



Open Space & Recreation Plan Town of Ware Massachusetts

March 3, 2016

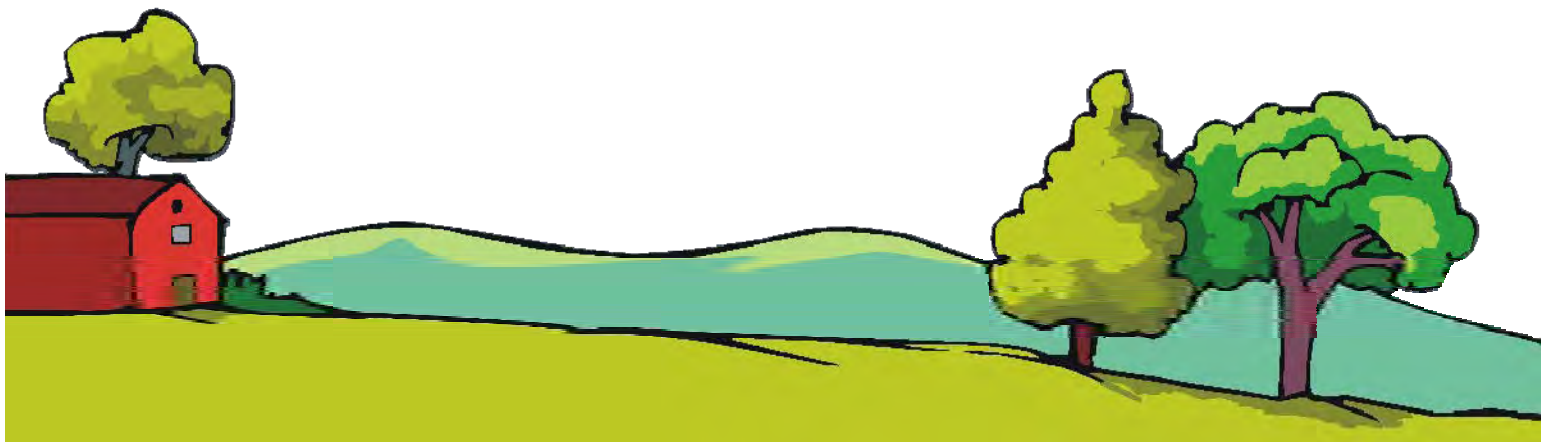


Table of Contents



Section 1: Plan Summary	1
Section 2: Introduction	3
Table 2-1: Open Space & Recreation Plan Committee	4
Section 3: Community Setting.....	7
A. Regional Context	7
Table 3-1: Protected Lands Associated with the Quabbin Reservoir	7
Map 1: Vicinity & Major Watersheds.....	8
Map 2: Regional Context.....	9
Map 3: Regional Open Space.....	10
B. History of the Community	11
C. Population Characteristics.....	12
Figure 3-1: Ware Population Trends 1930 to 2010	12
Table 3-2: Comparative Regional Population Trends.....	13
Figure 3-2: Percent Change in Population (Regional).....	13
Table 3-3: Demographic Trends Summary	14
Table 3-4: Population by Age, 1990 to 2010.....	14
Map 4: Population, 2010, by Census Block	15
Map 5: Population, 2010, by Census Block Group.....	16
Table 3-5: Population by Age, 2000 to 2010.....	17
Table 3-6: Population by Ethnicity	18
Figure 3-3: Percentage Of Students In Grade School From Low Income Families, 2010	19
Table 3-7: Ware Industry Trends, 2001 to 2010	19
Table 3-8: Ware Industry By Number Of Establishments, Employees And Wages, 2010	20
Table 3-9: Place of Work for Ware Residents, 2004	20
D. Growth and Development Patterns	21
Table 3-10: Land Use Changes by Category	22
Map 6: Landuse, 2005	23
Table 3-11: Housing Unit Change in Ware, 1990 to 2010.....	24
Figure 3-4: Age of Housing Stock.....	24
Figure 3-5: Regional Comparison Of Building Permit Activity, 2001-2010	25
Figure 3-6: Number Of Building Permits Issued By Year, 1990-2010.....	25

Table 3-12: Median Sale Price of Homes in Ware, 1990-2010	25
Figure 3-7: Ware Shuttle Route	27
Map 7: Zoning Districts.....	30
Table 3-13: Summary of Build-out Statistics	32
Section 4: Environmental Inventory & Analysis	33
A. Geology, Soils, and Topography	33
Map 8: Topography	34
Map 9: Soil Drainage	36
Map 10: Hydric Soils	37
Map 11: Septic Suitability	38
B. Landscape Character.....	39
C. Water Resources	39
Table 4-1: Surface Water Resources	40
Map 12: Water Resources.....	41
Figure 4-1: Chicopee River Basin, Swift River Subbasin	42
Figure 4-2: Chicopee River Basin, Ware River Subbasin.....	44
D. Vegetation	45
Map 13: Forest Cover	47
Map 14: Farmland Soils	48
Table 4-2: Rare Species and Natural Plant Communities	50
Map 15: Unique Features	53
Map 16: BioMap and Habitats.....	56
E. Fisheries and Wildlife	57
Map 17: CAPS Index of Ecological Integrity.....	58
Table 4-3: Common Wildlife by Habitat in Hampshire County	59
Map 18: Suitability of Soil for Wetland Wildlife	60
Map 19: Habitat of Potential Regional or Statewide Importance	61
Table 4-4: Rare Species	64
F. Scenic Resources and Unique Environments.....	65
G. Environmental Challenges	68
Table 4-5: MA 2012 Integrated List of Waters.....	69



Section 5: Inventory of Lands of Conservation and Recreation Interest..... 71

 A. Private Parcels 71

 Table 5-2: Conservation and Agricultural Preservation Restrictions 72

 Map 20: Open Space by Type (with Table) 73

 B. Public Lands 77

 Table 5-3: Municipal Lands..... 80

 Table 5-4: Other Public Lands 82

Section 6: Community Vision 85

Section 7: Analysis of Needs 87

Section 8: Goals and Objectives 91

Section 9: Action Plan 93

 Map 21: Action Plan..... 95



During the development of the 2013 update to the Town of Ware's 2007 Open Space and Recreation Plan (OSRP), there was much discussion about the definition of 'open space'. For the purposes of this plan, open space is defined broadly and can include conservation land, active recreation lands such as ball fields and playgrounds, passive recreation lands including trails or places for nature observation, agricultural land, greenways and parks, forest land, open fields, and waterways and wetlands. Generally, open space refers to an undeveloped area used for conservation or recreation purposes. Working woodlands managed for timber harvest, as well as land with active agricultural operations, are also considered open space.

Included within the 2013 OSRP is a detailed environmental inventory and assessment as well as a discussion about community demographics and growth and development patterns. Together, this information is used to understand the needs of the community relative to open space and recreation. Community input has also been sought to inform a more complete picture of what gives Ware its sense of place and makes it a community in which people choose to live today and in the years to come.

Through the analysis of data and public input process, four goals for open space and recreation in the Town of Ware were identified:

Goal #1: Provide a broad range of high quality recreational programs.

Goal #2: Manage open space and recreation cohesively and effectively.

Goal #3: Preserve town's rural characteristics.

Goal #4: Increase public awareness of open space and recreation resources.

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Statement of Purpose

The 2013 Open Space and Recreation Plan (OSRP) was developed to update the 2007 OSRP that was due to expire in 2014. The current OSRP offers many benefits to the Town of Ware, most notably the ability to recognize community characteristics that contribute to Ware's sense of place, and thus plan for their preservation. Likewise, when followed, this Plan can be an effective mechanism for achieving the community goals for open space and recreation identified in this plan.

Since the 2007 OSRP was completed, the community has been very active at improving and expanding recreational opportunities through the Parks and Recreation Commission and the Open Space Committee. Some of these projects include:




















-  Open Space Preservation – participation in the purchase by the East Quabbin Land Trust of the Hyde Woodland Preserve, a 100 acre woodland in the Dougal Range.
-  Open Space and Agricultural Preservation – participation in the purchase by the East Quabbin Land Trust of the Frohloff Farm, an 88 acre property along the Ware River and at the southern end of the Dougal Range.
-  Open Space Preservation - participation in a Conservation Restriction for a private property owner of 51 acres in the Dougal Range.
-  Recreation – Upgrades to the facilities at Memorial Field, included new lighting system for baseball and soccer/football fields, reseeded the fields, and new walking path around the perimeter of the park.
-  Recreation - Created a new ball field with fence at Grenville Park, used for tee ball.
-  Recreation - Improvements to ball field at Grenville Park: raised and leveled to correct drainage issues in both infield and outfield, reseeded field and recreated infield.
-  Recreation - Installed bocce court and horse shoe pits at Grenville Park.
-  Recreation - Replaced all roofs on dugouts at Memorial Field, Kubinski Field, and the first and second baseball diamonds at Grenville Park, replaced asphalt roofs with metal and replaced rotten boards.
-  Recreation - Installed underground electric service to band shell, park restrooms, and main baseball field at Grenville Park. Updated service in all locations.
-  Recreation - Refurbished the band shell at Grenville Park and installed a new ADA compliant ramp.
-  Recreation - Created two wheel chair accessible fishing piers with parking at Grenville Park.

Table 2-1: Open Space & Recreation Plan Committee

Herb Foley	Open Space Committee
Bill Imbier	Parks Commission
Brian Klassanos	Land owner
Danielle Souza	Recreation leagues
David Kopacz	Conservation Commission
Joe Knight	Planning Board
Denis Ouimette	Finance Committee
Kathy Cronin	Open Space Committee
Kevin McClure	Scouts
Diana Petersen	Resident, Business person
Nancy Talbot	Board of Selectmen







-  Recreation - Installed a new boat ramp for trailered boat access at Grenville Park, along with a new dock to fish from and use in launching.
-  Recreation - Roadway and parking lot improvements at Grenville Park, including paving the entrance and exit roads of the park, enlarging the main parking lot, installing drainage to handle high ground water around parts of parking lot, and paving to restrooms to better accommodate ADA needs.
-  Recreation - Installed new roofs on all buildings at Reed Pool, including the bath house, filter house, and concession stand.
-  Recreation - Upgrades at Reed Pool including installation of a new sand filter and chemical control system as well as safety devices, and upgrades to the electrical services in the filter house.
-  Recreation - Introduced wheel chair accessible picnic tables into the park systems.
-  Recreation - Added on to our hiking trails in Grenville park. Cutting of trees and wood chipped paths.
-  Recreation - Installed two bridges on, and opened, southern section of Ware River Greenway rail trail.
-  Refurbished and reinstalled the historic fountain in Nenameseck Square, including installation of a new upgraded pump system.

Planning Process and Public Participation

The Ware Board of Selectmen appointed an 11 member Open Space and Recreation Committee to work with the Pioneer Valley Planning Commission (PVPC) to develop an update to the 2007 OSRP. Table 2-1 lists the members to the Committee and their affiliation. Additionally, the Town Manager Stuart Beckley and the Town Planner Karen Cullen assisted the Committee. Funding for the PVPC's assistance was provided by a District Local Technical Assistance Grant to the Town of Ware. The OSRP update was developed to meet the requirements of the Executive Office of Energy and Environmental Affairs, Department of Conservation Services 2008 guidelines.



The Open Space and Recreation Plan Committee met six times on the following dates:

-  Thursday, May 2, 2013
-  Thursday, June 6, 2013
-  Thursday, June 27, 2013
-  Tuesday, July 30, 2013
-  Tuesday, October 1, 2013
-  Wednesday, March 2, 2016

Public input for the plan was conducted in several ways. A community survey was issued from June 7 through September 10, 2013. The survey was available electronically on Survey Monkey and in paper format at the Town Clerk's Office, the Young Men's Library Association, Reed Municipal Pool, and the Ware Senior Center. Press releases about the availability of the survey were issued in July, August and September, and an article ran in the Ware River News each month. A link to the survey was posted on the Town website. The Town received 103 survey responses, or approximately 2.5% of households.

In addition, a public visioning session was held on Monday, September 9, 2013 from 7-9 pm at the Ware Junior/Senior High School. The visioning session offered a public forum for discussing goals and strategies for addressing the future of open space and recreation in Ware. Despite broad outreach about the visioning session conducted in tandem with all notifications about the community survey, and the visioning session included as a "Save the date" on the survey itself, only 15 people attended the visioning session. Despite limited public participation in the survey and visioning session, the Committee utilized the information received from those engaged citizens.

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A. Regional Context

Ware is located in the Connecticut River watershed in the southeast corner of Hampshire County along the southeastern shore of the Quabbin Reservoir. The town is characterized by an abundance of surface waters that generally flow along a series of north and south running valleys carved by glaciers. The Ware River valley extends along the town's eastern border; the Muddy Brook and Flat Brook valleys are located near the town's geographical center; the Swift River valley extends from the Quabbin Reservoir along the western town boundary. See Maps 1 and 2 for the regional context.

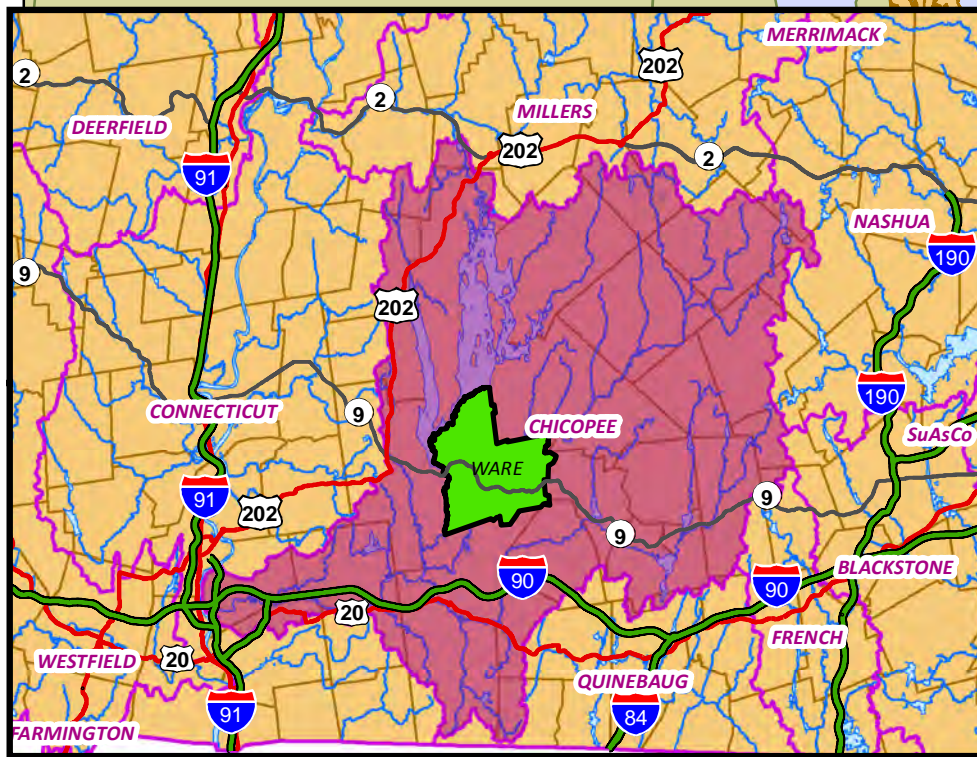
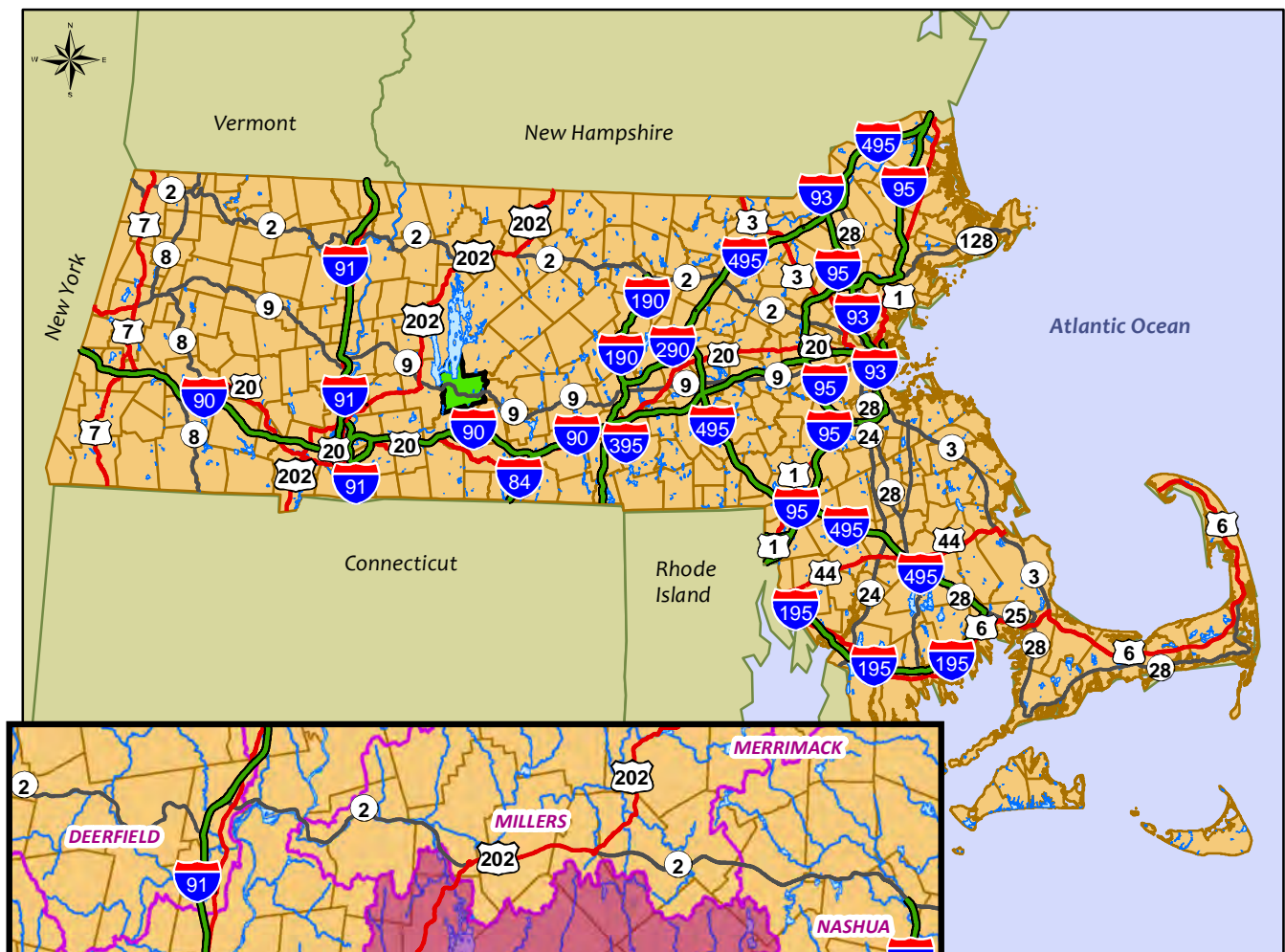
Ware has an area of 25,570 acres or approximately 40 square miles. It is bordered by: Belchertown to the west; New Salem, Petersham, and Hardwick to the north; New Braintree and West Brookfield to the east; and Warren and Palmer to the South. The Town is located approximately 27 miles from the City of Springfield to the southwest and 27 miles from the City of Worcester to the east.

Although major transportation corridors (Routes 9 and 32) in Ware have seen much development in recent times, the town has retained a rural character and historic appearance. Contributing to Ware's rural character is the Quabbin Reservoir, a part of which is in the town's northwestern corner. Built between 1928 and 1939 to provide water to the residents of Boston, the reservoir has 38.6 square miles of water surface, 118 miles of shoreline, 120 square miles of associated protected open space, and at capacity contains 412 billion gallons of water (see Table 3-1). Approximately 8,047 acres of protected land within the Quabbin Reservoir watershed is located in the Town of Ware.

Table 3-1: Protected Lands Associated with the Quabbin Reservoir

Landowner	Acres	Notes
Department of Conservation and Recreation (DCR) - Division of Water Supply Protection	53,987	
DCR – Division of State Parks and Recreation and Bureau of Forestry	2,381	Includes: Federated Women's Club State Forest, Shutesbury State Forest, Wendell State Forest, New Salem State Forest, Petersham State Forest
Department of Fish and Game - Division of Fisheries and Wildlife	3,015	Philipston Wildlife Management Area (WMA), Popple Camp WMA (Petersham), Racoon Hill WMA (Barre), other Barre WMAs, Wendell WMA, Petersham WMA
Private lands	17,200	Harvard University, Massachusetts Audubon Society, and the Trustees of Reservations
Total	76,583	120 square miles

Source: Quabbin Reservoir Watershed System, Land Management Plan 2007-2017



Legend

- Chicopee Basin
- Major Basins
- Rivers and Streams
- Lakes and Ponds

Open Space & Recreation Plan

Map 1: Vicinity and Major Watersheds

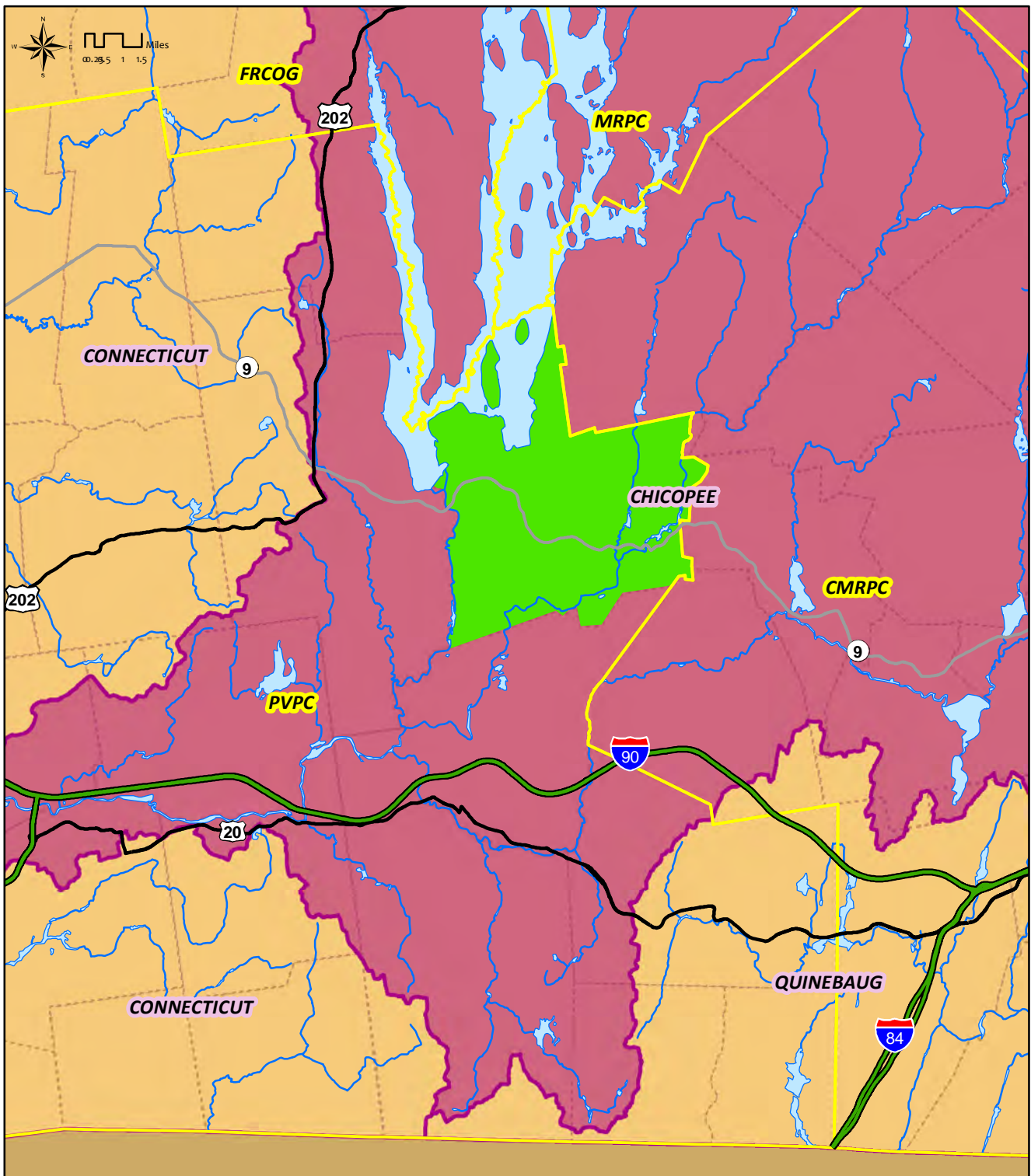
May 24, 2013

Sources:
MassGIS: Major Watershed Basins,
Waterbodies, Rivers, Roads, Towns

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Legend

- Ware
- Major Basins
- Chicopee Basin
- Regional Planning Agencies

Open Space & Recreation Plan

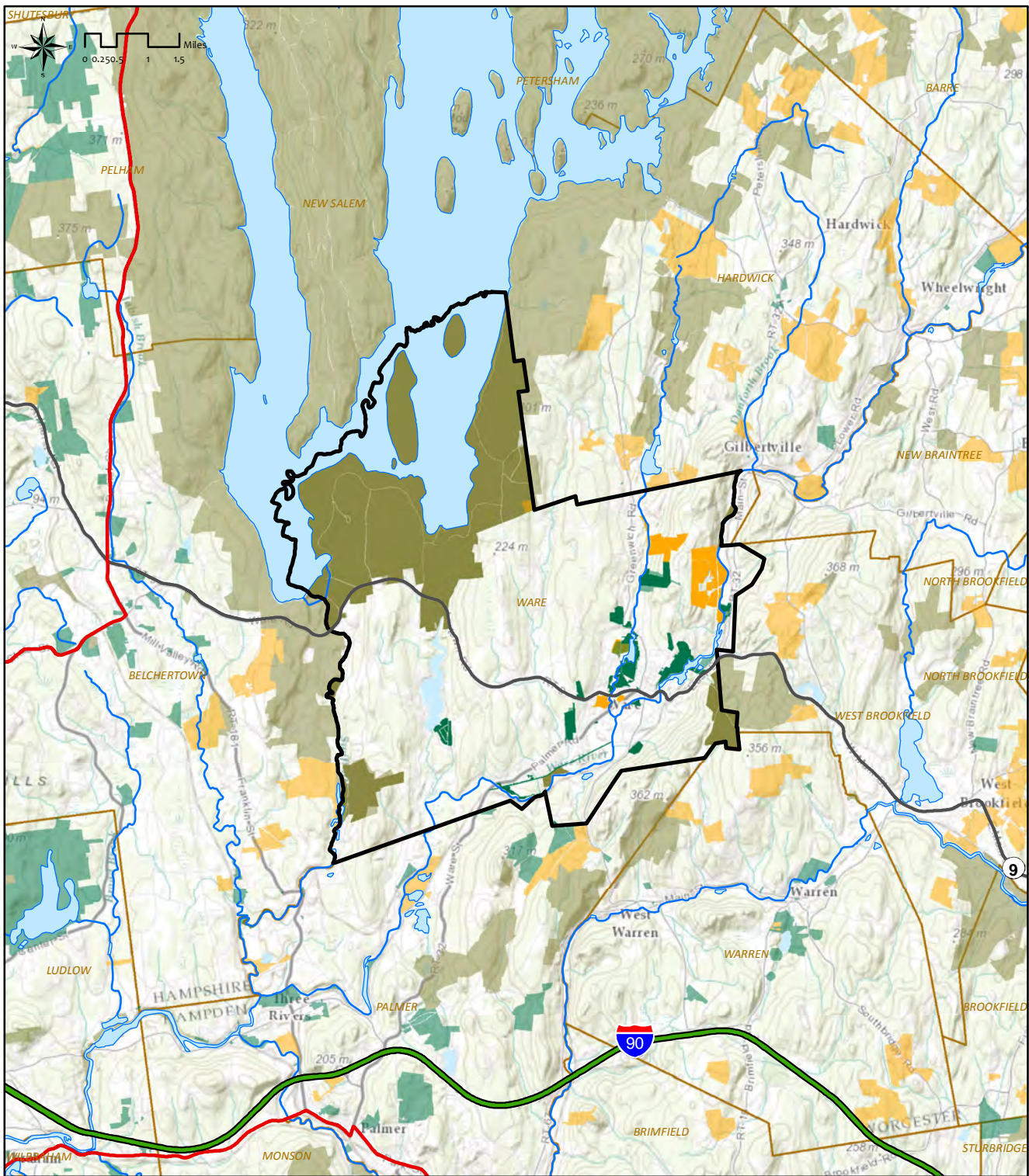
Map 2: Regional Context

May 24, 2013

Sources:
MassGIS: Watershed Basins, Regional Planning Agencies,
Waterbodies, Rivers, Roads, Towns

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Legend

Open Space: Ware

- State
- Municipal
- Other

OpenSpace: Regional

- State
- Municipal
- Other

Open Space & Recreation Plan

Map 3: Regional Open Space

May 24, 2013

Sources:
 MassGIS: Towns, Roads, Rivers, Lakes, Open Space
 Ware: Open Space
 ESRI: Base Map

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While public access to these lands is regulated by the Massachusetts Department of Conservation and Recreation (DCR) Division of Water Supply Protection to help protect drinking water supplies, there are opportunities for boat fishing and shore fishing access, hiking, sightseeing, bicycling on designated roads, picnicking, bird watching, and snowshoeing. An observatory tower is located on Quabbin Hill in Ware, and the park headquarters across the dam in Belchertown houses an interpretive center. There are six official access gates – numbers 50 through 55—into the Quabbin reservation located within Ware.

DCR actively protects and manages its lands at the Quabbin for forestry, wildlife, biological diversity and cultural resources. The program is detailed within the pages of a 10-year plan entitled 2007-2017 Quabbin Land Management Plan.

Map 3 shows the protected open space areas within the region. An examination of this map shows the potential for significant interconnected protected open space areas throughout the region, in addition to the extensive lands of the Quabbin reservation.

B. History of the Community

Ware's name is derived from the Nenameseck Indians' technique of building fishing weirs in the rivers. The weirs were rough walls of stone that formed a substructure for stakes and brush, allowing fish to be more easily caught. Locations within Ware provided favorite fishing spots for Native Americans who frequented the area before colonial times. The falls in particular, now the site of a dam located on the Ware River near the center of town, was a prime place to catch salmon, and many Native American relics have been found in this immediate area.

Abundant rivers and streams in the area also drew colonists who harnessed water power for small scale milling. The first mills were built around 1729, and Snow's Pond was one of the first manmade ponds in Ware. In 1742, the Ware River Precinct was established, which formed the basis for the establishment of the Town of Ware. The steady increase in the number of sawmills and grist mills drew people from surrounding towns. The first major manufacturing company in Ware began in 1813, supplying a local demand for textiles. In 1829 the Hampshire Manufacturing Company, followed by Otis Company, built large manufacturing mills in town. The Otis Company's mill is unique in that it was built from stone quarried from a nearby town, and is still standing today.

Prosperous mill manufacturing required railroads, which brought more goods and people to Ware. The early nineteenth century saw an influx of immigrants to the prospering and expanding factories. Here in town, residents lived, worked, went to school and church, found opportunities for recreation, and spent their wages in the downtown shops. During the 1800s, Ware was the most prosperous village in Hampshire County. Ware's boom was noticed as early as 1823 by reporter Jeremiah Spofford of the *Gazetteer of Massachusetts*, who wrote: "An immense change has been made in the town of Ware within a short period, By which a desolate wilderness has been changed into a prosperous village."

The town lost prosperity in the early twentieth century due to the regional decline of the milling economy. The Otis Manufacturing Company, which had been the largest single employer in the town for over one hundred years, also failed to gain profit. In October 1937, the Otis Manufacturing Company announced its liquidation and sale. Realizing the future impact of the announcement, within a few days, the Ware Citizens Committee voted to raise money to buy the mill. The purchase was the first employee buy-out of a major manufacturer in America. They renamed the now publicly-owned factory Ware Industries. It was during this period that Police Chief Bartholomew W. Buckley is credited with famously dubbing Ware as “The Town That Can’t Be Licked.”

Relative prosperity during the 1950s gave way to the pressures of inflation and recession prevalent throughout the 1970s, and Ware Industries declared bankruptcy in 1978. To recover the losses, the land and mill complex was divided into seventeen parcels and sold off to individual owners. Today, businesses, outlet shops, specialty stores, offices, and light industry are housed in the mill complex. Much of the building space throughout the millyard is either vacant or underutilized, providing an opportunity for redevelopment into a more vibrant economic center in the town.

C. Population Characteristics

Population Growth Indicators and Households

Ware’s population grew steadily from 1930 to 1990, but has remained stable over the past 20 years. There has been only a one percent increase in population from 9,808 in 1990 to 9,872, in 2010, with a slight dip to 9,708 in 2000 (see Figure 3-1.) Neighboring communities generally have experienced greater population growth during this same period with the largest increase occurring in Belchertown at 38% (see Table 3-2 and Figure 3-2).

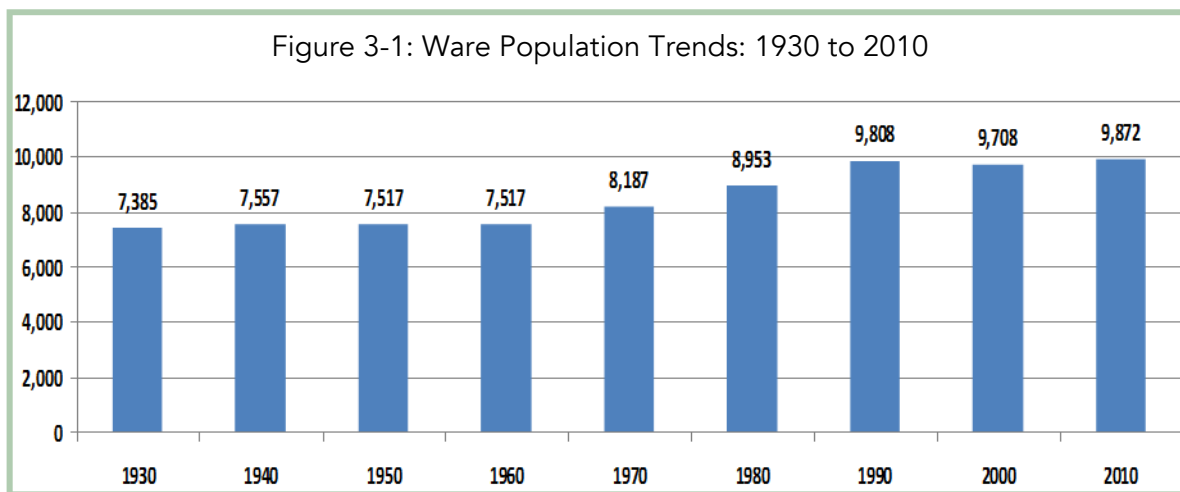
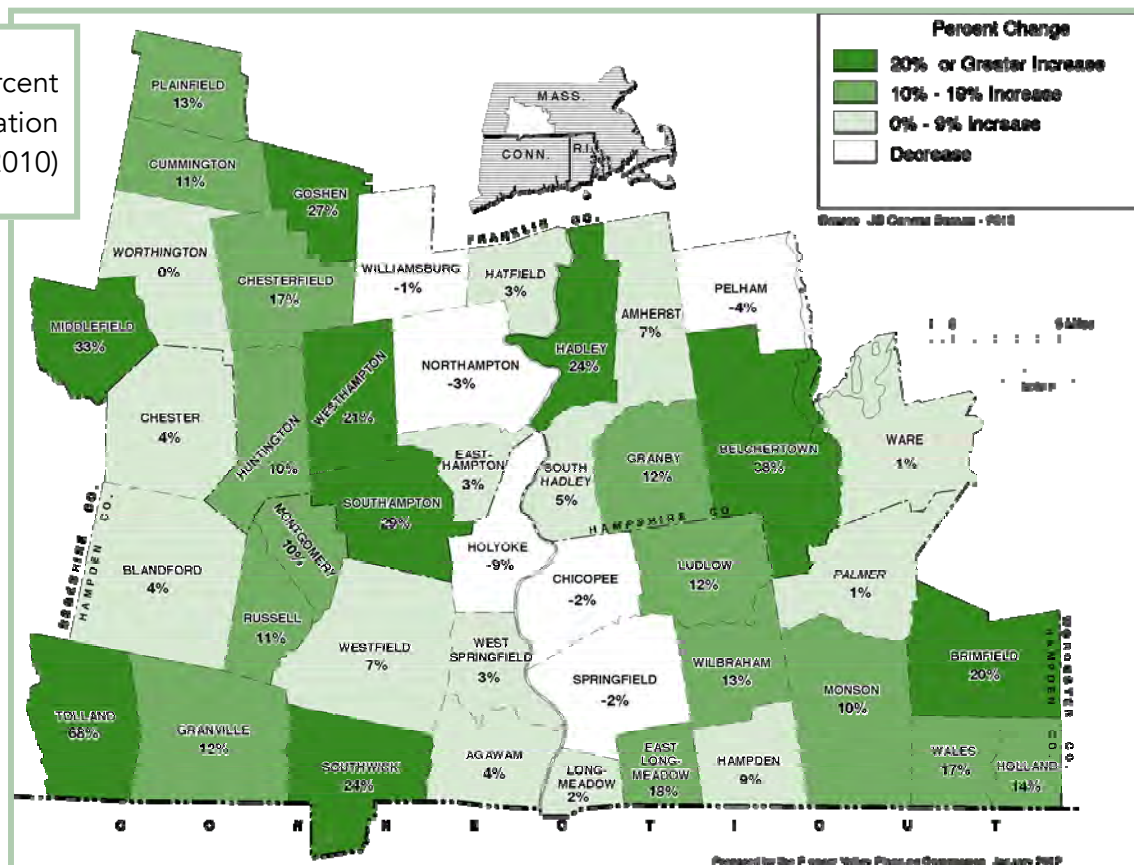


Table 3-2: Comparative Regional Population Trends

Geography	1990	2010	Change 1990 to 2010
Ware	9,808	9,872	1%
Belchertown	10,579	14,649	38%
Palmer	12,054	12,140	1%
Pelham	1,373	1,321	-4%
Ludlow	18,820	21,103	12%
Hardwick	2,385	2,990	14%
Warren	4,437	5,135	16%
Hampshire County	146,568	158,080	8%
Hampden County	456,310	463,490	2%
Pioneer Valley Region	602,878	621,570	3%
Massachusetts	6,016,425	6,547,629	8%

Source: U.S. Census Bureau 1990-2010

Figure 3-2: Percent Change In Population (1990 to 2010)



In Ware, the number of households increased by 8.6 percent, indicating a decline in the average household size during this same period, 1990 to 2010 (see Table 3-2).

The U.S. Census Bureau has not updated its estimates on the number of Ware residents with a disability since the 2000 Decennial Census, but the U.S. Census Bureau's latest regional estimates for 2008-2010 show that 11 percent of the region's total population of residents aged 18 to 64 and almost 40 percent of elderly residents reported having one or more disabilities (2008-2010 ACS).

Table 3-3: Ware Demographic Trends Summary

	1990	2000	2010	Change 1990 to 2010
Number of residents	9,808	9,707	9,872	0.7%
Number of households	3,836	4,027	4,120	7.4%
Households with children	1,228	1,200	1,084	-11.7%
Average household size	2.56	2.41	2.39	-6.6%
Single person households	1,149	1,172	1,198	4.3%
<i>Source: United States Census Bureau, Decennial Census 1990, 2000, 2010</i>				

Map 4 shows Ware's population by US Census Block, along with the location of the nine key recreation facilities in the town and of the environmental justice populations. The greater downtown area is home to the highest density of people, the environmental justice population, and 7 of the 9 recreational facilities. Map 5 shows similar data but at the Block Group level.

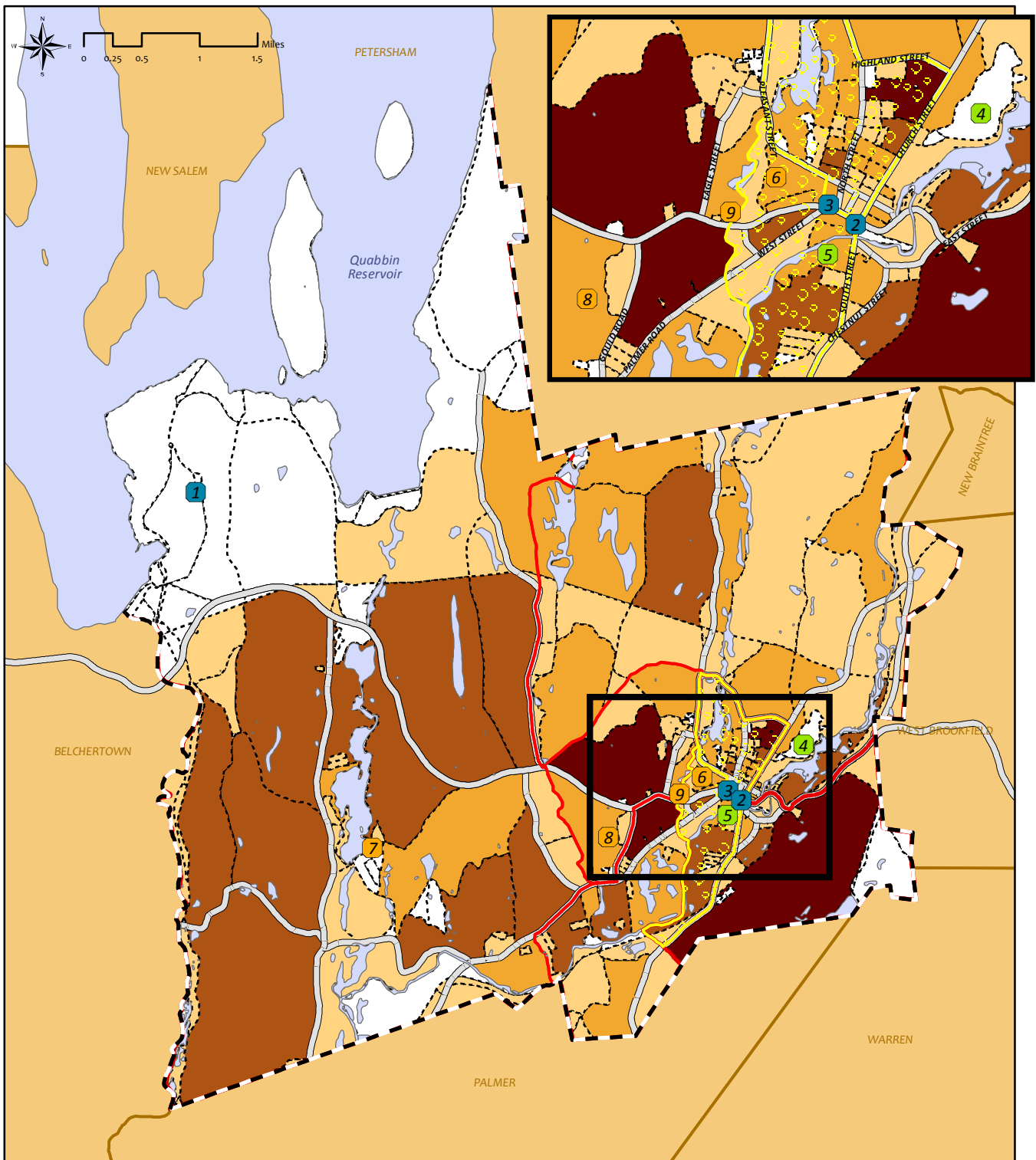
Population by Age

Despite the stable numbers in the overall population of Ware, there was tremendous growth in the 45 to 64-year-old age group. This population exploded from 1990 to 2010, increasing by 68%. In all other age groups, the population declined. This includes pre-school-age children (-18%), elementary (-18%), middle (-3%), and high school (-6%) age students as well (see Table 3-4).

Table 3-4: Ware Population By Age: 1990 to 2010 Comparison

	POPULATION 1990	% OF TOTAL 1990 POPULATION	POPULATION 2010	% OF TOTAL 2010 POPULATION	% CHANGE
UNDER 5 YEARS	744	7.5%	611	6.2%	-18%
5-9 YEARS	737	7.5%	607	6.1%	-10%
10-14 YEARS	591	6.0%	574	5.8%	
15-19 YEARS	639	6.5%	598	6.1%	
20-24 YEARS	664	6.7%	548	5.6%	
25-34 YEARS	1,722	17.4%	1,201	12.2%	-18%
35-44 YEARS	1,366	13.8%	1,320	13.4%	68%
45-54 YEARS	948	9.6%	1,634	16.6%	
55-59 YEARS	389	3.9%	713	7.2%	
60-64 YEARS	427	4.3%	608	6.2%	
65-74 YEARS	945	9.6%	767	7.8%	-12%
75-84 YEARS	517	5.2%	452	4.6%	
85+ YEARS	199	2.0%	239	2.4%	
TOTAL POP.	9,808	100.0%	9,872	100.0%	
MEDIAN AGE	33.8	N/A	41.2	N/A	
<i>Source: U.S. Census Bureau, 1990, 2000, & 2010 Decennial Census</i>					





Legend

- Census Tracts
- Census Block Groups
- Environmental Justice Area

Census Blocks; Population

- 0
- 1 - 50
- 51 - 100
- 101 - 200
- 201 - 473

Type of Recreation

- Active
- Active/Passive
- Passive

- 1 - Quabbin Park
- 2 - Nemaneseck Park
- 3 - Veteran's Park
- 4 - Grenville Park
- 5 - Memorial Field
- 6 - Kubinski Field
- 7 - Pennybrook Field
- 8 - School Campus Fields
- 9 - Reed Pool

Open Space & Recreation Plan

Map 4: Population, 2010

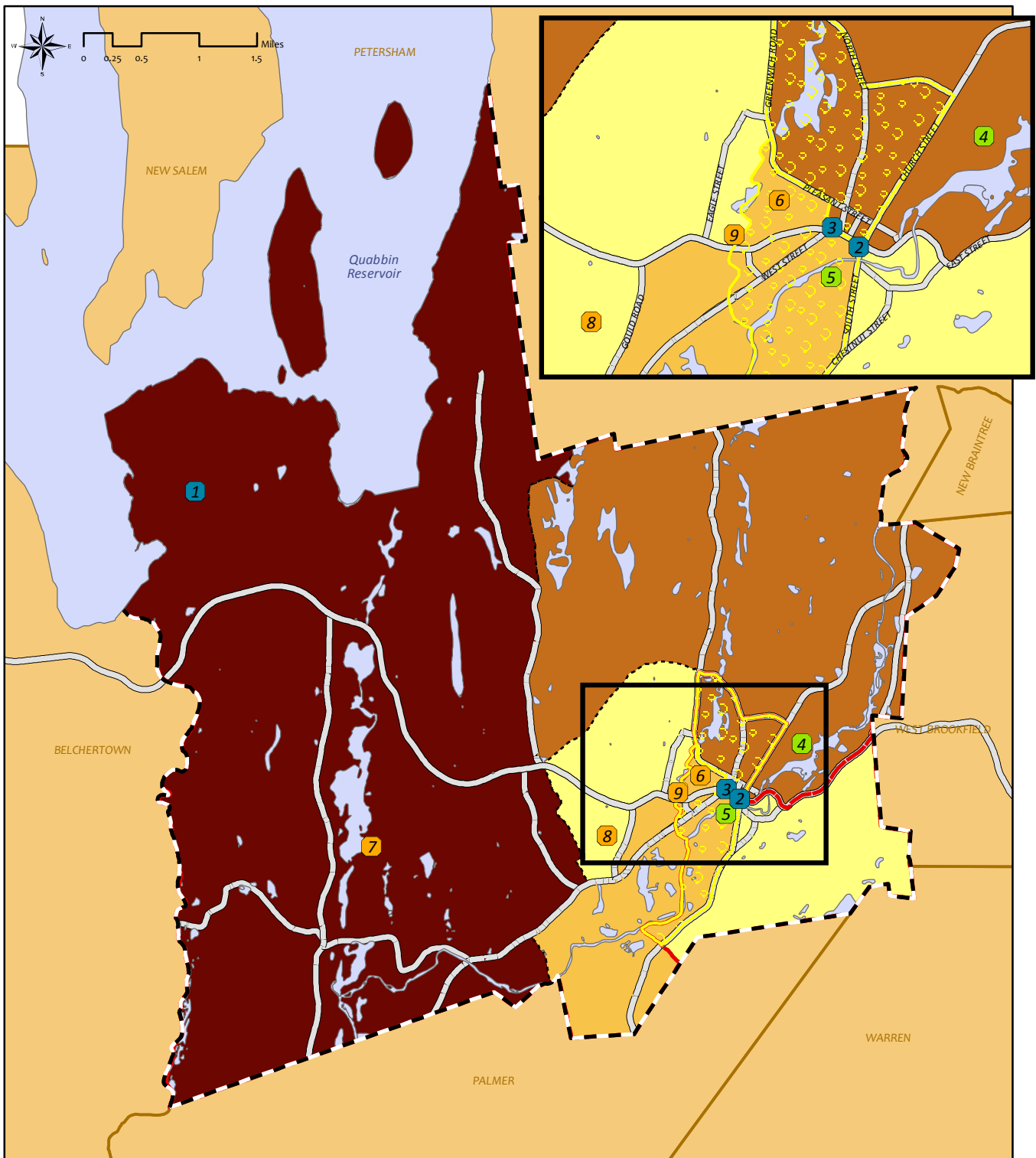
May 23, 2013

Sources:
MassGIS: US Census data, Environmental Justice Area
Ware: Recreation Areas

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Legend



Census Tracts



Environmental Justice Area

Census Block Groups; Population



654 - 1000



1001 - 1500



1501 - 2000



2001 - 3335

Type of Recreation



Active



Active/Passive



Passive

- 1 - Quabbin Park
- 2 - Nemaneseck Park
- 3 - Veteran's Park
- 4 - Grenville Park
- 5 - Memorial Field
- 6 - Kubinski Field
- 7 - Pennybrook Field
- 8 - School Campus Fields
- 9 - Reed Pool

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Map 5: Population, 2010

May 23, 2013

Sources:

MassGIS: US Census data, Environmental Justice Area
Ware: Recreational Areas

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Looking at population figures in a shorter time frame of 10 years, from 2000 to 2010, the 45 to 64-year-old age group still shows significant growth of 33%. Aside from the school age populations, declines in the other populations are moderated by this shorter time frame. The population of pre-school-age children grew by 3.5%, while all other school age populations declined: elementary at -5%; middle school at -20%, and high school at -13% (see Table 3-5). This more careful examination of the population can provide some important insights in providing direction for open space and recreation planning.

Table 3-5: Ware Population By Age: 2000 to 2010 Comparison

	POPULATION 2000	% OF TOTAL 2000 POPULATION	POPULATION 2010	% OF TOTAL 2010 POPULATION	% CHANGE
UNDER 5 YEARS	590	6.1%	611	6.2%	3.5%
5-9 YEARS	642	6.6%	607	6.1%	-13%
10-14 YEARS	723	7.4%	574	5.8%	
15-19 YEARS	689	7.1%	598	6.1%	
20-24 YEARS	538	5.5%	548	5.6%	-9%
25-34 YEARS	1,251	12.9%	1,201	12.2%	
35-44 YEARS	1,594	16.4%	1,320	13.4%	
45-54 YEARS	1,369	14.1%	1,634	16.6%	33%
55-59 YEARS	497	5.1%	713	7.2%	
60-64 YEARS	349	3.6%	608	6.2%	
65-74 YEARS	662	6.8%	767	7.8%	<1%
75-84 YEARS	613	6.3%	452	4.6%	
85+ YEARS	190	2.0%	239	2.4%	
TOTAL POP.	9,707	100.0%	9,872	100.0%	
MEDIAN AGE	37.7	N/A	41.2	N/A	
<i>Source: U.S. Census Bureau, 1990, 2000, & 2010 Decennial Census</i>					

Population by Race, Ethnicity & Ancestry

The Pioneer Valley Region continues to become more diverse in race and ethnicity. Immigration during the last few decades of the twentieth century and subsequent births, played a major role in changing the racial and ethnic composition of the Pioneer Valley as well as the overall U.S. population. The Pioneer Valley went from being 82 percent white in 2000 to 80 percent white in 2010. The region's Hispanic population grew significantly during this time from 12 percent in 2000 to 17 percent in 2010. Population by ethnicity in Ware remains predominantly white (94%) with a small Hispanic or Latino population following at 3.9% of the community (see Table 3-6).

Table 3-6: Population by Ethnicity

	Massachusetts	% of Total	Ware	% of Total
Total	6,547,629	100%	9,872	100%
White	5,265,236	80.4%	9,292	94.1%
Black or African American	434,398	6.6%	102	1.0%
American Indian and Alaska Native	18,850	0.3%	30	0.3%
Asian	349,768	5.3%	71	0.7%
Native Hawaiian and Other Pacific Islander	2,223	0.0%	0	0.0%
Some Other Race	305,151	4.7%	137	1.4%
Two or More Races	172,003	2.6%	240	2.4%
Hispanic or Latino (of any race)	627,654	9.6%	389	3.9%
<i>Source: U.S. Census Bureau, 2010 Decennial Census</i>				

Household Income & Poverty

Median household income for Ware in 2010 was \$66,564. While this is slightly higher than the \$65,672 median household income for the Pioneer Valley Region, it is much lower than the \$81,165 median household income for the state as a whole during this same period.

At the same time, 13.7% of Ware families had incomes below the poverty level. This has 581 children living in poverty. The Census Bureau uses income thresholds that vary by family size and composition to determine poverty. For example, a family of two adults and one child with an income at or below \$17,552 is defined as below poverty. These thresholds do not change based on geography.

The percentage of students who receive free and reduced lunch at school and households receiving fuel assistance can also be used to gauge financial need in a community. According to the Massachusetts Department of Education, a total of 688 students, or 53% of all students received free or reduced school lunch in Ware¹. Figure 3-3 shows how Ware compares to the other municipalities in the Pioneer Valley Regional Planning Commission's jurisdiction.

Economic Character & Employment Trends

Although the textile mills are gone, the mill buildings and accompanying neighborhoods give downtown Ware its architectural character. A number of the buildings have been converted to small manufacturing and retail spaces. Today, services and wholesale and retail trade have far surpassed manufacturing in employment, with over 83% of the total employment in the town. (See Tables 3-7 and 3-8.)

¹ Children from families with incomes at or below 130 percent of the poverty level (currently \$21,710 for a family of four) are eligible for free meals. Those between 130 percent and 185 percent of the poverty level (currently \$30,895 for a family of four) are eligible for reduced-price meals, for which students can be charged no more than 40 cents.



Figure 3-3: Percentage of Students in Grade School From Low Income Families, 2010

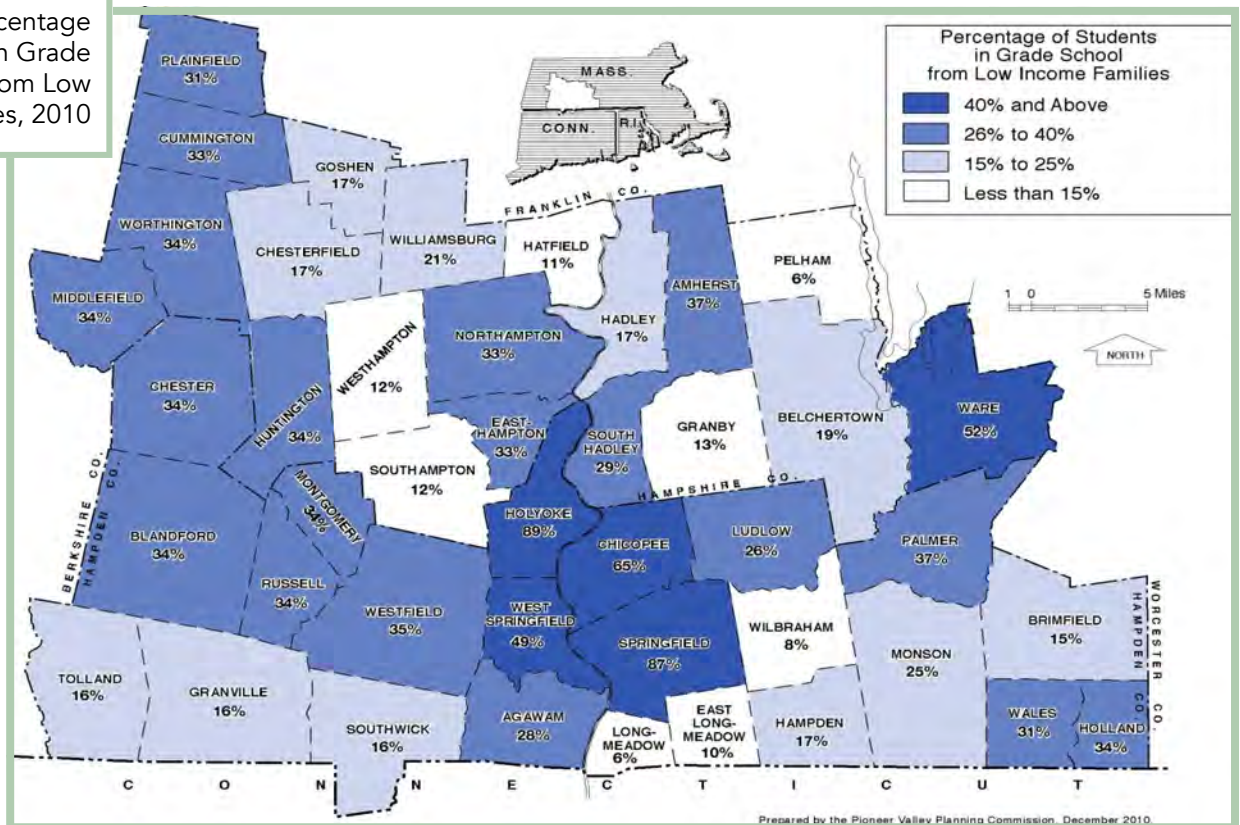


Table 3-7: Ware Industry Trends 2001 to 2010

Number of Establishments		Average Monthly Employment		Average Weekly Wage	
2001	2010	2001	2010	2001	2010
212	261	2,691	2,677	\$553	\$736

Source: MA Department of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010

The millyard is now occupied by a variety of uses including manufacturing, office, service, retail, and warehousing. Today's industries generally need modern spaces with upgraded utilities, which the millyard cannot provide. A large shopping center on Route 32 near the Palmer town line services residents from all of the surrounding communities.

Two-thirds of residents who work travel to jobs outside of Ware. Less than one-fifth travel out of the Pioneer Valley to Worcester County, elsewhere in Massachusetts, Hartford, or elsewhere in Connecticut for work. Nearly one-half stay within the Pioneer Valley (see Table 3-9).



Table 3-8: Ware Industry by Number of Establishments, Employees and Wages, 2010

Description	Number of Establishments	Average Monthly Employment	Average Weekly Wage
Total, All Industries	261	2,677	\$736
Goods-Producing Domain	39	467	\$1,198
Construction	29	85	\$830
Manufacturing	10	381	\$1,283
Durable Goods Manufacturing	6	92	\$1,122
Non-Durable Goods Manufacturing	4	289	\$1,335
Service-Providing Domain	222	2,210	\$639
Trade, Transportation And Utilities	52	817	\$502
42 - Wholesale Trade	10	17	\$1,253
44-45 - Retail Trade	33	763	\$464
48-49 - Transportation & Warehousing	8	30	\$846
Financial Activities	14	53	\$636
52 - Finance And Insurance	12	53	\$633
Professional And Business Services	31	283	\$945
54 - Professional & Technical Services	12	32	\$518
55 - Management of Companies & Enterprises	4	201	\$1,135
56 - Administrative And Waste Services	15	51	\$448
Education And Health Services	21	575	\$864
62 - Health Care And Social Assistance	17	380	\$844
Leisure And Hospitality	23	235	\$232
71 - Arts, Entertainment, & Recreation	3	10	\$416
72 - Accommodation & Food Services	20	225	\$224
Other Services	68	123	\$257
81 - Other Services, Excluding Public Admin	68	123	\$257
Public Administration	11	113	\$990
92 - Public Administration	11	113	\$990

Source: MA Department of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010

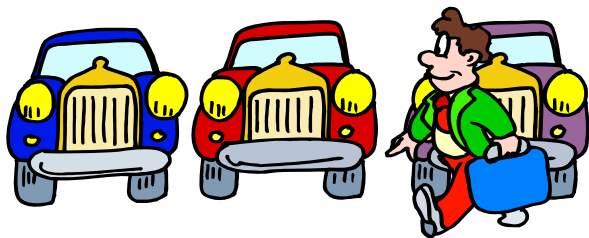


Table 3-9: Place of Work for Ware Residents, 2004

Place of Work	Number	Percent
Ware	1,629	33.6%
Belchertown	136	2.8%
Springfield	638	13.2%
Elsewhere in Pioneer Valley	1,555	32.1%
Elsewhere in Massachusetts	81	1.7%
Worcester County	723	14.9%
Hartford County	57	1.2%
Elsewhere in Connecticut	18	0.4%
Total	4,846	100%

Source: U.S. Census Bureau, 2004 Commuter Survey



D. Growth and Development Patterns

Ware began as a small farming community located along a stream (Flat Brook), with a typical farmstead pattern of development. The Industrial Revolution brought a significant amount of growth in what is now the downtown area, where the Ware River had significant elevation changes allowing for damming of the river for a reliable power source for the mills. The development pattern in this area of town was a typical mill town, with high density residential and commercial development located close to the mills where people worked. Following the decline of that industrial base, along with the increasingly automotive dependent lifestyle adopted by the country following World War II, Ware has moved toward a pattern of rural-suburban residential development with a secondary commercial and industrial base. There are several factors at play that influence this pattern and that will directly affect the amount and form of recreation and conservation space, and thus will require careful thought and planning.

Ware is both isolated and centrally located. Rural/suburban development has been on the rise (with the exception of 2008-2012 due to the Recession) since Ware lies within 45 minutes of both Worcester and Springfield. Yet the town retains the quiet rural life it has always enjoyed.

Ware's physical character has a strong influence on where and what development can take place. The basic landform character is one of narrow valleys and ridges running north-south. These ridges limited the amount of open land available for farming and concentrated the amount of developable land within the valleys and divided the town into three basic development areas: Beaver Lake, Ware Center, and the Ware River/Route 32 Corridor.

Ware's real estate market has fluctuated over the years but as prices rose in surrounding regions, Ware's lower prices became an economic incentive for people to move here. Ware is now desirable for its lower cost of housing and land, both of which have already impacted and will continue to impact residential and business development. The land itself will also feel these impacts. With the increased growth it is important to plan in advance for critical ecological and recreation lands.

The presence of a strong downtown development pattern, civic organizations, social and health services, and infrastructure set Ware apart from other towns its size. Its history of being a mill town has given Ware some of the urban resources that will allow the town to both accommodate and attract additional growth and development.

Historically, Ware had been settled primarily in the downtown area or its immediate vicinity. However, in the last few decades the outlying "rural" areas have become popular locations for single family homes. The area surrounding Beaver Lake, which began as a vacation community in the late 1800s, has become increasingly developed with year round single family homes. In addition, there has been a trend of residential development within the agricultural areas in the northern part of town, along Fisherdick and Greenwich Roads, and in the areas along West Warren Road in the southern part of town.

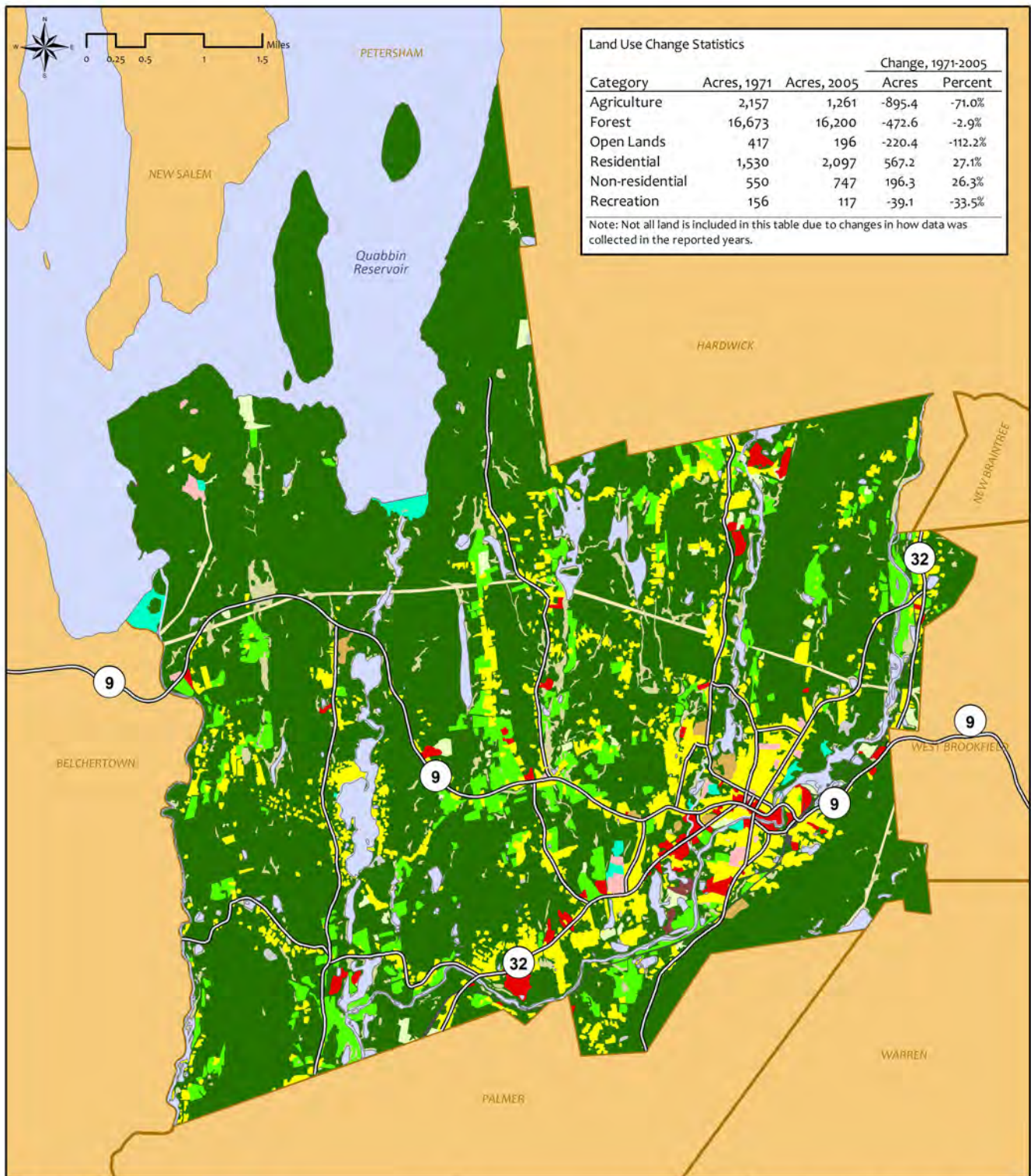
This development in the outer areas has caused some concern about the loss of rural character. All of

the features that contribute to this rural character – farmland, historic buildings along Route 9 West and in the downtown, the beauty of the Beaver Lake area, Muddy Brook – have felt the effects of development. These features, in addition to tracts of open space and recreation areas, are in need of protection.

Map 6 shows the “current” land use – the 2005 data from MassGIS, which is the most recent data available. It shows that 63.3 percent of the town is forested, 15.1 percent is water (mostly within the Quabbin Reservoir), 8.2 percent is residential, 4.9 percent is agricultural, 2.4 percent is non-residential developed, and the remaining 6.1 percent is everything else, including 0.5 percent recreational. The map includes a summary table of land use changes between 1971 and 2005. The most significant changes are in open lands with a decrease of 112 percent and agriculture with a decrease of 71 percent. Residential development increased by 27 percent and non-residential development increased by 26 percent. It is somewhat alarming to see that recreational land decreased by 33 percent, with a loss of 39.1 acres. However, it should be noted that this data is based on fairly rough mapping procedures and thus these land use change figures should be taken with a grain of salt. Table 3-10 provides a more detailed review of land use changes during this period.

Table 3-10: Land Use Changes in Ware by Category				
Category	1971	2005	Change (acres)	% Change
Active Agriculture	1,155	863	-292	-25%
Pasture	992	429	-563	-57%
Forest	16,673	16,802	129	1%
Non-Forested Wetland	381	542	161	42%
Mining, gravel pit etc.	34	15	-19	-56%
Open land, power lines, no vegetation	417	293	-124	-30%
Participation Recreation	153	82	-71	-46%
Spectator Recreation	0	0	0	0%
Water Recreation	3	35	32	1067%
Multi-Family	9	38	29	322%
Residential less than 1/4 acre lot	256	230	-26	-10%
Residential 1/4 - 1/2 acre lot	530	624	94	18%
Residential Greater than 1/2 acre lot	734	1,229	495	67%
Commercial	95	139	44	46%
Industrial	93	97	4	4%
Urban Open, parks, institutional, cemeteries	265	201	-64	-24%
Transportation	35	52	17	49%
Waste Disposal	29	25	-4	-14%
Water	3,723	3,859	136	4%
Woody Perennial, orchards, nurseries	10	15	5	50%
Total Acres	25,587	25,570	-17	
Source: MassGIS McConnell Land Use data 1971, 1985, 1999, 2005. Due to technological advances, the spatial accuracy of the 2005 data is substantially more accurate than data for the years 1971, 1985, and 1999. Prior to 2005, the state manually interpreted land cover and land use categories based on aerial photos. In 2005, the land use map was derived directly from an ortho image. This new method maintains much compatibility with the older system. Negative numbers mean loss of land.				





Legend

	Waterbodies		Non-residential
	Rivers		Institutional
Landuse (2005)			Cemetery
	Agriculture		Recreation
	Brushland		Transitional
	Forest		Utility
	Open Land		Transportation
	Wetland		Landfill
	Residential		Water

Category	Acres	Percent
Agriculture	1,261	4.9%
Brushland	21	0.1%
Forest	16,200	63.3%
Open Land	196	0.8%
Wetland	1,157	4.5%
Residential	2,097	8.2%
Non-residential	300	1.2%
Institutional	90	0.4%
Cemetery	67	0.3%
Recreation	117	0.5%
Transitional	27	0.1%
Utility	119	0.5%
Transportation	52	0.2%
Landfill	19	0.1%
Water	3,860	15.1%
	25,585	100.0%

Open Space & Recreation Plan

Map 6: Current Landuse

May 26, 2013

Sources:
MassGIS: Prime Forest, Waterbodies, Rivers,
Roads, Towns
Ware: Open Space

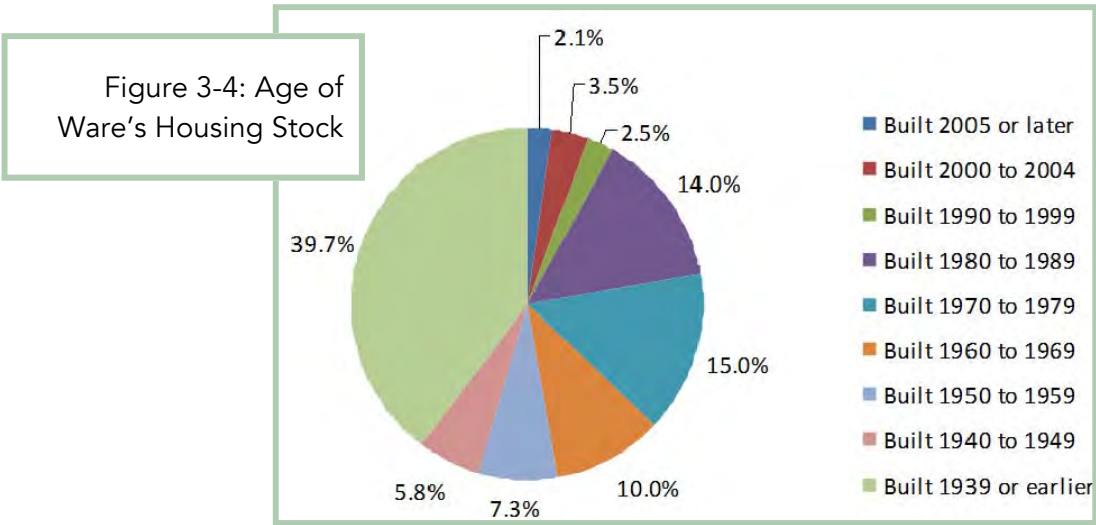
Town of Ware
126 Main Street
Ware, MA 01082
www.townofware.com



The increase in residential land use translates into a corresponding increase in the number of housing units. In 1990 there were a total of 4,095 housing units compared to 4,590 in 2010, a 12 % increase (see Table 3-11). Lot sizes required by the current Zoning Bylaw vary from as little as 8,000 square feet in the Downtown Residential zone to 80,000 square feet in the Rural Residential zone, which covers most of the town. Many lots, especially in the downtown area, are smaller than that.

Only 22% of the housing units in Ware are new (built since 1980). A large proportion of Ware’s housing stock (78%) was built before 1980 and 40% was built before 1939 (see Figure 3-4). It is not clear whether this accounts for the increase in the vacancy rate shown in Table 3-11.

Table 3-11: Housing Unit Change in Ware - 1990 to 2010							
	1990		2000		2010		% Change 1990 to 2010
Occupied Housing Units	3,836	78%	4,027	93%	4,120	90%	7.4%
Vacant Housing Units	259	5%	309	7%	470	10%	81.5%
Vacant Housing Units that are Seasonal Units	40	1%	51	1%	51	1%	27.5%
Total Housing Units	4,095	100%	4,336	100%	4,590	100%	12.1%
Source: U.S. Census Bureau, 1990, 2000, 2010 Decennial Census							

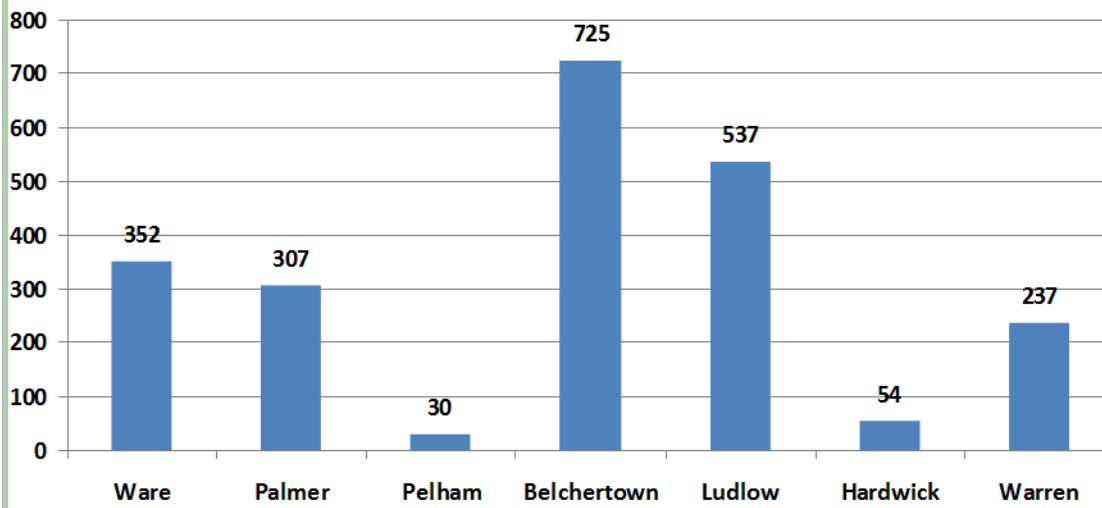


Source: ACS 5-Year Estimate, US Census Bureau 2006-2010

Recent building permit activity in Ware is slightly above average when compared to neighboring towns. This includes a low in 2008 of zero permits to a high of 120 permits in 2003. Overall, however, there has been a significant increase in the number of building permits issued in Ware when comparing the ten-year period in the 1990s when the Town issued 196 permits to the most recent decade when the Town issued 280 permits (see Figures 3-5 and 3-6). The rather significant increase in median sale prices of homes from 1990 to 2010 seem to track with this, indicating that there is demand, particularly for single family residential homes (see Table 3-12).



Figure 3-5: Regional Comparison of Building Permit Activity, 2001 Through 2010



Source: U.S. HUD State of the Cities Database

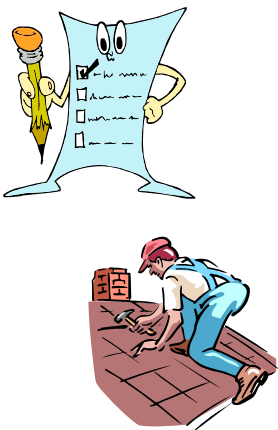
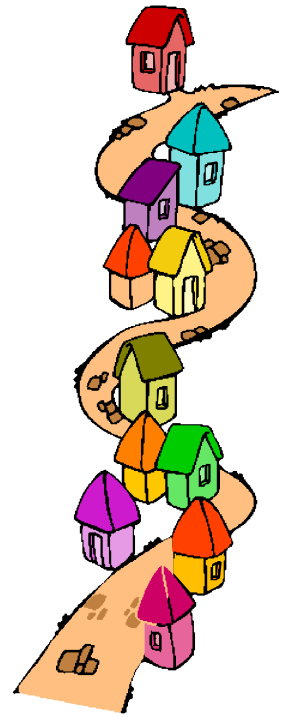
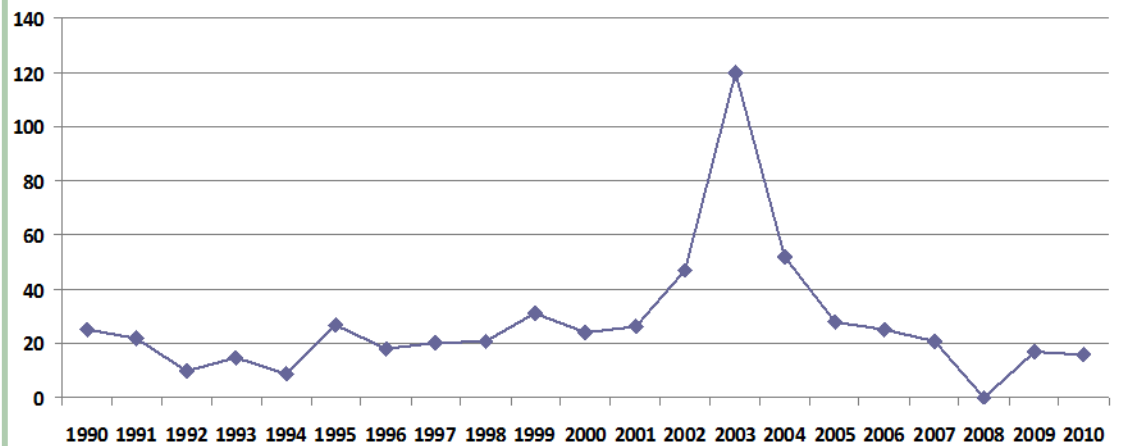


Figure 3-6: Number of Building Permits Issued by Year, 1990-2010



Source: U.S. HUD State of the Cities Database

Table 3-12: Median Sale Price of Homes in Ware - 1990 to 2010

Year	Median Sale Price - All Homes	Median Sale Price - Single Family Homes
1990	\$98,000	\$108,750
1995	\$69,000	\$89,200
2000	\$86,000	\$114,553
2005	\$180,000	\$185,450
2010	\$130,000	\$169,000

Source: Warren Group



Transportation

Ware has 121.1 miles of roads, 71% of which are town owned and maintained. Crossing each other in the center of downtown are Route 9, which runs east-west, and Route 32, which runs north-south. These two major routes provide convenient access to neighboring towns as well as Worcester, Springfield, Northampton, and Amherst. In addition, the following should be noted about these two major routes: Route 9 is the major east-west connector, running from downtown Ware east to the City of Worcester and west to the Town of Amherst and City of Northampton (where I-91 can be accessed). Ware's historic district is located along this road. West of the town center, farmhouses, agricultural fields, and stone walls make for a traditional New England landscape. Route 32 runs northeast to southwest, following the Ware River through town. The route has become a magnet for more recent commercial development, including "strip mall" development. Beyond Ware, Route 32 extends into Palmer where the Massachusetts Turnpike can be accessed.

Pedestrian facilities in Ware are concentrated in the more densely developed areas of downtown and extending south on Route 32 to the school campus. Most of the residential streets in and around downtown have sidewalks on both sides, and crosswalks are located at most intersections. ADA compliant ramps are becoming more common as these older neighborhood roads are rebuilt using CDBG funds, but it is a long slow process which will take many years to complete. Sidewalks exist on both sides of Route 32 south of downtown for eight-tenths of a mile, and on one side for another six-tenths of a mile to the school campus. There are two signalized crosswalks in this 1.4 mile stretch to allow pedestrians to safely cross Route 32, and another seven crosswalks with no signals.

In the downtown area, there are sidewalks on both sides of Route 9 for 1.3 miles from Boivin Avenue easterly to East Court, and then on one side of Route 9 for another 0.4 mile out to Guzik Motors. There are 2 signalized crosswalks in this 1.7 mile stretch (both downtown) and nine additional crosswalks, including one at the Reed Municipal Pool facility and one at Eddy & Barnes Streets where people can access the Kubinski Field. There are many more miles of sidewalks on the nearby residential streets, including along Church Street where Grenville Park is, four-tenths of a mile from Main Street. Sidewalks also exist on both sides of South Street, where Memorial Field is located about two-tenths of a mile from Main Street.

Facilities for cyclists are lacking in Ware, but with the recent opening of a 1.8 mile section of the Mass Central Rail Trail (Ware River Greenway) we are moving in the right direction. Currently there are no marked bicycle lanes on any of our roads, but they are being designed into a transportation improvement project for Main Street through the downtown. Bike racks are available at the Reed Pool and the Memorial Field recreational facilities, the public schools, and at some private locations in town as well.

For public transportation, PVTa operates a shuttle that makes 7 trips on weekdays on a route around downtown and extending south along Route 32 to the Gibbs Crossing shopping center, where a connection can be made to the Palmer Village Bus, or to the Big Y Plaza in Palmer (depending on the time of day) (see Figure 3-7). Once in Palmer, connections can be made to get to Belchertown, Holyoke, or Springfield. Use

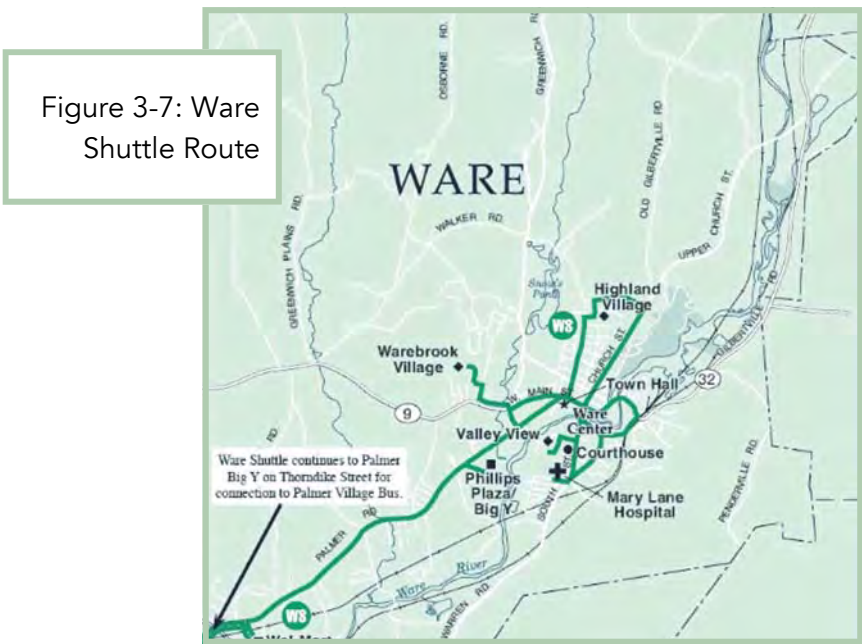


of the shuttle has remained relatively consistent over the past four years with between 10,039 and 10,886 riders annually. There is no shuttle service on weekends. A report was completed by the PVPC addressing the needs for transit in June 2013; this report includes several recommendations to improve service to Ware residents.

The major airport in proximity to Ware is Bradley International Airport, located in Windsor Locks, Connecticut, about 15 miles south of Springfield on Interstate 91. The Metropolitan Airport, a small privately owned general aviation facility in Palmer closed in early 2000 and the land has been redeveloped for housing.

Water Supply

Seventy percent of Ware’s population is served by a central public water supply and the remainder draw from private wells. Private wells that are regulated by MA DEP as public water supplies include Quabbin Sunrise Co-op, which has a single well that supplies 65 households in the mobile home park, and Hampshire East Properties, LLC, which served a day care center with a single well. The public water supply in town draws from two source locations -- one well at Dismal Swamp and four wells and a cistern west of Barnes Street—each with its own pump station and treatment facilities. In 2015 the wells at the Barnes Street site were replaced with new gravel-packed wells. Drinking water is transported from these locations through town via 40 miles of water main. The system includes two standpipes (holding tanks), located at Church Street and Anderson Road. The wells have a daily capacity of 1.8 million gallons per day, and the town’s average daily demand is 1.2 million gallons per day. The system is able to meet the average water demands of the present population.



Source: Pioneer Valley Transit Authority

Sewage System

The Town's wastewater treatment plant and collection system are old and in need of significant work and upgrades. The collection system itself involves approximately 32 miles of gravity sewer mains and one small pump station serving approximately 1,548 accounts. This includes approximately 55% of town residents as well as several industries.

In 2012, citizens voted to support major improvements to the Town's wastewater treatment plant on Robbins Road including \$120,000 to upgrade influent pumps - new motors, drives and controls and \$100,000 to upgrade disinfection systems from current gaseous and de-chlorination systems to liquid ones. Kanzaki Specialty Papers, a major contributor to the municipal wastewater system, has built a \$1.5 million pre-treatment facility on their own site to address the issues the town's treatment system had been forced to deal with from the waste coming in from the Kanzaki plant. Kanzaki's pre-treatment facility was built after a partnership with the Town dissolved which would have provided the Town with a \$2.5 million grant from the state to upgrade the municipal treatment plant to handle not only Kanzaki's effluent but needed improvements to handle the municipal sewage as well. The Town had spent \$300,000 in engineering costs for the project, some of those plans might be put to use in the future.

Stormwater

The Department of Public Works is responsible for the public storm drainage system, including catch basins, drain manholes, and pipes and culverts. Unlike Belchertown and Palmer, discharges from Ware's municipal system to nearby surface waters is not regulated by U.S. EPA. Regulation by EPA is triggered by total population and population density to define "urbanized areas." Ware participated along with 30 other towns in central Massachusetts in a 2012 Community Innovation Challenge Grant from the Massachusetts Office of Finance and Administration to develop a detailed map of their stormwater infrastructure that can be utilized to track operation and maintenance of the system.

As noted in Section 4, Beaver Lake is under treatment for Eurasian Water Milfoil, and elevated E. coli levels have been measured in the Ware River above the Ware Dam. It is likely that stormwater runoff contributes to the primary sources of both of these problems. The DPW's program to map stormwater infrastructure town-wide and develop a more systematic approach to operation and maintenance are important best management practices for reducing stormwater pollution.

For its 90 miles of public roads, the DPW has noted in the 2012 annual report that it placed 2,047 tons of sand and 1,114 tons of salt on local roadways. While spring street sweeping operations reduce the amount of sand entering the stormwater drainage system and Ware's waterways, some of this material – which is crucial to maintaining safe roadways during winter storm events – does make its way into the waterways of the town.



Solid Waste

At this time the Town does not have any active waste disposal facilities; instead residents and businesses contract with private haulers for solid waste disposal and recycling. The Town does hold special events from time to time to collect bulky waste such as furniture and appliances, in an effort to keep such unwanted items from being disposed of improperly (e.g. in the woods or on the side of the road). In addition, there is a company in Ware which deals in demolition materials and they will accept such items from residents.

Local Zoning

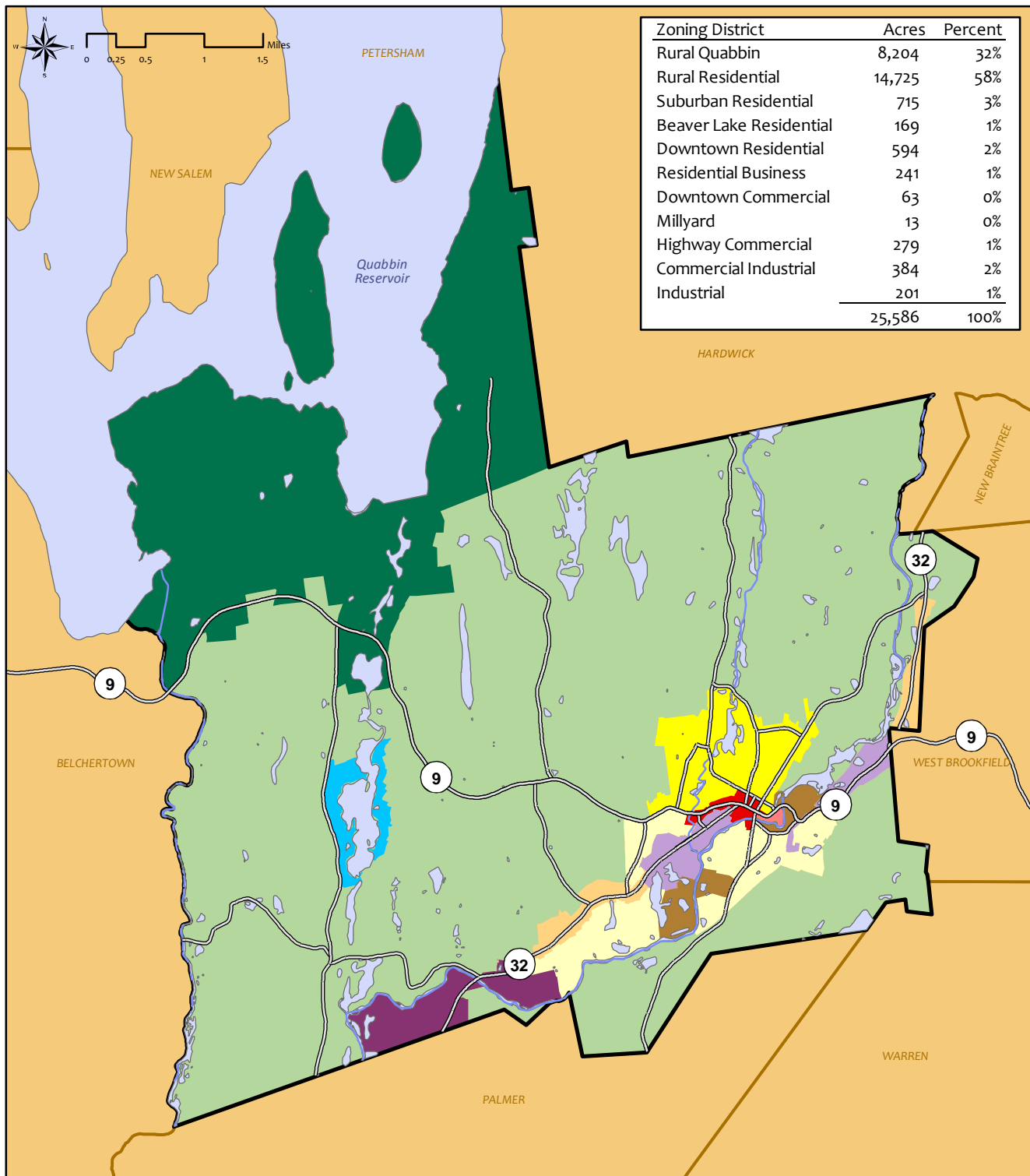
Without any zoning districts until 1987, land use patterns were well established based on proximity to customers (downtown) and, after World War II, roadways (Route 32 south of downtown). When Ware adopted its first zoning map in 1987, the district locations were based largely on this existing land use pattern. In 2012 the Town adopted a revised Zoning Bylaw with significant modifications to the zoning districts (see Map 7). Eighty percent of the town is zoned rural, and the ten percent in the nine other districts is almost entirely along the Route 32 corridor which follows the Ware River.

This indicates the extent to which the town remains rural and has kept the more compact forms of land use. A total of 32.1% of all lands (8,204 acres) are zoned to account for state ownership of the drinking water supply protection lands for the Quabbin Reservoir. Another 57.5% of lands (14,725 acres) are zoned for Rural Residential use, a district that the 2012 zoning bylaw identifies as “key to the rural character of the town.” The balance of land in Ware is zoned for higher density residential uses (5.8% or 1,478 acres) or commercial and industrial uses (4.6% or 1,179 acres).

In 2008 the Town adopted the Flexible Residential Open Space Development (FROSD) zoning provision, which requires that 50% of the development be set aside as open space. However, no developer has proposed an FROSD since 1) as written, it has no provisions for density bonuses or other incentives to use it, and 2) the housing market has been too weak to support any new residential subdivisions since the Recession in 2007/08. In addition, developers have felt the market has been stronger for homes on larger lots than for homes on smaller lots with large areas of common open space. However, with the aging population and a desire for more manageable homes, coupled with amendments to improve the FROSD provisions, it can be expected that interest in this form of development will improve.

Ware also has two overlay districts. The Floodplain Overlay District, which includes the so-called “100-year” flood zones associated with the Quabbin Reservoir, Swift River, Beaver Brook, Flat Brook, Muddy Brook and the Ware River, is intended to safeguard public safety, protect property from the hazards of periodic flooding, preserve the natural flood storage capacity of floodplains, and maintain groundwater recharge areas within the floodplain.

To achieve these goals, Ware regulates the amount and type of development which can occur in these floodplains. Some of the permitted uses include agricultural, forestry and nursery uses, outdoor



Legend

Zoning Districts

	Rural Quabbin		Residential Business
	Rural Residential		Downtown Commercial
	Suburban Residential		Millyard
	Beaver Lake Residential		Highway Commercial
	Downtown Residential		Commercial Industrial
			Industrial

Open Space & Recreation Plan

Map 7: Zoning Districts

May 24, 2013

Sources:
MassGIS - Towns, Roads, Waterbodies, Rivers
Ware - Zoning Districts

Town of Ware
126 Main Street
Ware, MA 01082
www.townofware.com



recreation, and wildlife management areas. No structures or buildings can be built in this district without a special permit granted by the Planning Board. This regulation helps to minimize loss of property.

Floodplains are nature's way of dealing with floods, which are an occasional natural occurrence. When development occurs in these areas, there are two undesirable effects. First, homes and other buildings are flooded, causing damage which can be expensive to repair. Second, this development reduces the water storage capacity of the floodplain, so that what would have been a minor flood is often worse, possibly causing damage to structures that were previously not impacted by flooding.

The Aquifer Protection Overlay District includes the Zone II Groundwater Protection Areas, Interim Wellhead Protection Areas (IWPA), and areas designated as high and medium yield aquifer areas. This district is intended to protect, preserve, and maintain present and potential sources of public and private water supplies and their recharge areas. It is important to delineate such a district to protect against contamination and to insure that the aquifer is constantly being recharged. Because aquifers are underground, it is critical that rainfall be allowed to permeate into them, in order to maintain the supply of water.

Land uses permitted in the Aquifer Protection district are similar to those permitted in the floodplain district, but with residential development also permitted. However, when developing in the Aquifer Protection district, the lot may not be more than 50 percent impervious surface. Stricter regulations apply within the Zone II and IWPA areas, including restrictions concerning toxic and hazardous wastes and runoff. All runoff from impervious surfaces must be recharged on the site by being diverted to stormwater infiltration basins covered with natural vegetation. These restrictions protect both water quality and the amount of water available from the aquifer.

While not regulated under Zoning, undisturbed wetlands have the added bonus of a filtration system. Wetland plants are a natural filter, so that when runoff from parking lots, roads, and other paved surfaces reaches a wetland, pollutants like gasoline and oil are filtered out of the water before it reaches the groundwater system. When these wetlands are built upon, the pollutants are not filtered out and runoff from streets and parking lots may flow directly into groundwater or streams and rivers.

Build-Out Scenario

The 1999 EO 418 Buildout Analysis is the only information available on build out conditions. This information is outdated, but still worth noting as a snapshot of potential buildout based on demographic and land use conditions in 1999. The buildout analysis illustrates to a community, using a series of maps, the potential for the future growth of the community in terms of residential units and potential square footage of commercial and industrial space. The Buildout Analysis enables a community to examine its likely future based on its 1999 zoning and other regulations, and determine if that is the future that is desired by the community. The analysis provides community-based estimates of the impacts of the buildout on the number of residents and school children, the water supply needs of the community, the future trash production, and the additional road miles associated with the buildout. The model also allows the community to test the

Table 3-13: Summary of Build-Out Statistics, Impact of Additional Development	
Developable Land Area	13,025.37 Acres
Additional Residential Units	7,087 Housing Units
Additional Commercial/Industrial Floor Area	904,365 Square Feet
Additional Residential Water Use	1,428,414.62 Gallons Per Day
Additional Residential Solid Waste	9,306.4 Tons
Additional Students	2,516
Additional Roadway	115.46 Miles
Assumptions: 1. Additional Students figure is based on an average of 2.56 persons and 0.355 students per household. 2. Additional Road Miles calculated for residential development only, based on frontages of 125 and 150 feet. Overall impacts on the transportation network in Ware should reflect the number of trips generated, level of service at key intersections, and other critical methods of measurement. 3. Water use figures do not reflect commercial water use.	

implications of alternative zoning regulations.

Table 3-13 is a summary of the build-out statistics for the town of Ware and while now outdated, are the best statistics available at this time. The analysis shows that as of 1999, out of 13,000 developable acres in Ware, there was the potential for over 7,000 additional housing units and 900,000 square feet of commercial space in Ware. This could result in over one million additional gallons of water per day for residential uses, 9,000 tons of residential waste, over 100 miles of roadway, and an additional 2,500 students. In particular, the broader area around Beaver Lake is seen as an area which may have substantial amounts of residential development. While a definitive subdivision plan for a 67 home development was approved off of Monson Turnpike Road in this part of town in 2006, no work has been done on it and it remains a “paper development”. The tract is currently on the market for sale, but the owners and their agents don’t expect it to be sold for development of the subdivision and are seeking to market it for other potential uses, including a cluster development for an active adult community or development of a campground. There are several other unfinished approved subdivisions in town with a capacity for 75 new homes. One of these is likely to have additional phases approved in the future, with a capacity for another 24 lots.

Achieving Ware’s vision for the future of a town with abundant parks and recreation opportunities, the safety and character of a small town with scenic roads and vistas, will require controlled growth and protection of those lands with recreation and conservation importance.



A. Geology, Soils, and Topography

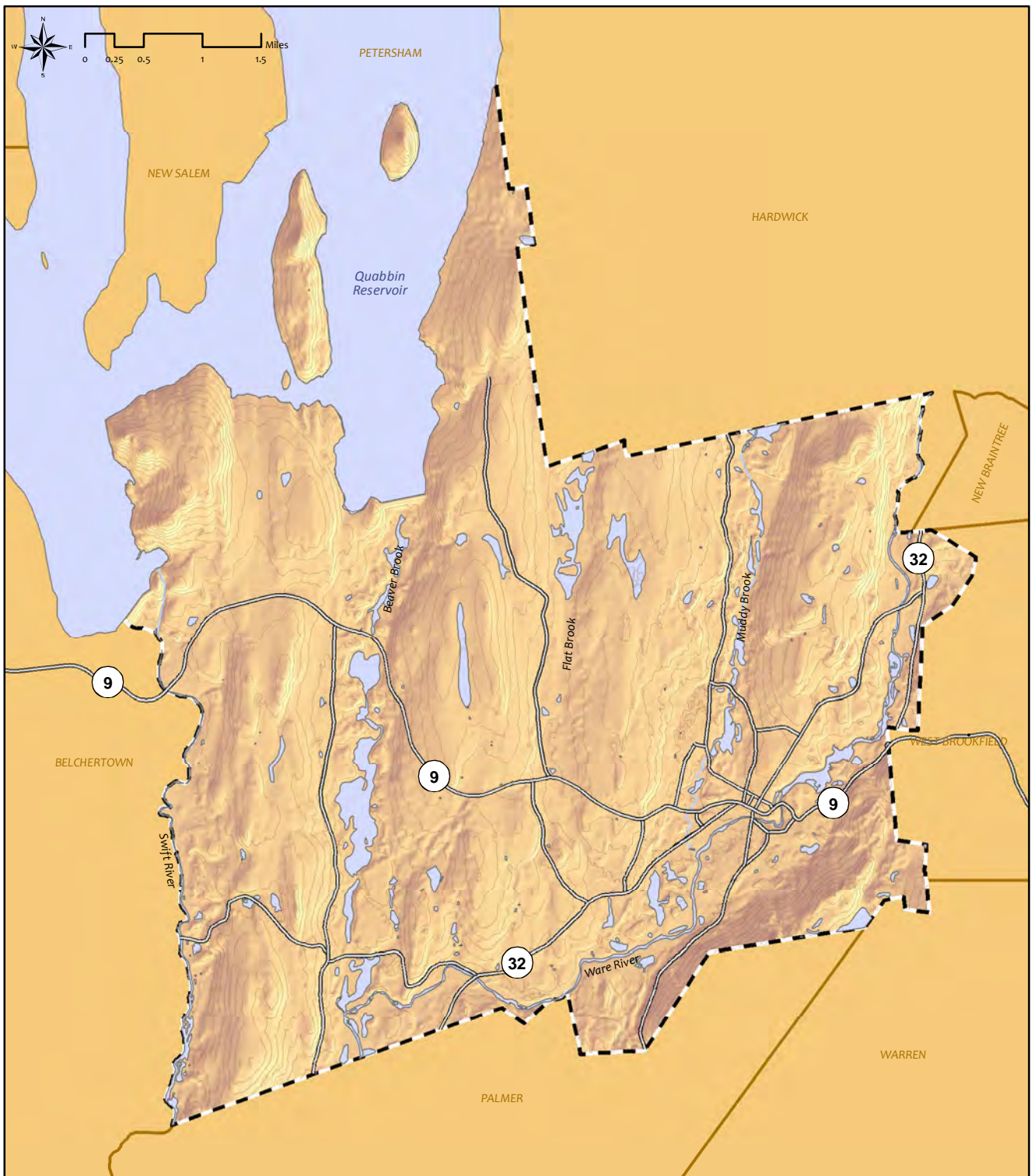
Ware is located in the easternmost part of Hampshire County, and encompasses 25,660 acres (40.09 square miles). The highest elevations in Ware are in the southeastern corner of the town (1,050 ft.) and Quabbin Hill (1,026 ft.). Approximately two-thirds of the area of the town falls in the 500-1,000 ft. elevation range, while the area which runs due south of the Quabbin Reservoir and then east through the commercial district is in the 0-500 ft. range.

The topography of much of Western Massachusetts was radically changed by glaciation during the Pleistocene period nearly one million years ago. The retreat of the last glacier, about 1,000 years ago, removed 10 to 15 feet of bedrock from the most exposed ledges, rounded the hills, deposited debris and created new land forms. The Muddy Brook valley is a glacial flute (small valley), and is an example of this geologic phenomenon. A considerable percentage of the soils in the Ware area was formed from glacial till and alluvial deposits. Glacial debris such as large stones and boulders often create serious problems for agricultural use, and the slow permeability of the soils is a severe limitation for septic systems. Map 8 shows these ridges and valleys.

The U.S. Natural Resource Conservation Service (NRCS) has organized the soils in Ware into two soil associations, each with distinctive patterns of soils, drainage pattern, topographic relief, development and agricultural constraints and opportunities, and other characteristics. Most of Ware's land is sloped which limits development of small scale commercial sites. Large rocks, a shallow depth to bedrock, droughtiness, or an occasionally high water table pose serious problems for forest or agriculture development. The two soil associations are as follows:

Southern and Central Ware: These areas contain Hinckley-Merrimac-Windsor soils. The Hinckley association contains soils that are characterized as being very deep, nearly level to steep, sandy, are excessively drained, and formed in outwash deposits. Topography ranges from rolling broad areas to narrow terraces. Many areas are dissected by drainage ways with slopes ranging from 0 to 35 percent. According to the NRCS, soils in this association are suited to cultivated crops, hay, and pasture. Management concerns include droughtiness and erosion on sloping to steep areas. The soil's low available water capacity is the main limitation for woodland production. In general, these soils are well-suited to building site development, but have the problem of readily absorbing, but not adequately filtering, the effluent from septic tank absorption fields. This should be taken into consideration when designing on-site sewage disposal systems in order to avoid polluting groundwater.

Northern and Central Ware, and areas around the Quabbin Reservoir: These areas contain Canton-Gloucester-Scituate soils. This association contains soils that are very deep, well-drained, and formed in



Legend

-  50 Foot Contours
-  Open Space
-  Waterbodies
-  Rivers

Open Space & Recreation Plan

Map 8: Topography

May 25, 2013

Sources:
 MassGIS: Topographic Elevations, Shaded Relief,
 Rivers, Waterbodies, Roads, Towns
 Ware: Open Space (all types)

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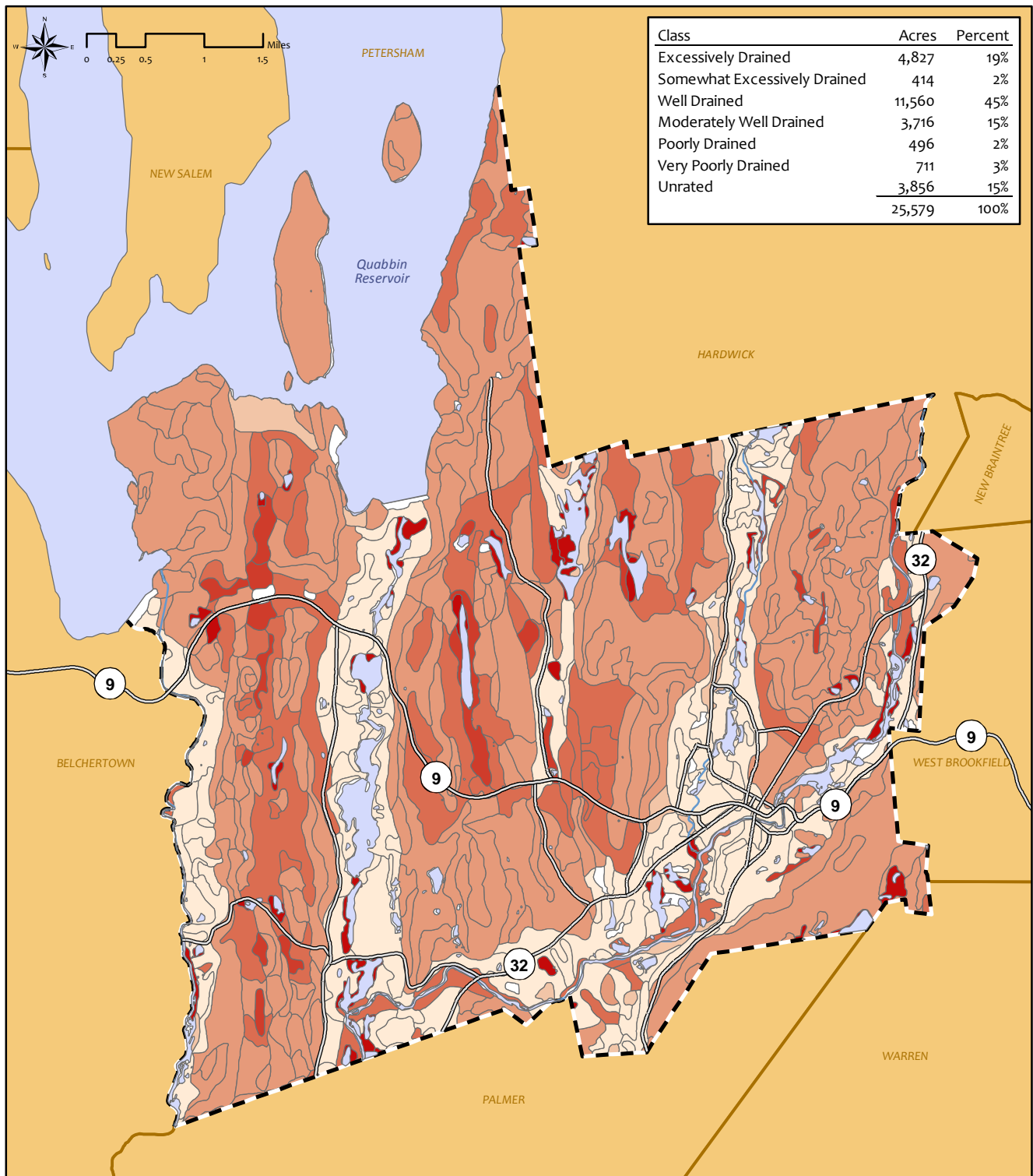


sandy glacial till. Most areas have stones and boulders on the surface that are 5 to 20 feet apart with slopes ranging from 0 to 45 percent. The NRCS describe these soils as being generally poorly suited to cultivated crops, hay, and pasture because of the stones that are found on the surface. They have a moderate potential for woodland production and upland areas are well-suited to building site development although wetness is a limitation in low areas and in depressions. Similar to the Hinckley soils, the Canton and Gloucester soils readily absorb but do not adequately filter effluent from septic tank absorption fields, so again on-site sewage disposal systems need to be designed accordingly to avoid polluting the groundwater.

Slope is an important factor when determining the development potential of an area. Areas with a slope of 15% or greater have limitations for building due to the significantly increased physical or financial requirements of such a project. Areas with a slope of 15% or greater form a series of north-south bands. The major areas with slopes of less than 15% are located in the Fisherdkick Road area in a north-south pattern east of the Quabbin which continues due south to the southern town boundary, and into the western corner of town. In general, approximately 50-60 percent of the town's land area has a slope of 15% or less.

The NRCS rates soils for a variety of characteristics which are useful in coarse (i.e. non-site-specific) planning. Map 9 shows soil drainage; this is important not only for building development potential but also for various types of vegetation (both cultured and natural) and wildlife habitat. Map 10 shows hydric soils, which are the locations where wetland habitats are most likely to be sustainable. It should be noted that wetlands do occur in other types of soils; the map is not a representation of wetlands.

Combining soil characteristics with slope indicates whether an area can easily support on-site sewage disposal (a.k.a. septic) systems. All of the soils found in Ware have severe restrictions for septic tank absorption fields (see Map 11). This does not mean that septic systems cannot be constructed, it means that the site specific soil conditions must be considered for each system, and the system must be designed to accommodate the soil limitations. In most cases, limitations can be overcome with alternative designs, and while more costly to install and maintain, development – particularly at low densities – can be sustained.



Legend

Drainage Class

- Unrated
- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Poorly drained
- Very poorly drained

Open Space & Recreation Plan

Map 9: Soil Drainage

May 25, 2013

Sources:

MassGIS: Towns, Roads, Waterbodies, Rivers

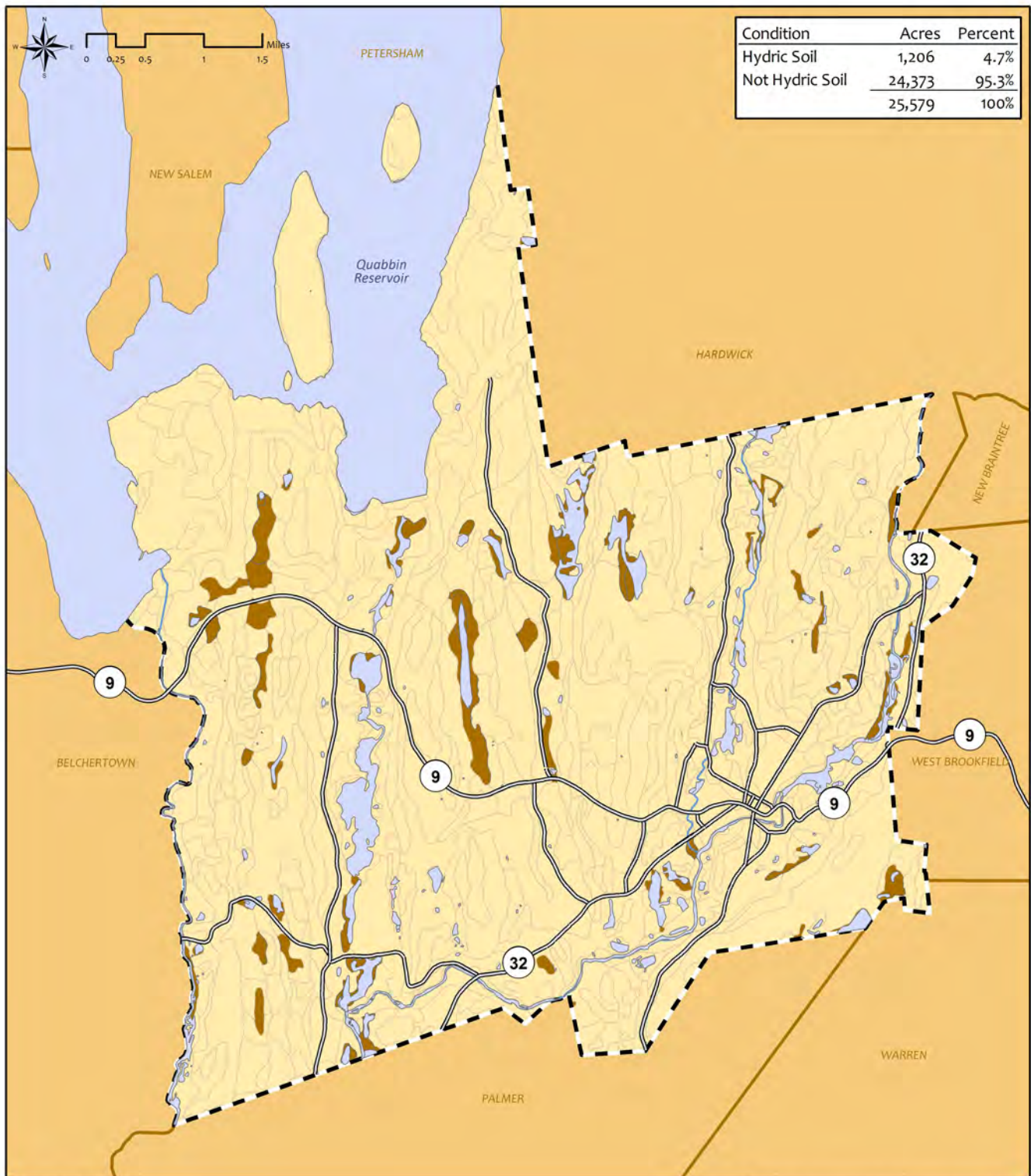
Ware: Open Space

NRCS: Soils, Drainage Classification (2007)

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Legend

- Hydric Soils
- Not Hydric Soils

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Map 10: Hydric Soils

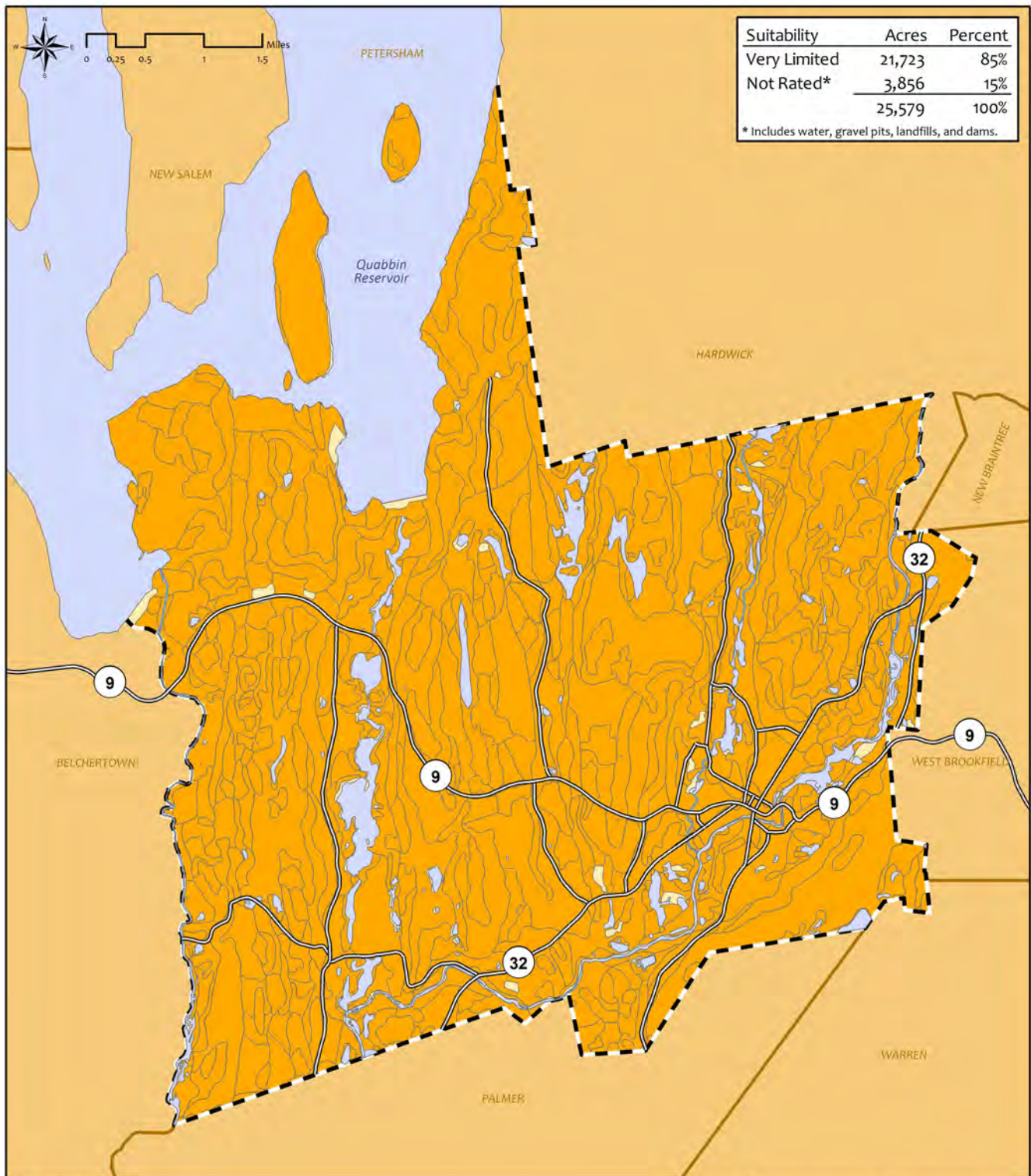
May 25, 2013

Sources:

MassGIS: Towns, Roads, Waterbodies, Rivers
 Ware: Open Space
 NRCS: Soils, Drainage Classification (2007)

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Legend

Suitability for Septic Absorbtion Fields

- Very limited
- Not rated

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Map 11: Septic Suitability

May 25, 2013

Sources:

MassGIS: Towns, Roads, Waterbodies, Rivers
 Ware: Open Space
 NRCS: Soils, Drainage Classification (2007)

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B. Landscape Character

At first glance, Ware looks like a typical western Massachusetts mill town, nestled among the glacial valleys and ridges with development concentrated along the major waterways. From many points in town and along major roadways, forested ridges and busy valleys with church spires and factory chimneys portray Ware as a community founded on the New England traditions of farming and mill manufacturing.

The old and the new coexist in Ware. Route 9 is the spine of the original town center (by Greenwich Plains Road), and is surrounded by historic buildings. The large residences along Route 9 and other roads close to the current town center (e.g. Church Street) testify to the prosperity the town enjoyed when manufacturing was at its peak in the millyard. Newer development has sprung up in the last fifty years, mostly along Route 32. The sprawling nature of today's commercial developments provides a less appealing and more generic solution to providing residents with goods and jobs.

The outer country roads of Ware provide a tour of the history of town, from the original farms, mills and covered bridge, to the newer residential lots that were created on the outskirts of town. Ware has a beautiful history that is still evident in the town's buildings. A good example of how Ware has retained its character while allowing for new development is found in the reuse of the large mills in the center of town. Now occupied by factory outlets, several small businesses, and some industrial uses, the mills serve a dual purpose of visual history and active commerce. Redevelopment is not at full capacity; underutilized space is still available. It is crucial to balance the value of the new, necessary improvements needed in town with the value of a rich history that should not be forgotten or replaced. Adopted in 2012, the Millyard zoning district was created to promote mixed use development in this area including residential, retail, office and light industrial.

Like many more urbanized communities with higher populations, Ware is trying to focus new residential development closer to the downtown area where public utilities (water and sewer) and facilities (parks and sports fields) are available. However, zoning alone cannot dictate where future residents live, and given the large amount of undeveloped, privately held land in Ware, it can be expected that recreational facilities will be needed in more remote parts of town. An example of this is Pennybrook Field, which had been a subdivision that was not developed and was eventually obtained by the Town. Only a small portion of this site has been developed into a ball field, and that was done by volunteers primarily for a practice field. The site could be improved with additional fields, parking, trails, and a picnic area. Located at the southern end of Beaver Lake, which is privately held, the site has significant potential which has yet to be realized. Map 5, in Section 4-F, shows many of the features that give Ware its rural character.

C. Water Resources

The entire town is located within the Chicopee River Basin, which encompasses a large network of tributaries that ultimately flow into the Connecticut River. Map 1 shows the watershed area. The watershed

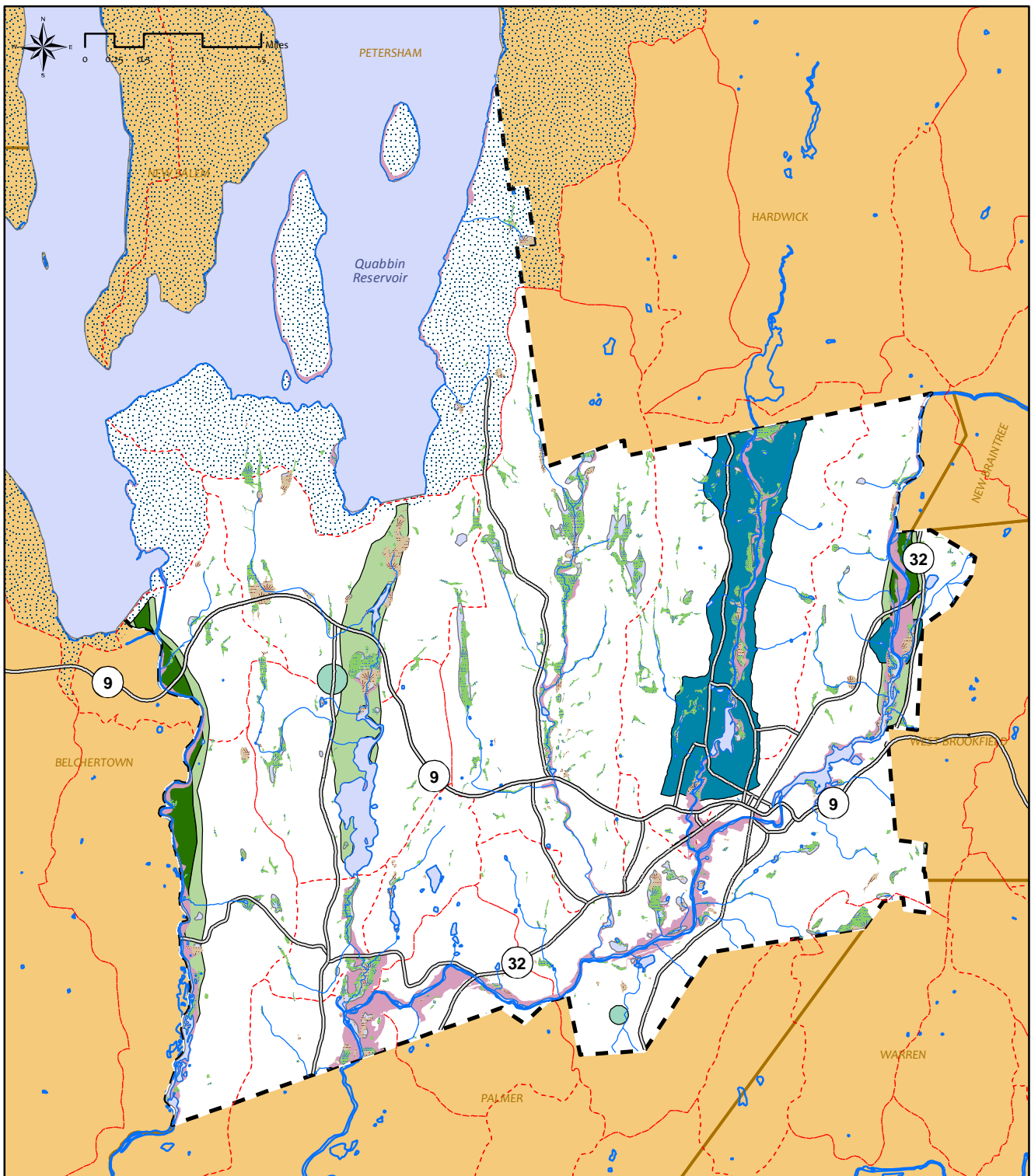
has a total drainage area of approximately 723 square miles. Five sub-watersheds of the Chicopee exist in Ware including Muddy Brook, Quabbin Reservoir, Quaboag River, Swift River and Ware River. The Quaboag, Swift and Ware Rivers converge in the Town of Palmer south of Ware to form the main stem of the Chicopee River.

The three major surface waters in Ware are the Swift and Ware Rivers and the Quabbin Reservoir (see Map 12). The Swift River flows along the Ware-Belchertown boundary until it joins the Ware River at the Three Rivers junction. The Ware River originates in Hubbardston, Massachusetts and flows generally southwesterly through the town. The Quabbin Reservoir is located in seven towns including Ware, and is managed by the Massachusetts Department of Conservation and Recreation (DCR), and covers 24,705 acres. DCR replaced the Metropolitan District Commission (MDC) as the manager of the reservoir in 2003 when MDC and the Massachusetts Department of Environmental Management (DEM) merged forming the DCR. Created in 1984, the Massachusetts Water Resources Authority (MWRA) is responsible for treatment and distribution of wholesale water to local water departments in 48 communities: 42 in greater Boston and the Boston-MetroWest areas and three in central Massachusetts (Chicopee, South Hadley, and Wilbraham). MWRA also provides a back-up water supply in three other communities. See Table 4-1 for additional information on surface water resources in Ware.

The Quabbin Reservoir was created in the 1930's by inundating the Swift River valley behind the Winsor Dam, which lies across the boundary of Belchertown and Ware, and the Goodnough Dike, which is in Ware. The reservoir has an average depth of 51 feet, with a maximum depth of 150 feet, and holds 412 billion gallons. Much of the watershed is now home to many species of wildlife including bear, bobcat, moose, deer, and bald eagles.

Table 4-1: Surface Water Resources					
Surface Water	Owner	Size (acres)	Use	Dam Height	Drainage (sq.mi)
Babcock Tavern Road Pond	Private	13	Recreation	none	unknown
Swift River and Ware River	Public		Recreation		
Beaver Lake	Private	155	Recreation	13	5.6
Martowski Pond	Private	8	Recreation	none	unknown
Penny Brook Pond	Private	8	Recreation	none	unknown
Cook's Pond (Peppers Mill Pond)	DCR	10	Fishing	10	2.7
Snow's Pond	Water Dept	25	Recreation	8	18.9
Quabbin Reservoir	DCR	24,705	Water Supply, Limited Rec.	170	185.9





Legend

- | | | | |
|-----------------|----------------------|-----------------|--------------------------------|
| | Chicopee Basin | | Flood Hazard Zone |
| | Sub-basin Watersheds | | Outstanding Resource Watershed |
| | Rivers and Streams | Aquifers | |
| | Waterbodies | | Interim Wellhead Protection |
| Wetlands | | | High Yield |
| | Marsh/Bog | | Medium Yield |
| | Wooded marsh | | Zone II |

Open Space & Recreation Plan

Map 12: Water Resources

May 25, 2013

Sources:
MassGIS: Watersheds, Rivers, Waterbodies, Wetlands,
Aquifers, Outstanding Water Resource Areas, Flood
Hazard Zones (FEMA), Roads, Towns

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Swift River Sub-watershed

MA DEP's Chicopee River Watershed 2003 Water Quality Assessment Report is the source of information in the next two sections of this plan.

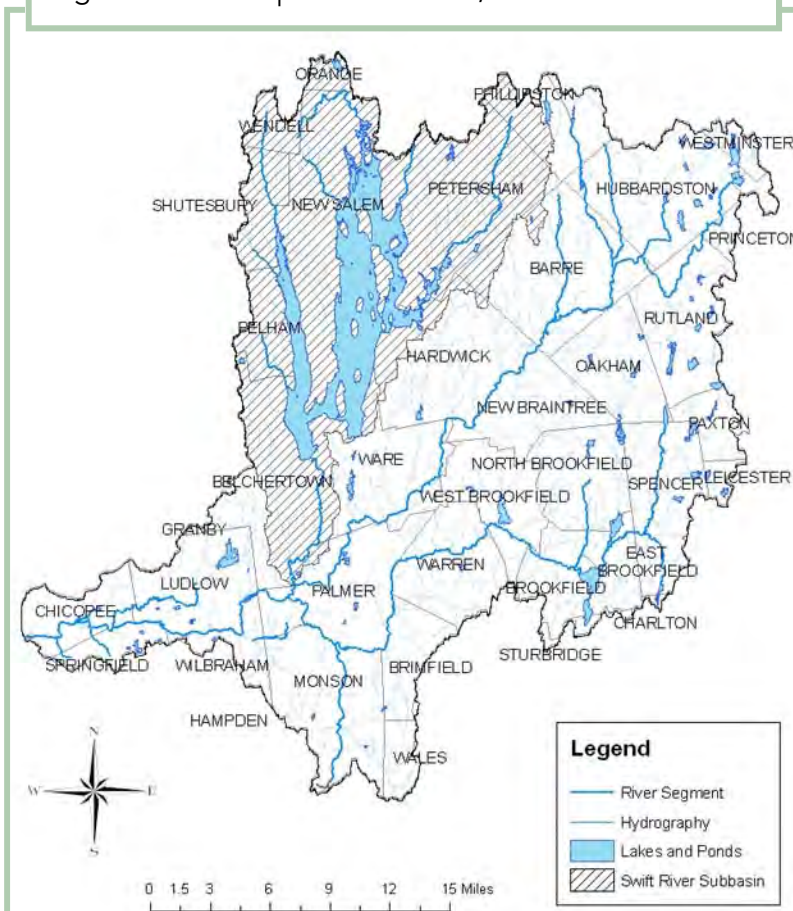
A portion of the Swift River (Segment MA36-09) flows through Ware forming the boundary with Belchertown. The Swift River is a Class B, Cold Water Fishery.

The U.S. Geological Survey (USGS) maintains a gage (Gage 01175500) on the Swift River in West Ware 1.4 miles downstream from the Quabbin Reservoir. The drainage area is 189 square miles including 1.6 square miles drained by Beaver Brook, flow that is diverted from the Ware River Basin (USGS, 2007). The period of record is July 1910 to present (USGS, 2007). The average discharge after the completion of Quabbin Reservoir (1940-2005) is 94.4 cubic feet per second (cfs) (USGS, 2007).

The USGS reports that flow has been regulated by Quabbin Reservoir since August 1939 (USGS, 2007). The flow has been diverted from the Ware River to Quabbin Reservoir since 1940; from Quabbin Reservoir to Wachusett Reservoir since 1941; from Quabbin Reservoir to Chicopee Valley aqueduct since 1950; and from Quabbin Reservoir to the city of Worcester periodically since 1966 (Socolow et al., 2004).

The Swift River begins at the Winsor Dam with flow regulated by the MWRA via a control structure in the Quabbin power plant. From

Figure 4-1: Chicopee River Basin, Swift River Subbasin



December 1 through May 31, DCR is required to release 20 million gallons per day (mgd) from the Quabbin Reservoir to the Swift River. From June 1 through November 30, the required releases (per order of the US Army Corps of Engineers) are dependent on the stream flow of the Connecticut River at the USGS Montague gage. When the flow of the Connecticut River is less than 4,900 cfs, the required release at Quabbin Reservoir is 45 mgd, and when the flow is greater than 4,650 cfs, the required release at Quabbin Reservoir is 71 mgd. In practice, however, DCR releases either 20 or 71 mgd or more depending on reservoir operating conditions (Austin, 1993).

The wetlands and waterways in this segment of the Swift River are identified as habitat for rare and endangered species



by the state's Natural Heritage and Endangered Species Program (NHESP). The Swift River contains a variety of habitat types. The river's gradient, cold water coming from the depths of Quabbin Reservoir, and the impoundment and extensive wetlands formed by the Upper Bondsville Mill Dam in the village of Bondsville, Palmer, result in a mix of cold and warm water fisheries habitat.

The Swift River is heavily stocked with trout and is fished all year long. Special fishing regulations apply to two different portions of this river segment (see Massachusetts Department of Fish & Game (MA DFG) Abstracts of the Massachusetts Fish and Wildlife Laws). A survey done in 1998 by the state found the river exhibited a rich species diversity with a well-balanced aquatic community.

In July 2006, Massachusetts Riverways conducted a habitat improvement project on this segment. The project entitled "Swift River Rock Structure Removal" improved habitat by eliminating flow constriction caused by rock piles left in the river by a former bridge (Graber 2004). The goal was to change pool habitat into new riffles.

All water quality data for the Swift River in Ware meet state and federal standards except pH, which was found to be slightly lower than the standard on the majority of sampling events. Given the good water quality and the presence of multiple age classes of brook trout, this segment supports the Aquatic Life Use, as defined by BioMap2 Critical Natural Landscapes.

The Massachusetts Division of Watershed Management (MA DWM) conducted water quality monitoring at one station (SR03-Cold Spring/Old Belchertown Road, Belchertown) along this segment of the Swift River from April to October 2003. The geometric mean of *E. coli* counts was 5.1 colony forming units (cfu)/100 mL. Both Primary and Secondary Contact Recreational Uses are supported given the low bacteria levels found at this site. The "Aesthetics Use" (aquatic life, primary contact such as swimming, secondary contact such as boating, and visual aesthetics) is also supported by the Swift River due to its high water quality.

Ware River Sub-watershed

Two segments of the Ware River flow through Ware: Segment MA 36-05 (Wheelwright Dam in New Braintree to Ware Dam in Ware) and Segment MA 36-06 (Ware Dam in Ware to Thorndike Dam in Palmer). Both are Class B, Warm Water Fisheries. The following information is from the Massachusetts Department of Environmental Protection's (DEP) 2003 Chicopee River Watershed Assessment.

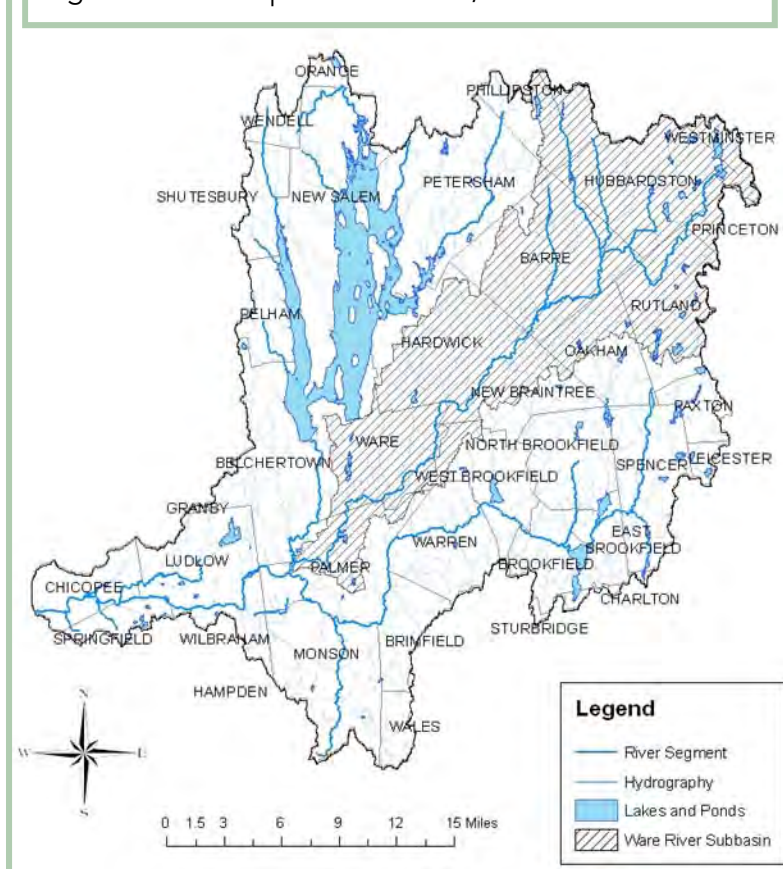
The USGS maintains a gage on the Ware River (Gage 01173500) 0.5 miles upstream from Gibbs Crossing, south of the Ware Dam. The drainage area for this gage is 197 square miles and the average annual discharge is 294 cfs (period of record 1931-2005 (USGS 2007)).

MA DFG stocks the Ware River with trout. (DFG, 2007). In 2003, DFG conducted fish population sampling in the Ware River off Route 32 in Hardwick and collected fallfish, yellow perch, yellow bullhead, golden shiner, spot-tail shiner, bluegill, redbreast sunfish, longnose dace, tessellated darter, chain pickerel, rock bass, white sucker, pumpkinseed, common shiner, eastern blacknose dace, and largemouth. The fish

assemblage consisted of a diverse mix of macrohabitat generalists and fluvial specialist/dependent species. The Hardwick Waste Water Treatment Plant is upstream of Ware in Hardwick. All water quality data meets criteria.

The Aquatic Life Use is assessed as supported for this segment based upon good survival of test organisms exposed to river water at all three locations, the presence of fluvial specialists/dependent fish species and good water quality conditions. The segment is given "Alert Status" due to acute whole effluent toxicity in both the Hardwick Water Pollution Control Facilities in Wheelwright and Gilbertville discharges and the slightly elevated total phosphorus concentrations.

Figure 4-2: Chicopee River Basin, Ware River Subbasin



The Primary Contact Recreational Use is assessed as supported in the upper 3.8 mile reach of Segment 36-05 based on bacteria counts. The lower 7.7 miles of this segment is assessed as impaired for this use due to elevated *E. coli* counts at one sampling location. The Secondary Contact Recreational Use is supported as bacteria levels at both stations meet the criterion. The Aesthetics Use is assessed as supported given the lack of objectionable conditions.

Outstanding Resource Waters

Outstanding Resource Waters (ORW) is a classification under the Massachusetts Surface Water Quality Standards of 1995 for certain watershed areas. According to 314 CMR 4.00, "Certain waters shall be designated for protection under this provision in 314 CMR 4.06(3) including Public Water Supplies (314 CMR 4.06(1)(d)1.). These waters constitute an outstanding resource as determined by their outstanding socioeconomic, recreational, ecological and/or aesthetic values. The quality of these waters shall be protected and maintained" (1995). The Quabbin Reservoir is a designated Outstanding Resource Waters with 3,357 acres of surface waters in Ware. This area is shown on Map 12.

Flood Hazard Areas

The major floodplain areas in Ware are located primarily along the Ware River and the Quabbin Reservoir. Other floodplain areas are located along the Swift River, Flat Brook, Muddy Brook, and in the Beaver Lake and Peppers Mill Pond area. Ware has restrictions on development in these areas to protect the community



against resource degradation due to unsuitable uses occur along these waterways, and also to reduce flooding. These areas are shown on Map 12.

Aquifer Recharge Areas

There are a number of aquifer recharge areas in Ware. One is located along the Swift River toward River Road, and another from the Goodnough Dike south to Beaver Lake. The most important and largest aquifer in Ware is the one now designated as a Zone II protection area by DEP which runs along Muddy Brook and Greenwich Road, down to Snow's Pond, which supplies the town wells off of Barnes Street. An additional well is located off Gilbertville Road, fed by another Zone II area along the Ware River. Various development and use restrictions exist in these areas in order to protect both water quality and potable water availability for the town. These areas are shown on Map 6. It should be noted that based on geologic data, there are other aquifer areas in the town, but due to previous development or potential for providing sufficient water for a public water supply, the Town has chosen not to regulate them specifically for groundwater resources.

Wetlands

Wetlands can be found throughout Ware and are typically associated with rivers, streams and ponds. There are 66 Certified Vernal Pools. Vernal pools are temporary wet areas that provide habitat to plants and animals and often form in the spring with snow melt. Several of the BioMap2 Core Habitats include Wetland Cores 1573, 1610, 1650, 1664, 1688, 1837, 1872, and 2335. Wetland Cores are the least disturbed wetlands in the state within undeveloped landscapes. These wetlands are most likely to support critical wetland functions (i.e. natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future. Two of the Wetland Cores (1573 – 80 acres; 1837 – 111 acres) are among the largest 20% of Wetland Cores in this ecoregion. Two other Wetland Cores are of significant size (1664 – 25 acres; 1688 – 17 acres).

In BioMap 2 Critical Natural Landscapes, six Wetland Core Buffers have been identified: 742, 775, 834, 849, 852, and 1322. Methodologies for BioMap2 considered unfragmented habitats surrounding wetlands and analyzed rare species habitats. These approaches identified protective upland buffers around wetlands and rivers that support the habitats and functionality of each individual wetland, as well as the adjacent uplands (important to species moving between habitats). The BioMap2 maps are included in this chapter under Vegetation Mapping.

D. Vegetation

General Inventory

Ware's landscape of rich fertile floodplains is a patchwork of croplands reaching the gently sloping hillsides of mostly mature woodlands. The October 2011 snowstorm caused a significant amount of damage

to trees throughout the region, and Ware was no exception. While trees in populated areas were trimmed or cut down, most damaged trees remained as-is out in the woods where people don't notice them. Some of these will likely become diseased, but generally speaking, the forest should not experience unnatural decline due to the storm.

Forest Land

In 1985, 64% of Ware's land was covered with forest (see Map 13). Current estimates of forest cover are unavailable. However one example of extensive forest cover is the Dougal Range (2,000+ contiguous acres) in the northeastern part of Ware, extending into Hardwick. The major forest types in Ware are Appalachian-Oak (Northern Red Oak, White Oak, Chestnut Oak, American Chestnut) and Northern Hardwood (Sugar Maple, Beech, Yellow Birch, White Birch, Paper Birch, Hemlock). Many of these species may be harvested for furniture, flooring, and fuel. These mature forests are excellent places for recreational trails due to the lack of substantial undergrowth. A maturing (younger) forest has fewer recreation opportunities but does provide game for hunting and wildlife viewing.

Public Shade Trees

Ware, like most New England towns, is blessed by many shade trees growing on public lands and along public roads. The town does not have a formal inventory of these trees, with the exception of the trees on Main Street and those in the Aspen Grove Cemetery (see below). The DPW has a good handle of the shade trees in town, since they are responsible for maintaining the roads throughout town. Tree maintenance is typically done during the winter, with trimming and removal when necessary. The Tree Warden is an employee of the DPW and as such, the department handles any tree removal or pruning that is needed. Ware is not a Tree City, and the town has no designated Scenic Roads either. About 12 years ago, the Town planted two American Liberty Elm trees at the entrance to Grenville Park.

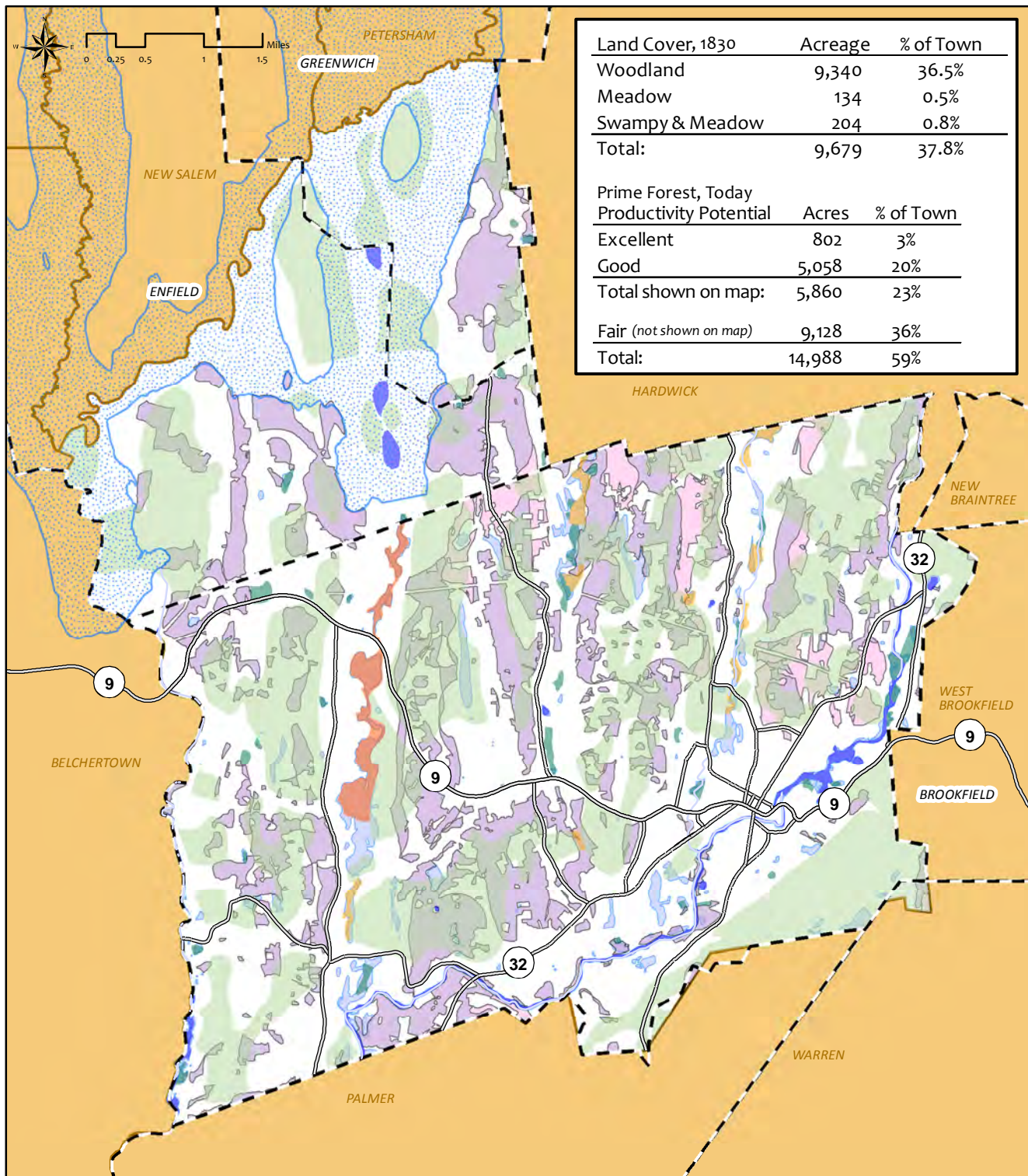
The street trees in downtown Ware are in fair condition, but many of those originally planted in the 1980s have died and been removed and not replaced. The community is planning the Main Street streetscape in anticipation of the reconstruction of the roadway in 2019 or so; this effort includes street trees. Given the width of the roadway (four lanes wide) there is insufficient room to ever see the majestic elm trees that once lined Ware's Main Street again.

In 2012, a tree survey was completed for Aspen Grove Cemetery in order to determine a maintenance work plan. As a result, a number of trees were trimmed and removed under the supervision of the Town Tree Warden. *Woolly Adelgid*, an invasive insect, has been identified on hemlock trees in the cemetery.

Agricultural Land

The many fields in Ware provide some of the most scenic views in town. Open lands provide viewsheds to the surrounding communities and region. The typically flat and well-drained lands may also convert easily to active recreation fields, such as ball fields. Converting former agricultural fields to





Legend

Land Cover, 1830

- Woodland
- Water
- Meadow
- Wetland (MassGIS)
- Swampy & Meadow Land
- Town Boundaries, 1830

Prime Forest, Today

- Excellent
- Good
- Town Boundaries, 2013
- Quabbin Reservoir
- Waterbodies
- Rivers

Note: Town names shown in black & white relate to the 1830 boundaries; those in brown relate to the current boundaries.

Open Space & Recreation Plan

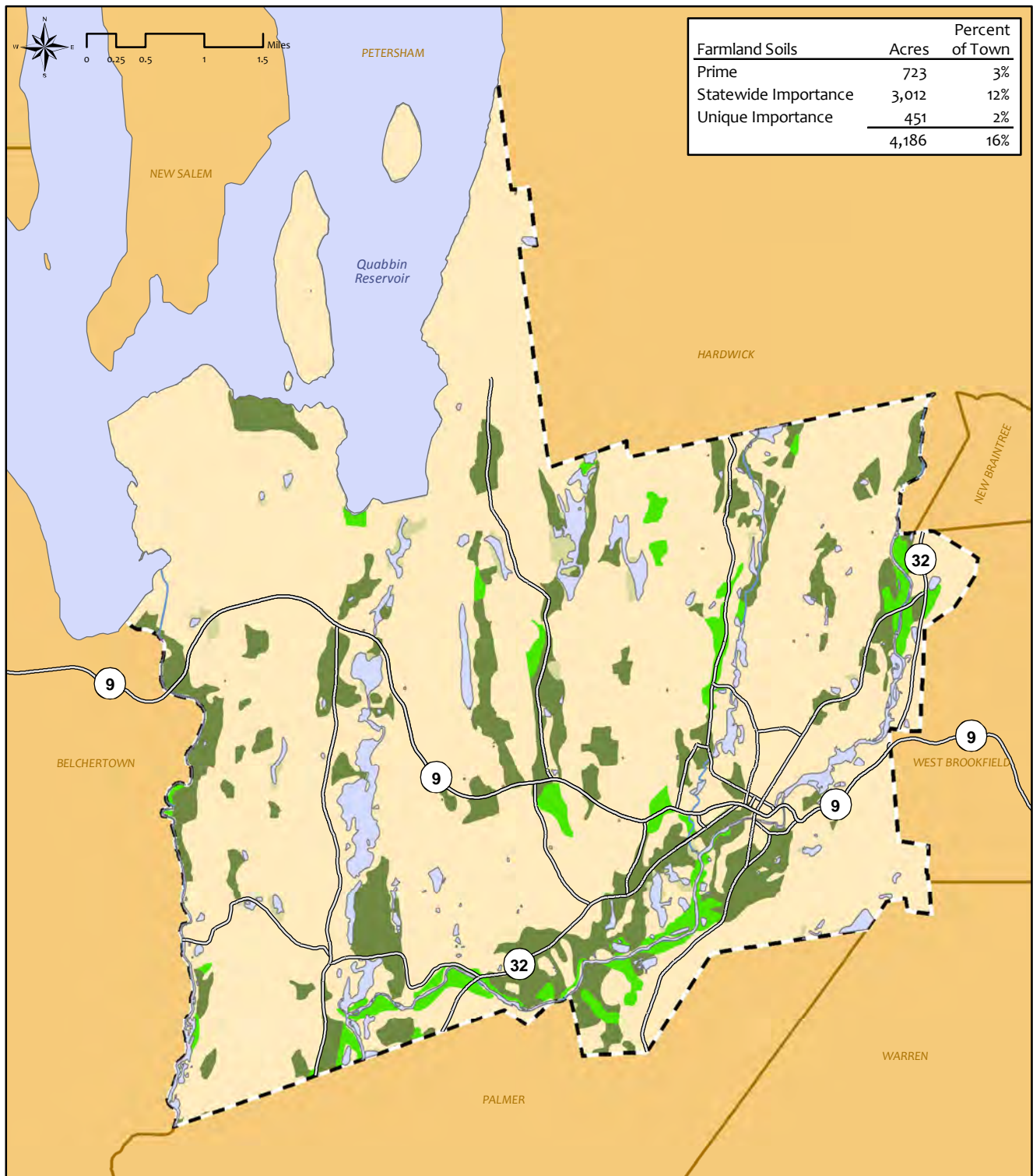
Map 13: Forest Cover

July 22, 2013

Sources:
 MassGIS: Quabbin Reservoir, Waterbodies, Rivers, Roads, Towns (2013), and Prime Forest (Today) which is derived from soil data along with 1999 land use/land cover, topography, and wetlands information.
 Harvard Forest: 1830 Land Cover, Town Boundaries (1830) [2002. 1830 Map Project. Harvard Forest Archives, Petersham, MA.]



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Legend

Open Space by Purpose

-  Agricultural
-  Other

Farmland Soils

-  Prime Farmland
-  Statewide Importance
-  Unique Importance
-  Other Soils

49.29 acres of prime or statewide farmland soils are protected with APR.
756.3 acres of farmland soils are protected with other types of protection; however 23.1 acres have only temporary protection through Chapter 61A or 61B.

Open Space & Recreation Plan

Map 14: Farmland Soils

May 24, 2013

Sources:
MassGIS: Towns, Roads, Waterbodies, Rivers
Ware: Open Space
NRCS: Soils, Farmland Classification (2007)

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recreation fields requires little to no forest cutting. Much of Ware's undeveloped, unforested land is in private ownership. Currently, over 1,647 acres of privately owned open lands are enrolled in MGL Chapter 61A for agricultural use, or 6.4% of town acreage. Between 1971 and 2005 Ware's farmland acreage decreased by 71%. Map 14 shows the soils best suited for farming, as well as the land in Ware that is protected for agricultural or other purposes. Note that lands in the "chapter land" tax reduction program are not shown on this map since they are not permanently protected. The land areas shown as prime farmland on this map should be where efforts for agricultural protection are emphasized.

Wetland Vegetation

Ware's wetlands are regulated by the Wetlands Protection Act (WPA) under the local jurisdiction of the Conservation Commission. Typical wetland plants (highbush blueberry, ferns, red maple, quaking aspen, birches, junipers and dogwoods) are popular foraging plants for many birds and other wildlife. Development limitations and strict legislation concerning wetland areas prevent these ecosystems from being used for anything more than conservation and recreation use. Recreation opportunities in and around them include bird watching and hiking.

Early planning and review of development projects under the WPA and the Massachusetts Endangered Species Act (MESA) play an important role in protecting rare species habitats. The NHESP produces maps for the Commission's use under the WPA (Priority and Estimated Habitat) and the Massachusetts Endangered Species Act. Estimated Habitats are a complete subset of Priority Habitats that identify habitats of rare wetlands wildlife. Priority Habitats are drawn for all rare species. The NHESP maps and BioMap2 Core Habitat and Critical Natural Landscape Maps in this Plan offer more information about the location of wetlands in Ware.

Rare Species – Vascular Plants

Of the uncommon plants in Ware, several species have declined in recent decades due to succession to forest throughout the state (see Table 4-2 for MESA status). New England Blazing Star is an endemic, globally rare, perennial composite that grows in dry, sandy grasslands and clearings. In Massachusetts, New England Blazing Star inhabits open, dry, low-nutrient sandy soils of grasslands, heathlands, and barrens. It thrives in fire-influenced natural communities that are periodically disturbed and devoid of dense woody plant cover. Bush's Sedge occurs in dry to moist non-acidic meadows and pastures in Massachusetts. Wild Lupine is an herbaceous perennial of the pea family that has large sprays of purple flowers in early June. It grows in direct sun on dry, sandy soil in open woods and fields. It, too, has declined throughout the state as forest has reclaimed many of the former agricultural lands, and now is mostly found along edges of forests on sandy soils.

Ware has several plants found in rocky open woods: Climbing Fumitory is an herbaceous biennial vine that can reach lengths of 10 feet. It is usually found in the shade climbing over talus at the base of cliffs. Purple Milkweed is an herbaceous perennial of open sparsely vegetated woodlands and borders.

Table 4-2: Rare Species and Natural Plant Communities in Ware

Common Name	Massachusetts Endangered Species Act (MESA) Status	Most Recent Year Observed
VASCULAR PLANTS		
Climbing Fumitory (<i>Adlumia fungosa</i>)	SC	2008
Purple Milkweed (<i>Asclepias purpurascens</i>)	E	2011
Bush's Sedge (<i>Carex bushii</i>)	E	2007
Narrow-leaved Spring Beauty (<i>Claytonia virginica</i>)	E	2008
Butternut (<i>Juglans cinerea</i>)	WL	2006
New England Blazing Star (<i>Liatris scariosa</i> var. <i>novae-angliae</i>)	SC	1931
Wild Lupine (<i>Lupinus perennis</i>)	WL	2008
One-flowered Pyrola (<i>Moneses uniflora</i>)	WL	1995
Swamp Lousewort (<i>Pedicularis lanceolata</i>)	E	Historic
Great Laurel (<i>Rhododendron maximum</i>)	T	2007
NATURAL COMMUNITIES		
Circumneutral talus forest/woodland	S3 – Vulnerable	2006
Hickory-hop hornbeam forest/woodland	S2 – Imperiled	2006
MESA Status: SC = Special Concern; E = Endangered; WL = Watch List; T = Threatened		



Several rare plants in Ware grow in moist woods along streams or in swamps. Narrow-leaved Spring Beauty typically occurs in deciduous forests on upper floodplain terraces and adjacent toe slopes. These areas have moist fertile soils and are subject to infrequent flooding events. Swamp Lousewort grows in open areas that are periodically flooded such as wet meadows, marsh edges, and stream banks. It occurs primarily in calcareous soils. Great Laurel, a member of the Heath family, is an evergreen shrub or small tree that grows up to 10 meters high. Its natural habitat is moist woods, swamps, and the edges of ponds. One-flowered Pyrola (also called Single Delight) is a short herbaceous plant of moist forests with a single white, waxy flower.

Natural Communities are recurring assemblages of plants and animals in similar chemical, moisture, geological, and topographic environments. In Massachusetts, the types are defined in the Classification of Natural Communities of Massachusetts, available on the NHESP website. Occurrences of uncommon types, called Priority Natural Communities, are considered to be priority for conservation. All types of natural communities provide important habitat for common and uncommon species and support the biodiversity of the town. NHESP keeps track of occurrences of Priority Types of Natural Communities, a complete list of



which is on the NHESP website. Two types of Priority Natural Communities have been identified in Ware. In addition, there are several other types in adjoining towns that might also be present in Ware. Patches of Ridgetop Pitch Pine-Scrub Oak community are found in both Hardwick and Palmer, and might be expected in Ware. In the lowlands between the ridges, Belchertown and Hardwick have Spruce-Tamarack Bogs and other types of bogs that may also occur in Ware.

Circumneutral Talus Forest/Woodland communities develop on boulder strewn slopes below slightly acidic cliffs or rock outcrops. There is often a gradient of vegetation density as the slope changes, with more trees on the lower slope. Occurrences in Ware are along a ridge that continues into Hardwick. Multiple patches of the community occur within a large contiguous forest area. Diversity of native species is good, but some patches are impacted by invasive species. One patch is next to an occurrence of Hickory-Hop hornbeam Forest/Woodland. Hickory-Hop Hornbeam Forests are open, hardwood forests dominated by various hickory species with significant Hop Hornbeam in the subcanopy. This type of community is characterized by a sparse shrub layer, and a nearly continuous cover of grasses and sedges. The very small example of Hickory - Hop Hornbeam Forest / Woodlands in Ware abuts and blends into a Circumneutral Talus Forest and other oak forest types. It has good species diversity and is in a large roadless area.

Unique Resources

The most important areas of Ware to protect in order to maintain biodiversity are around the Quabbin, and the Ware River and its tributaries. Additionally, the Dougal ridge in the northeastern part of town, shown as BioMap2 Supporting Natural Landscape (SNL) between Muddy Brook and the Ware River supports several recent rare species observations (since the BioMap work), many vernal pools (certified and potential), and older forest, all of biodiversity interest.

Ware has a very good, large area of protected lands around the Quabbin. That area includes BioMap2 cores Core Habitats and 1830s forest areas (see next section) that provide a remarkable example of relatively unfragmented habitat. Completing conservation protection of remaining unprotected land in that area, with buffers included, would enhance the viability of these special areas. Size and continuity of open space is particularly important for supporting wildlife populations. Preventing habitat fragmentation is vital in protecting the ecosystems for the rare species on the enclosed list, as well as for additional common species.

The two types of NHESP Priority Natural Communities recently identified in Ware (Circumneutral Talus Forest/Woodland and Hickory Hop-Hornbeam Forest/Woodland) are both forests of variable height and openness. Talus forests develop on boulder strewn slopes, usually below cliffs. There is often a gradient of vegetation, with exposed rocks at the base of the cliffs and taller, older trees near the bottom and sides of the slopes. "Circumneutral" refers to the chemistry of the rocks having low acidity, which allows the soils to have more nutrients available for plant growth than in the more acidic conditions that occur in much of Massachusetts (part of the reason for their relative scarcity in the state).

Circumneutral Talus Forest/Woodlands have a greater diversity of plant species than Acidic Talus

Forests. Some species associated with richer (more nutrients, especially calcium) conditions typically occur in Circumneutral Talus communities, including sugar maple, hickories, hop-hornbeam and some of the spring wild flowers. Hickory – Hop Hornbeam communities are mixed hardwood, open and usually short, forests/ woodlands with a sparse shrub layer, almost park-like in appearance. There is often a nearly continuous layer of grasses and sedges below the trees, which are dominated by hickories with a subcanopy of hop hornbeam. Hickory – Hop Hornbeam communities often occur on east or southeast facing midslopes with shallow soils – usually relatively dry areas. Many occurrences are small patches of a few acres each within a matrix of oak dominated forests. There are several herbaceous plant species that are found predominately in Hickory – Hop Hornbeam communities.

Map 15 shows the unique features in Ware. It includes our scenic landscapes and heritage landscapes, which were identified in the 2009 Ware Reconnaissance Report of the MA Heritage Landscape Inventory Program. These are the landscapes identified by participants as the most important to the townspeople in that they embody the community's unique character. Fifty five landscapes were identified in Ware, and of those, six were designated as heritage landscapes: Grenville Park; Ware Downtown including Nenameseck Square, Town Hall, Library, and Casino Theater; Ware Center Historic District; Ware-Hardwick Covered Bridge; Breckenridge-Rich Farm; and the Ware River Rail Trail. Of these, the Casino Theater in the downtown has been lost to neglect. Grenville Park, Nenameseck Square, and the Town Hall have all had improvements done since 2009 to help preserve them. The Covered Bridge has been rebuilt and reopened to the public since the Reconnaissance Report was published, preserving this important part of our heritage and history for many decades to come. The southern section of the Ware River Rail Trail (aka the Ware River Greenway rail trail) has been opened with the installation of two bridges in 2015. Plans to develop the section from Robbins Road to downtown Ware are underway, and negotiations continue with property owners north of Grenville Park to continue the trail to the north.

Map 15 also shows the historic districts in Ware. These districts showcase the historic structures within them, but to date no action has been taken to establish local historic districts with local regulation of alterations to the historic structures in them. Happily, many property owners with historic buildings have maintained the historic character on their own. Ware did adopt a demolition delay bylaw in 2015 to provide an opportunity for preservation of buildings slated to be torn down. So far, no significant buildings, like the Casino Theater, have been targeted for demolition.

Recreational assets are also shown on the map and include active recreational facilities such as ball fields as well as passive recreational areas such as special places and water access points. Special places include scenic vista points, locally known spots such as "the Cascades", "Mirror Rock", and "Boy Scout Caves." "Mirror Rock" is a spot on Coy Hill where if one were to take a small mirror, they could aim it such that the sun would reflect on it and people in the town below could see it, thus knowing that someone was there. Folklore has it that local boys would signal their mothers this way.



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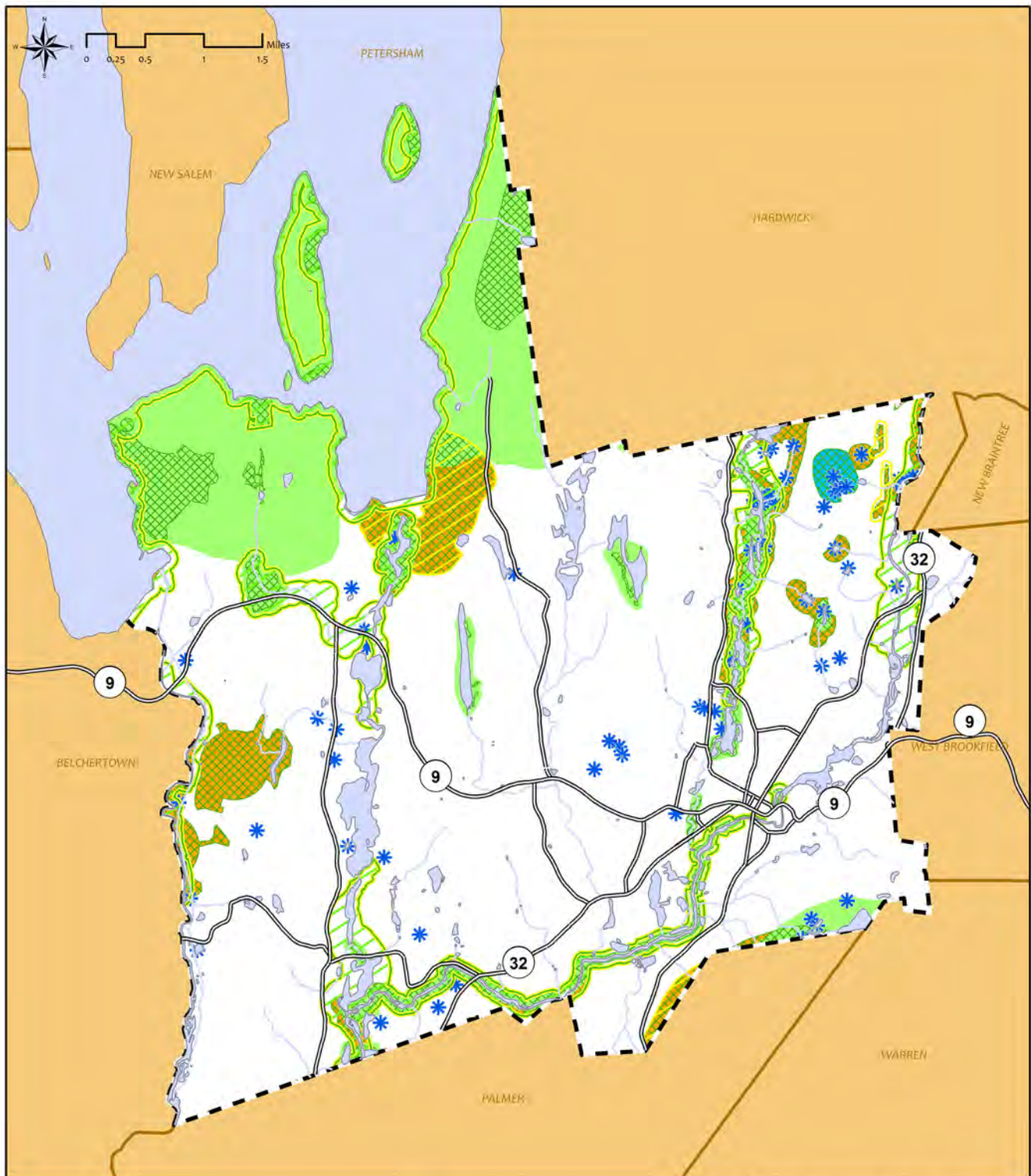
Vegetation Mapping Projects

Forested Land 1830s: The Harvard Forest map of 1830s woodlands forests shows portions of Ware as forested, areas of possible Primary Forest, untilled woodlots and wooded pastures. Such lands have greater biodiversity than areas that have been tilled. These are not Old Growth forests; they have been harvested and pastured, but the ground may not have been tilled. Harvard Forest digitized maps from the 1830s to show several categories of land cover. Ware's map shows areas that were forested in the 1830s (see Map 13, Forest Cover). NHESP GIS staff took that data and combined it with information from MassGIS' landcover datalayer made from 1999 aerial photos. Although a great deal will have changed in those areas during the 170 years between the map dates, some areas showing forested land during both periods have never been tilled. Surveys of the soil structure in the individual sites would be needed in order to determine whether those sites are primary forest. Primary forests retain more native biodiversity than sites that have been tilled such as soil, fauna and flora, microorganisms and plants that reproduce primarily without seed or spore (vegetatively). In addition, a variety of species of wildflowers are more common in untilled forests than previously tilled lands. The areas of 1830s forest on private land would be good targets for conservation acquisition in order to maintain the biodiversity of the Town and region, particularly the ridge between the Ware River and Muddy Brook and lands north of the DFW Herman Covey Wildlife Management Area (WMA) in the western part of town.

BioMap2: This map was produced by NHESP in 2012 to identify the areas of highest importance for biodiversity based on known locations of rare species and uncommon natural communities (see Map 16). It incorporates the habitats needed by rare species to maintain the local populations. Large unfragmented conservation land provides the best opportunities to maintain populations of species and limit further species loss. Land protection by towns that connects other protected open space is one way to provide important large areas of biodiversity protection. There are 6,294 acres of BioMap 2 Core Habitat and 7,892 acres of Critical Natural Landscape in Ware. Core habitat identifies specific areas necessary to promote the long-term persistence of rare species, other Species of Special Concern, exemplary natural communities, and intact ecosystems. Critical Natural Landscape identifies intact landscapes in Massachusetts that are better able to support ecological processes and disturbance regimes, and a wide array of species and habitats over long time periods.

It is important to differentiate the BioMap 2 core areas from the Priority and Estimated Habitats described above. BioMap and Living Waters (a 2003 companion report to BioMap that identifies rivers, streams, lakes and ponds that are critical to freshwater biodiversity) Core Areas identify areas particularly important for conservation planning purposes whereas Priority and Estimated Habitats are regulatory.

CAPS: The Conservation Assessment and Prioritization System (CAPS) is an ecosystem-based (coarse-filter) approach for assessing the ecological integrity of lands and waters and subsequently identifying and prioritizing land for habitat and biodiversity conservation. CAPS defines ecological integrity as the ability of an area to support biodiversity and the ecosystem processes necessary to sustain biodiversity over the long



Legend

- Open Space (all types)
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- NHESP Certified Vernal Pools
- BioMap2 Core Habitat
- BioMap2 Critical Natural Landscape
- BioMap2 CH Forest Core
- BioMap2 CH Vernal Pool Core
- BioMap2 CH BioMap2 Wetlands**
- Priority Natural Community Wetlands and Selected Oxbows
- Wetland core - least disturbed wetlands within undeveloped landscapes

- BioMap2 CH Aquatic Core
- BioMap2 CH Species of Conservation Concern
- BioMap2 CNL Landscape Blocks
- BioMap2 CNL Wetland Buffer**
- Least-disturbed wetland complexes
- Priority Natural Community Wetlands and Selected Oxbows
- Upland buffer
- BioMap2 CNL Aquatic Buffer**
- Aquatic Core
- Upland Buffer of Aq. Core
- Waterbodies
- Rivers and Streams

Open Space & Recreation Plan Map 16: BioMap and Habitats

May 26, 2013

Sources:
MassGIS: BioMap 2, NHESP Habitats, Waterbodies,
Rivers, Roads, Towns
Ware: Open Space

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term. CAPS is a computer software program and an approach to prioritizing land for conservation, based on the assessment of ecological integrity for various ecological communities (e.g., forest, shrub swamp, headwater stream) within an area. This process results in an Index of Ecological Integrity (IEI) for each point in the landscape based upon models constructed separately for each ecological community.

In November 2011, the Landscape Ecology Program at the University of Massachusetts, Amherst completed its first comprehensive, statewide assessment of ecological integrity using CAPS. IEI maps depicting the top 50% of lands with the highest ecological integrity have been completed for all cities and towns in Massachusetts (see Map 17).

E. Fisheries and Wildlife

Inventory

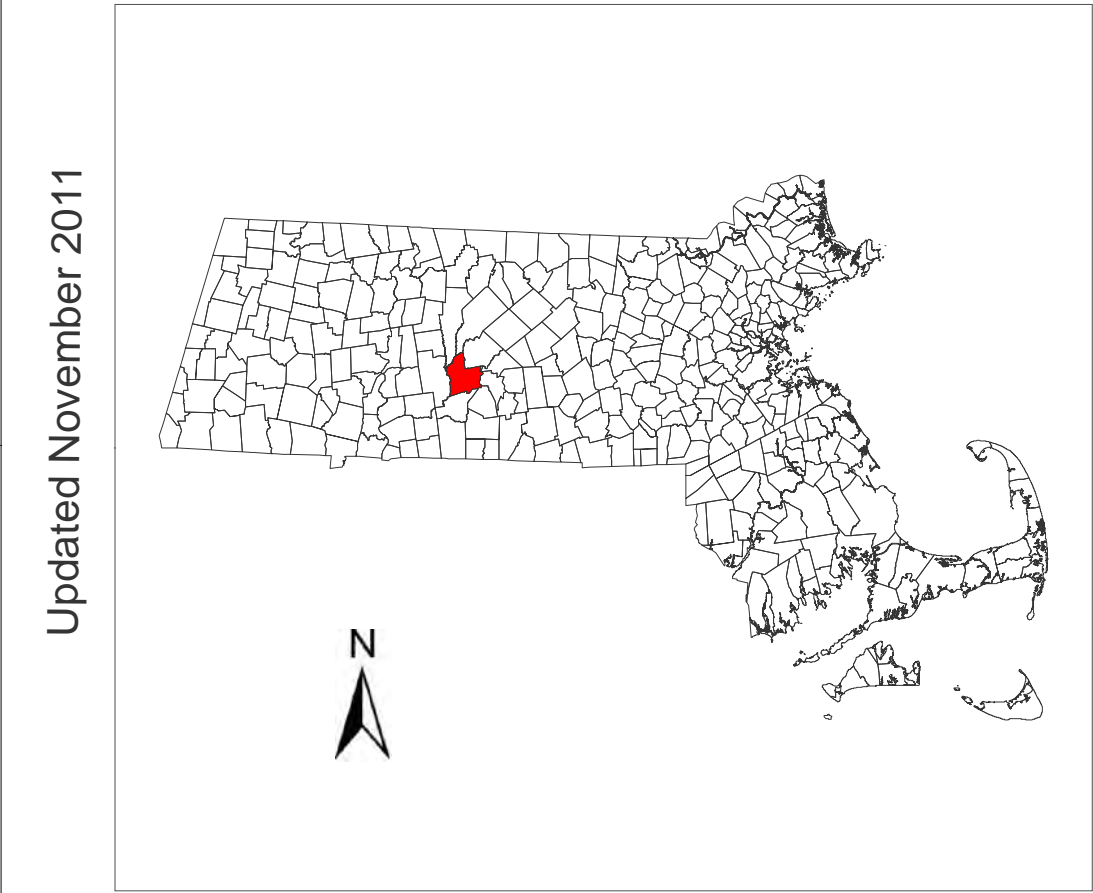
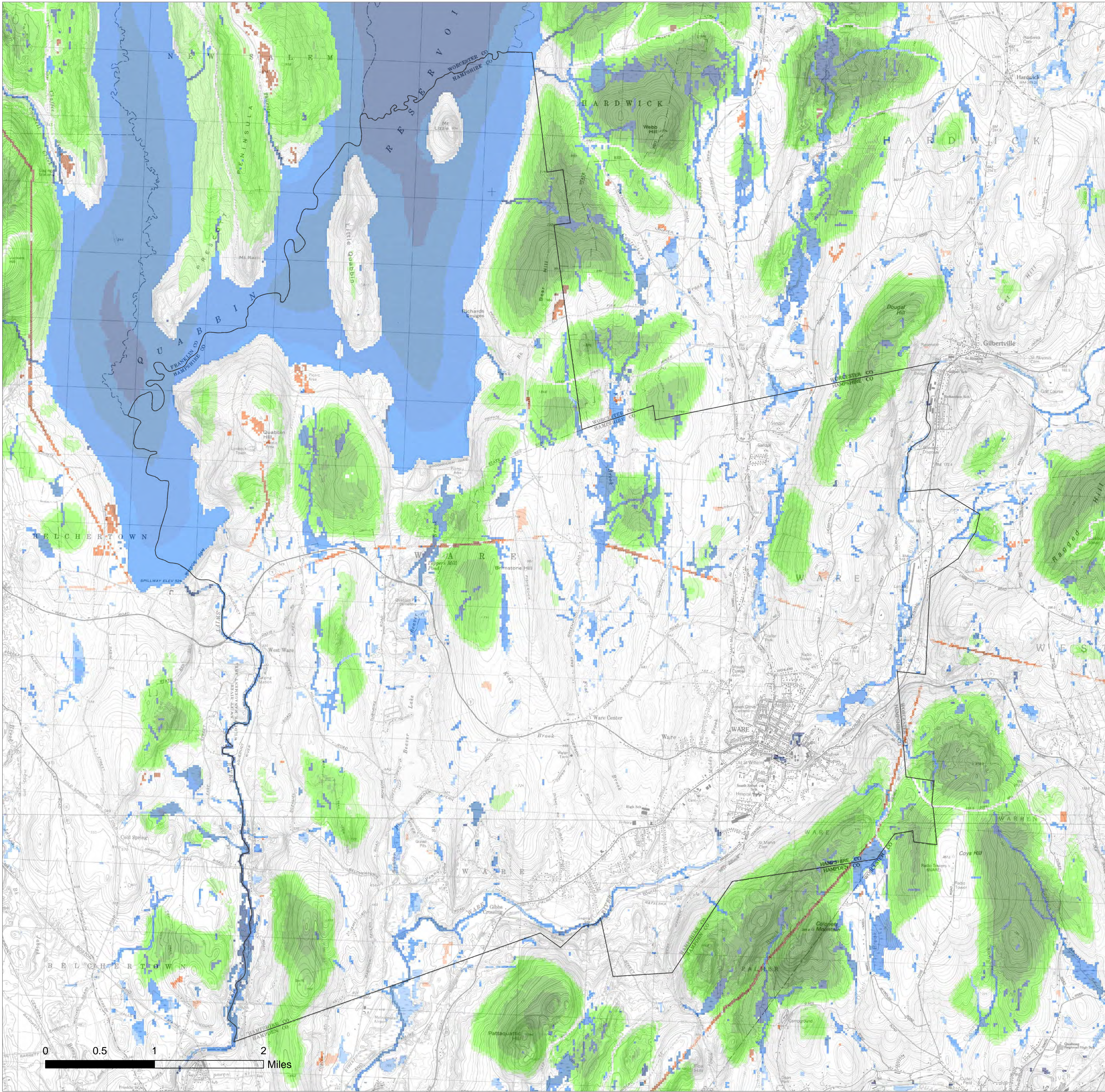
Numerous physical factors influence the sustainability of animal species communities, including plant species coverage, elevation, climate, development, pollution, and the availability of food and water. A species may decline or increase based upon a small change in any of these elements. Generally, Ware's physical characteristics provide a variety of wildlife habitats, including mixed and hardwood forestlands, agricultural and abandoned open fields, ponds and lakes, streams and rivers, wetlands, and even residential backyards. The most common species found in western Massachusetts in these categories are listed in Table 4.3. Many of these species may be hunted periodically with a valid hunting or fishing license.

Map 18 shows the soils that are best suited to support wetland wildlife. It should be noted that wetlands can occur on other soil types, but they are most sustainable on soils rated fair or good.

CAPS: The MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands (June 2006) adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts, Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict "Habitat of Potential Regional or Statewide Importance" which may require further review when work is proposed in these areas (see Map 19). These maps are known as "Important Habitat" and are based upon the integrated index of ecological integrity and depict all areas (not just regulated "resource areas") that score in the top 40% for Index for Ecological Integrity-Integrated (IEI-I). Areas designated as "Habitat of Potential Regional and Statewide Importance" represent 40% of the undeveloped landscape as well as 40% of each ecological community (e.g. forest, shallow marsh, shrub swamp, forested wetland, salt marsh). Areas within the polygons that are also within Wetland Protection Act jurisdiction represent "Habitat of Potential Regional or Statewide Importance" and may trigger detailed review.

CAPS Index of Ecological Integrity (IEI)

Town of WARE, MA



IEI, Index of Ecological Integrity

Top 50% of the Landscape



50-60 60-70 70-80 80-90 90-100% IEI

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The IEI, or Index of Ecological Integrity, delineates the relative wildlife habitat and biodiversity value of any point on the landscape based on landscape ecology principles and expert opinion. The IEI is calculated by the Conservation Assessment and Prioritization System (CAPS) computer program developed at the University of Massachusetts, Amherst. Depicted on this map are those areas representing 50% of the landscape with the highest IEI values; the darker the color the higher the integrity value. For more information see: <http://www.masscaps.org>.

Coastal beaches and rocky intertidal shores are included as Coastal Wetland and Aquatic.

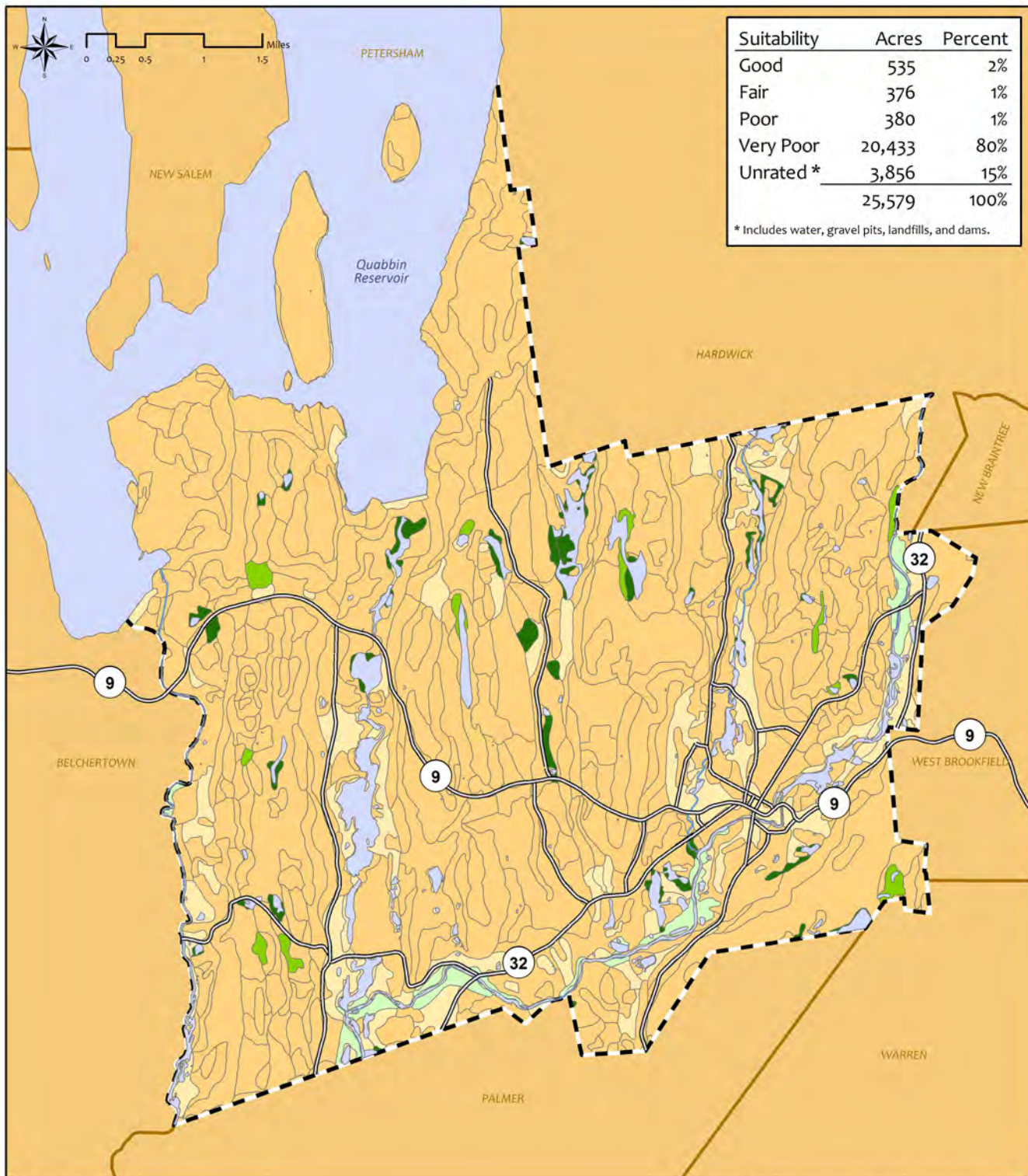
These maps were funded by grants from The Nature Conservancy and the Federal Highway Administration via a grant administered by the Massachusetts Department of Transportation, the Massachusetts Department of Environmental Protection and the U.S. Environmental Protection Agency under section 104 (b) (3) of the U.S. Clean Water Act. Data sources include the Office of Geographic and Environmental Information (MassGIS).

Prepared in cooperation with the Massachusetts Department of Transportation Office of Transportation Planning, and the United States Department of Transportation, Federal Highway Administration. The contents of this report reflect the views of the author(s), who is (are) responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Massachusetts Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Table 4-3: Common Wildlife by Habitat in Hampshire County

Habitat Type	Animal Type	Common Species
Woodland	Reptiles	turtle, snake
	Amphibians	salamander, tree frog, toad
	Birds	ruffed grouse, crow, hawks, turkey, woodpeckers, owls, songbirds
	Mammals	deer, rabbit, squirrel, woodchuck, chipmunk, raccoon, fox, skunk, porcupine, American Black Bear, bobcat, coyote, fisher, woodland jumping mouse, voles
Open Land	Insects	spiders, wasps, bees, ants, flies, moths, butterflies, beetles, mosquitoes, dragonflies
	Reptiles	snakes
	Birds	pheasant, crow, hawks, swallow, songbirds
	Mammals	cottontail, skunk, woodchuck, moles, shrews, bats, meadow jumping mouse, voles, mice
Open Water	Insects	mosquito, dragonfly, horsefly, moths
	Fish	herring, shad, trout, salmon, pickerel, pike, carp, catfish, perch, bass
	Reptiles	turtles
	Amphibians	frogs, toads, salamanders, newts
	Birds	Canada goose, mallard, osprey, bald eagle, kingfisher, swallow
	Mammals	beaver, otter
Wetland	Insects	mosquito, earthworms, beetles, snails, flies, dragonfly
	Fish	pickerel, carp, shiner, shad
	Reptiles	turtles, snakes
	Amphibians	salamanders, frogs, peepers
	Birds	ducks, herons, egrets, osprey, killdeer, kingfisher, grouse, pheasant, goose, songbirds
	Mammals	deer, rabbit, opossum, raccoon, fox, mink, beaver, otter, muskrat, skunk, moose
Residential	Insects	flies, mosquitoes, bees, wasps, beetles
	Reptiles	snakes
	Amphibians	toads, frogs
	Birds	crows, songbirds
	Mammals	squirrel, chipmunk, raccoon, rabbit, mice

Sources: A Natural Resource Inventory Atlas for Hampshire County, Cooperative Extension Service, UMass Amherst, 1979; with additions based on the current state mammal list, obtained from the MA Division of Fish & Wildlife 1/15/2016 at: <http://www.mass.gov/eea/agencies/dfg/dfw/fish-wildlife-plants/state-mammal-list.html>



Legend

Suitability for Wetland Wildlife

- Good
- Fair
- Poor
- Very poor
- Unrated

Open Space & Recreation Plan

Map 18: Suitability of Soil for Wetland Wildlife

May 25, 2013

Sources:

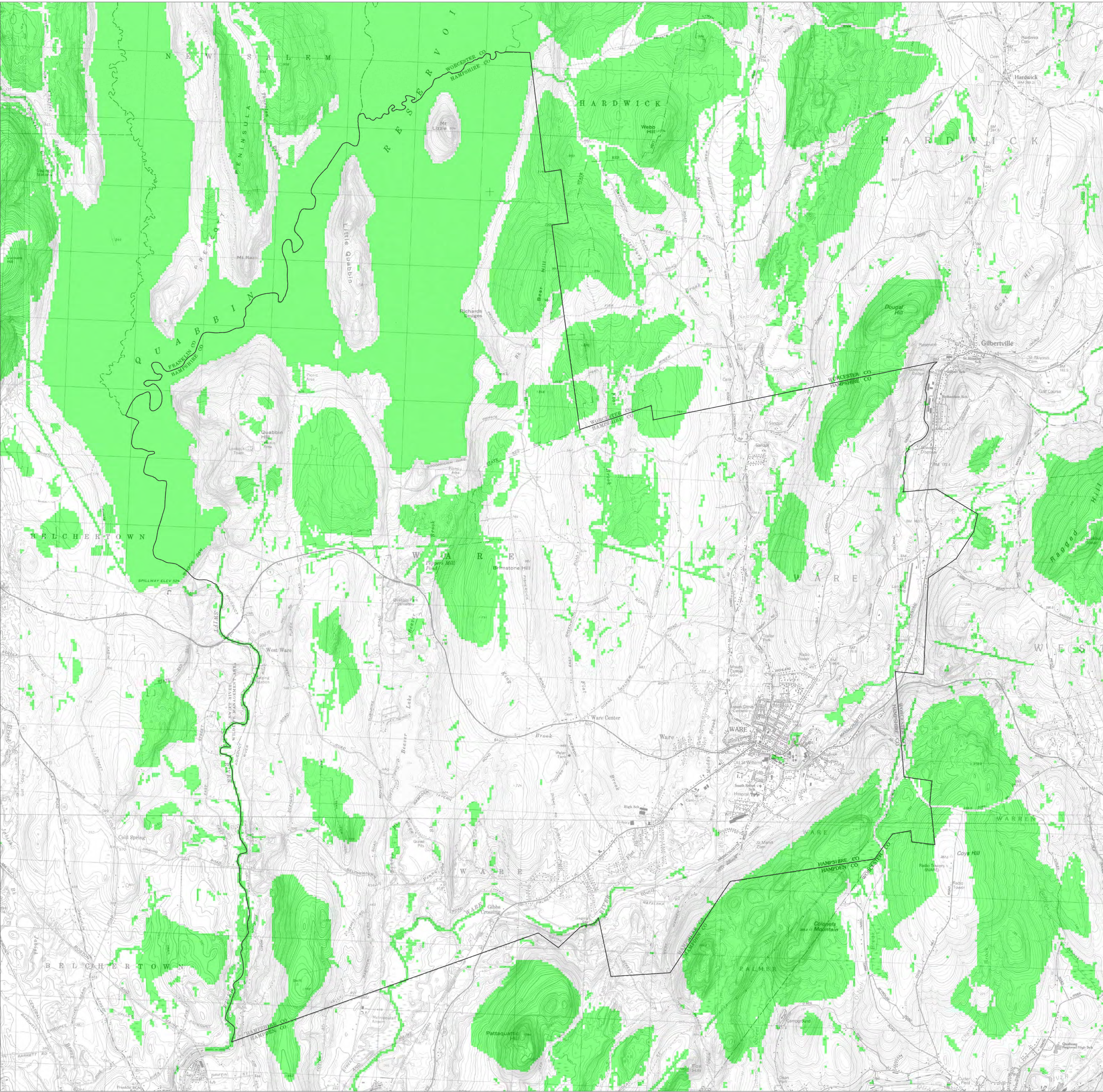
MassGIS: Towns, Roads, Waterbodies, Rivers
 Ware: Open Space
 NRCS: Soils (2007)

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Habitat of Potential Regional or Statewide Importance

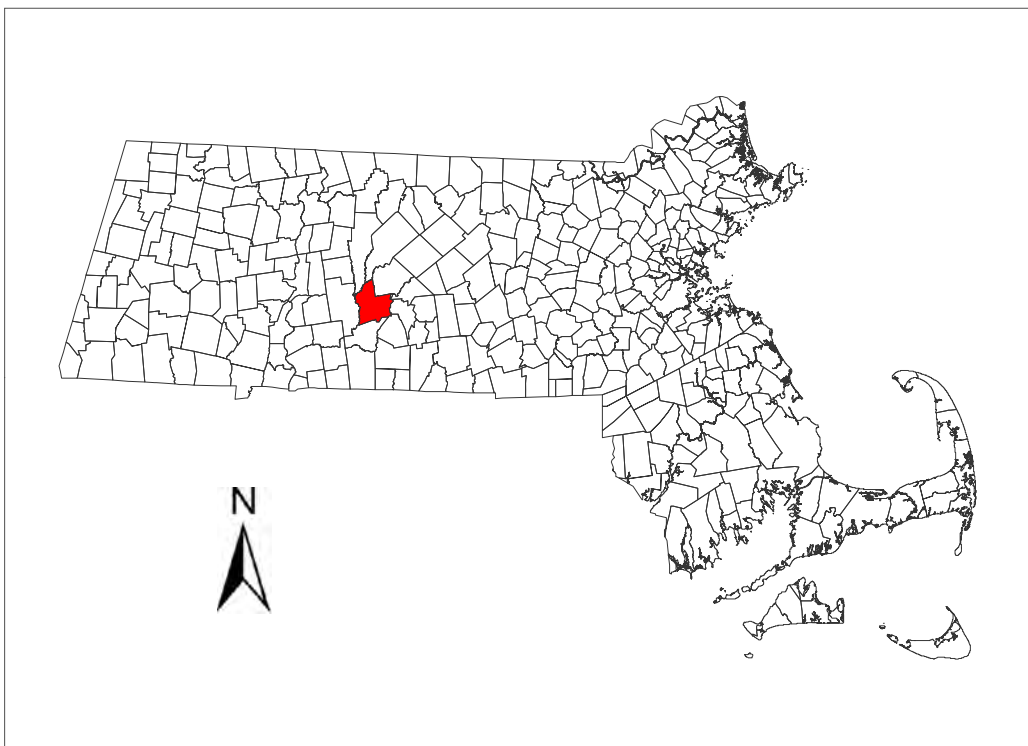
Town of WARE, MA



0 0.5 1 2 Miles

 Important Wildlife Habitat

Updated November 2011



The MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands, June 2006 adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict Habitat of Potential Regional or Statewide Importance that may trigger more intensive levels of review. For more information on how to assess wildlife habitat impacts, see Section III of the Guidance document: <http://www.mass.gov/dep/water/laws/wldhab.pdf>.

The CAPS model assesses the ecological integrity of Massachusetts landscape features as influenced by environmental stressor metrics (e.g. pollution, fragmentation). CAPS relies on data that are broadly available across Massachusetts. Ecological features which are not consistently surveyed or uniformly available, such as certified vernal pools, rare species, and contamination sites are not included in CAPS. When available, this more specific ecological information may be used in conjunction with the CAPS outputs to better understand particular sites in Massachusetts and support informed conservation decision-making. For more information on the statewide maps produced by the CAPS model, see: <http://www.masscaps.org>.

These maps are funded in part by the Massachusetts Executive Office of Energy and Environmental Affairs, the Massachusetts Department of Environmental Protection and the U.S. Environmental Protection Agency under section 104 (b)(3) of the U.S. Clean Water Act. Environmental data sources include the Office of Geographic and Environmental Information (MassGIS).



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Vernal Pools

Ware has 66 Certified Vernal Pools (CVPs) and 145 Potential Vernal Pools (PVPs) (identified from aerial photographs, needing verification on the ground). In addition, areas of swamps will provide habitat for vernal pool species. Ware's vernal pools are shown on map 16 with the natural communities. Clusters of vernal pools provide particularly good habitat for species that depend on this habitat. The clusters mean that there are alternate habitats if something happens to one pool, and slightly different conditions in each may provide different habitats for pool dependent species. There is a Vernal Pool Core in BioMap2 Core 1694.

Corridors for Wildlife Migration

Wildlife diversity is a function of the size and shape of undeveloped land, and the variety of habitat types available to animals. Species often must occupy more than one land type during its day, year, or lifetime. For example, the white tail deer will shelter in the thick evergreen forest, forage for berries along the edge of a field, and drink from a small stream, all in the same day. In addition, many species require overland migration routes to hunt or forage for food and water as well as seek shelter and propagate. Major natural corridors must be recognized as potential migration routes for many animals. Recreation trails or undeveloped floodplains and riverfronts can successfully serve as wildlife migration routes.

Rare Species

Bridle Shiners are small (<5 cm) minnows that swim in schools, moving in and out of vegetation along the edges of open, clear water in lakes and ponds and slack areas of streams and rivers. They feed on small insects and other aquatic animals (see Table 4-4 for MESA status).

Blue-spotted Salamanders were reported from Ware in the 1800s, but not since then. Although the species is known from only scattered occurrences in the Quabbin area, there are recent records in nearby towns. Working in cooperation with landowners to survey vernal pools in the spring might locate the species. Blue-spotted Salamanders inhabit upland forest during most of the year. In the spring, adults migrate to breed and lay their eggs in vernal pools, swamps, marshes, and other predominantly fish-free wetlands. After larvae metamorphose during late spring they disperse into upland forest.

Four-toed Salamanders nest in patches of sphagnum moss that overhang streams. The young drop into the streams where they live until maturity, at which time they move to nearby forests. Protecting healthy populations will help prevent them from needing additional protections of the Endangered Species Act. While not an obligate vernal pool species, the occurrences in Ware are in an area with a cluster of certified and potential vernal pools in BioMap2 Core 1694 as well as in Core 1704 in the Aquatic Core along Muddy Brook.

Wood Turtles have been reported from multiple areas in Ware, particularly along Muddy Brook. Wood Turtle habitat is comprised of streams and rivers, preferably with long corridors of connected uplands extending on both sides of the waterways. Both of the turtle species known in Ware nest in sandy upland areas and are susceptible to a high mortality rate when they move among parts of their habitats, particularly



where they must cross roads. Because turtles have low nest and juvenile survivorship, losing only a few adults annually can cause populations to decline because of low replacement rates.

Eastern Box Turtles spend most of their adult lives in Oak-Pine forests, but juveniles live in wetlands and adults favor wetlands during the hottest part of the summer. In Massachusetts, the best and most viable populations of Eastern Box Turtles are in the southeastern part of the state. The turtle has seldom been reported in Ware, with a report in 1928 and one more recently. Like the Blue-spotted Salamander, records from Quabbin area towns are very scattered, despite being relatively common (for a rare species) along the Connecticut River and south of the Quaboag River nearer the Connecticut border.

The three state-listed birds most recently observed in Ware occupy quite different habitats from each other. Pied-billed Grebes are secretive marsh birds that typically nest in dense cattail beds adjacent to open water. They are very sensitive to disturbance and changes in water levels.

Bald Eagles nest in tall trees along large lakes and rivers. Large lakes and rivers also support important winter congregations of Bald Eagles. Fish make up the bulk of their diet. Missing from the local environment since the early 1900s, they were reintroduced at the Quabbin in the 1980s. The effort was successful and today Bald Eagle populations are increasing and the Quabbin area is both a nesting area and an overwintering area for the species.

The Eastern Whippoorwill is a ground-nesting, nocturnal bird that is uncommon and declining. It has largely disappeared as a breeding bird from the Berkshires and the more developed areas of eastern Massachusetts. In Massachusetts, it occurs most commonly in the woodlands of the southeastern part of the state, but there are still populations in the Connecticut River Valley and the Quabbin area.

Southern Bog Lemming are small unobtrusive voles that live in tunnels, eat stems and leaves of grasses, and live in bogs and other, often drier, grassy habitats. Ware has one of very few currently known occurrences of the species in Massachusetts. The best management strategy is to leave them alone.

Ware has two state-listed species of freshwater mussel and another that was recently removed from the list and remains of conservation interest. The presence of these species in local streams, particularly Muddy Brook and the Ware River, confirms the importance of maintaining the clean, flowing waters for these species and others that share these habitats.

Brook Floater (or Swollen Wedge mussel) are small freshwater mussels that inhabit streams and rivers with low to moderate water velocities, stable substrates, low nutrients and good water quality. They are currently known in only four water bodies in the state, making Ware's population very important.

Creepers are freshwater mussels that inhabit low-gradient reaches of small to large rivers with sand or gravel substrates. Creepers are best supported by cool to warm waters with diverse fish assemblages.

Triangle Floaters are commonly found in low-gradient river reaches with sand and gravel substrates and low to moderate water velocities.

Both listed and recently delisted species of dragonflies are known in Ware. Clustered along the Ware River, these species also occur in and near other wetlands. Although each has its own distinct habitat, the nymphs of all species are aquatic and burrow in sediments of the wetland types they prefer. As with the freshwater mussels, maintaining clean, free flowing water is important for maintaining the species. Young adults of all the species use surrounding upland forests for protection while they reach maturity.

Two state-listed species of moths have been identified in Ware. Orange Sallow Moths inhabit dry, open oak woodlands on rocky uplands. Females lay their eggs on false foxgloves where the larvae feed on flowers, seeds, and foliage. Melsheimer's Sack Bearer known only historically in Ware, inhabits sandplain pitch pine/scrub

oak barrens, especially scrub oak thickets within frost pockets. Larvae feed exclusively on scrub oak (*Quercus ilicifolia*) in Massachusetts. The species is now limited to Cape Cod and the offshore islands, west to Plymouth.

Table 4-4: Rare Species












Name	Massachusetts Endangered Species Act (MESA) Status	Most Recent Year Observed
VERTEBRATES		
Bird, Bald Eagle (<i>Haliaeetus leucocephalus</i>)	T	2012
Bird, Eastern Whippoorwill (<i>Caprimulgus vociferous</i>)	SC	2012
Bird, Pied-billed Grebe (<i>Podilymbus podiceps</i>)	E	2000
Fish, Bridle Shiner (<i>Notropis bifrenatus</i>)	SC	2005
Lemming, Southern Bog (<i>Synaptomys cooperi</i>)	SC	1992
Salamander Blue-spotted (<i>Ambystoma laterale</i>)	SC	1800s
Salamander, Four-toed (<i>Hemidactylium scutatum</i>)	Delisted	2007
Turtle, Eastern Box Turtle (<i>Terrapene Carolina</i>)	SC	1928
Turtle, Wood Turtle (<i>Glyptemys insculpta</i>)	SC	2010
INVERETBRATES		
Dragonfly, Arrow Clubtail (<i>Stylurus spiniceps</i>)	Delisted	2004
Dragonfly, Beaverpond Clubtail (<i>Gomphus borealis</i>)	Delisted	1991
Dragonfly, Brook Snaketail (<i>Ophiogomphus aspersus</i>)	SC	2004
Dragonfly, Riffle Snaketail (<i>Ophiogomphus carolus</i>)	T	2004
Dragonfly, Spine-crowned Clubtail (<i>Gomphus abbreviates</i>)	SC	2004
Moth, Melsheimer's Sack Bearer (<i>Cicinnus melsheimeri</i>)	T	Historic
Moth, Orange Sallow Moth (<i>Pyrrhia aurantiago</i>)	SC	2010
Mussel, Brook Floater/Swollen Wedgemussel (<i>Alasmidonta undulate</i>)	E	2009
Mussel, Creeper (<i>Strophitus undulates</i>)	SC	2009
Mussel, Triangle Floater (<i>Alasmidonta undulata</i>)	Delisted	2009



F. Scenic Resources and Unique Environments

Scenic Landscapes

Most of the Town could be considered scenic. From its open farmland to its historic downtown, Ware is filled with beautiful landscapes. Citizens have described some exceptional places where the scenery is particularly noteworthy. This is the scenery that Ware residents cherish, that attracts new residents, and that visitors remember. These places should be given the highest priority when considering scenic open space protection. These scenic areas should be integrated with certain recreation activities, such as hiking and biking trails. These places are shown on Map 15 and include:

-  Several spots along the Ware River afford great views of the river and surrounding countryside.
-  The dams near East and South Streets are very popular scenic spots. These dams could serve as trail nodes or designated picnic areas, but currently all surrounding land is in private ownership. Public safety should be considered if improvements are made.
-  The Quabbin Reservation is a favorite place for hiking, picnicking and birdwatching. Creating a trail network linking the populated areas of town with the Quabbin Reservation should be examined.
-  Snow's Pond is a favorite destination for fishing, walking and picnicking, and is close to the center of town.
-  Fisherdict Road provides views of Mount Tom and the Quabbin Tower.
-  Route 9 eastbound before the descent to downtown and along Warren Road provide glimpses of Ware.
-  The Cascades is an intermittent stream with waterfall at the intersection of Old Belchertown Road and Sczgiel Road.
-  The Shea Farm on Gilbertville Road provides beautiful views of the surrounding area.
-  The Covered Bridge at Old Gilbertville Road is a unique scenic site in Ware and Gilbertville.
-  Grenville Park provides an incredible view of the Ware River from Frog's Hill.
-  Mirror Rock on Coy Hill provides views of the Holyoke Range, Mt. Monadnock, and Ware.

Major Characteristics

Ware is a town comprised of a series of glacial ridges and valleys. Typical of the region, many of the town's ridges have steep slopes and rocky soil, and therefore were never developed for agriculture. These ridges are thickly forested and provide critical habitat for certain species of birds and mammals that could not survive elsewhere. Waters shed from these ridges fill the rivers upon which the town was founded. The steep landforms provide climatic shelter for the valley inhabitants, and add to the scenic quality of Ware.

Planning efforts should include protection of these ridges from development. Clear-cut logging practices increase runoff which can lead to flooding and siltation of wetlands. Structures built upon the ridges would impact the scenic quality of the landscape. Wildlife habitat will certainly diminish with intense human use. These ridges help to make the valleys of Ware such great places to live.

Cultural, Archeological, and Historic Areas

The past must be remembered in order to assess the present. Preserving places and districts creates a bridge between then and now, over which we can cross to learn and reflect. Preservation of irreplaceable heritage is in the public interest so that cultural, educational, aesthetic, inspirational, economic, and energy benefits can be maintained and enriched for future generations.

Pursuant to the 1966 National Historic Act, the National Register of Historic Places has a central role in identifying buildings, sites, districts, structures, etc., worthy of preservation. Areas proposed for historic district designation do not need to be of national or state importance. Historic districts should be created by cities and towns to protect areas that are significant to their locality. A historic district may be established when “the relationship to each other of a sufficient number of buildings creates a whole which is greater than the sum of its parts.” (Cambridge Historic District Study Committee, Final Report, Cambridge, 1962.) According to the National Register of Historic Places, Ware has five national historic districts (see Map 5):

Church Street Historic District - from Church Street between Park Avenue and Highland Street. Dating from 1800 to 1900 and later, this district contains 73 structures and is architecturally and historically significant as a substantially intact residential part of a 19th century New England factory village.

Ware Center Historic District - Route 9, east and west of Greenwich Plains Road. Dating from 1700 to 1899, this district of twenty structures. It is significant for its spatial organization and architectural forms of the 18th century colonial settlement of Ware, as well as aspects of the town’s 19th century development.

Ware-Hardwick Covered Bridge – spans the Ware River in Ware from Old Gilbertville Road and in Gilbertville village in Hardwick from Bridge Street. It dates from approximately 1886 and is significant because it is only one of four 19th century wooden bridges in Massachusetts still standing in its original location. It was rebuilt in 2010 after being closed for 8 years due to structural deficiencies.

Millyard District – in the downtown along South, Church, Canal, Main, Park, Pleasant, and Otis Streets, contains forty-five structures. Beginning in 1821, the structures were built by three manufacturing companies over a 10-year period. These structures are noteworthy as exceptionally intact examples of the style used in this era of industrial development and its corresponding impact on residential development.

Town Hall - corner of Routes 9 and 32, dates from 1885-1886 and is a Romanesque Revival building with strong Richardsonian overtones. The Town Hall is also significant for its importance in centralizing Ware’s activities in the present downtown.



Grenville Park

In the early 1900s there were no large parks in Ware. Aspen Grove Cemetery and the Pumping Station Grounds (where the town wells are located, off Barnes Street) were the most important open spaces owned by the Town and were used for pleasure strolling and driving. The public also enjoyed the vacant lands on the outskirts of town for playing ball, picnicking, and accessing other parts of town. While this use did not create serious objection from land owners, there was a great need for a permanent public park to provide recreation. Through the civic spirit of one of the park commissioners, Mr. J.H.G. Gilbert, Ware secured land that provided ample outdoor recreation facilities within a few minutes' walk of the downtown: Grenville Park.

Grenville Park commemorates Grenville Gilbert, Jr., the beloved son of Mr. and Mrs. Gilbert. They felt that the best way to perpetuate the memory of their son was to associate his name with a permanent feature in the daily life of the community. It assured their home town a lasting and beautiful environment on the site where natural beauty lay in abundance.

The park was designed by Arthur A. Shurtleff of Boston, a landscape architect and urban planner. His ambition was to design a park that was reminiscent of the best natural wild landscapes of New England including tree and shrubbery arrangements and the choice of native vegetation. The Park includes ball fields, intimate spaces, and open spaces, which gives people many opportunities for different kinds of recreation. The plan includes maintenance schedules, descriptions of the various trees and shrubs, and specific details about the reasoning behind such design decisions such as leaving open spaces open and footpaths graveled instead of paved (Arthur A. Shurtleff, 1923). The park is also an integral part of the Ware River Valley Greenway Trails Project (see Chapter 5). Grenville Park is truly a gem in the Town of Ware.

Quabbin Park Cemetery

Also noteworthy is the Quabbin Park Cemetery. In 1938, the towns of Dana, Prescott, Enfield and Greenwich were disincorporated in order to create the Quabbin Reservoir. The 6,500 graves from these towns were moved here forming the Quabbin Park Cemetery, located on Route 9 in Ware.

Unique Environments

There are no designated Areas of Critical Environmental Concern in Ware. An Area of Critical Environmental Concern (ACEC) boundary is delineated upon designation by the Secretary of Environmental Affairs and includes any areas needed to protect and preserve significant natural resource features such as estuaries, wetlands, floodplain, and forested upland.

G. Environmental Challenges

Hazardous Waste and Brownfield Sites

Former Ware Farm Equipment Company, 200 West Street: The roughly 14 acre site was formerly the Ware Farm Equipment Company and was contaminated with both hazardous material and petroleum substances. Approximately 5 to 7 acres of the property was also a solid waste disposal area that was last used in the mid-1920s and is now capped and inspected annually. Burning waste at the disposal site led to elevated concentrations of total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs) in the soil, groundwater and surface water samples. The parcel was subdivided in 2010 and 4.4 acres, where the old buildings were located, has been cleaned up and redeveloped into the town fire and rescue station.

Former Ware Coal Gasification Plant, Monroe Street, Ware RTN 1-17892: The site was formerly owned by Amerigas Eagle Propane, Limited, which had acquired it in the holdings of previous owners; the Ware Gas Company had used the site to manufacture gas from coal. The site was found to have evidence of coal tar during a 2010 Phase I Environmental Site Assessment. In 2012 DEP issued a Notice of Intent to Mobilize and began an environmental site assessment. This assessment identified contamination at the site which could potentially be contained on site with a "cap in place" method. The Town acquired the property in 2014 by tax taking, which provides limited liability for the Town regarding contamination cleanup. The Town is currently working with DEP to perform additional assessments of the site in order to determine if a portion of it is clean enough to allow some recreational use. The Town plans to redevelop this site primarily as a parking lot to serve the adjacent Memorial Field recreational facility. If DEP permits, a portion of the site will be used to build recreational facilities such as a basketball court and playground, as an extension of the Memorial Field facility.

Landfills

The town landfill located off Robbins Road was capped in 2008. Landfill leachate can pose an environmental hazard, especially given its proximity to the Ware River. The site is undergoing long-term post-closure groundwater, surface water and gas emission monitoring under the supervision of MA DEP to identify any migrating contaminants. The landfill is located next to the town-owned Banas Farm, an important conservation property with recreational potential. Any future recreational use of this property should be planned in consultation with the Board of Health and MA DEP's Solid Waste Division to prevent potential public health risks from landfill leachate. For environmental and public safety reasons, access to the capped landfill is restricted except for designated monitoring and maintenance.

A parcel of land on Sheehy Road was used as a dump at one time for approximately one year. The DEP required site assessment and remediation, which has been completed with the installation of a cap in 2015. The site is located in the Zone II Groundwater Protection Area, with groundwater contributing to the town wells.



Erosion and Sedimentation

The Town has minimal erosion and sediment controls that establish requirements and procedures to control the adverse impacts associated with stormwater runoff from land development. Additional measures to address erosion and sedimentation were also mentioned in the town's Pre-Disaster Mitigation Plan, developed with funding from Massachusetts Emergency Management Agency in 2007.

During the winters of 2011 and 2012, the DPW applied 2,047 tons of sand and 1,114 tons of salt on the roads.

Chronic Flooding

Because Ware has so many water sources and floodplains that have long been built upon, the town has an infamous history of flooding. Ware's rivers exceeding their banks have caused much damage. The Ware River, being the largest and closest to town, has flooded many times, especially along upper Church Street near the airport, and again along Route 32. The Muddy Brook has been known to flood near Reed Pool, and the Flat Brook along Route 9. Ware has always been concerned about flooding in town.

In 2013, a focus for the Department of Public Works included several significant drainage repairs, a culvert replacement at the Pines, and substantial road re-surfacing.

New Development

New development in town remains very limited and at this time is well regulated by local zoning. A new solar field has been approved for property that borders West Brookfield; the solar installation will also include a large area in West Brookfield and construction is likely to be completed in 2016.

Ground and Surface Water Pollution

As noted in Table 4-5 Beaver Lake is impaired for Eurasian Water Milfoil, and the segment of the Ware River above the Ware Dam has had elevated E. coli levels. MassDEP is requiring a Total Maximum Daily Load (TMDL) report be designed for this segment to address the bacteria issue.

Table 4-5: Massachusetts Year 2012 Integrated List of Waters			
Surface Water	Segment ID	Size	Category
Beaver Lake	MA36010	150 acres	Category 4c Impairment not caused by a Pollutant (Eurasian Water Milfoil, <i>Myriophyllum spicatum</i>)
Ware River	MA36-05; Wheelwright Dam, New Braintree/ Hardwick to Ware Dam, Ware.	11.5 miles	Category 5 Requiring aTMDL (<i>Escherichia coli</i>)
Ware River	MA36-06; Ware Dam, Ware to Thorndike Dam, Palmer	10.1 miles	Category 5 Requiring a TMDL (Fecal Coliform)
Source: MA DEP			

Invasive Species

Like most of New England, invasive species have become quite common in Ware. Eurasian Water Milfoil in Beaver Lake has been under treatment annually for 10 to 15 years. Grenville Park manages its most publicly used areas for bittersweet, multiflora rose, barberry, and Euonymous. The 66 acre town forest is heavily infested with invasive species including bittersweet, barberry, honeysuckle, multiflora rose, winged euonymous, and buckthorn.

Environmental Equity

The vast majority of the recreational facilities in Ware are located close to the downtown area, within or close to the Environmental Justice area. Two exceptions to this are the Pennybrook soccer field and the Quabbin Reservation. Most of the open space in town is located outside of the Environmental Justice area, including land no longer available for development that is owned by the state (e.g. wildlife management areas, Quabbin Reservation), town (e.g. town forests, cemeteries), non-profit organizations (e.g. conservation restrictions on land trust properties), or private landowners (e.g. conservation or agricultural preservation restrictions on private land). Maps 5, 15, and 20 illustrate this.





The Town should consider the potential for increasing active recreation facilities in the more rural parts of town. Examples include developing new ball fields at the Pennybrook site, developing trails and trailhead parking at the Town Forests, partnering with landowners of properties with conservation restrictions for trailhead parking to provide better access to trails on those properties, and exploring opportunities to increase access to the waterways and waterbodies in Ware. The Town should also continue efforts to develop the northern section of the Ware River Greenway rail trail, working with Massachusetts Electric Company, the East Quabbin Land Trust, and a private property owner to secure land and/or the rights for the public to use the old rail bed through their properties.



Inventory of Lands of Conservation and Recreation Interest



This inventory of lands of conservation and recreation interest describes the ownership, agency management, current use, condition, recreation potential, public access, type of public funding, zoning, and degree of protection for each parcel. The degree of protection from destruction or degradation that is afforded to various parcels of land owned by private, public, and nonprofit owners is also evaluated. Protecting open space is important to ensure that future generations have land available for farming, timber production, and recreation. It also protects water supplies from degradation due to increased development. Protecting open space is critical to preserving habitats and habitat corridors for wildlife, from insects to moose and bears. Open space helps maintain clean air which all life depends on, whether plant or animal. Protecting land for recreational purposes – both active and passive – is important to ensure that future generations have places to play sports or simply walk among fields or trees, observing the natural world. Such activities are important for human health, helping with issues such as weight control, cardio-vascular health, and stress reduction among many other benefits. As a town's population grows, more people want to participate in sports, and the recreational facilities for such sports need to be increased to ensure they are not overused to the point where, for example, grass can no longer grow on the fields.

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

A. Private Parcels

There are 4,050 acres enrolled in Chapter 61, 61A, and 61B as identified in the table on Map 20. A detailed inventory by owner is included as Table 5-1, which corresponds to Map 20, Open Space by Type. The Agricultural Preservation Restriction (APR) Program is a voluntary program that offers a non-development alternative to farmland owners that are faced with a decision regarding future use and

Chapter 61 Tax Program

Each program provides a means to assess land at its current use (forest, agriculture, or open space/recreation) as opposed to its development value.

Chapter 61 - Intended for landowners with long-term, active forest management. Assessment of forestland based on the land's ability to grow timber.

Chapter 61A - Intended for landowners engaged in agricultural or horticultural use. Assessment based on the land's ability to produce the agricultural or horticultural product being grown. Forestland may be enrolled and is based on the land's ability to grow timber.

Chapter 61B - Intended for landowners maintaining the land in a substantially natural, wild or open condition. Assessment of forestland under Ch. 61B is 25% of the current assessed value of the land.

deposition of their farms. The program, operated by the Massachusetts Department of Agricultural Resources (MDAR), offers farmers a payment up to the difference between the "fair market value" and the "fair market agricultural value" of their farmland in exchange for a permanent deed restriction, which precludes any use of the property that will have a negative impact on its agricultural viability. Ware is one of 162 cities and towns in Massachusetts with APR protected farms.

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

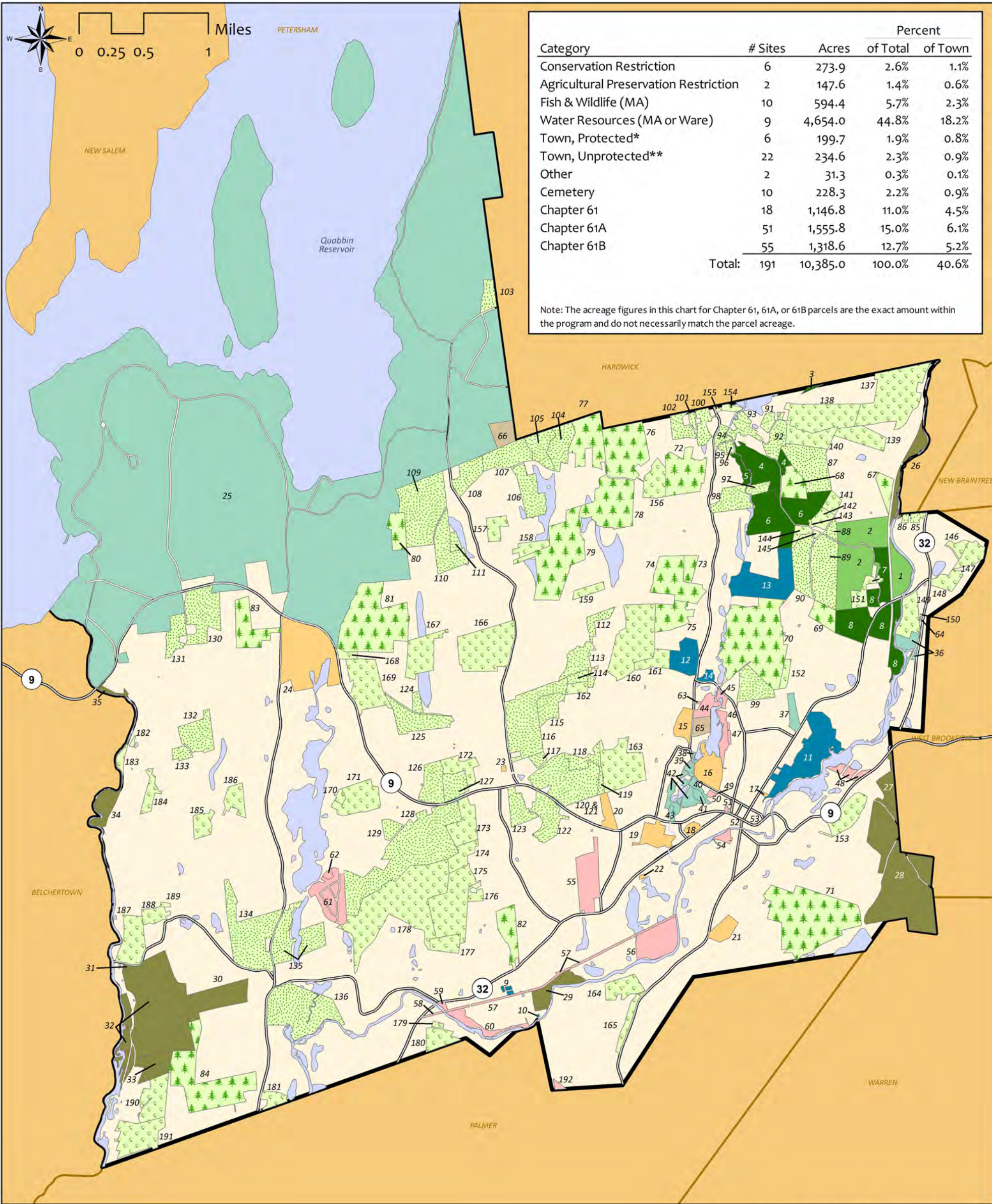
There are two agricultural preservation restrictions in Ware totaling 148 acres, and six CRs totaling 274 acres, as identified in Table 5-2 and shown on Map 20.

Table 5-2: Conservation and Agricultural Preservation Restrictions

OS Map ID	Restriction Type	Site Name	Fee Owner	Restriction Holder
1	APR	Lincoln	Lincoln, W. Chandler III	MA DAR
2	APR	Lincoln CR	Lincoln, W. Chandler III	East Quabbin Land Trust
3	CR	Baker CR	East Quabbin Land Trust	Hardwick Conservation Commission
4	CR	Klassanos CR	Klassanos, Brian and Martha	Ware Water Commission and East Quabbin Land Trust
5	CR	Strawberry Fields	Penny Lane Development LLC	Ware Conservation Commission
6	CR	Hyde Conservation Initiative CR	East Quabbin Land Trust	Ware Conservation Commission
7	CR	Lincoln	Lincoln, W. Chandler III	MA DAR
8	CR	Frohloff Farm CR	East Quabbin Land Trust	Ware Conservation Commission

Source: Ware Planning & Community Development Department





Legend

Open Space by Type

Conservation Restriction	Agric. Pres. Restriction	Other
Fish and Wildlife	Water Resources	Cemetery
Town, Protected*	Town, Unprotected**	61 - Forest
		61A - Agriculture
		61B - Recreation

Open Space & Recreation Plan

Map 20: Open Space by Type

November 5, 2014

Sources:
MassGIS: Open Space*, Waterbodies, Rivers, Roads, Towns
Ware: Open Space*

* Open Space database is a combination of data obtained from MassGIS, the Town of Ware Assessor's and Conservation Commission offices, the UMass LARP Fall 2012 "Prelude to a Master Plan," and research by Karen Cullen, Director of Planning & Community Development.

Town of Ware
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* Protected Town lands include parcels that have either deed restrictions or town meeting votes which permanently protected the land.
** Unprotected Town lands include parcels that, even if originally meant for a specific use, were never given any permanent protection through a deed restriction or town meeting vote.

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(bck of fold out map)



OS Id #	Type	Site Name	Owner	Acres*	Primary Purpose	Public Access	Level of Protection	Assessor Parcel ID	Owner Type
1	APR	Lincoln	LINCOLN W CHANDLER III	29.1	A	L	Permanent	36-5-1	P
2	APR	Lincoln CR	LINCOLN W CHANDLER III	118.5	A	L	Permanent	36-0-53	P
3	CR	Baker CR	EAST QUABBIN LAND TRUST INC	1.6	C	Y	Permanent	44-0-4	L
4	CR	Klassanos CR	KLASSANOS BRIAN T + MARTHA S	51.5	C	Y	Permanent	40-0-38	P
5	CR	Strawberry Fields	PENNY LANE DEVELOPMENT LLC	8.1	C	N	Permanent	40-44-5	P
6	CR	Hyde Conservation Initiative CR	EAST QUABBIN LAND TRUST INC	100.3	C	Y	Permanent	40-0-80	L
7	CR	Lincoln	LINCOLN W CHANDLER III	23.7	A	L	Permanent	36-0-5	L
8	CR	Frohloff Farm CR	EAST QUABBIN LAND TRUST INC	88.7	C	L	Permanent	36-0-50	L
9	TP	Zoller Parcels	WARE TOWN OF	2.4	C	Y	Permanent	10-96-1	M
10	TP	Zoller Parcels	WARE TOWN OF	0.3	C	Y	Permanent	6-0-20	M
11	TP	Grenville Park	WARE TOWN OF	87.5	R	Y	Permanent	23-0-15	M
12	TP	Town Forest	WARE TOWN OF	32.0	C	Y	Permanent	29-0-15	M
13	TP	Town Forest	WARE INHABITANTS OF THE TOWN	72.2	B	Y	Permanent	35-15-1	M
14	TP	Town Forest	WARE TOWN OF	5.3	B	Y	Permanent	29-0-46	M
15	C	Mount Carmel Cemetery	ROMAN CATHOLIC BISHOP OF SPFLD	17.2	H	Y	Permanent	23-0-6	N
16	C	Aspen Grove Cemetery	WARE TOWN OF	31.7	H	Y	Permanent	60-0-72	M
17	C	East Church Cemetery	UNITED CHURCH OF WARE	0.7	H	Y	Permanent	61-0-41	N
18	C	St Williams Cemetery	ROMAN CATHOLIC BISHOP OF SPFLD	5.5	H	Y	Permanent	56-0-26	P
19	C	St Williams Cemetery	ROMAN CATHOLIC BISHOP OF SPFLD	24.1	H	Y	Permanent	56-0-110	P
20	C	Holy Cross National Cemetery	HOLY CROSS POLISH NATIONAL	14.1	H	Y	Permanent	16-0-22	M
21	C	St Marys Cemetery	ROMAN CATHOLIC BISHOP OF SPFLD	16.9	H	Y	Permanent	11-0-19	M
22	C	Indian Cemetery	WARE TOWN OF	0.9	H	Y	Permanent	52-0-91	M
23	C	Ware Center Cemetery	WARE TOWN OF	0.9	H	Y	Permanent	21-0-51	M
24	C	Quabbin Reservoir Cemetery	MASS- DCR WATER SUPPLY	116.2	W	L	Permanent	64-0-1	S
25	WR	Quabbin Reservoir	MASS - DFW	7,931.0	W	L	Permanent	64-0-1	S
26	FW	Ware River Access	MASS - DFW	21.4	B	Y	Permanent	41-0-22	S
27	FW	Coy Hill WMA	MASS - DFW	17.7	C	Y	Permanent	24-0-25	S
28	FW	Coy Hill WMA	MASS - DFW	198.1	C	Y	Permanent	18-0-4	S
29	FW	Ware River Access	MOULSON CHARLOTTE R & BERNARD V	26.7	C	Y	Permanent	10-0-3	S
30	FW	Herman Covey WMA	MASS - DFW	51.7	C	Y	Permanent	8-1-1	S
31	FW	Herman Covey WMA	MASS - DFW	1.5	C	Y	Permanent	7-0-4	S
32	FW	Herman Covey WMA	MASS - DFW	221.9	C	Y	Permanent	3-0-10	S
33	FW	Herman Covey WMA	MASS - DFW	28.9	C	Y	Permanent	3-13-3	S
34	FW	Herman Covey WMA	MASS - DFW	22.7	C	Y	Permanent	19-0-1	S
35	FW	Herman Covey WMA	MASS - DFW	3.8	C	Y	Permanent	25-0-23	S
36	WR	Dismal Swamp Well Field	WARE TOWN OF	14.4	W	Y	Very High	30-44-1	M
37	WR	Church St Water Tank	WARE TOWN OF	11.4	W	N	Very High	23-0-13	M
38	WR	Snow's Pond Dam	WARE TOWN OF	1.3	W	X	Very High	62-0-44	M
39	WR	THE PINES - WATERWORKS DEPT.	WARE TOWN OF	3.2	W	X	Very High	62-0-45	M
40	WR	THE PINES - WATERWORKS DEPT.	WARE TOWN OF	5.3	W	Y	Very High	60-0-177	M
41	WR	Kubinski Field	WARE TOWN OF	4.1	W	Y	Very High	60-0-70	M
42	WR	THE PINES - WATERWORKS DEPT.	WARE TOWN OF	21.0	W	Y	Very High	60-0-70	M
43	WR	Reed Memorial Pool	WARE TOWN OF	3.2	W	Y	Very High	60-0-70	M
44	TU	Future Cemetery	WARE TOWN OF	13.1	B	Y	Low	29-0-72	M
45	TU	Snow's Pond	WARE TOWN OF	3.9	B	Y	Low	29-0-67	M
46	TU	Snow's Pond	WARE TOWN OF	12.9	B	Y	Low	23-0-8	M
47	TU	Snow's Pond	WARE TOWN OF	2.1	B	Y	Low	63-0-45	M
48	TU	East Street Riverfront	WARE TOWN OF	10.1	X	Y	Low	24-0-14	M
49	TU	Pleasant Street Lot	WARE TOWN OF	0.2	B	Y	Low	60-0-228	M
50	TU	Pleasant Street Lot	WARE TOWN OF	1.6	B	Y	Low	60-232-1	M
51	TU	Veteran's Memorial Park	WARE TOWN OF	0.9	R	Y	Low	61-0-6	M
52	TU	Nenamesek Park	WARE TOWN OF	0.1	H	Y	Low	57-0-91	M
53	TU	Pocket Park	WARE TOWN OF	0.1	H	Y	Low	57-0-98	M
54	TU	Memorial Field	WARE TOWN OF	5.4	R	Y	Low	57-0-62	M
55	TU	Ware School Campus	WARE TOWN OF	47.4	O	Y	Low	16-0-14	M
56	TU	Banas Farm	WARE TOWN OF	48.0	X	N	Low	11-0-21	M
57	TU	Old Railroad Bed	WARE TOWN OF	17.1	R	Y	Low	10-0-136	M
58	TU	Old Railroad Bed	MASSACHUSETTS CENTRAL RAILROAD	3.4	R	Y	Low	5-0-33	M
59	TU	Walmart Riverfront	WARE TOWN OF	1.7	X	Y	Low	9-0-170	M
60	TU	Walmart Riverfront	WARE TOWN OF	16.9	X	Y	Low	9-170-2	M
61	TU	Penybrook	WARE TOWN OF	43.8	B	Y	Low	14-0-8	M
62	TU	Penybrook	WARE TOWN OF	2.6	R	Y	Low	14-8-66	M
63	TU	Greenwich Road Drainage	WARE TOWN OF	0.6	O	N	Low	29-69-1	M
64	TU	Gilbertville Road Slice	WARE TOWN OF	0.3	C	N	Low	36-0-38	M
65	OTHER	Catholic Church	ROMAN CATHOLIC BISHOP OF SPFLD	12.0	H	Y	Low	23-0-7	N
66	OTHER	Beaver Lake Lot	BEAVER LAKE ASSOC.	19.3		N	Low	64-0-3	N
67	61		OBERG CARL O + DEBORAH A	11.9			Temporary	41-0-15	P
68	61		FINN DANIEL L	25.1			Temporary	40-0-36	P
69	61		MURPHY MARTIN & ROBIN M	17.6			Temporary	30-1-1	P
70	61		MOULTON GARY C & LORNA J	159.8			Temporary	29-0-48	P
71	61		RICHARDS LINDA T + EUGENE A	147.7			Temporary	17-0-17	P
72	61		SMITH CECILIA A	57.6			Temporary	40-0-8	P
73	61		MOULTON CHARLES A TRUSTEE OF THE CHARLES A MOULTON	11.6			Temporary	35-2-4	P
74	61		MOULTON ROBERT A + JILL M	58.8			Temporary	35-2-1	P
75	61		MOULTON CHARLES A TRUSTEE OF THE CHARLES A MOULTON	33.5			Temporary	35-0-2	P
76	61		REYNOLDS EDWARD G TRUSTEE	51.0			Temporary	39-0-4	P
77	61		SUPKA MARJORIE T &	63.4			Temporary	39-0-3	P
78	61		REYNOLDS EDWARD G TRUSTEE	70.0			Temporary	39-21-1	P
79	61		VADNAIS GERARD E & MARIA J	143.1			Temporary	34-0-4	P
80	61		KING WILLIAM C SR + PATRICIA L	18.8			Temporary	33-0-14	P
81	61		HULL FORESTLANDS LP	126.0			Temporary	26-0-16	P
82	61		SUNNY SIDE STORAGE LLC	20.0			Temporary	10-0-105	P
83	61		KRANTZ DARYL L + ANITA E	37.4			Temporary	26-0-6	P
84	61		BERGERON DARLENE A	96.0			Temporary	4-0-1	P
85	61A		CROCKETT LAWRENCE M +	4.2			Temporary	41-0-23	P
86	61A		CROCKETT LAWRENCE M	2.2			Temporary	41-22-1	P
87	61A		SINCLAIR LINDA A & COUTURE RICHARD P &	86.0			Temporary	40-36-2	P
88	61A		SHEA KEVIN T	6.8			Temporary	36-0-4	P
89	61A		SHEA KEVIN T	63.4			Temporary	36-0-54	P
90	61A		SHEA KEVIN T	27.1			Temporary	36-0-1	P
91	61A		CARLSON DONALD R	8.7			Temporary	40-0-26	P
92	61A		CARLSON DONALD R	22.3			Temporary	40-0-27	P
93	61A		CARLSON DONALD R	14.4			Temporary	40-0-25	P
94	61A		CARLSON DONALD R	6.5			Temporary	40-0-23	P
95	61A		CARLSON DONALD R	2.6			Temporary	40-41-1	P
96	61A		CARLSON DONALD R	3.5			Temporary	40-0-41	P
97	61A		SINCLAIR LINDA A & COUTURE RICHARD P &	8.7			Temporary	40-0-79	P
98	61A		SINCLAIR LINDA A & COUTURE RICHARD P &	29.2			Temporary	40-0-79	P
99	61A		MOULTON ERIC J SR	31.3			Temporary	29-53-1	P
100	61A		CAMPBELL EDWARD R +	17.0			Temporary	43-0-2	P
101	61A		CAMPBELL EDWARD R	1.5			Temporary	43-0-1	P
102	61A		CAMPBELL EDWARD R	17.1			Temporary	43-1-2	P
103	61A		WENZEL FRANKLIN D & DEBORAH L	13.6			Temporary	64-0-2	P
104	61A		STUTZMAN BYRON W + NANCY C TR	21.7			Temporary	39-0-2	P
105	61A		STUTZMAN BYRON W + NANCY C TR	25.0			Temporary	39-0-1	P
106	61A		SIEGEL DAVID T	36.1			Temporary	39-0-27	P

OS Id #	Type	Site Name	Owner	Acres*	Primary Purpose	Public Access	Level of Protection	Assessor Parcel ID	Owner Type
107	61A		PULCHTOPEK MICHAEL T & MELISSA LYNN	30.6			Temporary	38-0-8	P
108	61A		SMITH TERRANCE & IVY	26.4			Temporary	38-0-7	P
109	61A		JUDA MICHAEL F	97.0			Temporary	33-0-15	P
110	61A		JUDA STANLEY P LIFE EST	41.5			Temporary	33-0-17	P
111	61A		JUDA MICHAEL F & DEBRA R	6.6			Temporary	33-0-16	P
112	61A		LAGRANT FRANK E JR & BERNADET	12.3			Temporary	34-0-10	P
113	61A		KADRA CLAUDIA M & JAMES V TRUSTEES OF THE SHEA	30.6			Temporary	28-0-6	P
114	61A		KADRA CLAUDIA M & JAMES V TRUSTEES OF THE SHEA	8.2			Temporary	28-4-1	P
115	61A		SOPER JOHN C & MURRAY JAMIE A	22.0			Temporary	22-12-1	P
116	61A		SOPER JOHN C & MURRAY JAMIE A	45.4			Temporary	22-0-12	P
117	61A		CHRBASZCZ STANLEY + THEODOR	6.4			Temporary	22-19-1	P
118	61A		SZCZEPANEK JOSEPH S JR + JODI S	23.8			Temporary	22-0-46	P
119	61A		SZCZEPANEK JOSEPH S JR + JODI S	5.0			Temporary	22-0-45	P
120	61A		CHRBASZCZ STANLEY + THEODOR	85.8			Temporary	22-0-53	P
121	61A		CHRBASZCZ STANLEY + THEODOR	0.1			Temporary	22-51-1	P
122	61A		CHRBASZCZ STANLEY + THEODOR	36.9			Temporary	22-0-5	P
123	61A		COOK DAVID G CATHERINE M	31.6			Temporary	22-0-9	P
124	61A		JUDA STEVEN T	9.0			Temporary	27-0-6	P
125	61A		JUDA STEVEN T	46.0			Temporary	27-0-1	P
126	61A		LETENDRE LLC	31.0			Temporary	21-0-31	P
127	61A		BISKUP MICHAEL S & SHARON A	19.0			Temporary	21-0-32	P
128	61A		LETENDRE LLC	176.1			Temporary	21-0-5	P
129	61A		LETENDRE LLC	10.0			Temporary	15-0-25	P
130	61A		TUREK ROBERT S & CYNTHIA A	60.4			Temporary	31-0-4	P
131	61A		TUREK ROBERT & CYNTHIA	23.6			Temporary	25-0-10	P
132	61A		KOKOSKI MARK E	35.1			Temporary	19-0-29	P
133	61A		KOKOSKI FRANK W JR	8.8			Temporary	19-0-24	P
134	61A		MORIARTY LORETTE C LIFE ESTATE	89.0			Temporary	8-0-17	P
135	61A		MORIARTY MICHAEL + MICHAEL JR	13.0			Temporary	8-0-18	P
136	61A		MORIARTY MICHAEL + MICHAEL JR	76.0			Temporary	8-0-20	P
137	61B		SULLIVAN JOHN E JR +	87.8			Temporary	44-0-1	P
138	61B		BROWN PATRICK J	62.9			Temporary	43-16-1	P
139	61B		EATON GREGORY & PATRICIA	26.3			Temporary	41-0-10	P
140	61B		WIEDERSHEIM LEO P	31.4			Temporary	43-0-17	P
141	61B		CLOUTIER KATHLEEN A	8.0			Temporary	41-0-1	P
142	61B		HORTON MATTHEW F & LORRI A	9.6			Temporary	41-0-26	P
143	61B		ROOT KENNETH R	1.4			Temporary	36-0-55	P
144	61B		ROOT KENNETH R	4.7			Temporary	36-0-2	P
145	61B		ROOT KENNETH R	1.7			Temporary	36-2-1	P
146	61B		SIEGEL JAMES L & SHELLEY A	5.1			Temporary	37-0-4	P
147	61B		SIDUR SIMONE L WARBURTON SUSAN L	17.1			Temporary	37-0-8	P
148	61B		BISH WILLIAM J JR	14.3			Temporary	36-0-27	P
149	61B		O'RILEY RICHARD C + JOAN M CO-	25.0			Temporary	36-0-48	P
150	61B		O'RILEY RICHARD C + JOAN M CO-	0.3			Temporary	36-0-39	P
151	61B		LINCOLN ROGER N & ELIZABETH HOWE LIFE ESTATE	14.6			Temporary	36-0-52	P
152	61B		DEVINE MATTHEW D ET AL	7.8			Temporary	29-73-1	P
153	61B		KNAPP JOSEPH & PATRICIA	37.3			Temporary	24-0-34	P
154	61B		SINKOSKI MARK J & DONNA A	6.0			Temporary	43-0-7	P
155	61B		SINKOSKI MARK J & DONNA A	0.9			Temporary	43-6-3	P
156	61B		SCIORTINO FAMILY PARTNERSHIP NUMBER 1 &	26.5			Temporary	39-0-9	P
157	61B		LETENDRE LEO F	14.4			Temporary	38-0-12	P
158	61B		LOBODA EDWARD JR	13.7			Temporary	34-0-3	P
159	61B		COUNTRYLAND REALTY INC	10.0			Temporary	34-0-7	P
160	61B		DEECHER ANDREW & CECILIA	70.7			Temporary	28-42-1	P
161	61B		BREEDON KENNETH & RUBY L	12.0			Temporary	28-0-46	P
162	61B		HARDER PETER	8.2			Temporary	28-0-4	P
163	61B		PODKOWKA JOHN S & BARBARA LOU	64.0			Temporary	22-0-42	P
164	61B		MARTOWSKI JOSEPH T	23.0			Temporary	10-140-1	P
165	61B		MARTOWSKI STANLEY J	14.0			Temporary	6-0-16	P
166	61B		DESANTIS CHRISTOPHER J	82.2			Temporary	28-0-30	P
167	61B		ELDRIDGE CHRISTOPHER	38.0			Temporary	27-0-17	P
168	61B		LEMON CHESTER L + DEBRA J	5.0			Temporary	26-16-1	P
169	61B		LEMON CHESTER L + DEBRA J	46.0			Temporary	26-0-19	P
170	61B		KENYON JAMES W + LINDA M	2.7			Temporary	49-100-2	P
171	61B		KENYON JAMES W	41.4			Temporary	20-0-5	P
172	61B		BORONSKI WALTER	23.1			Temporary	21-0-33	P
173	61B		HARDER CRAIG S + DOREEN M	33.3			Temporary	21-0-4	P
174	61B		PILCH JOHN J	17.5			Temporary	15-0-19	P
175	61B		PILCH JOHN J	84.1			Temporary	15-0-17	P
176	61B		PILCH CHRISTINE	8.4			Temporary	15-0-16	P
177	61B		PILCH JOHN J	15.0			Temporary	9-0-44	P
178	61B		PILCH JOHN J	77.5			Temporary	8-0-44	P
179	61B		BOSS GLADYS R +	4.6			Temporary	5-27-1	P
180	61B		BOSS GLADYS R	9.0			Temporary	5-0-27	P
181	61B		HANCOCK JAMES D	10.6			Temporary	4-0-15	P
182	61B		SKOWRON BOLAC J & JOSEPH S	1.4			Temporary	19-0-10	P
183	61B		SKOWRON BOLAC J	6.8			Temporary	19-0-9	P
184	61B		GRENIER PAUL E + TARA S	13.4			Temporary	19-12-50	P
185	61B		YOUNG DONNA A	11.0			Temporary	19-22-5	P
186	61B		DANE ERIC R	17.4			Temporary	20-6-1	P
187	61B		SKOWRON BOLAC J	38.6			Temporary	7-0-15	P
188	61B		DESJARDINS GARY E & LAURIE A	12.1			Temporary	13-0-1	P
189	61B		DESJARDINS LAURIE A	1.6			Temporary	13-3-1	P
190	61B		BIRK GENE E & BIRK GLEN E	37.8			Temporary	3-13-1	P
191	61B		PISARSKI JOSEPH S &	61.1			Temporary	1-0-15	P
192	TU	Palmer Consv Comm	PALMER TOWN OF	2.5	C	X	Low	6-1-1	M

* Acreage data for the privately held lands in Chapter 61, 61A, and 61B are the acreage actually within the program, not the entire acreage of the parcel. (Data from the Assessor's Office, Oct. 2014).

Key:

Type:

- APR - Agricultural Preservation Restriction
- CR - Conservation Restriction
- FW - MA Fish & Wildlife
- WR - Water Resources (MA DCR or Ware Water Dept.)
- TP - Town of Ware, protected permanently
- TU - Town of Ware, Not protected permanently
- OTHER - other forms of protecton
- C - Cemetery
- 61 - Chapter 61, Forest
- 61A - Chapter 61A, Agriculture
- 61B - Chapter 61B, Recreation

Primary Purpose:

- A - Agriculture
- B - Recreation & Conservation
- C - Conservation
- F - Flood Control
- H - Historical / Cultural
- O - Other
- Q - Habitat
- R - Recreation
- S - Scenic
- U - Underwater
- W - Water Supply
- X - Unknown

Public Access:

- Y - Full
- N - None
- L - Limited
- X - Unknown

Owner Type:

- S - State
- M - Municipal
- L - Land Trust
- N - Private Non-profit
- P - Private

B. Public and Nonprofit Parcels

The Town of Ware owns 529.2 acres of land for conservation and recreation purposes as identified in Table 5-3 Municipal Lands. Most of the town-owned land, with the exception of public water supply source locations, is open for passive or active recreation uses. Table 5-3 includes both current and potential use of these lands. Other publicly owned land for conservation or recreation purposes is identified in Table 5-4. The following paragraphs describe Ware's most prominent public and non-profit owned spaces.

Grenville Park

J. H. Grenville Gilbert (1851-1932) and his wife Grace (née Brown) donated Grenville Park in memory of their son, Grenville Gilbert, Jr., who died while attending preparatory school. Construction of the park took many years and the park was officially accepted by the town in 1907. In 1911, the Gilberts donated an additional 30 acres west of the river, and another 10 acres on the east to enhance and protect the view. In 1917, suitable land in the park was plowed and given over to gardening under the Food Conservation Committee. In the early 1920s, Sylvester Baxter wrote an article for the Boston Transcript that described Grenville Park as Massachusetts's "most notable instance of a public park established as a memorial." He called the park "Ware's loveliest adornment," which "preserves the landscape by uniting the woodlands with the river" (Conkey, 1961). Tennis courts were constructed in the mid 1920s and in 1941 the park also boasted a ski jump! Today, Grenville Park is open year round with the back section seasonally closed to vehicular traffic. Among its 100+ acres, one will find:

- ✚ 2 Little League baseball diamonds
- ✚ 1 multi-purpose field
- ✚ 1 bandstand (rebuilt in 2014 with PARC grant, town match, and private funding)
- ✚ 1 boat ramp and new dock
- ✚ 2 handicap fishing piers
- ✚ 1 picnic pavilion
- ✚ 6 picnic areas
- ✚ 1 steel-framed playground area
- ✚ 1 regulation-sized basketball court
- ✚ 2 miles of oil/stone roadway
- ✚ Walking trails leading through 80+ acres of woods and along the Ware River
- ✚ Winter walking, snowshoeing, cross-country skiing, and sledding
- ✚ Opportunities for bird-watching and wildlife viewing

Veterans' Memorial Field & William H. Dearden Memorial Field House, Monroe Street

In 1942, property from the former Gilbert mill yard, George H. Piper and the Ware Gas Company, was donated to create a four-acre ball field off Monroe Street, abutting the Ware River. The field house was named after William H. Dearden, late editor of the Ware River News, and member of the special committee that created the athletic field. The field itself is named in honor of all the men and women of Ware who had served their country during periods of war. The park was dedicated on July 18, 1948.

Today, parking is available on South Street. During spring and summer the field is home to Ware's varsity baseball team. Other leagues, including Babe Ruth, Mickey Mantle, Connie Mack and an Over-30 traveling baseball team, use the field. During fall months, youth football and soccer leagues practice and play here as well. Features include a field house, bleachers, storage shed, and a lighted basketball court.

In March 2012, the town began making improvements here using Community Development Block Grant (CDBG) funds; most notably, state-of-the-art lighting, a new path system, and general field improvements. These improvements were completed in 2014.

Reed Municipal Pool: The Reed Municipal Pool is located at 119 West Main Street next to Beauregard Memorial Playground. This is an outdoor pool that opens at the end of June and closes at the end of August. The dimensions of the pool are 60 feet wide by 110 feet long, and ranges in depth from 3 feet to 10 feet. There is also a playground and picnic tables at this site.

Kubinski Field: Kubinski Field is located close to some of the municipal water supply wells and is thus under the jurisdiction of the DPW. The baseball diamond is maintained by the Parks Department. The field is used by both youth and adult baseball programs.

Pennybrook: Most of the land at the Pennybrook site is not formally being used, but area residents do use it for walking, nature study, and walking their dogs. Through volunteer efforts, a small portion of the site has been developed into a soccer field, which is heavily used by many of the youth soccer teams. Discussions about expanding recreational opportunities at the site are ongoing.

Banas Farm: The Banas Farm offers access to the Ware River as well as opportunities for passive and active recreation. Its scenic hillside views, open meadows, river frontage, and easily viewed wetlands contribute to its beauty. The Ware River Greenway, a rail trail which is part of the Mass Central Rail Trail system, abuts this large property.

Frohloff Farm: The Frohloff Farm, owned by the East Quabbin Land Trust, is an 89 acre site comprised of open fields and forest land abutting the Ware River. It is located on Church Street and includes a quarter mile of old railroad bed which is destined to become part of the Ware River Greenway rail trail when the adjacent sections are developed. There are trails open to the public on the property. Part of the site is actively farmed with a focus on small livestock. The land trust purchased the adjacent farmhouse in 2010 and after renovations leased it to the farmer who farms the property. The land trust has also begun work to restore a pitch pine and oak woodland on the site. The project, funded in part by the USDA's Natural



Resource Conservation Service, will improve wildlife habitat and restore the regionally declining pitch pine and oak woodland along the Ware River.

Hyde Woodland Preserve: This 100 acre parcel is owned by the East Quabbin Land Trust and is located along the southern flank of the Dougal Range. The property is entirely forested and is dominated by white pine and a mixture of hardwoods. The property is divided by the heavily eroded and abandoned Old Stagecoach Road, a public way, which is currently overtaken by a host of invasive plants. This old town road once connected Old Gilbertville Road to Hardwick Pond Road. Interesting stone walls, cellar holes, and unique landscape features such as steep talus slopes are found throughout the property. Some of the wildlife occurring in the area include white-tailed deer, beaver, black bear, bobcat, gray and red fox, coyote, moose, turkey, bald eagle, and a large variety of migratory birds including interior nesting songbirds. The property is currently open for hunting, fishing, and passive recreation. Access is from existing trails along the Dougal Range, such as through the adjacent Ware Town Forest parcel or from Hardwick Pond Road via the abandoned section of Old Stagecoach Road. In 2016 the land trust and the Town are working to establish a small trailhead parking area on Old Gilbertville Road, with a trail leading to the Hyde Woodland Preserve via Old Stagecoach Road.

Table 5.3: Municipal Lands

OS Id #	Type	Site Name	Management Agency	Acres	Current Use	
9	TP	Zoller Parcels	Conservation Commission	2.4	C	
10	TP	Zoller Parcels	Conservation Commission	0.3	C	
11	TP	Grenville Park	Town; Parks & Rec Comm	87.5	R	
12	TP	Town Forest @ Walker and Greenwich Roads	Town	32.0	C	
13	TP	Town Forest	Town	72.2	B	
14	TP	Town Forest	Town	5.3	B	
16	C	Aspen Grove Cemetery	Ware Cemetery Comm	31.7	H	
22	C	Indian Cemetery	Ware Cemetery Comm	0.9	H	
23	C	Ware Center Cemetery	Ware Cemetery Comm	0.9	H	
36	WR	Dismal Swamp Well Field	Town; DPW	14.4	W	
37	WR	Church St Water Tank	Town; DPW	11.4	W	
38	WR	Snow's Pond Dam	Town; DPW	1.3	W	
39	WR	The Pines - Waterworks Dept.	Town; DPW	3.2	W	
40	WR	The Pines - Waterworks Dept.	Town; DPW	5.3	W	
41	WR	Kubinski Field	Town; DPW	4.1	W	
42	WR	The Pines - Waterworks Dept.	Town; DPW	21.0	W	
43	WR	Reed Memorial Pool and Ball Field	Town; DPW	3.2	W	
44	TU	Open Space	Town	13.1	B	
45	TU	Snow's Pond	Town	3.9	B	
46	TU	Snow's Pond	Town	12.9	B	
47	TU	Snow's Pond	Town	2.1	B	
48	TU	East Street Riverfront	Town	10.1	X	
49	TU	Pleasant Street Lot	Town	0.2	B	
50	TU	Pleasant Street Lot	Town	1.6	B	
51	TU	Veteran's Memorial Park	Town	0.9	R	
52	TU	Nenamesek Park	Town	0.1	H	
53	TU	Pocket Park	Town	0.1	H	
54	TU	Memorial Field	Town; Parks & Rec Comm	5.4	R	
55	TU	Ware School Campus	Town; School Dept	47.4	O	
56	TU	Banas Farm	Town	48.0	X	
57	TU	Old Railroad Bed	Town	17.1	R	
58	TU	Old Railroad Bed*	Town	3.4	R	
59	TU	Walmart Riverfront	Town	1.7	X	
60	TU	Walmart Riverfront	Town	16.9	X	
61	TU	Pennybrook	Town	43.8	B	
62	TU	Pennybrook	Town	2.6	R	
63	TU	Greenwich Road Drainage	Town	0.6	O	
64	TU	Gilbertville Road Slice	Town	0.3	C	
Total Acreage:				529.2		

* Note, the Assessor data does not match the deed for this parcel; which indicates the portion south of the Ware River is owned by the Mass Central RR.



See key at bottom of next page.

Potential Use	Funding for Acquisition	Public Access	Level of Protection	Zoning	Assessor Parcel ID	Condition
parking for bike trail	unknown	Y	Permanent	Suburban Resid.	10-96-1	unknown
unknown	unknown	Y	Permanent	Suburban Resid.	6-0-20	unknown
expand passive rec	Town	Y	Permanent	Rural Resid.	23-0-15	good
passive rec	unknown	Y	Permanent	Rural Resid.	29-0-15	good
forestry	unknown	Y	Permanent	Rural Resid.	35-15-1	fair
forestry	unknown	Y	Permanent	Rural Resid.	29-0-46	good
n/a	unknown	Y	Permanent	Downtown Resid	60-0-72	good
n/a	unknown	Y	Permanent	Highway Commercial	52-0-91	poor
n/a	unknown	Y	Permanent	Rural Resid.	21-0-51	good
n/a	unknown	Y	Very High	Rural Resid.	30-44-1	good
active recreation field	unknown	N	Very High	Rural Resid.	23-0-13	good
n/a	unknown	X	Very High	Downtown Resid	62-0-44	fair
n/a	unknown	X	Very High	Downtown Resid	62-0-45	good
n/a	unknown	Y	Very High	Downtown Resid	60-0-177	good
expand active recreation	unknown	Y	Very High	Downtown Resid	60-0-70	good
n/a	unknown	Y	Very High	Downtown Resid	60-0-70	good
active recreation	unknown	Y	Very High	Downtown Resid	60-0-70	good
cemetery/ recreation	unknown	Y	Low	Downtown Resid	29-0-72	good
passive/active recreation	unknown	Y	Low	Downtown Resid	29-0-67	good
passive/active recreation	unknown	Y	Low	Downtown Resid	23-0-8	good
passive/active recreation	unknown	Y	Low	Downtown Resid	63-0-45	good
conservation/passive recreation	unknown	Y	Low	Rural Resid & Highway Commercial	24-0-14	good
access to Kubinski Field	unknown	Y	Low	Downtown Resid	60-0-228	good
active/passive recreation	unknown	Y	Low	Downtown Resid	60-232-1	good
n/a	unknown	Y	Low	Downtown Commercial	61-0-6	excellent
n/a	unknown	Y	Low	Downtown Commercial	57-0-91	excellent
sitting area	unknown	Y	Low	Downtown Commercial	57-0-98	good
active rec fields	unknown	Y	Low	Suburban Resid.	57-0-62	good
n/a	unknown	Y	Low	Residential Business & Rural Resid.	16-0-14	good
solar field/ active or passive rec	unknown	N	Low	Industrial	11-0-21	fair
rail trail	unknown	Y	Low	Suburban Resid.	10-0-136	good
rail trail	unknown	Y	Low	Commercial/Industrial	5-0-33	good
conservation	unknown	Y	Low	Commercial/Industrial	9-0-170	good
conservation	unknown	Y	Low	Commercial/Industrial	9-170-2	good
active or passive rec/ municipal uses	unknown	Y	Low	Rural Resid.	14-0-8	good
active or passive rec/ municipal uses	unknown	Y	Low	Rural Resid.	14-8-66	good
n/a	unknown	N	Low	Rural Resid.	29-69-1	good
n/a	unknown	N	Low	Residential Business	36-0-38	poor

Table 5.4: Other Public Lands

OS Id #	Type	Site Name	Owner	
24	C	Quabbin Reservoir Cemetery	MASS- DCR WATER SUPPLY	
25	WR	Quabbin Reservoir	MASS - DFW	
26	FW	Ware River Access	MASS - DFW	
27	FW	Coy Hill WMA	MASS - DFW	
28	FW	Coy Hill WMA	MASS - DFW	
29	FW	Ware River Access	MOULSON CHARLOTTE R & BERNARD V	
30	FW	Herman Covey WMA	MASS - DFW	
31	FW	Herman Covey WMA	MASS - DFW	
32	FW	Herman Covey WMA	MASS - DFW	
33	FW	Herman Covey WMA	MASS - DFW	
34	FW	Herman Covey WMA	MASS - DFW	
35	FW	Herman Covey WMA	MASS - DFW	
189	TU	Palmer Consv Comm	PALMER TOWN OF	
			Total Acreage:	

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 W - Water Supply
 X - Unknown



	Acres	Primary Purpose	Public Access	Level of Protection	Assessor Parcel ID	Owner Type
	116.2	W	L	Permanent	64-0-1	S
	7,931.0	W	L	Permanent	64-0-1	S
	21.4	B	Y	Permanent	41-0-22	S
	17.7	C	Y	Permanent	24-0-25	S
	198.1	C	Y	Permanent	18-0-4	S
	26.7	C	Y	Permanent	10-0-3	S
	51.7	C	Y	Permanent	8-1-1	S
	1.5	C	Y	Permanent	7-0-4	S
	221.9	C	Y	Permanent	3-0-10	S
	28.9	C	Y	Permanent	3-13-3	S
	22.7	C	Y	Permanent	19-0-1	S
	3.8	C	Y	Permanent	25-0-23	S
	2.5	C	X	Low	6-1-1	M
	8,644.2					

Public Access:

Y - Full

N - None

L - Limited

X - Unknown

Owner Type:

S - State

M - Municipal

L - Land Trust

N - Private Non-profit

P - Private

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Description of Process

As described in Section 2, the Open Space and Recreation Committee solicited community input to determine what the citizens of Ware value. This process involved a community survey and public visioning session. The final draft OSRP was also issued for a 30-day public comment period in November. With the data collection and analysis completed, and public input compiled, the Open Space and Recreation Committee reviewed the goals and objectives outlined in the 2007 OSRP to determine if they remained relevant and served as guidance for the next seven years. All four goals from the 2007 plan were kept, and several changes to the objectives were made to reflect work that had been accomplished over the past five years and work that needed continuation and/or expansion. The goals and objectives for the 2013 OSRP are outlined in Section 8 of this plan.

Statement of Open Space and Recreation Goals

The Town of Ware seeks to provide a broad range of high quality recreational opportunities for people of all ages in a cohesive, well publicized, and effectively managed format that preserve's the town's rural characteristics.

Goal #1: Provide a broad range of high quality recreational programs.

Goal #2: Manage open space and recreation cohesively and effectively.

Goal #3: Preserve town's rural characteristics.

Goal #4: Increase public awareness of open space and recreation resources.

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Summary of Resource Protection Needs

The results of the public outreach and participation process of the 2013 OSRP update remain similar to those identified in the 2007 Plan. Residents continue to value wildlife habitat, farmland, forests, the scenic rural character, and the local aquifer-based drinking water supplies. The quality of these resources is threatened indirectly through the ways humans use the landscape. New development, if poorly planned, could have a negative impact on both quality and quantity of all these resources. Residential sprawl has the potential to fragment wildlife corridors, diminishing the ecological integrity of these important critical natural lands. Coincidental to disrupting ecological value, residential sprawl can also interrupt scenic views and landscapes, degrade rural character, and impede the development of continuous trail development across large areas.

The ways in which lands are protected from development produce different values. For example, lands that are protected through the use of a conservation restriction can stay in private ownership. This results in having the decisions regarding the property's management in the hands of individuals, instead of a non-profit or a state or federal agency, which may not respond well to local concerns. In this example, the land also remains on the local property tax rolls. Although public access is sometimes required in conservation easements purchased by state conservation agencies and land trusts, it is not guaranteed. Lands that are purchased by state agencies and large land trusts are likely to provide access to the general public and sometimes offer payments in lieu of taxes.

Summary of Community Recreation Needs

Planning for a community's open space and recreation needs must strive to satisfy the present population's desires for new facilities, open spaces, and services as well as interpret and act upon the available data to prepare for the future needs of the residents. Although the OSRP will be updated in seven years, the types of actions that are identified in Section 9 take into account the needs of the next generation as well.

Responses to the community survey overwhelming stated that residents were not aware of the location of many of the town owned places for recreation, specifically the town forest properties on Walker Road, Upper North Street, Greenwich Road, and Snow's Pond. As a result, the trails at these locations are not fully utilized by residents. The top five recreational opportunities in need of expansion, enhancement or creation were prioritized: bike paths, nature trails, parks, arts and cultural events, and picnic areas. Broader outreach and promotion existing town-owned forest lands would address residents' desires for some of these opportunities. A public outreach campaign including maps and signage promoting awareness of both public and private lands for public recreation should be a top priority in the coming years.

Although ranking tenth in the list of desired recreational opportunities, trails for motorized use is also needed in Ware. Committee members could readily list numerous places in town where motorized vehicles are accessing land unauthorized. The conflict between motorized and non-motorized recreational use also needs to be addressed in order to recognize the inherent public safety issues associated with mixed use.

As required by the Massachusetts Division of Conservation Services, municipal Open Space and Recreation Plans must include information from the Statewide Comprehensive Outdoor Recreation Plan (SCORP)¹ and how it relates to the community. The 2012 SCORP discusses demand for outdoor recreation on a statewide basis, based on many public outreach efforts across the state. The plan has four goals: 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, and 4) invest in racially, economically, and age diverse neighborhoods given their projected increase in participation in outdoor recreation. Ware's OSRP Action Plan includes goals and recommendations that address each of these goals with the exception of the second one regarding water-based recreation. That said, there has been discussion about improving water access to the Ware River at Grenville Park.

Summary of Management Needs and Potential Change of Use

There are several techniques that can be used by towns for directing new growth into well suited areas and protecting those areas that are recognized as the most important natural resources. Strategies for consideration include changes to the local zoning code, land conservation, education and outreach about land protection options for private land owners, and education about best practices for forest landowners.

Purchasing a landowner's development rights is a common technique used by state, federal, and non-profit conservation agencies. A landowner has many rights associated with owning land including the right to farm, harvest wood, drill for water, and mineral rights. The amount of money that a land trust might pay a landowner for their development rights is equal to the difference between the value of the land as building lots for residential or commercial structures and its value as open land in its undeveloped and protected state. An example is the Agricultural Preservation Restriction (APR) Program. The APR program pays the landowner/farmer/forester the value of their land's development rights (the difference between the land's market value and its agricultural value). In return, the landowner retains ownership of the land, continues to pay property taxes, and will be able to easily pass this land onto their next generation (i.e., the land could stay within the family).

Although conservation restrictions are a common practice, most landowners are not aware of them, how they work, potential land conservation partners, etc. Education and outreach to landowners can provide local landowners interested in protecting their land with resources and contacts for potential partners, and offer resources for proper land management practices.

1. Massachusetts Statewide Comprehensive Outdoor Recreation Plan 2012. MA Executive Office of Energy and Environmental Affairs.



A less common form of preservation is a scenic easement, which are usually less restrictive than a conservation or agricultural restriction and are designed to protect views from public roadways.

There are several zoning techniques useful for land preservation. The most common is cluster housing provisions, which require a portion of the parcel being developed to be preserved as open space. Ware's zoning bylaw does include such provisions, although they should be revised to encourage use of the tool. Less common in this part of the country is transfer of development rights, where one area of a community is designated as a "sending zone" and another a "receiving zone"; a property owner in the sending zone has the option to sell or transfer his development rights to a parcel in the receiving zone, thereby preserving one parcel while increasing the density on the other parcel. Typically, sending zones are located where the community wishes to preserve land, and receiving zones are located where municipal services are available to serve a denser population. Other zoning techniques include hillside or hilltop districts which are often related to scenic vistas but are also useful for protecting steep slopes; in both cases development is usually allowed but at much lower densities than are allowed elsewhere in the town.

Finally, aside from the desire to protect land, funding for fee-simple purchase of the land or a conservation restriction is critical to these efforts. The Community Protection Act (CPA) allows communities to create a local Community Preservation Fund for open space protection, historic preservation, affordable housing and outdoor recreation. Community preservation monies are raised locally through the imposition of a surcharge of not more than 3% of the tax levy against real property, and municipalities must adopt CPA by ballot referendum. Although previous efforts were unsuccessful, exploring the adoption of the CPA in Ware is an important step toward developing resources to implement many of the actions outlined in the Action Plan in Section 9.

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The goals and objectives identified below were carried forth from the 2007 Open Space and Recreation Plan with some modification to some of the objectives. Towards the later phase of the planning process, it was evident that the goals and many of the objectives remained relevant in 2013. Although much work had been accomplished since 2007, expansion and/or continuation of this work is needed to advance the Town of Ware's goals for open space and recreation over the next seven years.

Goal #1: Provide a broad range of high quality recreational programs.

Objectives:

- 1a. Develop passive and active recreation opportunities on town-owned lands and private property.
- 1b. Develop recreation programs for all residents including social, arts and cultural programming.
- 1c. Secure space for indoor recreation activities.
- 1d. Expand lighted regulation athletic fields.

Goal #2: Manage open space and recreation cohesively and effectively.

Objectives:

- 2a. Increase coordination of town recreation facilities' management and administration.
- 2b. Refurbish existing town recreation facilities.
- 2c. Identify funding for recreation and conservation land management.

Goal #3: Preserve town's rural characteristics.

Objectives:

- 3a. Develop Ware River Greenway.
- 3b. Work towards establishing a town-wide greenway system.
- 3c. Conduct public outreach about land protection options.

Goal #4: Increase public awareness of open space and recreation resources.

Objectives:

- 4a. Develop informational program.
- 4b. Create innovative fund-raising.
- 4c. Continue to offer town-wide special event programs.

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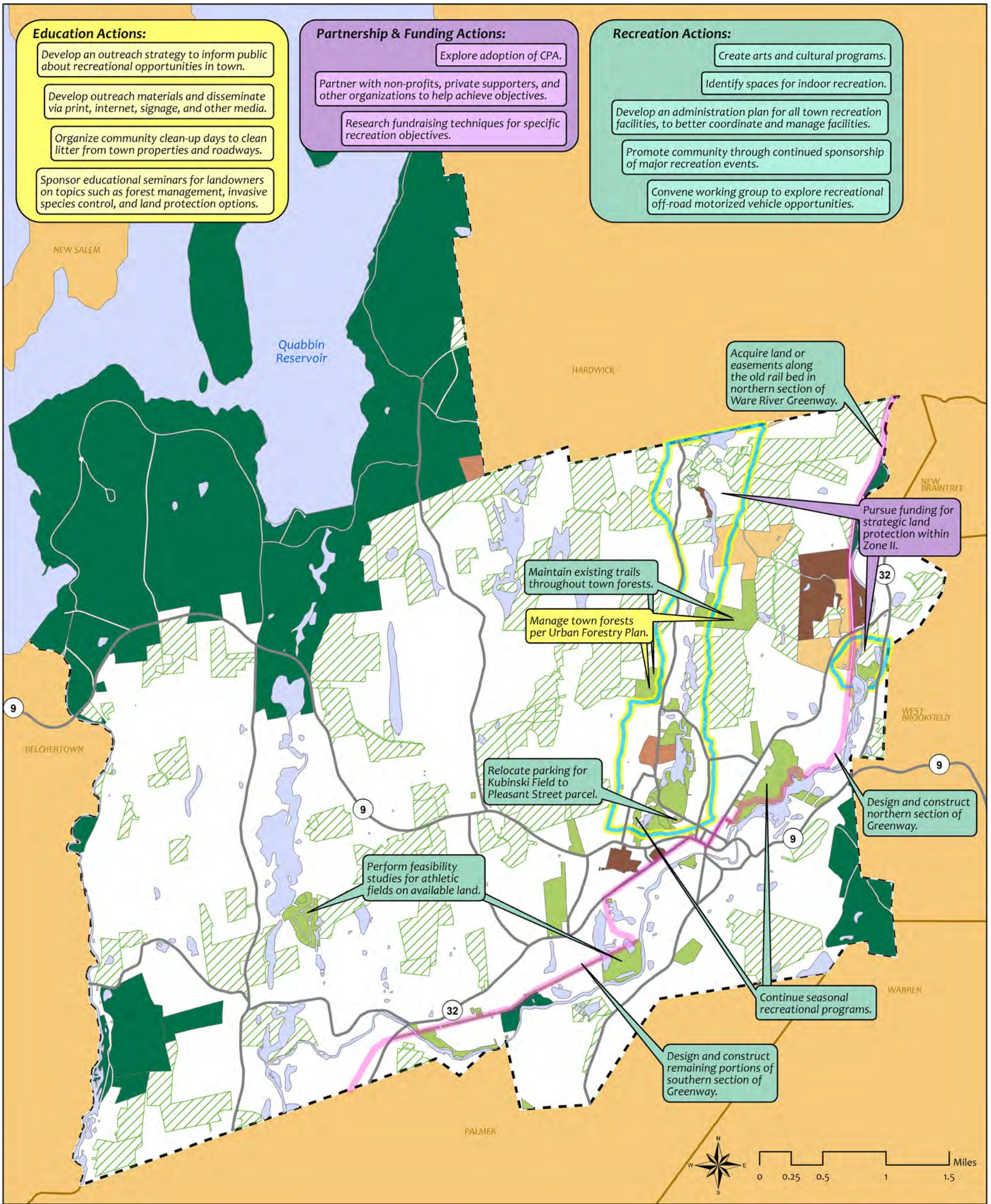


Objective / Action	Responsible Entities ¹	Proposed Timeframe	Possible Funding Sources	Priority
1a. Develop passive and active recreation opportunities on town owned and private lands				
Maintain existing trail network through town forests.	CC, PRC, OSRC	2016-2018	DCR Trails Grant Volunteer Corp	High
Develop signage and maps for trail network and make available to the public.	CC, PRC, OSRC	2016-2018	Private and Public Funds	Medium
Convene working group to explore need and potential location for motorized recreational use	OSRC	2017-2019	Not Needed	Low
Manage Town forests on Upper North Street, Walker Road and Muddy Brook as described in Urban Forestry Plan	CC	2016-2018	Town Funds	High
1b. Develop recreation programs for all residents including social, arts and cultural programming				
Support development of arts and cultural programming	CuC, HS	2016+ ²	Town Funds Foundation Grants	Medium
Continue seasonal recreation programs for youth and adults	PRC, SD	2016+	User Fees Town Funds	High
1c. Secure space for indoor recreation				
Identify spaces for indoor recreation	OSRC	2018-2020	Not Needed	Medium
Work with private and non-profit entities to continue and to develop new night programming for teens and adults	OSRC, PRC	2016+	Town Funds	High
1d. Expand lighted and unlighted regulation athletic fields				
Perform feasibility study for athletic field development on available land	OSRC	2019	DCS PARC Grant	High
Solicit grants for athletic field improvement and development	OSRC, BOS	2017-2021	DCS PARC Grant	High
2a. Increase coordination of town recreation facilities administration and management				
Develop plan of administration for all town recreation facilities	PRC, OSRC, SD	2016+	Town Funds	High
Relocate Kubinski Field parking lot from Zone I Groundwater Protection District to town-owned land on Pleasant Street	OSRC, PRC, BOS	2017	DCS PARC Grant	High

1. BOS = Board of Selectmen, CC = Conservation Commission, CuC = Cultural Commission, DPW = Department of Public Works, HC = Historical Commission, HS = Historical Society, OSRC = Open Space and Recreation Committee, PCDD = Planning & Community Development Department, PRC = Parks & Recreation Commission, SD = School Department, TC = Tax Collector, WD = Water Division of DPW
2. 2016+ means this is an ongoing action item.

Objective / Action	Responsible Entities	Proposed Timeframe	Possible Funding Sources	Priority
2b. Identify funding for recreation and land conservation				
Pursue funding for strategic land protection in Zone II Groundwater Protection District	WD, PCDD	2016+	Town Staff PVPC Local Technical Assistance	High
Seek corporate support	OSRC, BOS	2016+	Private/Corporate Funds	Medium
Explore adopting Community Preservation Act	BOS, CC, HC	2018-2022	Not Needed	Medium
3a. Develop Ware River Greenway				
Acquire land or easements along abandoned rail bed on northern section	OSRC	2016-2020	DCR Trails Grant	High
Design and construction for southern section	OSRC	2016-2018	DCR Trails Grant	High
Design and construction for northern section	OSRC	2018-2020	DCR Trails Grant	Medium
3b. Work towards establishing a town-wide greenway system				
Following the data presented in this plan, pursue opportunities for land preservation in critical areas	OSRC	2016+	Grants, Private/ Corporate Funds,	High
3c. Public outreach about land protection options				
Develop educational materials for community	CC, PCDD	2016-2018	Town Funds	High
Distribute information through Tax Collector with tax bills	TC	2016-2018	Town Funds	High
Host seminars on forest management, invasive species control, and land protection options (e.g. gifts, bargain sales, tax credits, and grant opportunities) for interested landowners	OSRC, CC	2016-2018	Foundation Grants Town Funds	High
4a. Develop informational program				
Develop outreach materials (signage, maps, brochures, etc.)	PCDD, CC, DPW	2016-2017	Town Funds	High
Develop and implement an outreach strategy	PCDD, CC, DPW	2016	Town Funds	High
Create a plan locating optimum sites for signs and kiosks.	PCDD, CC, DPW	2016	Town Funds	High
Develop design standards for signs and kiosks	PCDD, CC, DPW	2016	Town Funds	High
Utilize town website and cable access station about facilities, signage awareness, and rules and regulations.	PCDD, CC, DPW	2017-2022	Town Funds	High
4b. Create innovative fund-raising				
Research fundraising techniques for specific recreation objectives.	OSRP, PRC	2016+	Not Needed	Medium
Partner with non-profits, other organizations and private supporters	OSRP, PRC	2016+	Not Needed	Medium
4c. Continue to offer town-wide special events				
Continue to hold large-scale recreation events such as road races or derbies to promote the community	OSRP, PRC	2016+	Town Funds User Fees	High





Legend

Ware River Greenway

Aquifer - Zone II

Open Space

Town

State

Land Trust

Non-Profit

Private

61, 61A, 61B

Actions

Education

Partnership & funding

Recreation

Open Space & Recreation Plan


Map 21: Action Plan

October 7, 2013; updated March 3, 2016

Sources:
MassGIS: Open Space*, Waterbodies, Rivers, Roads, Towns
Ware: Open Space*

* Open Space database is a combination of data obtained from MassGIS, the Town of Ware Assessor's and Conservation Commission offices, the UMass LARP Fall 2012 "Prelude to a Master Plan," and research by Karen Cullen, Director of Planning & Community Development.

Town of Ware
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Public Comments *Section 10*



The Open Space & Recreation Plan Committee met to review the final draft of the plan on March 2, 2016. After agreeing on some edits to the Action Plan, the Committee voted 7-0 in favor that the plan as reviewed this evening with edits to be made be accepted by the committee and forwarded to the appropriate boards for letter of support.

On March 16, 2016, the Planning Board reviewed the plan and voted _____ to support/endorse the plan. See letter attached.

On March ____, 2016, the Board of Selectmen reviewed the plan and voted ____ to support/endorse the plan. See letter attached.

Letter from Planning Board



Letter from Board of Selectmen

Letter from Conservation Commission



Letter from PVPC

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