

Town of Goshen
Open Space and Recreation Plan

FINAL DRAFT
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2012

Town of Goshen Open Space and Recreation Plan

2012

Prepared for: Town of Goshen

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Acknowledgements

Goshen Open Space and Recreation Plan

Table of Contents

SECTION 1: PLAN SUMMARY

SECTION 2: INTRODUCTION

- A. *Statement of Purpose*
- B. *Planning Process and Public Participation*

SECTION 3: COMMUNITY SETTING

- A. *Regional Context*
- B. *History of the Community*
- C. *Population Characteristics*
- D. *Growth and Development Patterns*

SECTION 4: ENVIRONMENTAL INVENTORY AND ANALYSIS

- A. *Geology, Soils and Topography*
- B. *Landscape Character*
- C. *Water Resources*
- D. *Vegetation*
- E. *Fisheries and Wildlife*
- F. *Scenic Resources and Unique Environments*
- G. *Environmental Challenges*

SECTION 5: INVENTORY OF CONSERVATION AND RECREATION LANDS

- A. *Private Parcels*
- B. *Public and Nonprofit Parcels*

SECTION 6: COMMUNITY VISION

- A. *Description of Process*
- B. *Statement of Open Space and Recreation Goals*

SECTION 7: ANALYSIS OF NEEDS

- A. *Summary of Resource Protection Needs*
- B. *Summary of Community's Needs*
- C. *Management Needs, Potential Change of Use*
- D.

SECTION 8: GOALS AND OBJECTIVES

SECTION 9: SEVEN-YEAR ACTION PLAN

SECTION 10: PUBLIC COMMENTS

SECTION 11: REFERENCES

SECTION 12: APPENDICES

SECTION 1: PLAN SUMMARY

Goshen residents cherish the scenic landscape all around them and want to maintain the rural character of their community and the quality of life it affords them. Most integral to Goshen's character are the protection and management of forests, protection of water quality, active agriculture, and healthy, diverse and contiguous wildlife habitats. Residents seek to continue and expand upon the many forms of outdoor recreation found in Goshen including trails for hiking, snowmobiling and horseback riding, and swimming areas open to the public.

In concert with this vision, four goals for open space and recreation have been identified:

Goal #1: The diversity, continuity and integrity of wildlife habitat and biodiversity are well-established and protected in Goshen.

Goal #2: Working farms and forests are healthy local resources and a thriving component of Goshen's vibrant rural character.

Goal #3: Goshen's rivers, lakes, ponds and aquifers are clean and protected from all sources of pollution.

Goal #4: Recreational resources and opportunities are accessible to the public.

These goals are essentially the same in spirit as those identified in the 2003 Open Space and Recreation Plan. Thus, the Open Space Committee has met certain actions identified in the 2003 plan, as well as carried out other projects in support of those goals. Open Space Committee accomplishments since 2003 include:

- Created an active Open Space Committee;
- Formed a coalition of Goshen Open Space, Conservation, and Recreation Committees and Historical Commission to propose Goshen adopt the Community Preservation Act, which passed in 2007, allowing future "acquisition, creation and preservation of open space" with accumulated funds;
- Begun renovation and repair of multi-user Tilton Town Farm trail, for both educational and recreational use including bridge re-construction and other work funded by a 2009-2010 DCR Recreational Trails Grant;
- Liaison with Goshen landowners and conservation organizations to help them select appropriate options for preservation of open space, including the organization of community events on conservation options for property-owners;
- Facilitated coordination of conservation restriction donation on 55 acres of land on Route 9 to the Trustees of Reservation and the Hilltown Land Trust;
- Sponsored or co-sponsored educational programs on other open space issues, including ecological effects of ice storm damage, wildlife, vernal pools, trail repair, invasive species;
- Worked to develop regional trail networks and other conservation projects, through 5-Town Action Initiative, HCI alliances, Rt. 112 Scenic Byway, Westfield River Watershed Association and Wild and Scenic Advisory Committee, and other trail-user groups;
- Participated in Goshen's Zoning Review Committee;

2012 Goshen Open Space & Recreation Plan

- Participated in development of Route 112 Scenic Byway Plan; and,
- Implemented programs to control invasive species.



Tilton Farm trail construction crew, June 2010

SECTION 2: INTRODUCTION

A. Statement of Purpose

The 2012 Goshen Open Space and Recreation Plan (OSRP) provides a thorough assessment and inventory of lands of recreation and conservation interest, as well as related data and information about natural resources, community demographics and an economic profile of the community. This assessment combined with the public feedback provides a realistic and implementable plan to further the development of important building blocks for achieving Goshen's goals and objectives for open space and recreation.

B. Planning Process and Public Participation

Planning Process

This update to the 2003 Open Space and Recreation Plan has been undertaken by the Goshen Open Space Committee with technical assistance provided by the Pioneer Valley Planning Commission (PVPC) through a District Local Technical Assistance (DLTA) Grant from the Massachusetts Department of Housing and Community Development. The Committee met five times between January and December in 2011 regarding the plan update.

Members of the Open Space Committee include:

Alison Bowen
Melanie Dana
Terry Johnson
Jane Larson
David Packard
Sandra Papush

Additional information and feedback provided by Gina Papineau, Assessor's Office, and Joseph Frye, Planning Board and Zoning Board of Appeals.

Public Participation

The Goshen Open Space Committee issued a public survey and held a public visioning session to offer the community ample opportunity to participate in developing goals, objectives and strategies for open space and recreation in Goshen. The public survey was posted online at Survey Monkey and remained open for 60 days in mid-April to mid-June. Notice of the survey was advertised to residents in the local newspaper, and all municipal boards and departments through posting at their mailbox. Paper copies of the survey were available at Town Hall and the library, and were subsequently entered into Survey Monkey by Committee members. A discussion of the survey results is included in Section 6 Community Vision.

The final draft of the Plan was issued for a 60-day public comment period in October and November 2011. An electronic version of the plan was posted on the PVPC website and a paper copy available at the library and the Town Offices. Notice of its availability was sent to each of

2012 Goshen Open Space & Recreation Plan

the town boards and posted in the local newspaper. Comments were submitted in writing to PVPC, reviewed by the Open Space Committee and incorporated into the final plan.

SECTION 3: COMMUNITY SETTING

A. Regional Context

Covering about 17.7 square miles, the Town of Goshen is located along the northern border of Hampshire County in the foothills of the Berkshires. Known as one of the “hilltowns,” Goshen lies in the uplands west of the Connecticut River Valley, northwest of Northampton. The Town’s elevation ranges from 944 feet to 1694 feet. In Franklin County, the towns of Conway and Ashfield to the north border Goshen whereas in Hampshire County, Williamsburg lies to the east, Chesterfield to the south and southwest, and Cummington to the northwest. Major roadways through the Town are Route 9 tending northwest from Williamsburg through Goshen to Cummington, and Route 112 from the intersection of Route 9 at the north end of Goshen Center north to the Ashfield line in Franklin County.

Goshen’s proximity to Northampton, lack of good roads until the 20th century, and lack of reliable water power prevented any major industrial development. Industry consisted of small mills and home-based businesses, which continue today. Because of its fairly remote location, it has been able to maintain a quiet, country character. Most development consists of single-family homes; the remainder of land in Goshen is hilly and forested, with some scattered open fields in farming. Goshen was named after the town that the Israelites inhabited while in Egypt. As with most hilltowns, the Congregational Church has played a central role in its establishment.

The Town of Goshen has limited economic resources and is primarily considered a “bedroom community,” since most residents travel outside of town boundaries for employment. However, the housing market has expanded in the Pioneer Valley and as housing pressures intensify in the valley, Goshen and other hilltowns are likely to see an increase in new home development over the next several years. New home development is probably the greatest threat to open space in Goshen. That is, should large parcels of land (e.g., greater than 100 acres) be subdivided, wildlife habitat fragmentation or the loss of open space will occur in Goshen. While new home development can decrease open space, implementation of proper town planning can create a balance between open space preservation and new residential development.

Despite a rural veneer, Goshen has changed a great deal throughout its history. Goshen reached its lowest population in 1920 with 224 residents. Several factors have now brought the Town to the edge of a critical transformation. These factors include: the economic trends in Massachusetts and in the country as a whole; a nationwide demise of the family farm in favor of large economies of scale; large-scale flight from cities and large towns in favor of rural settings; development pressures on undeveloped agricultural and forest land by building development; and changes in the economy favoring service and information businesses over industry and manufacturing.

Goshen’s location within 13 miles of the City of Northampton and 25 miles of the college town of Amherst, respectively, and a relatively easy access to Interstate 91, has contributed to its development as a “bedroom community” to these two larger towns, as well as the Town of Greenfield and the cities of Springfield, Chicopee, and Westfield along the I-91 corridor into Connecticut.

Goshen is perceived as a recreational destination within the Pioneer Valley by virtue of the location of the D.A.R. State Forest (which has trails, swimming, hiking, picnicking, and camping) and the Holy Cross Campgrounds within its boundaries. In addition, Camp Howe, located on the west side of Lower Highland Lake north of East Street, attracts many young people on a seasonal basis with its camping facilities and opportunities for trail and water sports.

B. History of the Community

Prior to European settlement, the Goshen area was part of the hunting region for local Native Americans. As with most of the Hilltown areas, Goshen was not settled until the 1760s. After the French and Indian Wars, the French surrendered this area to Great Britain and the Native American incursions quieted, allowing settlement in the piedmont areas northwest of the Connecticut River Valley. It took Goshen over 100 years after Northampton and the surrounding towns in the Connecticut River Valley were settled to do the same. As part of Narragansett township No. 4, part of what became Goshen was laid out in 1736 and called "New Hingham" (now Chesterfield). The first settlers to Goshen were residents of New Hingham, west of Hatfield. A second land grant to the soldiers of King Phillip's War was called "Chesterfield Gore." Suffice it to say that what is Goshen today was originally part of Chesterfield. Eventually in 1781, residents of Chesterfield, willing to establish a meetinghouse of their own, broke off from that town. The Town of Goshen was incorporated on May 14, 1781.

Geographic settlement

By 1840, a wide network of town roads had been constructed to all parts of Goshen. Self-sufficient farming gradually gave way to a money economy in which cash crops became a necessary means of paying for the increasing purchase of goods. With more intensive farming in the 19th century, the virgin fertility of the soil was depleted. Weeds, crop pests, and diseases slowly moved in, and the lure of paid work in cities took its toll. Those who prospered began to buy out their neighbors and the best farms became larger, but fewer in number. By the end of the 19th century, the *Hampshire Gazette* was regularly full of several columns of farms for sale in the areas of hill top farming. A turn-of-the-century article in the Gazette explains: Large numbers of New England farms, well located or on rocky lands, should never have been utilized for agricultural purposes. That they were reflected the population pressures which existed at a period when there was no other recourse but farming, when household industries were an important source of revenue, and when men and women lived simply, reared large families and demanded little.

The center of Goshen remained fixed after the erection of the meetinghouse in 1782. All subsequent civic buildings were built nearby. The next public building in Goshen was the small wooden framed Town Hall that was erected in 1848 and served the Town as office and library until the current stone Town Hall was built in 1909-1911. The Goshen Center School was built next to the new Town Hall in 1923. In 1936 the one-story rear addition to the Town Hall was constructed. In 1976 the land next to the current post office was acquired by the Town for the park, tennis courts and parking lot.

2012 Goshen Open Space & Recreation Plan

Goshen as a Summer Resort

In the latter half of the 19th century, Goshen became known as a rural summer resort and somewhat of a health mecca, attracting a number of religious organizations. Among the reasons people came to spend the summers, according to literature of the time, were charming views and landscapes with the Mt. Holyoke and Mt. Tom ranges and the surrounding valley clearly visible; pure air at the high elevations around town; the quiet village; charming drives; and interesting geology, flora, and fauna. Tourist destinations for hikes and picnics were known as Devil's Den, the Lily Pond, and the Cascade.

Eventually, some of the people who had customarily come for the summer began to build their own seasonal homes in Goshen, causing a lasting effect on the appearance of the Town and its building stock. Also, in 1956 developers designed Hammond Acres around Hammond Pond, creating many summer cottages.

20th Century Recreation Areas

Organized recreation facilities seemed to be a natural offshoot of the summer resort industry in Goshen. Mention has already been made of the development of Hammond Acres. Holy Cross Camp was developed with an initial purchase of 125 acres on the west shore of Upper Highland Lake in 1923. An additional 100 acres were purchased in 1959. The D.A.R. State Forest was established in 1929 when John Tomlinson bought up 23 tracts of land and donated them, some 1,020 acres, to the Daughters of the American Revolution. During the 1930s, a CCC camp was established responsible for making many improvements. Camp Howe, a children's summer camp on East Street, was developed in Goshen after moving from Dana, Massachusetts, in 1940. Robert and Margaret Williams operated a children's summer camp on East Street from 1948 to 1967 called "The Rock." Camp Jollie, on the grounds of the Tomlinson Estate, provided summer recreation for handicapped children and was sponsored by the United Cerebral Palsy of Western Massachusetts. The Springfield Republican also maintained a summer camp for newspaper boys on Cape Street.

Historical Archaeology

Goshen has numerous historical archaeological sites in the form of stone walls, stone foundations and cellar holes, stone bridges, and at least two unexplained stone structures. Two historic archaeological sites are on file at the Massachusetts Historical Commission:

- 1) INV. #GHS-HA-01: Beals Home Stagecoach Depot on Beals Road (1792) with its associated abutments of a bridge spanning a nearby stream
- 2) INV. #GHS-HA-02: The Dresser Hill Sites (ca. 1846), consisting of George Dresser's house, with possible cellar hole of an earlier house and the associated remnants of the Reuben Dresser sawmill foundation.

Other historical archaeological sites and structures which have not been inventoried include the Potato Hole, possibly a stone barn built into the side of a hill in the northeast portion of town near the Conway town line, the Goshen tunnel above the Goshen Cemetery, the stone arched bridge at the foot of Sabo's Hill on West Street, and several partial foundation walls from small mills around town.

National Register of Historic Places Sites

The only National Register listing in Goshen is the historic district which comprises Mountain Rest, a missionary summer encampment, founded by Dr. George D. Dowkontt of New York City in 1900 or 1901. After having been placed on the National Register in November, 1983, it was developed into the Wildwood condominiums. It is currently owner-occupied and has a recently reactivated property owner association. It is located on Wildwood Lane off Spruce Corner Road.

C. Population Characteristics

General

Goshen has seen increases and decreases in population in response to external factors such as land prices, road development, industry in nearby communities, and housing costs in the Pioneer Valley. Throughout the fluxes in population, Goshen has remained a small Hilltown. Since the original settlement in 1761 and subsequent incorporation in 1781, the population rose steadily until reaching a peak of 724 in 1800. The population decrease reached its lowest point in 1920, with only 224 residents in town. Since the 1920s Goshen’s population has again been on the rise adding approximately 90 residents every decade. Between 1990 and 2000, the population increased from 764 to 921. By 2010 the population reached 1,054 residents according to the Federal Census. Given the recent trend in increasing population, it is important for Goshen to recognize the potential threat of new home development on open space.

Population in Goshen

Year	Population	Percent Change
1800	724	0
1920	224	-69
1990	764	241
2000	921	20
2010	1054	14

*Sources: US Census Bureau 2000 Decennial Census,
US Census Bureau 2010 Decennial Census,
1990 Census Population Estimates Program,
1920 and 1800 population estimates from previous OSRP*

2012 Goshen Open Space & Recreation Plan

Total Population by Age

2010	Total	Percent of Population
Total population	1,054	100
Under 5 years	59	5.6
5 to 9 years	60	5.7
10 to 14 years	55	5.2
15 to 19 years	69	6.5
20 to 24 years	40	3.8
25 to 29 years	47	4.5
30 to 34 years	35	3.3
35 to 39 years	84	8
40 to 44 years	71	6.7
45 to 49 years	92	8.7
50 to 54 years	110	10.4
55 to 59 years	107	10.2
60 to 64 years	79	7.5
65 to 69 years	57	5.4
70 to 74 years	43	4.1
75 to 79 years	11	1
80 to 84 years	21	2
85 years and over	14	1.3
Median age (years)	45.5	

Source: U.S. Census Bureau, 2010 Decennial Census

Goshen currently has a population density of approximately 60 people every square mile. In 2000 Goshen had approximately 53 people every square mile. This marks a near 15% increase in density in just ten years. Although density in Goshen is low compared to other parts of the state and the Pioneer Valley, given the recent trend in increasing population, it is important for Goshen to recognize the potential threat of new home development on open space and implement actions preserve the community's rural character.

2012 Goshen Open Space & Recreation Plan

Goshen Building Permit Trends

YEAR	All Units	Single Family Units
1990	3	3
1991	3	3
1992	7	7
1993	5	5
1994	2	2
1995	4	4
1996	5	5
1997	0	0
1998	6	6
1999	10	10
2000	8	8
2001	7	7
2002	10	10
2003	5	5
2004	7	7
2005	6	6
2006	4	4
2007	6	6
2008	0	0
2009	2	2

Source: U.S. Department of Housing and Urban Development

Residential building permits provide one way of noting development pressures on a community. Over the last 20 years Goshen has seen an average of over five building permits every year. Since 1990 Goshen has added 100 new buildings and all of these buildings have been single family structures. Building has slowed in the past few years consistent with national homebuilding trends. While Goshen has large amounts of open space it will be important to monitor development and identify parcels of land appropriate for preservation.

Household Income, Poverty, Major Employers, and Employment Trends

Goshen's average household income has been growing over the last 20 years. The most common income bracket for households in 1990 was \$40,000 to \$45,000. In 2000 the most common income bracket increased to \$60,000 to \$75,000; and, from 2005 to 2009 it increased again to between \$75,000 and \$100,000. Goshen has a diverse income spread. In 2009, 25% of Goshen households earned less than \$45,000, with just over 20% of households earning over \$100,000. The recreational needs and interest of residents with a range of income should be addressed by the town.

2012 Goshen Open Space & Recreation Plan

Goshen Household Income

Year	1990	2000	2005-2009
Total number of households:	317	368	426
Less than \$10,000	29	14	11
\$10,000 to \$14,999	11	15	19
\$15,000 to \$19,999	32	11	11
\$20,000 to \$24,999	20	21	9
\$25,000 to \$29,999	12	27	14
\$30,000 to \$34,999	24	26	5
\$35,000 to \$39,999	33	24	12
\$40,000 to \$44,999	42	20	20
\$45,000 to \$49,999	21	28	13
\$50,000 to \$59,999	31	36	39
\$60,000 to \$74,999	30	61	41
\$75,000 to \$99,999	24	56	142
\$100,000 to \$124,999	5	13	30
\$125,000 to \$149,999	3	10	11
\$150,000 to \$199,999 (or more)	0	3	24
\$200,000 or more	N/A	3	25

Source: U.S. Census Bureau, 1990 and 2000 Census, 2005-2009
 American Community Survey 5-year Estimates

Goshen has seen a decrease in the percentage of households living in poverty as the town population has grown. As of 1990 approximately four percent of the community was living under the poverty line. From 2005 through 2009 approximately one percent of the community was living under the poverty line.

Poverty In Goshen

Year	Below Poverty Line	% Below Poverty Line
1990	33	3.97%
2000	71	7.87%
2005-2009	N/A	1.20%

1990 and 2000 U.S. Census;
 2005-2009 American Community Survey 5 Year Estimates

The majority of workers in Goshen travel outside of the community for employment. Of the approximately 600 employed workers the vast majority work outside of town. The largest ten employers in town provide just over 100 jobs. Commuting is a major part of each working resident's day. The recreational and open space needs of commuters may be different than those who work at or close to home.

2012 Goshen Open Space & Recreation Plan

Largest Employers in Goshen	
Company Name	Employment Size
Camp Howe	40
George Propane Inc	18
Good Time Stove Co	15
Goshen Stone Co	9
George D Judd & Sons LLC	7
Berkshire Technologies Inc	6
Town Hall Assessor's Office	3
Highway Dept	2
Pampered Pet Sitting	2
US Post Office	2
<i>Source: ReferenceUSA, 2008</i>	

As of 2009, over 93% of the labor force was actively employed.

Employment Trends in Goshen			
Year	Labor Force	Employed	% Unemployed
1990	519	493	5.01%
1991	506	478	5.53%
1992	540	511	5.37%
1993	555	532	4.14%
1994	594	567	4.55%
1995	602	587	2.49%
1996	584	573	1.88%
1997	595	577	3.03%
1998	568	557	1.94%
1999	615	604	1.79%
2000	574	566	1.39%
2001	581	571	1.72%
2002	588	575	2.21%
2003	599	578	3.51%
2004	598	579	3.18%
2005	588	573	2.55%
2006	601	577	3.99%
2007	593	577	2.70%
2008	600	572	4.67%
2009	605	566	6.45%
<i>Source: MA Executive Office of Labor and Workforce Development</i>			

Environmental Justice

Environmental Justice Communities are areas that have a need for protection from environmental pollution because the area is home to a large percentage of poor, foreign born, minority, or foreign language speakers. Goshen is not an Environmental Justice Community however a need to protect the recreational and open spaces that make Goshen special does exist.

D. Growth and Development Patterns

Patterns and Trends

Goshen began as a small mill town surrounded by forest, which provides recreational opportunities today. The community's character has long been defined by large tracks of forests and a few farms. With the greater access provided by better roads and proximity to nearby college towns, Goshen is subject to some pressures of residential development. To illustrate, since 1990 Goshen has seen an average of five residential building permits per year.

Due to numerous wetland areas, large-scale development is limited. Although Goshen currently has no local ordinances for increased wetlands or rivers protection bylaws the Commonwealth's Wetlands Protection Act is in effect. Historically and for practical reasons, up until now both wetlands and floodplain development has been limited.

Infrastructure

Transportation

There is a well defined road network throughout Goshen. Two major State routes exist in Goshen. State Route 9 runs from the southeast border with Williamsburg to the northwest boarder with Cummington. Route 9 is also locally known as United States Marine Corps League Highway and Main Street. State Route 112 begins at the junction with State Route 9 at the town center and travels north into Ashfield. State Route 112 is also locally known as Cape Street. No public transportation or official bike routes exist in town. Walking and biking are however common forms of transportation.

Water Supply

Goshen does not have a municipal water supply system, relying instead on numerous on-site private wells located throughout the community, including seven active public water supply systems with nine active wells serving restaurants, camps, the town office and school, the state forest, and two homeowner's associations.

2012 Goshen Open Space & Recreation Plan

Public Water Supplies¹

PWS ID	PWS Name	Status	Class*	Source ID	Source Status	Availability
1108003	Goshen Town Office	Active	NC	1108003-01G	Active	Active
1108004	Spruce Corner Restaurant	Active	NC	1108004-01G	Active	Active
1108007	Camp Holy Cross	Active	NC	1108007-01G	Active	Active
1108008	4H Camp Howe Inc	Active	NC	1108008-01G	Active	Abandoned
1108008	4H Camp Howe Inc	Active	NC	1108008-02G	Active	Active
1108008	4H Camp Howe Inc	Active	NC	1108008-03G	Active	Active
1108009	Wildwood Condominium	Active	COM	1108009-01G	Active	Active
1108010	DCR DAR State Forest	Active	NC	1108010 – 01G Twinning Brook Well	Inactive	Abandoned
1108010	DCR DAR State Forest	Active	NC	1108010-02G Campground Well	Active	Active
1108010	DCR DAR State Forest	Active	NC	1108010-03G Day Use Well	Active	Active
1108014	Hammond Acres Water Corp	Active	NC	1108014-01G	Active	Active
1108014	Hammond Acres Water Corp	Active	NC	1108014-02G	Active	Emergency
1108002	The Whale Inn	Inactive	NC	1108002-01G	Inactive	Inactive
1108002	The Whale Inn	Inactive	NC	1108002-02G	Inactive	Inactive

*NC - Non-Community Well; COM - Community Well

The Massachusetts Department of Environmental Protection (DEP) has completed Source Water Assessment (SWAP) Reports for several of the public water supplies in Goshen. The SWAP identifies the most significant potential contamination sources that could threaten well water quality. The susceptibility ranking does not imply poor water quality but rather threats to consider for proper best management. Actual water quality is best reflected by the results of regular water tests.

A well's source protection area is the land around the well where protection areas should be focused. Wells have a Zone I protective radius and an Interim Wellhead Protection Area (IWPA). The Zone I should be owned or controlled by the water supplier and limited to water supply activities. IWPA is the larger area that is likely to contribute water to the well. The IWPA radius is based upon the average pumping rate of the well. In many instances the IWPA may not include the entire land area contributing water to the well. Therefore, the well may be susceptible to activities outside the IWPA. Information provided in the SWAP reports for each well is as follows:

¹ Skiba, Catherine. Massachusetts Department of Environmental Protection, July 19, 2011 email correspondence

2012 Goshen Open Space & Recreation Plan

Spruce Corner Restaurant Non-Community Well

Well's high susceptibility to potential microbial threats is based on the septic system components within the Zone I/IWPA. The moderate susceptibility to potential non-microbial threats is based on the local roads and parking areas within the Zone I and/or the IWPA.

Camp Holy Cross

Well's high susceptibility to potential microbial threats is based on the septic system components within the Zone I and IWPA. The moderate susceptibility to potential microbial threats is based on the access roads, state highway and parking within the Zone I and IWPA.

Camp Howe

Well's high susceptibility to potential microbial threats is based on the septic system components within the Zone I / IWPA. The moderate susceptibility to potential non-microbial threats is based on the local roads and parking within the Zone I and/or the IWPA.

Wildwood Condominiums

The Wildwood Condominium complex is located off Spruce Corner Road and consists of six residences. The homes use various forms of fuel for heat and hot water including propane, wood and oil. There are no underground storage tanks at the complex. The facilities include an unpaved internal road, parking areas, a barn, lawn and wooded areas. The homes are serviced by on-site septic disposal. The well is an 8-inch diameter, bedrock well drilled in the 1950s and believed to be greater than 200 feet deep. The well is considered to be highly vulnerable to potential contamination from the ground surface because there is no significant hydrogeologic barrier such as clay or a thin till barrier to prevent surface contamination from migrating into the bedrock aquifer.

DAR State Forest Non-Community Wells

DAR State Forest's two Transient Non-community Wells indicated a high susceptibility to potential microbial threats based on septic system components within the Zone I and IWPA. The moderate susceptibility to potential non-microbial threats is based on the local roads within the Zone I and IWPA and the high ranking for the Day Use well (03G) is based on fuel oil storage in the IWPA.

Hammond Acres Water Corporation

The well's high susceptibility to potential microbial threats is based on the septic system components within the Zone I / IWPA. The moderate susceptibility to potential non-microbial threats is based on the local roads within the Zone I and/or the IWPA. There is also a solid waste landfill nearby that consists of dredging fill from the adjacent lake and so is not listed as a threat.

2012 Goshen Open Space & Recreation Plan

Public Water Supply SWAP Information

Well Name	Well (Source) ID#	Zone I Radius (feet)	IWPA Radius (feet)	Microbial Susceptibility	Non-Microbial Susceptibility
Spruce Corner Restaurant	1108004-01G	135	438	High	Moderate
Camp Holy Cross	1108007-01G	212	524	High	Moderate
Camp Howe	1108008-02G	175	470	High	Moderate
Camp Howe	1108008-03G	175	470	High	Moderate
Wildwood Condominiums	1108009-01G	148	446	Moderate	Moderate
DAR Campground Well	1108010-02G	198	500	High	Moderate
DAR Day Use Well	1108010-03G	100	422	High	High
Hammond Acres Water Corp	1108014-01G	209	519	High	Moderate
Hammond Acres Water Corp	1108014-02G	209	519	High	Moderate

Aquifer Recharge Areas

Goshen does not have any major aquifer recharge areas within its town boundaries, according to the “USGS Hydrologic Atlas Series on Groundwater Favorability in Massachusetts”. However, Goshen does have several areas of surficial geology described as “sand and gravel deposits”, which may be worth exploring further as potential well sites. These areas are located at:

- Wing Hill Road at Wing Hollow Road
- Route 9 at East Street
- Route 9 at Lithia
- Hyde Hill Road near Blake Brook

Sewer Service

There is no public sewer service in Goshen. Individual homes, businesses, and government facilities are responsible for creation and use of septic systems as per 310 CMR 15.00 Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-Site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage.

Long-Term Development Patterns

All of Goshen is zoned for single family residential/agricultural, allowing great opportunity for residential growth. According to an analysis in the 2003 OSRP (performed as part of the E.O. 418 Build-out Analysis), total build-out of Goshen would result in a maximum population of 9,624 people, 3,678 households, 1,430 students, and an increase of 71 miles of roadway. The increase in water demand would be 652,700 gallons a day, and increase solid waste production to 4,465 tons a year.

2012 Goshen Open Space & Recreation Plan

Because of its proximity to Northampton and Interstate 91, the existence of Route 9, limited zoning bylaws, and relatively inexpensive undeveloped land, Goshen could potentially experience some of the extreme development pressures and associated conflicts confronted by other Pioneer Valley communities. The potential for uncontrolled commercial and strip development in the town center, industrial and large service businesses on rural residential roads, diminution of historic and scenic landscapes, vanishing open space, increased traffic, and loss of historic architecture have been seen in other parts of the Pioneer Valley and could occur in Goshen.

SECTION 4: ENVIRONMENTAL INVENTORY AND ANALYSIS

Hilltown landscapes are primarily forested, yet retain many characteristics of former self-contained agricultural centers. This is the case in Goshen, which was once a thriving agricultural settlement and has become a quiet rural town.

There are 1,283 acres in Goshen that have been identified by the Natural Heritage and Endangered Species Program (NHESP) as BioMap2² Core Habitat, and should be protected for that purpose if at all possible. NHESP defines Core Habitat as land critical for the long-term persistence of rare species and other Species of Conservation Concern, as well as a wide diversity of natural communities and intact ecosystems across the Commonwealth.

There are also 3,610 acres of Acres of Critical Natural Landscape (CNL). Critical Natural Lands complement Core Habitat, including large natural Landscape Blocks that provide habitat for wide-ranging native species, support intact ecological processes, maintain connectivity among habitats, and enhance ecological resilience; and includes buffering around uplands around coastal, wetland and aquatic Core Habitats to help ensure their long-term integrity.

The relevance of BioMap2 Core Habitat and Critical Natural Lands are discussed further in Section 4.

In 2005, Goshen participated in the Conservation Assessment and Prioritization System (CAPS) under the Highland Communities Initiative. The project conducted by the Landscape Ecology Program, Department of Natural Resources Conservation at the University of Massachusetts utilized a computer modeling approach to prioritize land for conservation based on the assessment of ecological integrity for various natural communities within an area. The priority areas identified for conservation by CAPS have been considered and incorporated within the goals, objectives, and recommended actions of this plan.

A. Geology, Soils and Topography

The bedrock of Goshen is part of the eroded core of an ancient chain of mountains that is approximately 400-500 million years old and extends from Long Island Sound through Western Massachusetts and Vermont into Quebec. There are three known formations in Goshen: the Goshen Formation, with a light gray to dark gray schist and phyllites (lustrous slaty rocks); the Waits River Formation, with dark gray schists and occasional thin beds of marble; and the Williamsburg Granodiorite, with crystalline granite-like inclusions containing coarse crystalline veins of quartz.

Like almost all of New England, great ice sheets thousands of feet thick once covered Goshen. The ice sheets melted about 12,000 years ago and left extensive surface deposits that cover most of the land and dominate the New England landscape. The two basic types of deposit in

² Massachusetts Department of Fish and Game and The Nature Conservancy. 2010. *BioMap2: Conserving the Biodiversity of Massachusetts in a Changing World*.

2012 Goshen Open Space & Recreation Plan

Goshen are lodgement till and stratified drift. Lodgement till formed when glaciers overrode and compressed the earth. It is an unsorted mixture of sand, clay, pebbles and boulders, no more than three feet thick. Stratified drift refers to deposits of sand and gravel that formed during the final days of the Ice Age. The melting ice sheets gave rise to torrential streams that had the power to carry a large load of sand and gravel formerly trapped in ice. The velocity of the stream diminished, as when entering a lake or flat area, releasing its sediment load to settle and form deposits of sand and gravel.

The soils in Goshen are dominated by three major types: the Lyman soils, which are loamy and shallow; and the Marlow and Peru soils, which are loamy and slowly permeable. All of the soil types existing in Goshen present severe limitations to septic absorption fields and building construction. As there is no public water or sewer in Goshen, this presents natural constraints to development.

The Goshen area contains igneous and metamorphosed sedimentary rocks of Paleozoic age (600 million to 225 million years before the present). Small intrusions of the Williamsburg granodiorite and related pegmatite comprise the igneous rocks while the Hawley schist, Goshen schist and quartzite of the Conway schist comprise the metamorphic rocks (Anderson, 1959). The age of the sedimentary Hawley schist is believed to have originated during the Ordovician period (approximately 500 to 440 million years ago). In the Goshen area this schist is very coarse-grained kyanite garnet biotite muscovite schist containing quartz bands interwoven with mica. The rocks weather to a dark gray often stained brownish by rust or greenish from plant material (e.g., lichens and mosses). There are four variations of Hawley schist:

- Schist containing large garnet (alkaline earth metals and iron silicates) and kyanite (blue to light green aluminum silicate) metacrysts;
- Hornblende schist (combinations of calcium and metals);
- Feldspathic beds (high concentrations of feldspar); and,
- Coarse garnet-biotite-quartz muscovite (mica grouping of metals) schist

Easily accessible outcrops of the Hawley schist can be found on Ball Road and along Bissell Road (Anderson, 1959).

The Conway/Goshen schist comprises the Conway formation, which overlies the Hawley schist and is composed of two lithologic units (Willard, 1956). As a result, this formation is younger in age and has been assigned to the Silurian system (395 to 430 million years ago). The older member is micaceous containing irregularly alternating beds of micaceous quartzite. The younger bed is predominantly quartzite, somewhat micaceous and contains calcareous layers. This widely distributed Conway formation is generally a garnet-quartz-mica schist, containing sericite, biotite, and staurolite. Small amounts of graphite, magnetite, pyrite, and plagioclase are present in the stone. The rock has a lead gray to dark gray color, except where stained with rust due to iron deposits. The mineral sericite provides sheen to the rock, similar to that of phyllite. As a result, the stone appears very fine grained with a porphyroblastic (relatively smooth) surface. Visible portions of the Conway formation can be viewed along the Rt. 9, Loomis Road and the Judd flagstone quarry. The Conway formation has been correlated with the Waits River formation in southern Vermont (Anderson, 1959). The Conway, Goshen, and Hawley schist were quarried quite extensively for building foundations, until the introduction of concrete. Currently, the schist formations are primarily used in landscape design. The igneous rock in the region is not used commercially.

2012 Goshen Open Space & Recreation Plan

The Williamsburg granodiorite is a compact, fine-grained (1.0 mm) biotite granite that weathers to a light gray color to almost white. The spotted black specks are biotite. This stone is very hard and is difficult to split relative to the schist. The largest exposure of grandiorite bedrock in Goshen can be observed along the western shore of Lily Pond. Grandiorite has limited economic use with the exception of a few small inclusions within retaining walls (Anderson, 1959).

B. Landscape Character

Goshen has a wealth of features unique to the area, including many views of the valley and Mt. Holyoke Ranges east and south of town, and, on Moore Hill, 360 degree views. Tilton Town Farm provides not only excellent views of Mt. Tom and the lower Pioneer Valley, but also recreational trails and pastures.

Goshen has several small lakes, ponds, wetlands, and wet meadows that provide wildlife habitat and recreational opportunities. Upper and Lower Highland Lakes are part of a great recreational resource, the D.A.R. State Forest. Visitors can swim, fish, boat, picnic, hike, and camp on its 1,000 acres. However, public access is only allowed on Upper Highland Lake from D.A.R. State Forest. Access to Lower Highland Lake is restricted to private ownership surrounding the lake. Hammond and Lily Ponds also provide recreational opportunities.

Goshen also contains many historical resources, such as its historic center, Lithia and Batesville villages, the “potato hole” for archaeological observation, mill and dam remnants, and old roads.

The Town of Goshen has not acquired any land for the recreational or conservation purposes since the 2003 OSRP was completed. However, State and private initiatives have been at work to preserve the Lilly Pond bog. Located approximately one half mile west of DAR State Forest, the 20-acre floating Lilly Pond bog was recognized by National Heritage and Endangered Species Program as a priority natural community in Goshen. This parcel of land was identified as a priority for land protection in by NHESP in 2001. The Five College Consortium donated 20 acres including the bog to the Department of Fish and Wildlife in 2004. Since that time, the Department of Fish and Wildlife has protected over 300 acres abutting the site.

Additionally, a conservation restriction (CR) was placed on 55 acres of privately owned land on Route 9 in west Goshen. The CR is held by the Trustees of Reservations and The Hilltown Land Trust.

Forested land makes up the largest land use category in Goshen accounting for 85 percent of Goshen’s land. Residential land use is the third most common type of land use. This category includes small (under ¼ acre lots), medium (lots of 1/4 acres to ½ acre), large (lots of 1/2 acres to one acre), and very low density (lots larger than one acre). Together, active agriculture and pasture form over 400 acres of land. These uses are another visual characteristic of Goshen. The portion of land related to residential uses has been growing in recent years. The town is under pressure from residential development and protecting forested land from development will be key to maintaining Goshen’s rural character.

2012 Goshen Open Space & Recreation Plan

Goshen Land Use		
Rank	Use	Acres
1	Forest and Forested Wetland	9,657
2	Non Forested Wetland	416
3	All Residential	401
4	Water	215
5	Active Agriculture	214
6	Pasture	195
7	Powerlines	80
8	Active Recreation	58
9	Parks and Institutional Open Space	27
10	Mining	22
11	Commercial	21
12	Industrial	11
13	Water Recreation	2

Source: 2005 Mass GIS Land Use Codes

C. Water Resources

Watersheds

Surface water drains in two directions: southwest and southeast. A small portion of northeastern Goshen lies within the Deerfield River Basin and is drained via the Poland Brook sub-basin. The majority of land in Goshen is within the Westfield River Basin, which is drained by way of Webster Brook and the Swift River sub-basins. Almost one-third of Goshen lies within the Connecticut River Basin. This area is drained via the west branch of the Mill River, Rogers Brook and Granny Brook.

Surface Water

Goshen has six major bodies of water. Upper and Lower Highland Lake are northeast of Goshen Center. These two separate lakes border D.A.R. State Forest and are connected by a small stream. Hammond Pond in the south side of town is the approximate size of the Upper Highland Lake. Damon Pond lies mostly in Chesterfield but has approximately 1/3 of its surface in the southwest corner of Goshen. Lilly Pond located ½ mile west of D.A.R. is approximately 20 acres and contains a bog. Sears Meadow Pond, also known as Sears Meadow Reservoir, is northwest of the town center.

Many other smaller bodies of water are scattered across the landscape primarily located along streams and in wooded areas. Most of the 215 acres of open water in Goshen are comprised of the six large ponds. These water bodies offer valuable wildlife habitat, unique natural environments, and provide benefits to Goshen's human inhabitants in the form of prime recreational opportunities

Aquifer Recharge Area

Goshen does not have any major aquifer recharge areas within its town boundaries, according to the "USGS Hydrologic Atlas Series on Groundwater Favorability in Massachusetts". However, Goshen does have several areas of surficial geology described as "sand and gravel deposits", which may be worth exploring further as potential well sites ("USGS Hydrologic Atlas Series on Groundwater Favorability in Massachusetts"). These areas are located at:

- Wing Hill Road at Wing Hollow Road
- Route 9 at East Street
- Route 9 at Lithia
- Hyde Hill Road near Blake Brook

Flood Hazard Areas

According to the 1978 Flood Insurance Rate Map, the location and limits of the 100-year floodplain lie adjacent to several watercourses in Town. They are widely dispersed and include (from north to south) the Sears Meadow west of Route 112 and between that road and Sears Road; west of Sears Swamp between Spruce Corner Road/Barrus Road and Sears Road along both banks of East Brook; along the east side of Route 112 south of the Ashfield line north and south of the Good Time Stove Company; around Upper and Lower Highland Lakes; the northeast corner of Town west of Wing Hill Road; Lower Highland Swamp east of Camp Howe and north of

2012 Goshen Open Space & Recreation Plan

East Street; east of East Street along Rogers Brook; and various smaller areas throughout the Town, shown on the Water Resources Map.

Wetlands

Goshen has a variety of natural resources including several forested and wet meadow wetlands. A great diversity of species is dependent upon the wetlands and riparian areas in Goshen. Maintaining the integrity of wetlands is important to provide food, shelter, and breeding habitat for various species, and to provide temporary flood water storage.

Wetlands include rivers, ponds, swamps, wet meadows, beaver ponds, and land within the FEMA-defined 100-year flood area. Wetland areas are home to frogs, fish, freshwater clams and mussels, beaver, otters, muskrats, great blue herons, waterfowl, and bitterns. Wetlands are specialized habitat areas that are always wet or are wet for extended periods of time during the year. The types of wetlands in Goshen include marshes, bog, vernal pools, ponds, streams and river. The Commonwealth of Massachusetts regulates activities in and around wetlands in Goshen through the Wetlands Protection Act Regulation 310 CMR 10.00, and enforced by the local Conservation Commission. Wetlands provide important wildlife habitat and play a critical role in maintain water quality by serving as natural filters for nutrients, toxins, and sediment that would otherwise move directly into surface and ground waters.

There are approximately 416 acres of non forested wetlands and 316 acres of forested wetland in Goshen. Wetland habitats in town occur primarily along the streams and rivers as well as in lands adjacent to the 6 major ponds in Goshen. If open waters are included in this accounting, the total acreage of wetlands in Goshen rises to 947 acres. These wetlands and flood areas in are shown on Goshen's Water Resources Map.

D. Vegetation

Lands within Goshen support a wide variety of coniferous and deciduous forests, grasslands, wetlands, and riparian vegetation. There are approximately 9,500 acres of forest, 400 acres of non forested wetlands, 200 acres of agriculture, and approximately 200 acres of pasture. The town has expanses of permanently and temporarily protected vegetated open space located within a North Central Hardwoods-Hemlock-White Pine zone. Lush and diverse vegetation is critical to the quality of life in Goshen.

Forest Land

According to Massachusetts Geographic Information System, Goshen has 9,657 acres of forested land and forested wetland in 2005. Approximately 85 percent of Goshen is forested land with combinations of mixed hardwoods and conifers such as white pine, red oak, red maple, black birch, white birch, white ash, sugar maple, yellow birch, beech, hickory, black cherry, white oak, aspen, gray birch, cedar, hop hornbeam, and pitch pine. The floodplains and wetlands support a variety of native trees such as silver maple and willows.

Public Shade Trees

Goshen's town center has a healthy cover of public shade trees. Many of the roads in town are also lined with public shade trees. The town is responsible for maintaining public trees in the cemetery, parks and on all other town properties. However, the majority of trees in town are

2012 Goshen Open Space & Recreation Plan

not actively maintained by the town. These trees and stands of trees are present where forest meets existing roadways.

Agriculture

According to Massachusetts Geographic Information System, Goshen has 214 acres of Active Agricultural Land. In addition Goshen has 195 acres of Pasture land. In the early days of Goshen's settling, there was much more active farming and pasture land. Open fields are part of what makes Goshen stand out visually from other parts of the Pioneer Valley. If left unmaintained these fields and pastures will revert back to forest.

Wetland Vegetation

As of 2005, according to Massachusetts Geographic Information System, Goshen had approximately 416 acres of forested wetland and approximately 316 acres of non-forested wetland. These areas and the associated vegetation are important resources for wildlife. The vegetation provides food, nesting material, and cover to many species of animals.

Rare Species

Various uncommon plants present to some degree in Goshen, mostly associated with the Lilly Pond bog, include³:

- Purple Fringed Orchis (*Habernaria finbriata*)
- Marsh Cinquefoil (*Potentilla palustris*)
- Sundew (*Drosera sp.*)
- Rattlesnake Plantain (*Goodyera sp.*)
- Spotted Wintergreen (*Chimphila maculata*)
- White Baneberry (*Actaea pachypoda*)
- Bur Marigold (*Biden cernua*)
- Spotted Corralroot (*Corallorhiza maculate*)

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) lists Black Cohosh (*Actaea racemosa*) as an Endangered plant species in Goshen. It is a vascular plant with observed historic habitat in Goshen. There are no other Rare, Endangered or Species of Special Concern plants listed for Goshen.

Unique Natural Resources

Goshen is home to many unique natural resources including large tracts of forests, potential vernal pools, streams and rivers, several ponds, and several rock outcroppings. Sears Meadow and the Lilly Pond and associated bog are rare environments. These unique types of wetland are valuable to humans and wildlife in the form of flood control and habitat.

Lilly Pond approximately one half mile west of DAR was recognized by National Heritage and Endangered Species Program as a priority natural community in Goshen. The Lilly Pond bog is a wild 20 acre floating mat of vegetation. Some unique species in the area include Leatherleaf, Bog Rosemary, Bog Laurel, Pitcher Plant, Round-leaved Sundew, Virginia Cottongrass, and Rose Pogonia. This parcel of land was identified as a priority for land protection in by NHESP in 2001. The Five College Consortium donated 20 acres including the bog to Department of Fish and

³ Town of Goshen. September 2003. *Open Space and Recreation Plan*.

2012 Goshen Open Space & Recreation Plan

Wildlife in 2004. Since that time Department of Fish and Wildlife has protected over 300 acres connected to the site.

Both Upper and Lower Highland Ponds and the connected lands of DAR State Forest are unique natural resources. These locations provide great opportunity for recreation and provide quality habitat for many types of flora and fauna. Likewise the rivers and streams of Goshen are valuable resources and should be protected.

E. Fisheries and Wildlife

Although a detailed inventory has not been completed in Goshen, there is a variety of wildlife that has been observed. This includes, but is not limited to, deer, moose, mink, muskrat, otter, porcupine, fishers, fox, eastern coyote, bobcat, bald eagle, and black bear. The return of beaver to the region has led to the creation of wetlands that provide excellent habitat for many species of transient and migratory bird life.

Vernal Pools

A vernal pool is a seasonal wetland contained in a depression that lacks a permanent above ground outlet. It appears when the water table rises in the fall and winter, when the snow melts in the late winter and early spring, and with runoff from rain. The water lasts for a few months in the spring and early summer. By late summer, a vernal pool is generally dry or is otherwise free of fish. The periodic drying does not support breeding populations of fish, but many organisms have evolved that must use a vernal pool for various parts of their life cycle. Species such as the mole salamander, the wood frog, and the fairy shrimp have come to be known indicators of the existence of vernal pools.

Vernal pools range in size and are generally shallow (about three to four feet deep). Pools might be found in low areas of a forest, in the floodplain of a river or stream, within a vegetated wetland, in an open field, between coastal dunes, in abandoned quarries or natural rock formations and other areas where water might pool.

There are no certified vernal pools in Goshen. However, 11 potential vernal pools been observed for many years. Among the areas they can be found are: west and south of the intersection of South Main Street and South Chesterfield Road; and, on the west side of Route 9 south of the used car lot, north of the intersection with Ball Road.

Wood frogs, red spotted newts, and mole salamanders live in upland forests, but migrate to ancestral vernal pools to lay their eggs in early spring. The eggs hatch in the pool, and, in the case of the frogs, the tadpoles develop in the pool and eventually follow the adults to the adjacent uplands.

Corridors

Goshen serves as an important wildlife corridor, both aquatic and terrestrial, in this part of western Massachusetts. The proximity to large contiguous tracts of forest land in neighboring towns, and its dual citizenship within the upper Westfield River watershed and the upper Mill River watershed grant it important headwater stream status.

Rare Species

The town has a diversity of major habitat types. Its rivers, wetlands, forest, meadows, and hilltop ridges provide sustenance, mating grounds, and vegetated cover to the wildlife dwelling within. Since many species rely on a variety of habitat types during different periods of their life cycle, species diversity is greatest in areas where several habitat types occur in close proximity to one another. When habitats are of high quality and ample quantity, wildlife populations thrive. Selected areas are of great importance to the survival of rare and endangered species.

2012 Goshen Open Space & Recreation Plan

The species listed as Special Concern, Threatened, or Endangered by Massachusetts Natural Heritage Program are the same species listed in the 2003 Open Space and Recreation Plan. No changes in status have taken place.

Threatened, Endangered and Species of Special Concern in Goshen				
Type	Common Name	Scientific Name	Status	Last Seen
Bird	Sedge Wren	<i>Cistothorus platensis</i>	Endangered	1995
Dragonfly	Harpoon Clubtail	<i>Gomphus descriptus</i>	Endangered	1996
Dragonfly	Riffle Snaketail	<i>Ophiogomphus carolus</i>	Threatened	1996
Amphibian	Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Special Concern	1993
Reptile	Wood Turtle	<i>Glyptemys insculpta</i>	Special Concern	2007
<i>Source: Massachusetts Natural Heritage Program</i>				

Three rare species of turtle are found in the wetlands of the watershed: the Eastern Box Turtle, the Spotted Turtle, and the Wood Turtle. Spotted turtles inhabit a variety of wetland habitats in Massachusetts, including marshy meadows, wet woodlands, boggy areas, beaver ponds, and shallow muddy-bottomed streams. They can be found in Red Maple and Atlantic White Cedar swamps and woodland vernal pools. They require a soft substrate and prefer areas with aquatic vegetation.

Several rare amphibians are known to inhabit the wetlands and forest of Goshen including three salamanders and one toad and one frog species: the four-toed salamander, the Spring Salamander, the Jefferson Salamander, the Eastern Spadefoot Toad, and the Gray tree frog.

Historically the waters of the Westfield and Connecticut basins were home to large numbers of salmon, trout and other fish. European settlement of these basins downstream of Goshen during the seventeenth century, with its accompanying development of dams and mills, began to change the quality and character of the surface water. In the 1930s and 1940s the Mill River was still one of the best-stocked streams in the state. However, by the 1950s pollution from industrial and domestic sources had ruined the larger rivers and streams for fishing and recreation. In the 1970s, local volunteer teams began orchestrating a streams cleanup. By 1983, most streams were clean enough to stock again. Current stocking efforts of trout and Atlantic salmon (*Salmo salar*) occur in several tributaries and lakes throughout Goshen. However, dams located downstream in the lower Pioneer Valley (e.g., Mill River in Northampton, and the ACOE Knightville Dam in Huntington) limit migration patterns of most Atlantic salmon.

F. Scenic Resources and Unique Environments

Scenic Resources

Daughters of the American Revolution (DAR) State Forest, the first DAR forest in the United States, was established in 1929 when the Massachusetts Chapter of the Daughters of the American Revolution arranged for the donation of 1020 acres of land to the State to be used as a forest preserve. It includes public beaches at Upper Highland Lake, picnic and day use areas,

2012 Goshen Open Space & Recreation Plan

hiking trails, boat ramps, fishing and other multi-use recreation. There are no public beaches at Lower Highland Lake and Hammond Pond.

Tilton Farm, approximately 71 acres of town owned land with a variety of recreational opportunities including ball fields, volleyball court, pavilion, nature trail and open pastures. The farm is bordered to the north by the DAR State Forest.

Both Upper and Lower Highland Lake are scenic natural resources. These two lakes border DAR State Forest. Public access is only allowed on Upper Highland Lake at the DAR State Forest.

Historic Areas

Several noteworthy historic sites exist. Beals Home Stagecoach Depot on Beals Road (1792) and its associated abutments of a bridge spanning a nearby stream are historic.

The Dresser Hill Sites (ca. 1846), consisting of George Dresser's house, with possible cellar hole of an earlier house and the associated remnants of the Reuben Dresser sawmill foundation are historic.

The town center with Town Hall (1911) and Center School (1923) are not the original buildings in town but are historic.

Other historical archaeological sites and structures which have not been inventoried include the Potato Hole, possibly a stone barn built into the side of a hill in the northeast portion of town near the Conway town line. The Goshen tunnel above the Goshen Cemetery, the stone arched bridge at the foot of Sabo's Hill on West Street.

Several partial foundation walls from small mills are scattered around town as well.

Unique Environments

The following places have been identified by the residents of Goshen for their contribution to the character of Goshen. Although similar environments may exist throughout western Massachusetts and New England, these special places are noteworthy in Goshen:

1. Sears Meadow, a shallow wetland located in the northern portion of town.
2. West Branch of the Mill River, a small meandering stream located in the upper elevations of the Connecticut Basin. The West Branch of the Mill River drains Lower Highland Lake, which is located south of the DAR State Forest. The stream enters the Mill River in Williamsburg and travels through the City of Northampton. Due to historical mill operations, the Mill River has several low head dams and related appurtenant structures which impound water and limit fish migration. The Mill River enters the Connecticut River along the southern border of Northampton. On a yearly basis the West Branch of the Mill River is stocked with salmon fry.

2012 Goshen Open Space & Recreation Plan

3. Rogers Brook, a small stream filled with native trout and stocked yearly with salmon fry. Rogers Brook is located along the western ridge of the Connecticut Basin and empties into the Mill River in Williamsburg.
4. Webster Brook drains the upper eastern ridge of the Westfield Basin and is formed by way of several intermittent streams. This sub-basin has been known to support a variety of wildlife including but not limited to Black Bear and Moose.
5. Lilly Pond, considered a peat bog, which is somewhat unique to Massachusetts. The MA Fish and Wildlife Department purchased a conservation restriction on approximately 59 acres bordering Lilly Pond for wildlife habitat protection, now called the Lily Pond Wildlife Management Area.
6. Damon Pond – Only a portion of Damon Pond is within Goshen town boundaries. There are several summer cottages along the shore of the pond.
7. Hammond Pond – Approximately 45 acres with a private beach and boat launch for members. Currently there is no swimming access for non-member town residents.

At present, Goshen does not have any areas designated as Areas of Critical Environmental Concern as designated by Massachusetts Department of Conservation and Recreation. It may be a course of action for the Open Space Committee to investigate. High water quality (Class A designated areas), a large percentage of wetlands acreage, a significant volume of listed endangered species, extensive inland surface waters, natural hazard areas, habitat resources, and special use areas are all examples of natural resources that would make an area qualified for status as an Areas of Critical Environmental Concern.

G. Environmental Challenges

Hazardous Waste

There are four reported releases of oil or hazardous materials in Goshen between 1997 and 2009 in Mass DEP's 21E Reportable Releases Database. All of the releases have been cleaned up and Release Abatement Outcome (RAO) status achieved.

Landfills

Landfill sites are located on East Street, with a former landfill located on Highland Road on the West Branch of the Mill River. Both landfills are regulated and monitored by MA DEP and there are no known contamination issues associated with them.

Erosion

Goshen is a Hilltown with many peaks and valleys. The soils of Goshen are generally poorly draining and the substrate is often made up of granite and similar material. Erosion, beyond what is expected in natural settings, is not a significant concern.

Chronic Flooding

The 100 year floodplain and wetlands of Goshen are the main resources to collect excess water and protect town from flooding. Flooding is expected and considered normal in Goshen's

2012 Goshen Open Space & Recreation Plan

wetlands and floodplain. The wetlands and floodplain serve to control flooding of other areas, water storage, and filtration.

Sedimentation

The areas around Hammond Pond and the Highland Lakes are generally more densely developed than other residential areas in town. Poor landscaping techniques, soil disturbance, and the use of sand in the winter can lead to sedimentation of the nearby water bodies.

New Development:

Goshen has seen approximately five new single family residences built every year for the last 20 years. This slow and steady rate of development will change the character, landscape, and quality of life in Goshen if left to progress. If Goshen wishes to preserve the large tracks of forest, open space, and fields in town the town must seek ways to limit or mitigate the impacts of new development. Many useful zoning tools could be adopted that can successfully limit the visual impact and habitat destruction of new development while still allowing for economic activity and new construction.

Ground and Surface Water

Very few areas in Goshen possess soils that have good drainage characteristics required for proper on-site sewage disposal. Based on historical Goshen Board of Health records, failing septic systems have occurred particularly in the Hammond Pond area and the Highland Lakes region. These areas are generally more densely developed than other residential areas in town and contain significant seasonal populations.

Heavy use of road salt in winter months can also contaminate groundwater and wells.

Invasive Species

Invasive species are a concern in areas of land that have been recently disturbed or degraded. If these lands are not carefully replanted with native species the landscape will allow invasive species to flourish. Goshen has fewer developments and thus less opportunity for invasive species than many surrounding communities; however, invasive species are still a concern. Some common invasives found in areas of Goshen include Japanese knotweed, Japanese barberry, Asian bittersweet, multiflora rose, purple loosestrife, and garlic mustard.

Environmental Equity

The many parks and parcels of open space ensure that residents have access to recreation lands. All new facilities built or substantially remodeled in Goshen are American with Disabilities Act compliant as per national law. Many sites however remain inaccessible to those with disabilities.

SECTION 5: INVENTORY OF LANDS OF CONSERVATION & RECREATION INTEREST

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

- Private lands can be protected in perpetuity through deed restrictions, or conservation easements (yet some easements only run for a period of 30 years and those lands are therefore not permanently protected open space).
- Lands under special taxation programs, Chapter 61, 61A or 61B, are actively managed by their owners for forestry, agricultural, horticultural or recreational use. 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 recreational use by deed. Municipal properties may be protected via the Town Meeting or City Council vote to acquire them.
- Private, public and non-profit conservation and recreation lands are protected under Article 97 of the Articles of Amendment to the State Constitution.

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 interested in long-term, active forest management. Assessment of forestland under Ch. 61 is based on the land's ability to grow timber.

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

Chapter 61B - Intended for landowners interested in 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.

A. Private Parcels

Approximately 3,387.57 acres of privately owned land in Goshen is protected under the Chapter 61 program, for agriculture, forestry, or recreation. 1,838.62 acres of land is in the Chapter 61 program, 877.05 acres of land is in the Chapter 61A program, and 671.92 acres of land is in the Chapter 61B program. A detailed spreadsheet of land by owner is included in the Appendices along with the parcels mapped on the Recreational and Protected Open Space Map.

B. Public and Nonprofit Parcels

There are 2,789.91 acres of land owned by a public agency or non-profit that has designated recreational or conservation purposes. These lands are mapped on the Recreational and Protected Open Space Map, and a table identifying them is included in the appendices.

Lilly Pond Wildlife Management Area

Lilly Pond was identified as a priority for land protection in 2001, Department of Fish and Wildlife has protected over 300 acres at this site. In 2004, the 20-acre bog itself was donated to DFW by the previous owner, Five Colleges, Inc.

Tilton Town Farm

Tilton Town Farm is a parcel of land subdivided into three smaller parcels. One of the three is being used as a primary residence and another is a field for haying. The third parcel, comprising over 73 acres, contains ball fields and picnic areas. There is also a section dedicated to a nature trail, currently under construction with funding provided by a 2009 DCR Trails Grant. Tilton Town Farm is located on West Wing Hill Road and is bordered by a wooded state park.

The main entrance to the park is a dirt road that is not maintained in the winter. There is a 3:1 slope to the road. There are benches adjacent to the lower ballpark that do not have arm or back rests. The upper ball field is accessed by a dirt road. It has bleacher-style seating, and there is no handicap area in the parking lot. There is a Porta-Potty that is not handicap-accessible.

There is a picnic area adjacent to the ball field, which is accessed by the same dirt road. The picnic tables are not wheelchair-accessible and there is no handicapped parking. The nature walk is located in a wooded section and the path consists of dirt and rooted terrain.

ADA recommendations: Install and maintain a paved roadway entering the ballparks, complete with handicapped parking. Provide picnic tables that are wheelchair accessible.

Town Office Playground

Town Office Playground is located adjacent to the Town offices. The tot playground consists of a swing set and slide that are not handicap adapted. The adjacent parking lot, for the Town offices, has two handicap parking spaces. There is no pathway connecting the parking lot to the playground. The ballpark that is adjacent to the playground has two benches that do not have sides or backs. There is no public restroom located in the Town Office Playground.

ADA recommendations: Provide handicapped adaptable swing sets and slides and a paved path to the tot area and ball field; provide public restrooms that are accessible to the handicapped.

Town Tennis Courts and Tennis Court Park

The asphalt tennis courts are adjacent to a paved parking lot. There are no specified handicapped spaces in the parking lot, but there is access. The courts are cracked, unmanageable for a wheelchair. There are no public restrooms.

2012 Goshen Open Space & Recreation Plan

ADA recommendations: Refinish the surface of the court. Provide handicapped parking spaces.

Town Cemeteries

The town cemetery is not accessible for the handicapped; the entrance is a dirt road with a slope of 3:1. The road is not maintained in the winter and there is no off-road parking.

ADA recommendations: pave the entrance road and provide parking spaces accessible to the handicapped.

DAR State Forest

DAR State Forest was established in 1929 when the Daughters of the American Revolution (DAR) donated 1,020 acres to the Commonwealth. Almost 750 additional acres have been acquired since then, including Upper and Lower Highland Lakes. DAR offers a popular beach for swimming on Upper Highland Lake, and a shady picnic area. A group picnic pavilion can be reserved. The campground offers 50 campsites and a private beach. Wheelchair-accessible campsites are available and may be reserved. A reserved group campsite is also available. Non-motorized boats may be launched at ramps in both lakes. Ice fishing and skating are popular. More than 15 miles of marked trails wind through the woods, offering year-round opportunities for hiking and horseback riding. In winter these trails are popular with cross country skiers, snowshoers, and snowmobilers. Many trails and all restrooms are accessible.

SECTION 6: COMMUNITY VISION

A. Description of Process

Public Survey

The Open Space Committee issued a public survey for a 60-day period in the Spring of 2011. Unfortunately only 43 responses were received. Despite the low response rate (4% of total population; 5.3% of the population over the age of 20), the Committee believes the responses to be of value and opted to include them as part of the plan analysis to understand open space and recreation use patterns and preferences within the community. A full copy of the survey results are provided in the Appendix.

Based on survey results, D.A.R. State Forest is the most “often” used recreational facility, with Tilton Town Farm, and Lily Pond coming in second and third respectively. Facilities “never” used by residents include tennis court park (78%), town tennis courts (74%), and the town office playground (65%). In terms of recreational activities, trail use at D.A. R. State Forest is the most “often-used” activity (49%), with 46% of respondents “never” using Tilton Town Farm’s trails. Of the eight surface water resources listed, the most widely used are Upper (40%) and Lower (37%) Highland Lake. Under “other places for recreation”, the most noted locations were local roads. Non-motorized trail use is the number one recreational activity enjoyed by local residents (78%) followed by swimming (75%), bird watching (71%), boating (44%), and road biking (32%).

Relative to goals and objectives, survey respondents identified protecting water quality (100%) as important to them, followed by protecting forests (98%), protecting farmland (95%), and preserving rural character (91%). Supporting those priorities, respondents consider the following resources the most important to protect: wildlife habitat (86%), groundwater/aquifers (84%), forest land (80%), farmland (68%), and land with scenic views (52%).

Draft Plan Public Comment Period

The final draft of the Plan was issued for a 30-day public comment period in November 2011. An electronic version of the plan was posted on the Town website and a paper copy available at the library and the Town Offices. Notice of its availability was sent to each of the town boards and posted in the local newspaper. Comments were submitted in writing to PVPC, reviewed by the Open Space Committee and incorporated into the final plan.

B. Statement of Open Space and Recreation Goals

Goshen residents cherish the scenic landscape all around them and want to maintain the rural character of their community and the quality of life it affords them. Most integral to Goshen’s character are the protection and management of forests, protection of water quality, active agriculture, and healthy, diverse and contiguous wildlife habitats. Residents seek to continue and expand upon the many forms of outdoor recreation found in Goshen including trails for hiking, snowmobiling and horseback riding, and swimming areas open to the public.

SECTION 7: ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

The results of the public outreach and participation process engaged in as part of the 2011 OSRP update remain similar to those identified in the 2003 plan. Residents continue to value wildlife habitat, farmland, forests, the scenic rural character, and their local aquifer drinking water supplies. Unfortunately, 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. Further, of the land in Goshen, only a small percentage is permanently protected from development, and most is privately owned. Only a few areas guarantee public access for recreation including D.A.R. State Forest, Lily Pond Wildlife Management Area and Tilton Town Farm. Residential sprawl has the potential to fragment wildlife corridors, diminishing 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 prevent 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. The question of connectivity, management, and public access will gain importance as the population of Goshen grows.

B. Summary of Community's Needs

Planning for a community's open space and recreation needs must work to satisfy the present population's desires for new facilities, open spaces, and services and also interpret and act on the available data to prepare for the future needs of the Goshen 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.

During the recent survey, citizens were asked to indicate how often they use certain open space areas and recreational facilities. Overall, Goshen residents revealed a relatively high use of the D.A.R. State Forest. Other facilities "sometimes" used included Lily Pond, Tilton Town Farm, the town office playground, and the town tennis courts, respectively. However, most of the parcels of land that are permanently protected in Goshen are located along the outer edges of town and surrounded by private land. The DAR is a large tract of land but is not contiguous with other permanently protected parcels of land; hence, there is no permanent greenway corridor which

2012 Goshen Open Space & Recreation Plan

would guarantee the protection of both new and established hiking/snowmobile trails. In addition, both Hammond Pond and Lower Highland Lake restrict public access. Access to canoe launches or swimming opportunities is limited to the Upper Highland Lake in the DAR State Forest.

People who are physically handicapped are challenged to find conservation lands and spaces that are accessible in Goshen. Most of the town owned land is grass fields and gravel roads of nearly level terrain. The ADA survey of local recreational facilities notes where ADA compliant improvements could be made to improve access for handicapped persons.

C. Management Needs, Potential Change of Use

There are several techniques that can be used by towns and conservation land trusts for directing new growth and protecting those areas that are recognized to be the most important natural resources. Strategies for consideration include changes to the local zoning code, land conservation, and education and outreach about land protection options including estate planning.

For example, a transfer of development rights (TDR) bylaw seeks to preserve open space like farm and forestland while promoting compact residential development or commercial development near town or village centers. It is intended to steer development away from open space areas targeted for preservation, and toward village centers targeted for growth. A typical bylaw creates two zoning districts: a preservation district (sending zone), and a commercial or compact residential district (receiving zone). Development rights are transferred from the sending zone to the receiving zone in effect preventing further development in the sending zone and encouraging denser development in the receiving zone. Typically the receiving zone will have standards for managing stormwater runoff and other site plan review criteria to ensure protection of a village character atmosphere and local natural resources.

The Goshen Planning Board began a review of its local zoning bylaw in 2007 and again in 2010 but has not implemented any significant changes. A bylaw to protect stone walls was presented at the 2010 Annual Town Meeting, but due to some procedural issues with the vote, it needs to be re-presented at another Town Meeting for adoption. The Planning Board has expressed interest in working on new bylaws to provide site plan review standards for wind power facilities for the protection of scenic and rural character, and evaluate alternatives to typical ANR roadside residential development such as Conservation Subdivisions that offer protection of natural areas through increased density in other appropriate site locations.

Purchasing a landowner's development rights is a very 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. 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).

2012 Goshen Open Space & Recreation Plan

Although conservation restrictions are a common practice, most landowners are not aware of them, how they work, potential land conservation partners, etc. This is where education and outreach to landowners comes in. Most of the undeveloped land in Goshen is privately owned and unprotected from development. The Open Space Committee has been very active in recent years hosting landowner conservation education events. Some of the training was provided in partnership with UMASS Cooperative Extension, The Trustees of Reservations Highland Communities Initiative, and the Hilltown Land Trust as part of the Neighbor Conservation Network project. This type of landowner education should continue and support local landowners interested in protecting their land with resources and contacts for potential partners.

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. In 2007, the Town of Goshen adopted the Community Preservation Act (CPA). The CPA was adopted at the maximum 3% local surcharge with an exception for low-income households. As of 2011, the CPA Committee has not spent any of their funds on the purchase of open space for conservation or recreation. Monies to date have been used primarily for historic restoration projects. CPA funds are a critical resource that can be used not only for the actual purchase of land or a conservation restriction but also for some of the pre-acquisition work such as land survey, deed and title research, legal fees, grant writing, etc. CPA funds can also be used as matching funds for land grants and/or private or non-profit supporting funds. CPA funds are an important resource that should be used wisely to meet the goals and objectives identified in the next chapter of this plan.

SECTION 8: GOALS AND OBJECTIVES

Goshen residents cherish the scenic landscape all around them and want to maintain the rural character of their community and the quality of life it affords them. Most integral to Goshen's character are the protection and management of forests, protection of water quality, active agriculture, and healthy, diverse and contiguous wildlife habitats. Residents seek to continue and expand the many forms of outdoor recreation found in Goshen including trails for hiking, snowmobiling and horseback riding, and swimming areas open to the public.

Goal #1: The diversity, continuity and integrity of wildlife habitat and biodiversity are well-established and protected in Goshen.

Goal #2: Working farms and forests are healthy local resources and a thriving component of Goshen's vibrant rural character.

Goal #3: Goshen's rivers, lakes, ponds and aquifers are clean and protected from all sources of pollution.

Goal #4: Recreational resources and opportunities are accessible to the public.

Objectives:

- A. Residents are well-informed about land conservation strategies and resources, including funding and technical assistance, for protecting their land, and able to implement protective measures when opportunities arise.
- B. Municipal employees, board and committee members are well-informed about land conservation strategies and resources, including funding and technical assistance, for protecting land in Goshen, and able to implement protective measures when opportunities arise.
- C. Local bylaws and regulations encourage smart growth and the protection of important natural resources.
- D. A network of trails exists throughout Goshen and connects to the surrounding communities and is accessible to residents.

SECTION 9: SEVEN-YEAR ACTION PLAN

This section provides a detailed Action Plan spanning the next seven years for working toward the goals and objectives outlined in this plan. The Action Plan is intended to be a realistic, implementable plan for the coming years. Throughout the development of this plan, as well as in planning processes in neighboring communities, it has been widely recognized that all-volunteer boards are stretched extremely thin and sometimes experience “board fatigue” resulting in the loss of valuable committee members. To address this, the Action Plan targets key projects, partners and funding opportunities to implement important building blocks toward the achievement of the long-term goals outlined herein.

Three tenets are inextricably linked to each of the four goals:

- Land conservation through private and public means
- Support of working forest and farmlands
- Continued and expanded access to working lands (farm and forest) and conservation lands for recreation

There is no one size fits all approach to achieving any of Goshen’s goals for open space and recreation. Land conservation will require local, state and federal government investment through ownership and/or funding assistance. Non-profit land trusts can be critical partners either as outright land owners or the holder of a conservation restriction. Private land owners will need access to many potential partners to implement voluntary restrictions, and donations or sale of their land for conservation purposes.

Local Community Preservation Act funds are a critical source of funding that can be used in part or in whole for any number of the land conservation partnerships and strategies noted. State and federal grants will also be important. To maximize Goshen’s ability to apply for conservation grants, the community needs to be ready to act when the opportunity presents. This requires staying in touch with important land owners to know when opportunities for land protection may become available. It is recognized that there are typically only a few times in a land owner’s life when they start to plan for the future of their land. Estate planning can help a land owner meet their financial and personal goals relative to their land, and address a community’s goals for the protection of natural resources. Similarly, the community should be aware of and maintain working relationships with land trusts and other conservation organizations for technical assistance on these matters and potential access to funding.

Much of the same approach applies to development and expansion of trails and other recreational opportunities. The Open Space Committee has prioritized several on-going and successive trail projects for completion as part of this Action Plan. Building on past trail success at Tilton Farm, additional funding will be needed through grants and possibly local CPA funds.

Another critical component of land conservation is ensuring that local bylaws and regulations promote growth in areas where infrastructure exists and supports the protection of important natural resources.

2012 Goshen Open Space & Recreation Plan

Action	Responsible Entity	Date	Funding Source
Objective: Residents are well-informed about land conservation strategies and resources, both funding and technical assistance, for protecting their land, and able to implement protective measures when opportunities arise.			
Continue educational outreach to landowners about conservation options including conservation restrictions, estate planning, and limited development.	Open Space Committee; Hilltown Land Trust; TTOR HCI; UMASS Extension	2012-2019	
Based on Action Plan map priority areas, conduct targeted outreach to landowners about land conservation options including estate planning	Open Space Committee; Hilltown Land Trust; TTOR HCI		
Utilize Community Preservation Act funds for the purchase of land coming out of Chapter 61, 61A or 61B, and other privately owned lands available for sale.	Open Space Committee; Board of Selectmen; Community Preservation Committee	2012-2019	Goshen CPA funds
Objective: Municipal employees, board and committee members are well-informed about land conservation strategies and resources, both funding and technical assistance, for protecting land in Goshen, and able to implement protective measures when opportunities arise.			
Adopt local policy for first right of refusal for land coming out of Chapter 61, 61A and 61B for sale	Open Space Committee; Board of Selectmen		
Utilize Community Preservation Act funds for the purchase of land coming out of Chapter 61, 61A or 61B, and other privately owned lands available for sale.	Open Space Committee; Board of Selectmen; Community Preservation Committee	2012-2019	Goshen CPA funds
Objective: Local bylaws and regulations encourage smart growth and the protection of important natural resources.			
Develop Wind Power Bylaw	Planning Board;	2012-2013	

2012 Goshen Open Space & Recreation Plan

with Site Plan review standards to protect rural character and scenic views	Pioneer Valley Planning Commission		
Adopt Stone Wall Protection Bylaw at Annual Town Meeting	Planning Board	2012	
Develop Conservation Subdivision Bylaw / Flexible Residential Development Bylaw to offer alternatives to ANR	Planning Board; Pioneer Valley Planning Commission; HCI	2012-2013	
Objective: A network of trails exists throughout Goshen and connects to the surrounding communities and accessible to residents.			
Complete construction of Tilton Farm trail – South Loop	Open Space Committee	2011	
Make improvements to Tilton Farm Trail – North Loop; Apply for DCR Trails Grant	Open Space Committee	2012-2015	DCR Trails Grant
Work with Williamsburg Trail Committee and surrounding Towns to identify regional trail connections, and advance trail development	Open Space Committee	2013-2017	DCR Trails Grant; Goshen CPA

SECTION 10: PUBLIC COMMENTS

TBD AFTER 30-DAY PUBLIC COMMENT PERIOD

SECTION 11: REFERENCES

Anderson, A. Jr. 1956. *Bedrock Geology of Part of the Goshen Quadrangle, Massachusetts*. Unpublished Master's thesis, UMASS at Amherst.

Commonwealth of Massachusetts Department of Geographic Information. 2011. *Massachusetts Geographic Information System*.

Commonwealth of Massachusetts Department of Geographic Information. 2011. *Massachusetts Geographic Information System*.

Goshen Community Development Planning and Open Space Committee. 2003. *Town of Goshen Open Space and Recreation Plan*.

Goshen Assessors Office, 2000-2011. *Number of Building Permits*.

Goshen Assessors Office, 2010-2011. *Chapter 61, 61A, 61B Properties*.

Goshen Assessors Office, 2011. *Tax Exempt Properties*.

Goshen, Town of, 2011. *Zoning Bylaws*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. February 18, 2004. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for DEM DAR State Forest*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. March 20, 2002. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for Spruce Corner Restaurant*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. February 18, 2004. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for Camp Holy Cross*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. January 21, 2002. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for Camp Howe*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. April 7, 2005. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for Wildwood Condominiums*.

Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program. January 21, 2002. *Transient Non-Community Source Water Assessment and Protection (SWAP) Report for Hammond Acres Water Corporation*.

Massachusetts Department of Conservation and Recreation, 2011. *Areas of Critical Environmental Concern*. <http://www.mass.gov/dcr/stewardship/acec/>

2012 Goshen Open Space & Recreation Plan

Massachusetts Department of Fish and Wildlife, 2011.

<http://maps.massgis.state.ma.us/dfg/biomap2.htm>

Massachusetts Executive Office of Labor and Workforce Development, 2011.

http://lmi2.detma.org/lmi/lmi_lur_a.asp

Massachusetts Historical Commission, 2011. *Historic Features by Community*,

<http://mhc-macris.net/>

Massachusetts Natural Heritage Program, 2011. *Endangered Species by Town*.

http://www.mass.gov/dfwele/dfw/nhosp/info_by_town.htm

Massachusetts Natural Heritage Program, 2011. *Vernal Pools by Town*.

http://www.mass.gov/dfwele/dfw/nhosp/vernal_pools/vernal_pool_data.htm

Pioneer Valley Planning Commission Data Center, 2011. *Goshen Land Use and Demographic Trends*.

Reference USA, 2008. *Longmeadow Massachusetts Largest Employers*.

Springfield Water and Sewer Commission, 2010. *Annual Statistics Report*.

United States Census Bureau, 2001. *Decennial Census 2000*.

United States Census Bureau, 2005-2009. *American Community Survey 5-year Estimates*.

United States Census Bureau, 2011. *Decennial Census 2010*.

United States Geological Survey, 2003. *Hydrologic Atlas Series on Groundwater Favorability in Massachusetts*

SECTION 12: APPENDIX

Inventory of Land Ownership for Recreational and Protected Open Space

Maps

Recreational and Protected Open Space

Natural Lands – 2005 Land Use

Soils

Topography, Flood Plains, and Water Supplies

Unique Features

Action Plan

Funding and Technical Assistance Resources

Open Space and Recreation Survey Summary

ADA Access Self-Evaluation

Funding and Technical Assistance Resources

The following are a list of agencies that offer grants and other types of technical assistance for land conservation, land management and recreation.

Massachusetts Department of Conservation and Recreation

<http://www.mass.gov/dcr/grants.htm>

Forest Legacy Program

<http://na.fs.fed.us/legacy/index.shtm>

The Forest Legacy Program is a partnership between States and the USDA Forest Service to identify and help conserve environmentally important forests from conversion to non-forest uses. The main tool used for protecting these important forests is conservation easements. The Federal government may fund up to 75% of program costs, with at least 25% coming from private, state or local sources.

Contact: Deirdre Raimo, Forest Legacy Program Manager

USDA Forest Service; NA, State and Private Forestry

271 Mast Rd., Durham NH 03824

(603) 868-7695 draimo@fs.fed.us

MA Executive Office of Energy and Environmental Affairs

http://www.mass.gov/?pageID=eoeeterminal&L=4&L0=Home&L1=Grants+%26+Technical+Assistance&L2=Grant+%26+Loan+Programs&L3=EEA+Grant+%26+Loan+Guide&sid=Eoeea&b=terminalcontent&f=eea_grants_grants_landandrec&csid=Eoeea

Massachusetts Land Trust Coalition

<http://www.massland.org/category/conservation-practitioners-land-protection-practices/federal-programs>

Pioneer Valley Planning Commission

60 Congress Street, Springfield, MA 01104

(413) 781-6045

Anne Capra, Principal Planner acapra@pvpc.org

Grants Recently Available

The availability of grants changes from year to year. Below is a list of recently available grant programs that may or may not be available in the future depending on budget cycles.

Recreational Trails Grant

MA Department of Conservation and Recreation

October 1st due date; annually

Contact: Amanda.lewis@state.ma.us or Paul.Jahnige@state.ma.us

The Recreational Trails Program provides grants ranging from \$2,000 to \$50,000 on a reimbursement basis for a variety of trail protection, construction, and stewardship projects throughout Massachusetts. It is part of the national Recreational Trails Program, which is funded through the Federal Highway Administration (FHWA). Funds are disbursed to each state to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses.

80% grant / 20% match required (cash or in-kind)

Community Forest Stewardship Grants

MA Department of Conservation and Recreation

Due twice per year - September 30; May 30th

Michael Downey, Forest Stewardship Program Service Forester

413-442-8928 x135 michael.downey@state.ma.us

Jennifer Fish, Director, Service Forestry Program

413-545-5753 jennifer.fish@state.ma.us

The Massachusetts Forest Stewardship Program is now offering Community Forest Stewardship Grants. These are 50-50 matching reimbursement grants offered to municipalities that have town forest or water supply land enrolled in the Forest Stewardship Program.

This grant program seeks to fund projects which will result in sustained improvements in local capacity for excellent forest management in the following five key areas:

- **Buy Local:** We seek to raise awareness of local wood product supply and marketing as well as to encourage the development of value-added local wood products to increase sustainable forest management and to support forest based businesses.
- **Building and Strengthening Citizen Advocacy and Action Organizations:** We seek to fund projects that develop, strengthen or sustain citizen groups or non-profit organizations that advocate and / or act to promote excellent forest management.
- **Implementation of Forest Stewardship Management Plan:** We seek to fund implementation of plans that guide the strategic management of municipal forest resources at the community level including local use of wood products, habitat restoration or investment in forest management.
- **Projects that include high community visibility:** We seek to fund projects that enhance environmental quality, strengthen community involvement, and follow the principles of the Stewardship Program. These projects also result in enhanced public awareness and support for community forestry.
- **Other Projects:** We will consider some well-conceived and executed projects which result in implementing/achieving community forest/forestry-related goals set forth in a town's "Strategic Planning" document.

Conservation Appraisals for Small Communities Grant Program

Agency: Executive Office of Energy and Environmental Affairs (EEA)

Description and Eligible Activities: Reimbursement funding for appraisals completed in order to apply to the LAND grant program. Reimbursement rate is 80%.

Website: www.mass.gov/eea/dcs-grants

Eligible Applicants: Available to all communities with a population of fewer than 5,000 people. Participants must have an executed state contract prior to getting the appraisal. The Participant must submit a LAND application for the appraised property to receive reimbursement. Reimbursement under this grant is not contingent upon the participant's LAND application being selected for funding.

Estimated Application Deadline: Rolling, no later than Monday, May 30, 2011

Maximum Award \$5,000 per appraisal

Contact: [Celia Riechel](mailto:Celia.Riechel@eea.state.ma.us), 617-626-1187

Drinking Water Supply Protection Grant Program

Agency: Department of Environmental Protection (DEP)

Description and Eligible Activities: Provides grants to assist public water systems and municipalities in acquiring land to protect the quality of public drinking water supplies.

Website: <http://www.mass.gov/dep/water/dwgrant.htm>

Eligible Applicants: Massachusetts municipalities and public water systems

Estimated Application Deadline: September

Average Grant Size: \$170,000

Average # of Grants: 3

FY 2010 Spending: \$510,000

Contact: [Catherine Sarafinas](mailto:Catherine.Sarafinas@dep.state.ma.us), 617-556-1070

Federal Land and Water Conservation Fund

Agency: Executive Office of Energy and Environmental Affairs (EEA)

Description and Eligible Activities: The Federal Land & Water Conservation Fund (P.L. 88-578) provides up to 50% of the total project cost for the acquisition, development and renovation of park, recreation or conservation areas.

Website: <http://www.mass.gov/eea/dcs-grants>

Eligible Applicants: Municipal conservation commissions, park departments, and certain agencies within EEA. Municipalities must have a current open space and recreation plan to apply, and the land must be open to the general public.

Estimated Application Deadline: Rolling

Average Grant Size: Average \$414,000 (Minimum \$250,000, Maximum \$500,000)

Average # of Grants: Typically 5 per year.

FY 2010 Spending: \$2,050,000

Contact: [Melissa Cryan](mailto:Melissa.Cryan@eea.state.ma.us), 617-626-1171

LAND - Local Acquisitions for Natural Diversity

Agency: Executive Office of Energy and Environmental Affairs (EEA)

Description and Eligible Activities: Provides grant assistance to city and town conservation commissions for the acquisition of open space for conservation and passive recreation purposes (formerly the Self-Help Program).

Website: <http://www.mass.gov/eea/dcs>

Eligible Applicants: Municipalities must have a current open space and recreation plan to apply, the land must be open to the general public; communities with any outstanding conversion issues ("Article 97") are not eligible.

Estimated Application Deadline: July

Average Grant Size: Average \$350,000 (Maximum \$500,000)

Average # of Grants: 15

FY 2010 Spending: \$3,965,131

Contact: [Celia Riechel](#), 617-626-1187