. Farmland and open fields	Almost 90% of Petersham’s land is wooded, thus open fields are both visually interesting and ecologically important. They are also a key part of the Town’s historic and current rural working landscape. Of this group, farmlands with good soils are of highest priority.
2. Habitat connections and corridors	Petersham is a critical link in the region-wide North Quabbin habitat and open space network. Protecting connections between large patches of already-protected forest land — especially in the eastern half of Town — will help ensure that these habitat values are maintained.
3. Unprotected stream corridors	Land along the East Branch of the Swift River, Moccasin Brook, Rutland Brook, Lorinda Brook, and the East Branch of Fever Brook are not only tributaries to the Quabbin

¹¹ Source: Petersham Buildout Study, modified by Daylor Consulting Group to exclude restricted Cohen Act lands and other unbuildable areas. See **Chapter 4** of the Master Plan for further discussion.

¹² See **Chapter 6** and especially **Table 6-6** in the Master Plan.

¹³ See, for example, the Cost of Community Services studies prepared by the American Farmland Trust for southern New England towns.

	Reservoir, but also provide habitat for numerous rare and endangered species. All of these stretches are mapped as “Core Habitat” by the state’s BioMap project, and most are also designated as critical for rare aquatic species by the Living Waters habitat mapping project. Undeveloped land along the river also helps maintain water quality by filtering out pollutants, among other functions. Most of these lands are already protected in perpetuity and are protected as well by the Watershed Protection Act. The Town seeks opportunities to protect additional lands along these critical stream corridors.
4. Large parcels	Large parcels (or small parcels adjacent to larger blocks of protected open space) generally offer more benefits for wildlife and recreation than small isolated parcels.
5. Willing owner	With limited resources available for land conservation, the Town and other conservation organizations are pragmatic about how they prioritize their efforts. Land protection most often is the result of a mutually agreeable and beneficial arrangement between the seller or donor of land or conservation restrictions and the party acquiring these.
Funding: DCR Watershed Protection Restrictions and Forest Legacy	

The second step of an open space protection program is to identify and implement techniques and funding mechanisms for protecting high-priority lands. **Box 2** discusses a variety of land protection techniques, many of which have already been used successfully in the Town. These techniques include regulatory tools, various forms of state and local funding, and ways of “leveraging” funds for maximum benefit.

Box 2: Tools for Land Conservation

A. Outright Acquisition

Outright acquisition provides the highest amount of protection for a piece of property. In addition, the group that purchases the property is able to control how it is used or managed. However, outright acquisition is often the most expensive technique, as well. Funding mechanisms for outright acquisition include:

1. Grant funding: for example, through the state's Self-Help program administered by the Division of Conservation Services.
2. Private conservation organizations such as the Trustees of Reservations or Mount Grace Land Conservation Trust and the East Quabbin Land Trust.
3. Donations or "bargain sales" from landowners seeking to conserve their land or gain income tax benefits.
4. Town funding from a one-time appropriation or regular contributions to an open space fund.
5. Acquisition through the tax title process. State law gives towns the power to seize property for non-payment of taxes if the amount of unpaid taxes becomes large enough. These "tax title" properties are often suitable for conservation and/or recreation uses, and can be added to a town's open space network. For example, the 80 acres of the Davenport property in Petersham (and the adjoining 60 acres in Athol) was obtained through tax title proceedings.

B. Restrictions and Easements

Restrictions and easements limit the future use of land by restricting or prohibiting development. However, the land continues to be owned and managed by a private owner. If the restriction on development is in perpetuity, this mechanism provides as much protection for land as outright acquisition. In addition, it can cost less than outright acquisition, offers more flexibility to meet the needs of the landowner, and allows the property to stay on the tax rolls. For example, a restriction is being negotiated that will allow a landowner to continue to farm the land and live on the land. Funding for restrictions and easements can come from the same sources as for outright acquisition. In addition, grant funding is available from state programs such as the LAND (Local Acquisition for Natural Diversity) Grant program and the Agricultural Preservation Restriction program, which purchases easements from farmers to encourage continued farming and to restrict future development. There many restrictions held by the Department of Conservation and Recreation (DCR) under the Watershed Preservation Restriction program, The Trustees of Reservations, Massachusetts Audubon Society, Mount Grace Land Conservation Trust, and the Petersham Conservation Commission.

C. Temporary Protections

The State's Chapter 61, 61A, and 61B programs offer tax incentives for landowners to keep their property in active forestry, agricultural, and recreation use, respectively. However, these programs offer no long-term protection for land. See **Chapter E** for additional discussion of these programs.

D. Other Tools

Other possible land conservation tools take advantage of the economics of land development to protect open space as part of new development projects. As long as the open space is protected with a suitable conservation restriction, this form of open space protection is as good as outright acquisition. These tools include:

1. **Conservation Subdivisions and Flexible Development:** These development techniques allow developers to create smaller lots or lots with less frontage in exchange for setting aside a portion of the development site as open space. The overall number of units remains roughly the same as in a conventional development layout.
2. **Other Zoning Tools:** Other growth management tools to protect open space and natural resources have been identified in the Master Plan which the Town has not officially adopted.

3. **Limited Development Projects:** In a limited development project, a conservation group (usually a nonprofit organization but sometimes a government body) first purchases a piece of land they would like to conserve as open space. Then, a portion of the site that is less important for conservation purposes is carved off and sold for development. The proceeds from this sale are used to repay money borrowed for the land purchase or used to fund future conservation efforts.

Given Petersham's limited financial resources, the Town's primary role in present and future land protection is and should be as a facilitator and enabler—not as the primary funder. Funding mechanisms for land protection that will cost the Town little or nothing include:

- Working with nonprofit land protection organizations.
- Working with state agencies interested in land protection.
- Seeking and accepting donations of land and conservation easements for property that is useful for conservation, recreation, and/or future municipal needs.
- Seeking state and federal grants for land protection, especially through the state's Self-Help program, which reimburses cities and towns for 52%-70% of the cost of purchasing eligible lands. These grants are awarded on a competitive basis and Petersham has currently received three of these through the state's Self-Help program. Although a local match is required, this has been provided through nonprofit organizations and private donors working with the Town.
- Working with developers to protect open space as part of new development.

The Petersham Conservation Commission (see below) has and will continue to assume the primary responsibility for applying for open space and recreation grants, working with potential donors, and working with outside organizations that are interested in land protection in Petersham.

A final note with regard to open space protection is that Petersham already has a large amount of open space that is controlled by "outside" tax-exempt organizations, such as the state of Massachusetts and regional or statewide nonprofit groups. In general, these lands are well-managed and benefit Town residents in a variety of ways, from the numerous recreation opportunities offered on The Trustees of Reservations' land to the large payment in lieu of taxes made annually by the Department of Conservation and Recreation (DCR) on their land holdings. Nevertheless, many residents during the planning process stated a preference that a significant portion of the Town's landscape should remain in private ownership and on the tax rolls in productive use for farming, forestry, or other activities. This can be accomplished through the use of conservation restrictions, which prevent development but keep the "fee" ownership of the land in private hands. This has been and continues to be the strategy in protecting open space. These lands are not currently but should be assessed at a reduced value similar to if they were enrolled in one of the Chapter 61 programs.

Petersham Open Space and Recreation Committee

The Petersham Open Space and Recreation Committee (OSRC) is devoted specifically to open space and outdoor recreation. However, this plan includes numerous action items that will require the efforts of dedicated volunteers to implement. As part of these duties, the OSRC is involved in some or all of the following activities:

1. Establish and maintain contact with the Town's large landowners to identify conservation opportunities and be aware of when owners may wish to sell. Educate landowners about various conservation options and their financial benefits. Monitor the status of Chapter 61, 61A, and 61B parcels and be aware of when these tax classifications expire so that the Town can use or assign its right of first refusal to acquire the property, if desired.
2. Work with nonprofit and state organizations that are pursuing land protection in Petersham so that the Town's priorities and objectives can be reflected in the actions of these organizations.
3. Work closely with other Town boards—including the Conservation Commission, Planning Board, Selectboard, Zoning Board of Appeals, and the proposed Agriculture and Rural Development Committee—to coordinate open space protection efforts with other Town priorities and initiatives.
4. Pursue grants through the Conservation Commission for open space protection, including the state's Self-Help grants.
5. Work with the Planning Board to secure appropriate open space set-asides as part of conservation subdivisions and other flexible development plans.
6. Work on linking Petersham's public trails in various sections of the Town by securing easements through private property (with the voluntary permission of the landowner) or future development parcels.

Growth Management and Environmental Planning

Although the Town has not officially approved the recommendations in the Master Plan, Growth Management and Environmental Planning have been addressed in the Subdivision Control Regulations. Recognizing that future development will occur in Petersham, current patterns of land protection allow opportunities for creating protected open space and wildlife corridors and important habitats.

12. MAINTAINING PETERSHAM'S WORKING LANDSCAPE

Petersham's "working landscape" refers to those lands in Town that are actively used for agriculture, forestry, mining, or other revenue generating uses such as ecotourism. Maintaining and even strengthening the Town's working landscape is a top priority, for several reasons. First, a working landscape is one of the main things that differentiates a rural community from a suburban or exurban one. The Town's landscape and community character—which residents value so highly—are highly dependent on maintaining this working landscape. Second, the working landscape has historically been a cornerstone of the Town's economic base. While this is less true today, the Town still perceives agricultural and natural resource based businesses as very desirable and worth promoting. Finally, the working landscape protects open space and natural resources through the stewardship by individual landowners. This combination of local control and land use that serves the public interest is very desirable for Petersham's future.

While the benefits of maintaining the working landscape are evident, it is less obvious how to promote it. The working landscape depends upon numerous landowners, each of whom is essentially running a small business—whether it is logging, farming, woodworking, or running a guide service. Thus, the most successful efforts to promote working landscapes have focused on providing educational, technical, and

financial resources to help these small businesses thrive and to help new ones get established. For example, the North Quabbin Regional Landscape Partnership — an affiliate of Mount Grace Land Conservation Trust — promotes a variety of workshops for landowners. Both Mount Grace Land Conservation Trust and the East Quabbin Land Trust promotes working landscapes through encouraging and preserving working farms in the North Quabbin region, including Petersham.

Although there has been an increase in locally grown organic produce, to provide greater support for “working landscape businesses” within the Town itself, Petersham should consider establishing an **Agriculture and Rural Development Committee** to promote profitable farming, forestry, and other natural resource based businesses in the Town. Initially, this committee should be tasked with researching the best practices in rural and resource-based economic development from throughout the Northeast that could potentially be used in Petersham. At the same time, the committee should identify financial and technical resources (ranging from various grants to the UMass Extension service) that local landowners can take advantage of—ideally free of charge. Next, the committee should work with owners of existing and prospective farm, forestry, and tourism businesses in Town to deliver these resources and help these businesses thrive. Examples of activities that the committee might undertake include:

- Working with an owner of open pasture land to establish a small business raising organic free-range beef, or raising sheep or goats for producing high-end cheeses on site.
- Connecting a young aspiring farmer from out of town who is looking for a plot of land to farm with a landowner in Petersham who wants his land to be farmed so that he can claim a Chapter 61A tax abatement.
- Working with a forest landowner and a UMass Extension staffer to initiate a pilot project on half an acre of land raising American ginseng in a natural shade environment to sell as a herbal medicinal product.
- The Petersham Open Space and Recreation Committee in cooperation with Harvard Forest, The Trustees of Reservations, Massachusetts Audubon Society to develop a town wide recreation, trails, and attractions map that promotes outdoor recreation in Town while highlighting local businesses that tourists can patronize such as restaurants, bed & breakfasts, and craft stores and studios.
- Supporting the established weekly farmers’ market on the town common or a local Community Supported Agriculture (CSA) program.¹⁴

A second effective way to help maintain the working landscape is to place conservation restrictions (CRs) on working lands that allow them to continue to be logged or farmed, but prohibit most types of development. Considerably more CRs have been placed on forest and farmlands in recent years. This approach keeps land in private ownership, under local management, and on the tax rolls (although tax revenue is modest because the land is only taxed at its open space value, not at its development value). The state, working with Mount Grace Land Conservation Trust continues to purchase large numbers of CRs for forested land in the North Quabbin region including Petersham

¹⁴ CSAs allow persons to buy a share in a farm for a moderate fee, which guarantees them a certain portion of the farm’s output for the duration of the growing season. Farmers benefit from this program since they receive up-front the money needed to cover planting costs, seeds, equipment, and the farmer’s salary, while residents benefit by receiving high-quality produce (often organic) at a moderate price. Also, the risk of a crop being ruined by weather or insects is spread among the shareholders, rather than just the farmer, which could ultimately force farmer to sell his land.

13. TRAILS AND OUTDOOR RECREATION

Petersham has a large number of trails that are used for various recreational activities including hiking, horseback riding, cross-country skiing, snowshoeing, mountain biking, and snowmobiling. It is important to divide these trails into two categories. The first category includes trails that are open to the general public and advertised by trail maps, trailhead signs, and/or trailhead parking areas. These trails are located on land owned by the DCR, other state agencies, the Trustees of Reservations, Harvard Forest, and on the Public Foot Paths, Pierce Road and Poor Farm Road. Uses on these trails are generally limited to hiking, cross-country skiing, snowshoeing, and, in some instances, mountain biking. A number of trails are used for horseback riding.

The second category of trails is mainly located on private land. These trails are not advertised or open to the public, but in many cases the landowner allows them to be used by neighbors and other local residents. Many trails on private land are used for mountain biking, and of these trails, where landowners allow, are essentially the only place in Town where motorized trail recreation can take place.

Looking to the future, the Town would like to expand and link its network of trails that are open to the public so that residents and visitors alike can piece together longer hiking, skiing, or mountain biking adventures that will eventually circumnavigate the town. Mapping of the publicly accessible trails¹⁵ that now exist in Town has begun, and the Open Space and Recreation Committee has identified the most useful potential links between them. New trail segments can be added in a variety of ways, such as:

- Working with private landowners who are willing to allow public trail access across their land and seeking trail easements. (Allowing public access across one's land does not carry with it any legal problems about liability, adverse possession, or other issues. See **Appendix 4** for further information.)
- Working with developers to obtain desired trail easements as part of new developments (desired trail segments on developable land should be mapped ahead of time—before any development is proposed—to give the Town a stronger basis for requesting the easement).

Once public trail mapping is completed, this information can be used to create a town wide recreation, trails, and attractions map for use by residents and visitors. The main purpose of this map would be to encourage ecotourism in Petersham and to support the local tourist-oriented businesses that would be featured on the map. Given current levels of usage, there is no reason for concern about overuse on Petersham's public trails for the foreseeable future.

14. FACILITIES FOR SPORTS AND SWIMMING

As discussed in **Section E3** (the recreation inventory), Petersham currently has a little league field, softball field, soccer field, and indoor gymnasium that is suitable for basketball and volleyball. Currently, these facilities are generally adequate to meet local needs, and what is not available in Petersham can be found in nearby Athol or Orange. Thus, in the short term, the greatest recreation facility need in Town is

¹⁵ Trail maps for many individual properties already exist—see **Appendix 2**. However, these individual maps have not been compiled on a townwide basis to identify existing and potential linkages.

for tennis courts, swimming areas, and a skating and hockey pond. Funding for such programs could be provided through grants or through Town appropriation.

Longer term, the Open Space and Recreation Committee should work to identify site(s) in the Town, totaling 5-10 acres of suitable land, that could be used to provide future space for recreation facilities that may be necessitated by resident demand and/or a growing population, such as outdoor basketball or tennis courts as well as additional baseball/softball and soccer/football fields. The Town should identify and reserve such land now so that these facilities can be developed in the future if demand exists and funding becomes available.

The greatest recreation need identified in the resident survey was for a natural lake or pond for swimming, which 39% of residents felt was needed. Currently, the only swimming hole in Town is at Brown's Pond, which is privately owned, but the landowner allows the public to use it. The Open Space and Recreation Committee should explore the possibility of creating another swimming area, perhaps in another part of Town. Swimming options at Connor's Pond on Route 122 is closer to the Quabbin Reservoir and should not be considered for swimming. This site is owned by the Swift River Valley Trust, which represents the Mass. Audubon Society, Trustees of Reservations, and Harvard Forest.

15. PROTECTING WATER RESOURCES

As discussed in **Chapter D**, Petersham has valuable surface water resources that drain into the Quabbin Reservoir and provide habitat for several rare aquatic species. At the same time, the entire Town relies upon groundwater for its domestic water needs, and upon septic systems for sewage disposal. These on-site systems are regulated by the Board of Health and properly sited and managed which is especially important in a community such as Petersham with mostly tightly-packed glacial till soils and streams that flow into the Quabbin Reservoir (see **Figure D-1**). The Town actively follows strategies to safeguard water resources.

Development Practices and Standards

Petersham has not had subdivisions; however, the Planning Board has developed Subdivision Control Regulations. Improving the regulations to include slopes and stormwater management and encouraging the use of environmentally friendly stormwater management systems, compared to conventional systems, should be considered. These systems typically rely less on structural engineering solutions and more on the natural physical and biochemical filtering abilities of vegetation to treat stormwater. They also tend to recharge water to the ground locally rather than relying on extensive piping systems, and may require less land because they can be integrated into gardens and other landscaped areas. The following are a few examples of environmentally friendly stormwater management systems. These can be used alone, or in conjunction with conventional catch basin/drain pipe systems where appropriate.

- **Vegetated swales** consist of earthen channels covered with a dense growth of grass or other vegetation, which can be dry or wet. They are suitable for roadsides or the edge of parking lots.
- **Vegetated filter strips** are bands of dense vegetation located between the pollutant source and the receiving water body, which trap sediment and pollutants.

- **Constructed wetlands** are shallow pools containing marsh plants that remove pollutants through retention, settling, and biological uptake. These can be used in place of conventional retention or detention basins where there is a relatively large volume of stormwater.
- **Bioretention cells (rain gardens)** are upland landscaped areas designed to treat and infiltrate runoff. These small systems can collect runoff from residential rooftops and driveways, functioning as a low-cost alternative to conventional stormwater management systems in residential developments. An under-drain may or may not be provided.
- **Pervious paving surfaces** are common in rural areas and help reduce the volume of stormwater runoff.

Wastewater Disposal Issues

Failed or failing septic systems on properties in the town center have been addressed through the State Title V requirements for inspections and upgrades where necessary when property is sold.

The Board of Health is aware of systems that have not yet failed but are at risk of doing so, especially those located on small lots and/or in areas of less permeable soils and has taken action as needed. Homeowner education materials are available for periodic pump-outs to maximize the life span of existing systems. Systems checks at the time of pump outs alert homeowners of problems. The Town has received funding for homeowners who qualify for needed upgrades their systems.

Other Actions

Road salt is one component of nonpoint source pollution—the polluted runoff that can foul water bodies, kill aquatic life, and alter vegetation communities. The Town already minimizes road salt usage during the winter months on Town-maintained roads. However, the same is not true for state-maintained roads, some of which pass through environmentally sensitive areas such as pond shores, wetlands, and the Swift River valley. To address this concern, the Town should work with MassHighway to designate “reduced salt” portions of state highways near sensitive water resources.

16. PROTECTING SPECIES, HABITATS, AND ECOSYSTEMS

Habitats, ecosystems, and the species that depend upon them for survival can be protected through many of the same strategies that are discussed above for protecting open space and water resources. Most conservation biologists believe that habitat destruction and degradation is the greatest threat to species, followed by competition from invasive species. Accordingly, Petersham should work to protect its natural heritage through the following measures:

1. Protect additional open space based on the priorities identified in **Box 1**.
2. Continue to safeguard streams and ponds from pollution threats and seek to provide natural vegetation buffers at least 200 feet wide around these resources whenever possible.
3. Establish a comprehensive cooperative arrangement between the Town, Harvard Forest, MassHighway, The Trustees of Reservations, the Massachusetts Audubon Society, and private property owners to provide a program to eradicate and control the spread of invasive species.

Vernal pools are a unique type of habitat that merit special attention. Vernal pools are small, seasonal water bodies occurring in isolated basins that are usually wet during the spring and early summer and dry up during the later summer months. Vernal pools typically lack fish populations, making them excellent breeding habitat for many amphibian species. They also provide important habitat for other invertebrate and vertebrate wildlife species. Many of these species rely on not just the vernal pool itself, but also the adjacent upland area, for their survival. Despite their importance, vernal pools are not protected from development unless they have been certified through the state's Natural Heritage and Endangered Species Program (NHESP) certification process. As shown on **Figure D-3**, Petersham has numerous potential vernal pools. The Conservation Commission continues to identify, verify, certify, and protect vernal pools. Much of this work has been done by MassLIFT AmeriCorps volunteers working with local land trusts.

17. VEGETATION AND THE SHADE TREE ACT

Vegetation varies considerably throughout the town from areas of conifers mostly of Eastern hemlock and white pine to areas of mixed hardwoods. Roadsides reflect the neighboring forest and the character of the town's roads has become increasingly important to townspeople. Petersham has adopted the Shade Tree Act and Scenic Roads Act for the following roads:

Amidon Drive	Narrow Lane
Birch Hill Drive (now Birch Drive)	Nelson Road
Briggs Road	Baldwin Drive (now New Athol Road)
Camels Hump Road (now Camel Hump Road)	New Salem Road
Carberry Lane (now Carberry Road)	Nichewaug Road
Carter Pond Road	Craft Center Cut-off (now North Street)
Choate Drive (now Choate Road)	Old Hardwick Road
Church Road (disc.)	Oliver Street
Common Street	Pat Connor Road
Canyonker Road (disc.)	Phillips Drive
French Road (disc.)	Pierce Road (disc.)
Gay Drive	Poor Farm Road (disc.)
Glasheen Road	Prospect Hill Road
Glen Valley Road	Quaker Drive
Hall Road	Russell Road (now part of South Street)
Hammon Road (now Hammond Lane)	Shaw Road
Hardwick Road	South Street
Harty Drive	Spring Street
Leighton Road	Sunset Lane
Loring Hill Road	Tom Swamp Road
Maple Lane	West Street
Turnpike Road (now Monson Turnpike)	Woodward Road

There is interest in planting native shrub species, especially flowering shrubs, along roadsides to control vegetation appropriate to roadsides and reduce roadside maintenance.

Public shade trees on the common and in the Town cemeteries are especially prized. When trees have to be removed due to damage or decay, replacement trees are planted.

18. LAND MANAGEMENT

The management of Petersham's open space will affect its value for habitat and recreation. Most of the open space in Petersham is not owned by the Town, so the Town cannot directly control its management. However, the Town — through the Open Space and Recreation Committee and the Conservation Commission — is active in working with state and nonprofit landowners to review the management of existing conservation lands in Petersham and to identify any need for change. Of the Town-owned open space, the most pressing management need is at the Babbitt Wildlife Sanctuary and the Davenport Pond Property.

19. PROTECTING HISTORIC RESOURCES

Petersham's historic buildings, sites, and landscapes contribute greatly to the Town's unique character. The Town has already taken several steps to protect these resources, but additional steps may be needed to protect them from destruction or inappropriate alteration.

Historic District and Historic Property Designations

The Petersham Historic District was expanded and now extends along Route 32 from the northern most house on North Street in the north to Barre Road (Route 122) in the south, and includes the Common and properties on either side of the Common. The district includes 32 homes and fourteen properties. The Historic District designation not only identifies and commemorates historic buildings; it also protects these buildings and local property values by requiring design review for exterior construction, alterations, or demolition visible from the road.

Outside of the Historic District, however, there are numerous other historic properties worthy of protection. A handful of these are listed on the National Register of Historic Places (see **Section D7**), but most have no protection. Areas with a concentration of historic buildings or historic landscape features include:

- West Street, Hardwick Road from West Street to Spring Street, Spring Street, the initial stretches of East Street and Oliver Street east of Route 32
- North Main Street from the northern end of the Petersham Historic District to Route 101
- East Street from Brown's Pond to Glasheen Road
- Maple Lane
- West Road
- The area near the intersection of South Street and Nichewaug Road

The Historic District Commission should determine whether they are eligible for historic designation or protection and whether the property owner(s) support such designation. This can be accomplished by working with the property owner and preparing a Massachusetts Historical Commission inventory form. These forms can be prepared by volunteers, and do not confer any regulatory status on the property. Once the inventory forms have been prepared, the Town will have the information necessary to determine whether additional historic district or property designations are appropriate. At this point, several options may be possible:

1. Expand the Petersham Historic District to include the additional properties and/or create one or more satellite historic districts in areas with a concentration of historic homes.
2. Where historic properties are located too far apart from one another to justify creating a historic district, individual properties could perhaps be designated as local or state historic landmarks.
3. In some cases, it may be most appropriate not to create additional historic designations, but to rely on other tools, such as a Scenic Overlay District (see **Chapter 4**), to protect scenic character.

Historic Sites

Historic sites such as Dana Common in the southern part of town and the Poor Farm in the northern part of town are of particular interest. Dana Common within the DCR owned Quabbin Reservation was listed in the National Registry of Historic Places in March 2013. The Friends of Quabbin funded interpretive signs at cellar hole surrounding Dana Common to give visitors views of houses that were once there. The Poor Farm on Poor Farm Road, a public footpath in the northern part of town, is an ideal site for interpretive signs.

Demolition Delay Bylaw

Currently in Petersham, privately owned historic buildings can be demolished without Town review, except within the Petersham Historic District. In many Massachusetts towns with considerable development pressure, numerous historic buildings have been lost to make way for new subdivisions and other development. Loss of historic buildings in Petersham would undermine the Town's character, and should be avoided if at all possible. One way to encourage alternatives to demolition is through a demolition delay bylaw, which the Town should consider adopting.

A demolition delay bylaw typically applies townwide to historic buildings older than some pre-defined age (e.g., 100 years). If the owner of such a building wishes to demolish the building or any exterior part of it, he or she must undergo review by the Historic Commission. If the Historic Commission finds the building not to be historically significant, then the demolition may proceed without delay. However, if the building is deemed to be historically significant, a delay period (typically six months, but in some towns up to a year) will be imposed on the demolition request. The purpose of the demolition delay is to allow time for the Historic Commission to work with the property owner to identify alternatives to demolition (including grants or other funding, if available). If the owner submits a proposal that either addresses the Commission's concerns or is determined to be an acceptable compromise, or if there is found to be no feasible alternative to demolition, the delay period can be waived. Otherwise, the owner must wait out the delay period before s/he may demolish the structure.

Historic Plaques Program

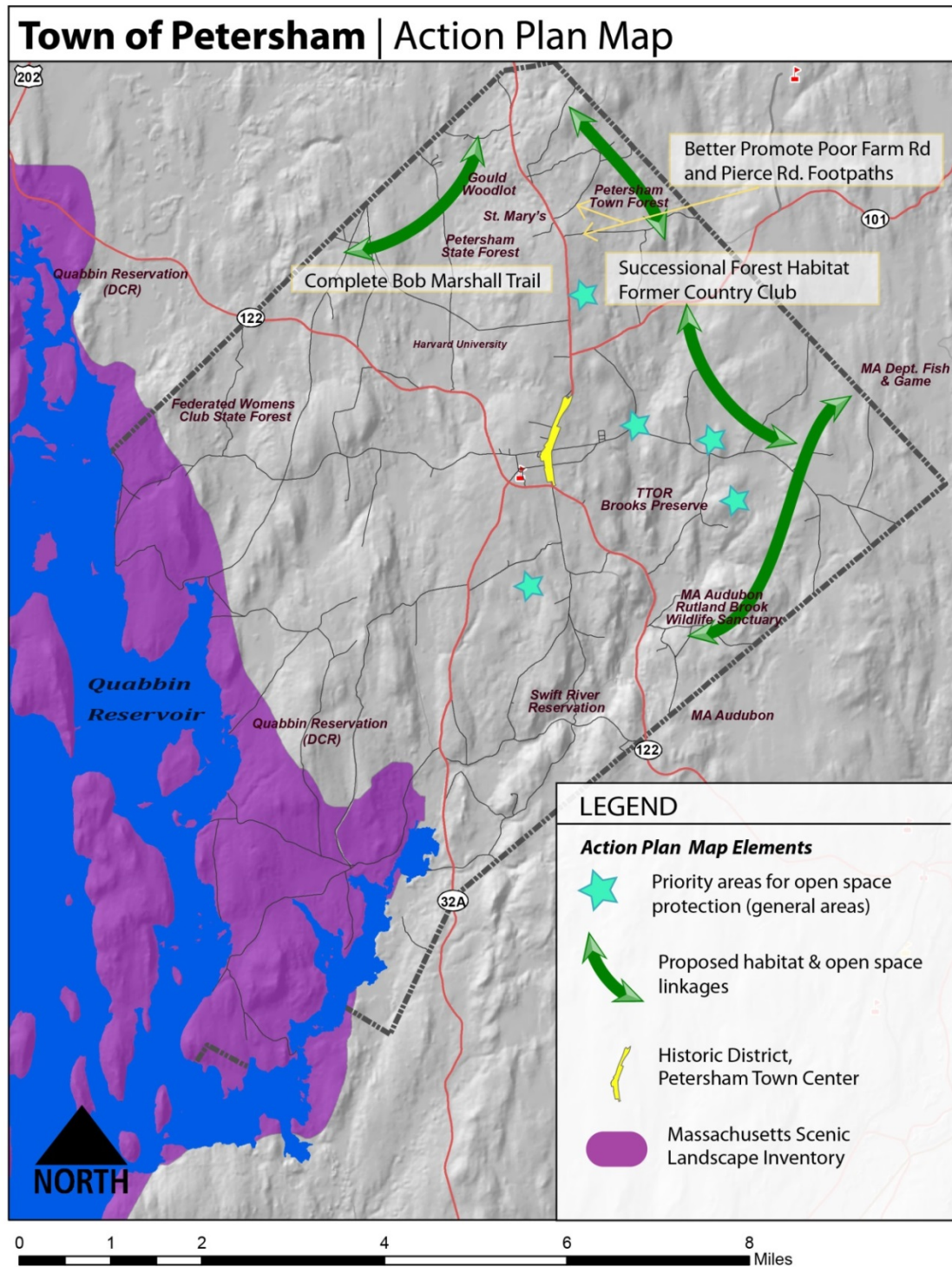
The Petersham Historic District Commission has yet to formalize the Historic District Plaque Program that would allow property owners in the Historic District to purchase customized plaques identifying the name and construction date of their historic building. These bronze plaques are intended to help residents and visitors commemorate the Town's historic heritage.

Historic Roads and Landscapes

For most people, the sense they get of Petersham's character is based on what they see as they drive, bike, or walk along the Town's roads. Given the importance of Petersham's scenic roadsides to the Town's residents, preservation of these resources should be a top priority. The Master Plan proposes several strategies to help protect historic roadsides. These tools are summarized briefly below and described in more detail in **Chapter 4** of the Master Plan.

- **Scenic Overlay District:** Require site plan review for development within 300 ft. of designated scenic roads so that the aesthetic quality of Petersham's rural roads can be retained even as development occurs. This technique does not affect lot size or allowed uses.
- **Flexible Development Options:** Techniques such as Flag Lots and Flexible Rural Development encourage houses to be situated further back from the road where they are less visible from historic and scenic roads.
- **Road Management and Improvement Guidelines:** Informal guidelines have been adopted the Highway Department, Tree Warden, Selectmen, Planning Board, and others to follow when making decisions related to Town roads. The guidelines should address issues such as paved versus unpaved surface; planning, trimming, and cutting of street trees; and placement of utility poles. Historic landscape factors should be a key criterion in formulating the standards.

20. OPEN SPACE ACTION PLAN



Goal 1: Protect a significant portion of Petersham's unprotected open space in order preserve the town's rural character, protect its natural resources, and minimize development in inappropriate areas.

Objective	Responsible Group(s)	Time Frame	Funding
1A. Continue the close cooperation between the Open Space and Recreation Committee and the Conservation Commission to conserve priority open space	Conservation Commission, OS&RC	Ongoing	-----
1B. Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on the Open Space Action Map.	POST	Ongoing	DCR Forest Legacy Land Trusts
1C. Work with the Planning Board to improve bylaws for new development that would allow for flexible site layout patterns and identify the most important open space lands for protection.	Planning Board, Town Meeting	2013-2016	-----
1D. Incorporate BioMap2 core habitat and critical natural landscapes into planning for open space protection.	Planning Board, OS&RC, Town Meeting	2014	-----
1E. As opportunities arise, use Petersham's legal authority to acquire tax title lands for open space.	Board of Assessors, Selectboard	Ongoing	-----

Goal 2: Maintain and expand the town's "working landscape" of farming and forestry operations and promote ecotourism .

Objective	Responsible Group(s)	Time Frame	Funding
2A. Establish an Agriculture and Rural Development Committee to promote profitable farming, forestry, ecotourism, and other natural resource based businesses.	Selectboard, Town Meeting	2014-2016	-----
2B. Work with the Harvard Forest, North Quabbin Regional Landscape Partnership, Mount Grace Land Conservation Trust, East Quabbin Land Trust, The Trustees of Reservations, and Massachusetts Audubon Society to provide educational, technical, and financial resources to owners of existing and prospective farm,	OS&RC, ARDC.	Ongoing	-----

Objective	Responsible Group(s)	Time Frame	Funding
forestry, and tourism businesses in town.			
2C. Continue to seek conservation easements on agricultural and forest land that promote continued farming or forestry activities while prohibiting development.	OS&RC, ARDC	Ongoing	DCR Forest Legacy Land Trusts
2D. Work with the North Quabbin Regional Landscape Partnership, local and statewide land trusts, Harvard Forest, and State agencies to encourage private forest landowners who are not enrolled in Chapter 61 or 61A or have Conservation Restrictions to prepare forest management and stewardship plans.	OS&RC, ARDC	Ongoing	-----

Goal 3: Ensure that large portions of the town's open space remain open to the public.

Objective	Responsible Group(s)	Time Frame	Funding
3A. Prepare a town wide recreation, trails, and attractions map for use by residents and visitors.	OS&RC	2013-2014	-----
3B. Identify and act upon opportunities to connect and expand the town's network of trails that are open to the public to allow for circumnavigation of the town and connections to trails in other towns.	OS&RC, Conservation Commission	2006-2008	-----
3C. Cooperate with local horse owner and mountain bicycle organizations to assist in creating and improving trails, develop parking for horse trailers at appropriate sites, and to seek trail easements for public access over private lands.	OS&RC	Ongoing	-----
3D. Urge the Town to explore extending the network of sidewalks for safe recreational walking around the center of the town, Spring Street, and upper portion of Hardwick Road.	Selectboard, OS&RC	Ongoing	?
3E. Obtain public trail easements and/or access to open space as part of new development projects.	Selectboard, Planning Board, OS&RC	Ongoing	DCR Federal sources

Goal 4: Provide adequate access to active recreation facilities for field sports, court sports, and swimming.

Objective	Responsible Group(s)	Time Frame	Funding
4A. Identify land at the Center School site and/or elsewhere in town that may be used for additional sports fields in the future.	OS&RC, School Committee	Ongoing	-----
4B. Work to renovate the tennis courts on the Nichewaug Inn property for use by town residents, if possible.	OS&RC, Selectboard	2014-2015	?
4C. Seek arrangements with neighboring towns to allow Petersham residents access to safe swimming areas.	OS&RC	Ongoing	-----
4D. Investigate options for additional swimming areas in town.	OS&RC	Ongoing	-----
4E. Facilitate and promote the use of ponds in town for recreational skating and ice hockey.	OS&RC	Ongoing	-----

Goal 5: Protect the Town's surface water, ground water, and wetland resources.

Objective	Responsible Group(s)	Time Frame	Funding
5A. Work with the Planning Board to adopt site planning standards that steer development away from sensitive water resource areas.	OR&RC Planning Board, Town Meeting	2014-2018	-----
5B. Work to ensure remediation of future wastewater disposal problems in the town center.	Board of Health	Ongoing	-----
5C. Investigate the need for more stringent standards for subsurface wastewater disposal to protect sensitive surface and ground water resources.	Board of Health, Planning Board	Ongoing	-----
5F. Work with MassHighway to designate lower salt areas on portions of state highways near sensitive water resources.	Selectboard, DCR, MassHighway	2014 -2018	-----

Goal 6: Minimize the destruction and fragmentation of natural ecosystems through carefully targeted open space protection and ecologically-based land development regulations.

Objective	Responsible Group(s)	Time Frame	Funding
6A. Through Town actions and in collaboration with other organizations, protect additional open space according to the priorities shown on the Open Space Action Map.	See Action Item 1B.		
	See Action Item 1C.		
6B. Work with the Planning Board to adopt an environmentally-based site planning process that requires consideration of ecological form and function when designing new developments.			
6C. Continue to certify vernal pools in Petersham through the Mass. Natural Heritage and Endangered Species Program so that they will be protected by state regulations.	Conservation Commission, Volunteers	Ongoing	-----
6C. Establish a comprehensive cooperative arrangement between the Town, Harvard Forest, MassHighway, The Trustees of Reservations, the Massachusetts Audubon Society, and private property owners to provide action in the control of invasive species.	Conservation Commission, Various Organizations, Property owners	Ongoing	-----

Goal 7: Manage the Town's open space to achieve an optimal balance between habitat and water resource conservation and various, educational, recreational, and potential revenue-generating uses.

Objective	Responsible Group(s)	Time Frame	Funding
7A. Provide parking, trail construction, and maintenance, at the Babbitt Wildlife Sanctuary and improve the entrance and parking area and establish new trails as needed, especially for equestrian use, at the Davenport Pond Property.	Conservation Commission	2014-2018	?
7B. Provide interpretive and educational materials for the Babbitt Wildlife Sanctuary and Poor Farm.	Conservation Commission, Various Organizations	2014-2018	?
7C. Develop interpretive nature trails and trails for handicapped, seniors, and the visually impaired at	Conservation Commission	2014-2018	?

Objective	Responsible Group(s)	Time Frame	Funding
appropriate locations.			
7D. Provide and make available interpretive and educational materials for important, natural, and historic areas.	Conservation Commission, Historic Commission	Ongoing	?
7E. Establish a comprehensive cooperative arrangement between the Town, Harvard Forest, The Trustees of Reservations, and the Massachusetts Audubon Society to facilitate coordinated trail construction and maintenance and property management.	Conservation Commission, Various Organizations	2014 Ongoing	-----
7F. In collaboration with state and nonprofit landowners review the management of existing conservation lands in Petersham and identify any need for change.	Conservation Commission, Historic Commission	2014 Ongoing	-----

Goal 8: Protect historic buildings and landscape features from destruction or inappropriate alteration, and encourage the adaptive reuse of historic buildings.

Objective	Responsible Group(s)	Time Frame	Funding
8A. Encourage the Historic District Commission/Historical Commission to inventory additional historic properties and evaluate the potential to expand the Petersham Historic District, create additional historic district(s), and/or designate additional historic properties and to adopt a Demolition Delay Bylaw to discourage the demolition of buildings more than 75 years old.	Historic District Commission, Historic Commission, Town Meeting	2014-2018	-----
8B. Work with the Planning Board to explore a Scenic Overlay District to ensure that new development along scenic roads is aesthetically compatible with the road's character.	Planning Board, OS&RC, Town Meeting	2014 Ongoing	-----
8C. Prepare and adopt a set of guidelines for the future management and maintenance of Town historic and scenic roads that addresses issues such as the paving of roads; the planting, thinning, and pruning of street trees; and the placement of utility poles.	OS&RC, Highway Department, Planning Board	2014-2018	-----

Goal 9: Provide Natural History Programs at the Petersham Center School and for the community.

Objective	Responsible Group(s)	Time Frame	Funding
9A. Ensure the continuation in perpetuity of the Natural History Programs at the Petersham Center School.	Conservation Commission, School Board	2014-2018	?
9B. Work with the school to establish a native pollinator garden and expand onsite natural history education opportunities.	Conservation Commission, School	2014 Ongoing	Volunteers

Goal 10: Establish plans and contingencies for mitigating the effects of climate change.

Objective	Responsible Group(s)	Time Frame	Funding
10A. Work with the Conservation Commission and Highway Department in cooperation with the Emergency Management Committee and Police Department, Harvard Forest, The Trustees of Reservations, and the Massachusetts Audubon Society to develop plans and procedures in the event of extreme storm events.	OR&RC, Conservation Commission, Various Groups	2014-2018	-----
10B. Review and inventory local water resources that would be available for agriculture in the event of prolonged drought.	Conservation Commission	2014-2018	-----
10C. Work with Harvard Forest to encourage landowners to use forest management practices that optimizes carbon sequestration.	Conservation Commission, Harvard Forest	Ongoing	-----

J. REFERENCES

In addition to the individuals and organizations identified in the Plan, information was obtained from the following sources:

- *Final Report and Recommendations of the Davenport III Committee*, Petersham Davenport Committee, 1999.
- *Interviews* with the following persons:
 - Jim Baird, Petersham Historical Society & formerly of Mass. Audubon Society
 - Alf Berry, Petersham Board of Selectmen
 - Ann Degnan, Petersham Center School (recreation)
 - Annette Ermini, Petersham Historic District Commission
 - Brian Hall and John O’Keefe, Harvard Forest
 - Rich Hubbard, Mass. Department of Food and Agriculture
 - Michael Landry, Petersham Assessor’s Office
 - Dick O’Brien, Trustees of Reservations
 - Alain Peteroy, Mount Grace Land Conservation Trust
 - Fifi Scoufopoulos, Petersham Board of Health
 - Henry Woolsey, Petersham Conservation Commission
- DCR **PETERSHAM RECONNAISSANCE REPORT**, Spring 2008, Massachusetts Heritage Landscape Inventory Program
- *Harvard Forest website* (<http://harvardforest.fas.harvard.edu/>), accessed July 2013.
- *East Quabbin Land Trust website* (<http://www.eqlt.org/>), accessed July 2013.
- *Massachusetts Audubon Society website* (<http://www.massaudubon.org/>), accessed July 2013.
- *Massachusetts Natural Heritage Atlas, 1999-2001 Edition*, Massachusetts Natural Heritage and Endangered Species Program, 1999.
- *Massachusetts Geographic Information Systems (MassGIS) datalayers*, various dates.
- *Mount Grace Land Conservation Trust website* (<http://www.mountgrace.org/>), accessed July 2013.
- *North Quabbin Community Forestry Initiative Ecotourism Marketing Report*, Cynthia Barstow and the New England Forestry Foundation, 2002.
- *North Quabbin Regional Landscape Partnership website* (<http://www.nqpartnership.org/>), accessed July 2013.
- *North Quabbin Woods Project website* (www.northquabbinwoods.org), New England Forestry Foundation, accessed July 2013.
- *Open Space and Recreation Plan Requirements*, EOEa Division of Conservation Services, 2001.
- *Open Space Planner’s Workbook*, EOEa Division of Conservation Services, 2001.

- *Petersham Community Survey*, administered by the Petersham Ad Hoc Planning Committee, 2003.
- *Petersham General By-Laws, Rules and Regulations Governing the Subdivision of Land*, and *Rules and Regulations Governing Scenic Roads*, various dates.
- *Petersham Master Plan*, Daylor Consulting Group and the Petersham Ad Hoc Planning Committee, in preparation.
- *Planning One Town: Petersham – A Hill Town in Massachusetts*, John D. Black and Ayers Brinser, Cambridge: Harvard University Press, 1952.
- *Preliminary Soil Survey of Worcester County (Northwest), Massachusetts*, USDA Soil Conservation Service, 1989.
- *State Register of Historic Places*, Massachusetts Historical Commission, 2012.
- *The Trustees of Reservations website* (<http://www.thetrustees.org/>), accessed July 2013.

A. APPENDIX 1: ADA TRANSITION PLAN

The Americans with Disabilities Act (ADA) Transition Plan was prepared under the guidance of the Montachusett Regional Planning Commission. The plan was formally initiated on June 2, 2003 and completed on August 31, 2003. During this short period of time, a number of activities, meetings, and actions occurred to insure full and meaningful participation of the general public. A survey form was sent to all town departments, boards, and commissions to evaluate those services and programs being offered as well as operating procedures and policies. Individual meetings were held with various department heads and officials and all properties open to the public or offering direct services to the public as described in this plan were visited and assessed. Regular communication was conducted with the Office of the Board of Selectmen through working meetings and regular e-mail correspondence. A public presentation of the Petersham Accessibility Plan was made on September 9, 2003 as part of the Board of Selectmen's regularly scheduled meeting.

This plan consists of six sections and an Executive Summary. Section I provides an overview of the document and its primary goals and objectives. Section II is an overview of the various state and federal accessibility laws and regulations. Section III contains a self-evaluation of programs and services offered by the town. Section IV consists of a transition plan including an inventory of town-owned property and general estimates of cost for barriers removal and accessibility compliance. Section V identifies a number of policies and procedures to be adopted by the town in compliance with the ADA. Section VI includes a summary of recommendations identified in the plan. Supplemental information is provided as Appendices. Complete copies of the report are available through the Montachusett Regional Planning Commission.

Petersham does not have a recreation commission or parks department, however, there are two large parcels owned and managed by the Conservation Commission. The Conservation Commission has no employees and depends on volunteer help and contracting of maintenance activities which includes field restoration and annual mowing at the Babbitt Wildlife Sanctuary. Trail maintenance and improvement at the Davenport Pond Property has been conducted through groups of volunteers. These properties have no recreation or other facilities. These properties are open to the public for hiking and passive recreation but the Conservation Commission does not provide organized programming. Both properties are under development for parking which will include handicapped parking, improved access, and trail improvement.

Facility Inventory
LOCATION: Babbitt Wildlife Sanctuary

ACTIVITY	EQUIPMENT	NOTES
Picnic Facilities NONE	Tables & Benches	Located adjacent to accessible paths
		Access to Open Spaces
		Back and Arm Rests
		Adequate number
	Grills	Height of Cooking Surface
	Trash Cans	Located adjacent to accessible paths
		Located adjacent to accessible paths
	Picnic Shelters	Located near accessible water fountains, trash can, restroom, parking, etc.
Trails	CURRENT TRAILS ARE NOT SUITABLE FOR PEOPLE WITH DISABILITIES	Surface material – NATURAL VEGETATION AND
		Dimensions - VARIABLE
		Rails - NONE
		Signage (for visually impaired) NONE
Swimming Facilities NONE	Pools	Entrance
		Location from accessible parking
		Safety features i.e. warning for visually impaired
	Beaches	Location from accessible path into water
		Handrails
		Location from accessible parking
Play Areas (tot lots) NONE	All Play Equipment i.e. swings, slides	Shade provided
	Access Routes	Same experience provided to all
		Located adjacent to accessible paths
Game Areas: *ballfield *basketball *tennis	Access Routes	Enough space between equipment for wheelchair
		Located adjacent to accessible paths
	Equipment	Berm cuts onto courts
		Height
		Dimensions
		Spectator Seating
Boat Docks NONE	Access Routes	Located adjacent to accessible paths
		Handrails
Fishing Facilities NONE	Access Routes	Located adjacent to accessible paths
		Handrails
	Equipment	Arm Rests
		Bait Shelves
		Handrails
		Fish Cleaning Tables
Programming NONE	Are special programs at your facilities accessible?	Learn-to-Swim
		Guided Hikes
		Interpretive Programs
Services and Technical Assistance NONE	Information available in alternative formats i.e. for visually impaired	
	Process to request interpretive services (i.e. sign language interpreter) for meetings	

LOCATION: Babbitt Wildlife Sanctuary

PARKING			
<i>Total Spaces</i>		<i>Required Accessible Spaces</i>	
Up to 25		1 space	
26-50		2 spaces	
51-75		3 spaces	
76-100		4 spaces	
101-150		5 spaces	
151-200		6 spaces	
201-300		7 spaces	
301-400		8 spaces	
401-500		9 spaces	
<i>Specification for Accessible Spaces</i>	Yes	No	<i>Comments/Transition Notes</i>
Accessible space located closest to accessible entrance		√	Under development
Where spaces cannot be located within 200 ft of accessible entrance, drop-off area is provided within 100 ft.			
Minimum width of 13 ft includes 8 ft space plus 5 ft access aisle			
Van space – minimum of 1 van space for every accessible space, 8 ft wide plus 8 ft aisle. Alternative is to make all accessible spaces 11 ft wide with 5 ft aisle.			
Sign with international symbol of accessibility at each space or pair of spaces			
Sign minimum 5 ft, maximum 8 ft to top of sign			
Surface evenly paved or hard-packed (no cracks)			
Surface slope less than 1:20, 5%			
Curbcut to pathway from parking lot at each space or pair of spaces, if sidewalk (curb) is present			
Curbcut is a minimum width of 3 ft, excluding sloped sides, has sloped sides, all slopes not to exceed 1:12, and textured or painted yellow			
RAMPS			
<i>Specification</i>	Yes	No	<i>Comments/Transition Notes</i>
Slope Maximum 1:12		√	Ramps not needed
Minimum width 4 ft between handrails			
Handrails on both sides if ramp is longer than 6 ft			
Handrails at 34" and 19" from ramp surface			
Handrails extend 12" beyond top and bottom			
Handgrip oval or round			
Handgrip smooth surface			
Handgrip diameter between 1 1/4" and 2"			
Clearance of 1 1/2" between wall and wall rail			
Non-slip surface			
Level platforms (4ft x 4 ft) at every 30 ft, at top, at bottom, at change of direction			

Facility Inventory
LOCATION: Davenport Pond Property

ACTIVITY	EQUIPMENT	NOTES
Picnic Facilities NONE	Tables & Benches	Located adjacent to accessible paths
		Access to Open Spaces
		Back and Arm Rests
		Adequate number
	Grills	Height of Cooking Surface
	Trash Cans	Located adjacent to accessible paths
		Located adjacent to accessible paths
	Picnic Shelters	Located near accessible water fountains, trash can, restroom, parking, etc.
Trails	CURRENT TRAILS ARE NOT SUITABLE FOR PEOPLE WITH DISABILITIES	Surface material – NATURAL VEGETATION AND
		Dimensions - VARIABLE
		Rails - NONE
		Signage (for visually impaired) NONE
Swimming Facilities NONE	Pools	Entrance
		Location from accessible parking
		Safety features i.e. warning for visually impaired
	Beaches	Location from accessible path into water
		Handrails
		Location from accessible parking
Play Areas (tot lots) NONE	All Play Equipment i.e. swings, slides	Shade provided
	Access Routes	Same experience provided to all
		Located adjacent to accessible paths
Game Areas: *ballfield *basketball *tennis	Access Routes	Enough space between equipment for wheelchair
		Located adjacent to accessible paths
	Equipment	Berm cuts onto courts
		Height
		Dimensions
		Spectator Seating
Boat Docks NONE	Access Routes	Located adjacent to accessible paths
		Handrails
Fishing Facilities NONE	Access Routes	Located adjacent to accessible paths
		Handrails
	Equipment	Arm Rests
		Bait Shelves
		Handrails
		Fish Cleaning Tables
Programming NONE	Are special programs at your facilities accessible?	Learn-to-Swim
		Guided Hikes
		Interpretive Programs
Services and Technical Assistance NONE	Information available in alternative formats i.e. for visually impaired	
	Process to request interpretive services (i.e. sign language interpreter) for meetings	

LOCATION: Davenport Pond Property

PARKING			
<i>Total Spaces</i>		<i>Required Accessible Spaces</i>	
Up to 25		1 space	
26-50		2 spaces	
51-75		3 spaces	
76-100		4 spaces	
101-150		5 spaces	
151-200		6 spaces	
201-300		7 spaces	
301-400		8 spaces	
401-500		9 spaces	
<i>Specification for Accessible Spaces</i>	<i>Yes</i>	<i>No</i>	<i>Comments/Transition Notes</i>
Accessible space located closest to accessible entrance		√	Under development
Where spaces cannot be located within 200 ft of accessible entrance, drop-off area is provided within 100 ft.			
Minimum width of 13 ft includes 8 ft space plus 5 ft access aisle			
Van space – minimum of 1 van space for every accessible space, 8 ft wide plus 8 ft aisle. Alternative is to make all accessible spaces 11 ft wide with 5 ft aisle.			
Sign with international symbol of accessibility at each space or pair of spaces			
Sign minimum 5 ft, maximum 8 ft to top of sign			
Surface evenly paved or hard-packed (no cracks)			
Surface slope less than 1:20, 5%			
Curbscut to pathway from parking lot at each space or pair of spaces, if sidewalk (curb) is present			
Curbscut is a minimum width of 3 ft, excluding sloped sides, has sloped sides, all slopes not to exceed 1:12, and textured or painted yellow			
RAMPS			
<i>Specification</i>	<i>Yes</i>	<i>No</i>	<i>Comments/Transition Notes</i>
Slope Maximum 1:12		√	Ramps not needed
Minimum width 4 ft between handrails			
Handrails on both sides if ramp is longer than 6 ft			
Handrails at 34" and 19" from ramp surface			
Handrails extend 12" beyond top and bottom			
Handgrip oval or round			
Handgrip smooth surface			
Handgrip diameter between 1 1/4" and 2"			
Clearance of 1 1/2" between wall and wall rail			
Non-slip surface			
Level platforms (4ft x 4 ft) at every 30 ft, at top, at bottom, at change of direction			

The Selectboard has appointed Steven C. Boudreau as the designated Town ADA Coordinator.

Steven C. Boudreau
ADA Coordinator
3 South Main Street
P.O. Box 486
Petersham, MA 01366

978 724-3564 Fax 978 724-3501



978-724-3353

**TOWN OF
PETERSHAM
SELECTBOARD**
3 South Main Street
P.O. Box 486
Petersham, MA 01366
stevenboudreau391@gmail.com
www.townofpetersham.org

Fax 978-724-3501

June 23, 2014

Steven C. Boudreau
C/ O Petersham Selectboard Office
Town Offices 3 South Main Street
Petersham, MA 01366

Dear Steven,

At its regularly scheduled meeting on June 9, 2014 the Petersham Selectboard voted to appoint you **ADA Coordinator** through June 30, 2015.

This position requires that you be sworn into office. Until you accept this position by being sworn in, the Town will not consider you as filling the position, as per MGL 41:107. The Town Clerk's office hours are Monday evenings 6:00 to 8:00 in the Town Office Building, 3 South Main Street, 2nd floor, and also by phone at 978-724-6649. If you have any questions, don't hesitate to call me.

Sincerely,

Steven C. Boudreau
Administrative Coordinator
CC: Town Clerk, File

B. APPENDIX 2: INFORMATION FOR LANDOWNERS ON ALLOWING PUBLIC ACCESS TO PRIVATE LAND

This information for landowners on allowing public trail access to private land is taken from the website of the Greater Worcester Land Trust and from a Mass. D.E.M. brochure distributed by the Trails Program

"If landowners allow access across their property will they become exposed to liability suits for injuries suffered on their property?"

"Trail users can sue a landowner but liability is limited by law to circumstances of unlawful, wanton and reckless conduct. The standard definition for this willful conduct is: an intentional act or failure to act with knowledge (or knowledge of facts that would lead a reasonable person to know) that such conduct not only creates unreasonable risk of bodily harm to another, but also involves a high degree of probability that substantial harm will result."

"Massachusetts General Laws (MGL) Chapter 21, Section 17C, which limits a landowner's vulnerability to suits by reducing the duty of care, reads as follows:

17C Public use of land for recreation purposes; landowner's liability limited; exception
*An owner of land who permits the public to use such land for recreation purposes without imposing a charge or fee therefor, or who leases his land for said purposes to the commonwealth or any political subdivision thereof shall not be liable to any member of the public who uses said land for the aforesaid purposes for injuries to person or property sustained by him while on said land **in the absence of willful, wanton or reckless conduct** by such owner, nor shall such permission be deemed to confer upon any person so using said land the status of an invitee or licensee to whom any duty would be owed by said owner. The liability of an owner who imposes a charge or fee for the use of his land by the public for recreation purposes shall not be limited by any provision of this section. (Emphasis added)"*

"Any landowner with a hazard such as an open pit or unsafe structure on his or her property should repair or remove it. Whether or not a trail exists on the property, an owner could be liable for injuries sustained by a legitimate user or even a trespasser, particularly if the injured party is a minor"

"If a landowner grants access through permission or license, will this lead to permanent access? Would continued use lead to loss of control or permanent easement through adverse possession?"

Continuous use of private property under permission or license from the property owner does not ripen into an easement. See MGL Chapter 187, Section 2. If permission is given for trail use, then that use is not adverse to the rights of the owner and cannot lead to claims of adverse possession."

"How can a landowner control what happens on the trail that he or she has allowed across the property?"

The landowners may, and should, propose conditions of use to the trail organization. These conditions can be written into the license agreement or the easement. The owner or trail group might also want to erect signs reminding users that they are on private land and should refrain from certain proscribed activities. Examples of traditional restrictions prohibit lighting fires, camping, leaving trash, operating motorized vehicles, or access after sunset. A farmer might want to stipulate that no produce be picked, or that dogs must be leashed. These signs can be designed to meet the concerns of the landowner."

"What is a trail easement?"

In Massachusetts, the instrument for legal access for trails is called a "conservation easement" or more strictly a "conservation restriction." These are legally enforceable agreements between a landowner and a trail organization or local or state agency, under MGL Chapter 184, Section 31-33 by which the owner of open land promises to preserve its natural state and keep it substantially free of future development. For trail purposes, such an agreement should include language stipulating public access for trail use. Such a restriction constitutes an "interest in land" that runs with the land and is binding on future owners. The trail corridor remains the property of the owner and can be sold or disposed of but the trail easement is in perpetuity.

This agreement to preserve the land and allow trail access, can be donated or sold for its appraised value to a trail group, town, or public agency. Donations of land or conservation restrictions are tax deductible in most instances, with the amount of the deduction depending on the individual circumstances of the owner.

Conservation restrictions are the best tool for permanent trail protection, short of outright acquisition of the property by a non-profit or government agency. They are permanent and appear on the title of the property. They also can provide a useful tool for landowners who are eager to preserve the natural quality of their open land."

"What other financial incentives are available for landowners who allow public trail access?"

Owners who sell or donate conservation restrictions may apply for abatements in property tax assessments to reflect the reduction of value of their property after foregoing the development rights.

MGL Chapter 61B provides local property tax abatement for owners who open up their land for public recreation without charging a fee. This is administered through town tax assessors."

"What is a license?"

Unlike an easement, a "license" is a revocable agreement between an owner and a trail group that permits trail access. It is a useful tool, and superior to verbal and written permission in that it can be used to stipulate conditions of use and management agreements. Model formats are available from DEM's Trails Program."

"Who is responsible for maintaining the trail on private land?"

The trail organization or whoever accepted the easement or license is responsible for the care of the trail, in cooperation with the landowner. The trail organization should layout, cut, and blaze the trail to its standards. The landowner should always be consulted concerning major modifications, such as cutting large trees, opening walls or fences, or building bridges. Routine maintenance and clean-up are the responsibilities of the trail group. It is a courtesy to notify the landowner prior to embarking on any trail working party."

"Whom can the landowner contact if there is inappropriate use or other problems with the trail?"

A local trail representative from the trail maintainer group should be identified and should be available to owners to assist with problems. Trouble shooting and quick response to landowner concerns will help prevent loss of access."

"If landowners open their land for a foot trail how can they prevent unauthorized motorized use?"

If the license or easement stipulates foot travel only, this should appear on signs at the entrance to the property. There are penalties for operating motorized vehicles on private land, and landowners and trail groups can work together by informing local police of violations. MGL Chapter 266, Section 121A makes it an offense punishable by a fine of \$250 to enter onto private land, whether or not posted against trespass, with a motorized vehicle or powered device."

"If a trail group wishes to establish a trail on public land, does it need permission?"

Yes, permission is needed from the local park or forest supervisor prior to cutting a trail in a state park or forest. Trail use can sometimes conflict with other management goals such as forest or wildlife management or water supply. The supervisor must be informed of the route of the trail and consulted on major changes involving cutting of trees or construction of bridges. Public land managers should be treated with the same courtesy as private landowners."

C. APPENDIX 3: TOOLS FOR LAND & RESOURCE CONSERVATION

This appendix discusses a range of tools that Petersham can use to assist in implementing the Open Space and Recreation Plan. These tools include sources for grant funding, matching funds, technical assistance, and other resources. Please note that some of these sources change from time to time as funding is appropriated or eliminated, or for other reasons.

1. Grants for Open Space and Passive Recreation

Massachusetts Self-Help Program

The Self-Help Program has assisted municipal conservation commissions in acquiring land for conservation of natural resources and passive outdoor recreation purposes since 1961. The intent is to preserve lands and waters in their natural state. Self-Help funds also protect areas containing unique natural, historical or cultural features or water resources. Compatible passive outdoor recreational uses such as hiking or bird watching are encouraged and access by the general public is required.

This state program pays for the acquisition of land or a partial interest (such as a conservation restriction), and associated acquisition costs such as appraisal reports and closing costs. The cost of development of passive recreational facilities on land acquired with Self-Help monies must be absorbed by the municipality, and such development must be reviewed by the Division of Conservation Services. Self-help grants provide communities with 52% to 70% reimbursement for the total project cost.

Greenways and Trails Demonstration Grants Program

This program provides grants to support greenway projects and trail networks that connect existing open space. Projects eligible for funding include greenway and trail planning, mapping and resource assessment; greenway related public education and outreach; and greenway and trail management, maintenance and expansion. The grant program provides awards of \$1,000 - \$5,000 for projects within a single community, and up to \$10,000 for projects that are regional or multi-town. Grants are awarded to municipalities, non-profits and regional planning agencies.

National Recreational Trails Act Grant Program

The National Recreational Trails Act (NRTA) and the Intermodal Surface Transportation Act (ISTEA) of 1991 provide for the transfer of fuel tax revenue generated by the use of off-highway vehicles and in backcountry camping, to a statewide grant program. These grants provide funding to private organizations, government agencies and municipalities for trail projects.

Grants may be targeted toward construction of new trails or acquisition of land or easement for trails, maintenance of existing trails, development of trail-side and trail-head facilities, water trails, and other projects. At least 50% of the project cost must derive from other sources.

2. Grants for Natural Resource Protection

Lake and Pond Grant Program

The Lake and Pond Grant Program awards grants for the protection, preservation and enhancement of public lakes and ponds in the Commonwealth. A key goal of the program is to promote a holistic approach to lake management that is based on sound scientific principles and emphasizes the integrated use of watershed management, in-lake management, pollution prevention and education to provide long-term solutions to lake problems. A maximum grant of \$10,000 is available to eligible applicants on a 50/50 cost sharing basis. In the past, applications have been due on December 31 of each year.

Flood Management Grants

Authorized by the National Flood Insurance Reform Act of 1994, the Flood Mitigation Assistance (FMA) program makes cost-share grants available on a pre-disaster basis for flood mitigation planning and other floodplain projects, such as property acquisition, relocation of residents living in floodplains, and retrofitting of existing structures within a floodplain. Flood hazard mitigation plans, approved by the state and FEMA, are a prerequisite for receiving FMA project grants. Communities must contribute up to 25% of the cost for the planning and project grants with an FMA match of 75%. Annual application process is in the spring.

Forest Stewardship Planning and Project Grants for Town Forestlands

The Massachusetts Forest Stewardship Program seeks to encourage landowners to practice long-term guardianship through the development of a management plan for their woodlands. Recognizing both the ecological and social values of our forests, the program is designed to improve wildlife habitat and forest aesthetics, to protect soil and water resources, and to increase the potential for high-quality wood products. In order to further these goals, grants are awarded to public and private organizations in two categories: 1) for the preparation of 10-year forest management plans and demonstration areas on town owned woodland. 2) for professional training and technical support to the forestry community for delivery of the stewardship message. Most grants range from \$1,500 to \$2,000.

Mass ReLeaf Grant Program

The MASS ReLeaf grant program is designed to foster partnerships between business, government and nonprofit groups to raise money for the planting and care of public trees. Since 1989, the program has raised more than \$2 million through various corporate-giving and federal campaigns, leveraged over \$2.5 million of in-kind services, and planted more than 12,000 trees. The goals of the program are to help communities purchase trees to be planted for energy conservation, screening, community gateway or parking lot enhancement, or to offset urban pollution; to expand and engage a network of community leaders, government officials and corporate partners through educational and promotional events and projects; and to assure long-term tree survival by emphasizing proper tree selection, planting, aftercare and maintenance.

3. Programs for Historic Resource Protection

Historic Landscape Preservation Grant Program

The Historic Landscape Preservation Grant Program is a state-funded competitive grant program established in 1997 to support the preservation and restoration of historic landscapes listed or, in certain instances, eligible for listing on the State or National Register of Historic Places. Many municipal

landscapes across the state are over a century old and continue to suffer from deferred maintenance, intrusive additions and limited ability of municipalities to fund rehabilitation projects.

Municipalities may apply for grants for work related to inventory and planning of historic resources; construction projects (rehabilitation, restoration, etc.); preservation maintenance; and public education and stewardship. The grant amount is up to \$50,000 per year per project for planning, inventory, education and stewardship projects, and up to \$100,000 per year for construction or preservation maintenance projects. Municipalities must provide a cash match of 30-48% of the total project cost. In the past, the deadline for applications has been May 15 of each year.

Preservation Restrictions

Preservation Restrictions are authorized by Chapter 184, Sections 31-33 of the General Laws, and protect historic and archaeological properties from changes that may be inappropriate. A Preservation Restriction (easement) on a property restricts present and future owners from altering a specified portion of that building, structure, or site. A restriction can run for a few years or in perpetuity and may be included as part of the property deed. Preservation restrictions can be donated or purchased by a government body or private preservation organization and are enforced by the holder of the restriction. Charitable donations of easements on historical buildings or archaeological sites may qualify for federal income tax deductions. The Massachusetts Historical Commission should be contacted.

Survey and Planning Grants

Survey and Planning Grants provide 50 percent matching federal funds for the preparation of community surveys, preservation plans, preparation of historic district studies and legislation, archaeological surveys, nominations to the National Register, and educational preservation programs. Eligible applicants are local historical commissions, Certified Local Governments, local and state agencies, educational institutions, and private organizations.

Contact: Massachusetts Historical Commission, 617-727-8470.

4. Community Preservation Act

Efforts have been made to see if the town would vote to accept the Community Preservation Act, Chapter 267 of the Acts of 2000. To date, there has been insufficient support needed for the Town to adopt it. Massachusetts communities who adopt this measure will receive state matching funds for local preservation efforts. If the Community Preservation Act were to be adopted, 10% of the money raised must be used for open space protection, 10% for historic preservation, and 10% for affordable housing with the remaining 70% used for any of these three purposes. This could provide a steady source of income for open space preservation and other important activities. If the Town decides to take advantage of this option, it would be eligible to receive state matching funds for local preservation efforts.



April 28, 2014

Robert A. Clark, Chair
Petersham Conservation Commission
P.O. Box 486
Petersham, MA 01366

Dear Ms. House:

The Town of Petersham has submitted to the MRPC for review and comment its 2014 Open Space and Recreation Plan as per state requirements. An Open Space and Recreation Plan provides a community with an instrument to effect community goal. It establishes the community's aspirations and recommends patterns of development that will support them. Having this document available can help a municipality advocate for the open space and recreation needs of its community.

A Massachusetts community with an approved Open Space and Recreation Plan becomes eligible to apply for Self-Help, Urban Self-Help, Land and Water Conservation Funds and other grant programs administered by the Executive Office of Energy and Environmental Affairs, Division of Conservation Services. Open Space and Recreation Plans also help coordinate with ongoing acquisition efforts of the goals of the MRPC are in the areas of regional growth, environmental quality, land use, individual opportunity and welfare, and economic development. The Montachusett Regional Planning Commission finds this proposal in conformity with regional goals, policies and objectives of this region and the Commonwealth of Massachusetts.

Petersham's plan appears to contain all of the required sections according to the Open Space Guidebook published by the Executive Office of Energy and Environmental Affairs (EOEEA). We recommend that local officials work with EOEEA staff should there be any additional information to be corrected or required.

Sincerely,

Glenn P. Eaton
Executive Director

1427R Water Street Fitchburg, MA 01453 978.345.7376 fax: 978.348.2490 email: mrpc@mrpc.org

TOWN OF PETERSHAM

Planning Board

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Melissa Cryan
Executive Office of Energy and Environmental Affairs
Suite 904
100 Cambridge Street
Boston, Massachusetts 02114

April 28, 2014

Dear Ms. Cryan

The Planning Board has reviewed the 2014 Open Space & Recreation Plan. We find its description and analysis of existing inventory and future opportunities to be both thorough and accurate. The stated goals and action plan are consistent with the wishes and needs of the residents and will further the interest of the town in protecting and managing open space and recreation.

The Planning Board endorses the plan.

A handwritten signature in dark ink, appearing to read "D. Fraser Sinclair".

D. Fraser Sinclair
Chairman
Petersham Planning Board



**TOWN OF
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April 28, 2014

Ms. Melissa Cryan
Executive Office of Energy and Environmental Affairs Suite 904
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Boston, Massachusetts 02114

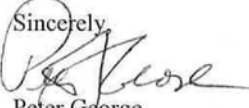
Dear Melissa,

The Town of Petersham Selectboard has reviewed the updated Open Space & Recreation Plan as prepared by the Petersham Conservation Commission and Open Space & Recreation Committee.

We are grateful for the diligent work by the committees and for the input received by residents in creating a solid update of the Plan for our town.

From informative data to detailed and diverse maps, the document contains excellent current information; vital historic information; and critical ideas and goals for the future.

Since its first creation and now with this update, we have found the OS&R Plan to be a valuable tool and a true working document for Petersham -- to be used as an encyclopedic guide and planning tool, not to sit collecting dust. We are proud of what is reflected in Petersham's presentation about our community and will be pleased to use it for a number of purposes going forward. We will also ensure the Plan is readily available both in the Petersham Town Office Building and at our local library for any and all to utilize.

Sincerely,

Peter George
Chairman
Petersham Selectboard

cc: Robert Clark, Chair Conservation Commission, File