

**SOUTHWICK**  
**OPEN SPACE AND RECREATION PLAN**



**FINAL DRAFT**  
**October 26, 2012**

# **Town of Southwick**

## **Open Space and Recreation Plan**

**2012**

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**October 26, 2012**

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# TABLE OF CONTENTS

Section 1: Plan Summary.....	6
Section 2: Introduction.....	7
A. Statement of Purpose.....	7
B. Planning Process and Public Participation .....	7
Section 3: Community Setting .....	9
A. Regional Context.....	9
B. History of the Community.....	9
C. Population Characteristics .....	13
D. Growth and Development Patterns .....	20
Section 4: Environmental Inventory and Analysis .....	30
A. Geology, Soils and Topography.....	30
B. Landscape Character .....	32
C. Water Resources .....	32
D. Vegetation.....	37
E. Fisheries and Wildlife.....	38
F. Scenic Resources and Unique Environments .....	41
G. Environmental Challenges .....	44
Section 5: Inventory of Lands of Conservation and Recreation Interest.....	45
Section 6: Community Vision.....	54
A. Description of Process .....	54
B. Statement of Open Space and Recreation Goals.....	55
Section 7: Analysis of Needs.....	56
A. Summary of Resource Protection Needs.....	56
B. Summary of Community's Needs .....	62
C. Management Needs, Potential Change of Use .....	63
Section 8: Goals and Objectives .....	65
Section 9: Seven-year Action Plan .....	67
Section 10: Public Comments .....	73
Section 11: References .....	74
Section 12: Appendix .....	75
Maps	

Seven Year Action Plan Map

Open Space Map

Regional Context Map

Zoning Map

Soils & Geologic Features Map

Water Resources Map

Conservation Assessment Prioritization System (CAPS) Map

Inventory of Open Space and Recreational Lands

Public Outreach

Funding Resources Guide

Natural Heritage and Endangered Species Program Comments

ADA Self Evaluation

# SECTION 1: PLAN SUMMARY

The Southwick Open Space and Recreation Plan is a comprehensive guide for the protection of natural resources and environmental quality for town owned lands. This plan will enable the community to direct programs and prioritize available lands for potential uses, which would better serve the Town. Consideration must be given to protection of lands with historic, scenic, recreational and public health values and creating linkages to current open space in Southwick while allowing for responsible development.

Open space planning is an on-going process that requires input from all town boards as well as its citizens. Whether we are dealing with sustainable development, ecosystem management or watershed management, land use planning is of paramount importance. Land use decisions must encourage development that protects community character and valuable natural resources. The Great Brook Aquifer underlies one third of Southwick. This is our town's water supply and also serves water to the neighboring communities of West Springfield and Westfield. Sanitary sewers have been constructed through the center of town and around part of the Congamond Lakes. Phase one of the sewer project was completed in 2004 and construction for Phase II is underway. Sewer expansion will greatly improve water quality in the Congamond Lakes.

These needs informed the creation of five open space and recreation goals, to address protection of ground and surface water, preservation of Southwick's rural character and history, protection of wetland and wildlife habitat and the creation of new recreational opportunities, creating the framework for the development of the Town's Seven-Year Action Plan. These goals are:

*Goal 1: Maintain the ecological integrity of aquatic ecosystems and protect the quality and quantity of surface and groundwater drinking water supplies.*

*Goal 2: Permanently protect important open space and ensure conservation areas are appropriately managed for flora and fauna habitat integrity and resiliency.*

*Goal 3: Preserve working farms and forests in support of an agricultural way of life in Southwick.*

*Goal 4: Improve and expand recreational and environmental education opportunities for people of all ages while preserving Southwick's scenic, cultural and historic character.*

# SECTION 2: INTRODUCTION

## A. STATEMENT OF PURPOSE

The purpose of this plan is to provide for the protection of open space, remaining farmlands, aquifer recharge areas, and sensitive habitats and to promote awareness and appreciation of conservation and recreational areas while still allowing for controlled, responsible development. The need for improved and additional conservation and recreational facilities both passive and active are of critical importance to the town in the face of increased residential development.

This plan seeks to coordinate the efforts of all town commissions, private organizations, and residents to protect, revitalize and connect existing resources as well as create additional conservation and recreational areas for people of all age groups and abilities.

Open space is defined in this plan as land that is used for the protection of wetland and wildlife habitat and the Town's water supply. It also provides recreational opportunities and protection of historical sites, scenic views and vistas. Open space conservation is often the cheapest way to safeguard drinking water, clean the air and achieve other environmental goals in a cost effective manner. Open space is necessary to retain the Town's rural character and may consist of greenways, parks, fields, forestlands and farmland.

## B. PLANNING PROCESS AND PUBLIC PARTICIPATION

### PLANNING PROCESS

In 2009 to 2010, the Southwick Open Space Committee began an update to the 2001 Open Space and Recreation Plan. However, the Committee was unable to reach consensus with all of the municipal departments, commissions, and committees identified in the Action Plan on proposed strategies for implementation of the plan. Formal adoption of the updated plan was set aside and the Open Space Committee resumed work on projects under their jurisdiction.

In February of 2012, the Town of Southwick requested and received assistance from the Pioneer Valley Planning Commission (PVPC) through a District Local Technical Assistance Grant (DLTA) to resurrect the proposed 2010 OSRP update and begin the process from scratch. The highest importance for developing an updated OSRP was put on seeking public input about goals, objectives and priorities, and achieving consensus among ALL municipal departments, boards, and committees for endorsement of the plan and implementation strategies herein. To do this, PVPC in coordination with the Open Space Committee, implemented a broad campaign to engage the public and municipal officials.

### PUBLIC PARTICIPATION

The 11 member Open Space Committee served as the coordinating committee for the OSRP update. All of the Committee meetings were held at Town Hall and were open to the public.

The committee met eight times between April and December 2012 and these meetings were posted at town hall, and emailed to the Committee members, board chairs and department heads for all boards, departments and committees within Southwick.

A public survey was conducted between May 4<sup>th</sup> and June 30<sup>th</sup>, 2012. The survey was available on-line via SurveyMonkey, and in paper form available at Town Hall and the Public Library. The survey link as well as paper copies were distributed to every municipal department for dissemination to the residents they serviced. Notice of the survey was also published in the May 10, 2012 *Republican* newspaper. Results of the survey are discussed under Section 6 Community Vision.

The PVPC, in conjunction with the Southwick Open Space Committee, held a public workshop on September 12, 2012 at Town Hall to present the draft Open Space and Recreation Plan including goals, objectives, and actions. In particular, a detailed Action Plan was developed. The public workshop is described further in Section 6 Community Vision.

Public meetings of the Open Space Committee devoted to development of OSRP chapters occurred on:

- March 28, 2012
- May 23, 2012
- July 18, 2012 co-sponsored with the Planning Board
- September 12, 2012

Public meetings with other town departments, boards and commissions devoted to investigation and analysis of open space and recreation issues were held on:

- March 20, 2012 Assessor's Office
- April 10, 2012 Planning Board
- April 26, 2012 Lake Management Committee
- April 30, 2012 Board of Selectmen
- May 22, 2012 Park and Recreation Commission

#### SOUTHWICK HERITAGE LANDSCAPES PROGRAM PUBLIC PARTICIPATION

In a public meeting on November 13, 2008, eighteen people were in attendance, including members of the Southwick Historical Society, Inc.; the Southwick Town Planner; the West Hampden Historical Society; Board of Selectmen; Town Planning Board; and residents, several of whom noted they were life- long. During the meeting audience members created a master list of forty-three heritage landscapes that fell within ten landscape categories, and then selected among those landscapes their priorities taking into account integrity, level of threat, public support, and accessibility. The six priority landscapes chosen by the meeting members were the Town Center, the Moore House in The Jog, the former Chuck's Steak House Area (also known as Slab Brook Plain), Gillett Corner, a view of Sodom Mountain, and the Railroad Line at Congamond Lakes. The final product for each community was an individualized Heritage Landscape Reconnaissance Report, which was completed in June 2009. This report outlines the community's landscape history, describes the priority heritage landscapes along with associated opportunities, issues, and recommendations, and concludes with implementation strategies. This OSRP update incorporates all relevant information from this planning process.

# SECTION 3: COMMUNITY SETTING

## A. REGIONAL CONTEXT

Southwick is located in Hampden County on the western edge of the Connecticut River Valley, on the Massachusetts-Connecticut border. Southwick is in the watersheds of the Westfield and the Farmington Rivers and is a town with highly varied terrain. It has mountainous sections, a string of low-lying, freshwater lakes, and, in between, a landscape of rolling hills. At one time entirely under Lake Hitchcock, the area of Southwick has rocky gravel soil in the uplands and sandy soil in the lowlands, a fact that has had an impact on its development. The community is characterized as a rural farming and residential community that is becoming a suburb of the Springfield /Westfield /Hartford region. Southwick has an area of 19,814 acres, or approximately 31 square miles. It is bordered by Granville to the west, Westfield to the north, Agawam to the east, and Suffield and Granby, Connecticut to the South. The town is only 12 miles from the City of Springfield and 22 miles from the City of Hartford, Connecticut. The largest of the mountains that make up vistas in the town is Sodom Mountain on its west border at an elevation of 1126 feet.

## B. HISTORY OF THE COMMUNITY

Native Americans are thought to have concentrated their settlement around the Congamond Lakes in the eastern half of the town during the Pre-historic and Contact Periods for its good soil and fishing. The Native American groups may well have gone into the uplands for hunting west and north east of the Lakes, and trails led into Westfield (Woronoco). Route 10 (College Highway) going north and south, and Vining Hill Road going east and west were the major routes established by these early occupants.

Southwick was the common land for Westfield during the early 18th century and settlement in the area began in the 1730s when Westfield opened it up for sale to the growing population. The area was surveyed and laid out in lots with room for houses and contiguous tilling and pasture land, unlike many other of the early Connecticut River Valley towns that were laid out as linear street villages whose pasture and tilling lands were not contiguous with the house lots. Settlement was slow: by 1754 about 34 families had arrived. In just two decades, however, their number had risen to 841. At 86 College Highway one of the houses remaining from this period, the Joseph Moore House, ca. 1751, is a fine example of the town's early architecture.

Settlers to the southern part of Southwick mainly came from Hartford and Windsor, Connecticut and were more affluent than those who settled in the northern section of town. Because of this distinction the northern part of town was referred to in the 1700s as "Poverty Plains" and the Jog area was called "Mooretown".

Due to the late date of its settlement, there was no prolonged period during which the settlers focused on farming in Southwick. Rather farming was carried out simultaneously while the rivers were being used for powder mills, saw and gristmills. In fact, the town's first industry was established at the same time that it was being settled as a farming community. By 1775 Captain Matthew Laflin had built up to five powder mills on his property along Two Mile Brook in Southwick and into Westfield. Getting quickly to work, he sold his powder to the patriots throughout the Revolutionary War and local historians

record that it was used specifically at the Battle of Bunker Hill. Reflecting its use, Two Mile Brook became known as Powder Mill Brook, later Great Brook. According to the Massachusetts Historical Commission's Reconnaissance Survey of 1982, Laflin's powder mill industry was the most extensive known operation of its kind in the Connecticut River valley in the 18th century. It has been claimed that slaves were used to handle the twenty or so kegs of powder produced each day from these mills.

The area's road system improved considerably from the 1760s as settlement began to increase, and gradually a town center formed in the early 1770s on Route 10 at its intersection with the County Road (now Klaus Anderson) and College Highway. It was here that the first meetinghouse was built in 1773. While some families were settling and beginning farms, others were active as land speculators, and one of the places where their efforts were concentrated was around the Congamond Lakes. These speculators proposed draining the water to expand the area of fertile soil that was around and under them for sale.

Western Massachusetts gradually became more prosperous after the Revolutionary War, and Southwick was part of this pattern. Between 1776 and about 1810, the town's farmers continued to practice their mixed agriculture, but then two developments improved their prosperity significantly. First, broomcorn and tobacco were introduced as cash crops in the 1810s. The second was construction of a canal through the town that enabled farmers to ship their extra produce to markets in more urban Connecticut. The Hampshire and Hampden Canal was built in Southwick during this period connecting Connecticut's Long Island Sound at New Haven by the Farmington Canal to Westfield in 1829. In 1835 the Hampshire and Hampden canal was opened to Northampton passing through Southampton. After 1836 the two canal companies merged and became the New Haven and Northampton Company. The canal enabled farmers to intensify their cultivation of tobacco and increase production of market garden produce and dairy.

A measure of the town's prosperity is the selection of Isaac Damon as architect of the large and well-detailed new meetinghouse at 488 College Highway in 1824. Further north on College Highway than the first meetinghouse, the new meetinghouse location was on Southwick Hill, which soon became the town's center. Architect Isaac Damon occupies a central role in western Massachusetts architecture. He was active in Northampton designing his own home, the First Congregational Church at 50 Elm Street in Springfield and the First Congregational Church in Blandford before coming to work in Southwick. His first commission about 1820 in Southwick appears to have been the Methodist Episcopal Church at 222 College Highway at Gillett Corner. Gillett Corner is the intersection of Vining Hill Road and College Highway and was named for the Gillett family that occupied three of its four corners for most of the 19th century. After construction of the church, the Corner grew to become a secondary village.

Beside the new meetinghouse (the Congregational Church), the Center grew between about 1790 and 1840 with a Baptist Church and Federal and Greek Revival style houses along College Highway. The Hampshire and Hampden Canal proved an expensive form of transportation for Southwick with high maintenance costs for repairs, winter icing and even muskrat damage. Despite the efforts by its investors, including the Commonwealth of Massachusetts, the canal was doomed. In 1848 the canal was closed and the canal company was authorized to construct a railroad, the New Haven and Northampton Railroad, commonly known as the Canal line. They used portions of the canal as their route, but did not adhere to it fully.

By 1860 the town Center extended east down Depot Road to a railroad station, which had been built for the Canal Line. Until construction of the railroad, Depot Street was known as Broad Street and was where those who had made wealth in the powder mills settled. Greek Revival and Italianate style houses were built on both College Highway and Depot Road further adding to the architectural richness of the Center.

The dominant economic activity in Southwick remained tobacco cultivation during the first half of the 19th century. Many people began making cigars to supplement their incomes, and one of the biggest cigar makers was Charles J. Gillett from Gillett Corner. Mr. Gillett and the people who worked for him made cigars in a cottage industry. Gillett then collected and distributed them to stores, hotels, and at events and public auctions where large groups of people met. Eventually most cigar-making in the region took place in Westfield where it was industrialized, but it persisted as a cottage industry in Southwick through the Civil War. Tobacco itself continued to be grown at increasing levels, however. Some residents made gun powder or started making whips or whip lashes during the period, mostly as second jobs, but without a large river as a source of water power, Southwick could not become an industrial town as did Westfield and agriculture remained dominant.

By the turn-of-the-century, Swedish, Austrian, Italian and Polish joined the Irish who had previously settled in town when the canal and railroads were being built. The new immigrants were mainly farmers, and many also worked in Southwick's businesses and small factories. On the farms tobacco was the chief crop and farmers built drying sheds and stripping sheds where they processed their leaves and prepared them for shipment to the cigar factories. With the introduction of shade tobacco, competition with the Sumatran tobacco increased, and more barns were built throughout town to handle the larger crops.

At the Congamond Lakes people began coming from the cities to spend their summers, and several hotels, a few boarding houses and entertainments were built to accommodate them. A railroad station near the Lakes made it convenient for summer guests to travel to the Lakes. The New Haven and Northampton railroad passed along the west shore of the Lakes and it became important in winters for the ice harvesters who were able to cut and ship the ice relatively quickly and efficiently. Southwick's was the largest ice harvesting enterprise in New England with ice shipped out on the railroad year round to New York, and from there by ship to places further south. The size of a football field, some of the ice house foundations are known still to be under water. One ice-related building remains at 108 Congamond Road, now the Red Riding Hood's Basket restaurant.

If there were little building in the previous period, Southwick more than made up for it with building in the Center during the first decade of the 20th century. A new Consolidated School (1928), a new Firehouse and commercial buildings all appeared in the Center where College Highway and Depot Road intersect. New construction also took place at Congamond Lakes where summer cottages were built in the 1930s along its shores and in a concentrated development north of North Pond. Accordingly, new businesses to support the large summer population went up in the area. Recreational businesses like golf courses and boat rentals appeared along with restaurants in this part of Southwick.

Meanwhile tobacco growing among farmers remained strong, and one of the results of this strength was that farms were not broken up for development, as they often were in neighboring manufacturing towns. The Great Brook Valley was the prime tobacco growing area. The business consolidated and grew more commercial when farmers contracted with one of several tobacco corporations to sell exclusively to them. Often the corporations had their names painted on the barns of their growers. Mechanization of farming and the corporation system allowed the farmers to produce greater quantities and to sell in a more secure manner buffered from the vagaries of the market.

After World War II Southwick grew rapidly but haphazardly. Commercial buildings were mixed with residential buildings and poorly designed buildings were put up alongside historic homes. Housing subdivisions provided greatly needed homes for growing families, and a fair amount of farmland was split up for new neighborhoods. Today, however, Southwick retains historic features from many of its most significant periods of development. Farms and farmland, sometimes adjacent to commercial centers and institutional centers, characterize much of the town, which has become a desirable place to live with easy access to Springfield and Hartford.

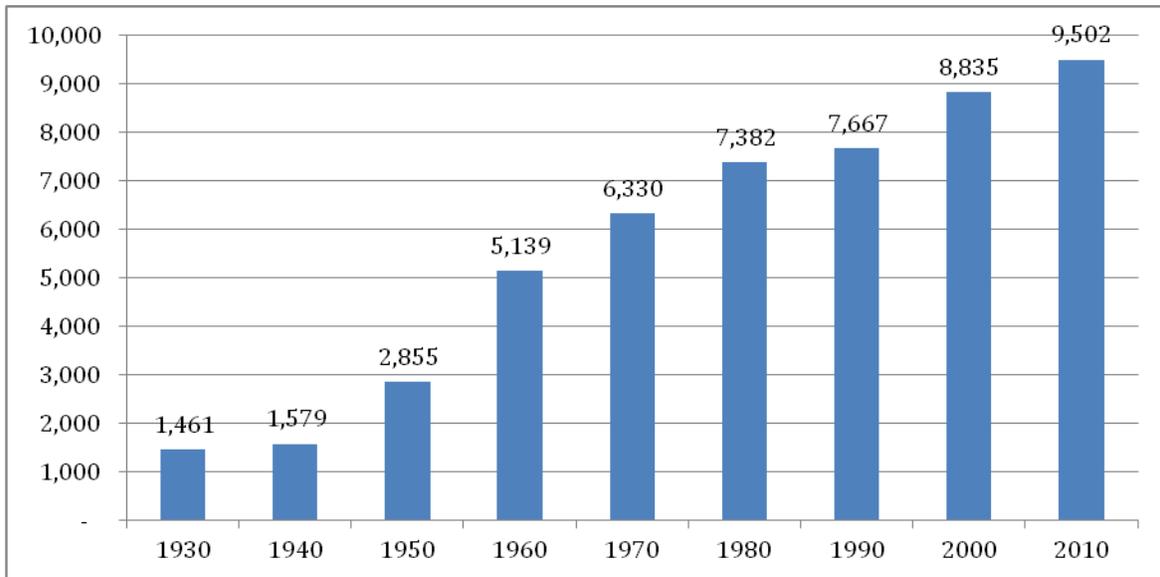
Southwick has been home to some notable citizens past and present. The Crane family owned one of the best showplace horse farms in the Northeast located on Sunnyside Road. Governor Eli owned a farmhouse off Tannery Road during the 1930's, and Amasa Holcomb was the first manufacturer of telescopes in the United States. Other residents include Vernon Johnson who went on to become one of Canada's leading industrialists and conservationists, as well as Rebecca Lobo who was one of the premier women basketball players in the country.

## C. POPULATION CHARACTERISTICS

### POPULATION GROWTH INDICATORS AND HOUSEHOLDS

Southwick's topography and location adds to its popularity and the increase in single-family homes. From 1980 to 2010, the town's population has grown from 7,382 people to 9,502 people. That is an increase of 2,120 people, representing a 23 percent increase in the last thirty years. Between 1990 and 2010, there was a 37 percent increase in the number of households. The average household size decreased, with the number of single family residences increases by 76%.

**TABLE 1: SOUTHWICK POPULATION TRENDS: 1930 TO 2010**



**TABLE 2: SOUTHWICK DEMOGRAPHIC TRENDS SUMMARY**

	1990	2010	Percent Change
Southwick Residents	7,667	9,502	24%
Southwick Households	2,713	3,710	37%
Southwick Households with Children	1104	1072	-3%
Average Household Size	2.83	2.56	-10%
Southwick Single Person Households	510	898	76%
Southwick-Tolland Regional School Student Enrollment	1858	1731	-7%

Source: U.S. Census Bureau, Decennial Census 1990 & 2010; Massachusetts Department of Education, 1995 & 2010 student enrollment data.

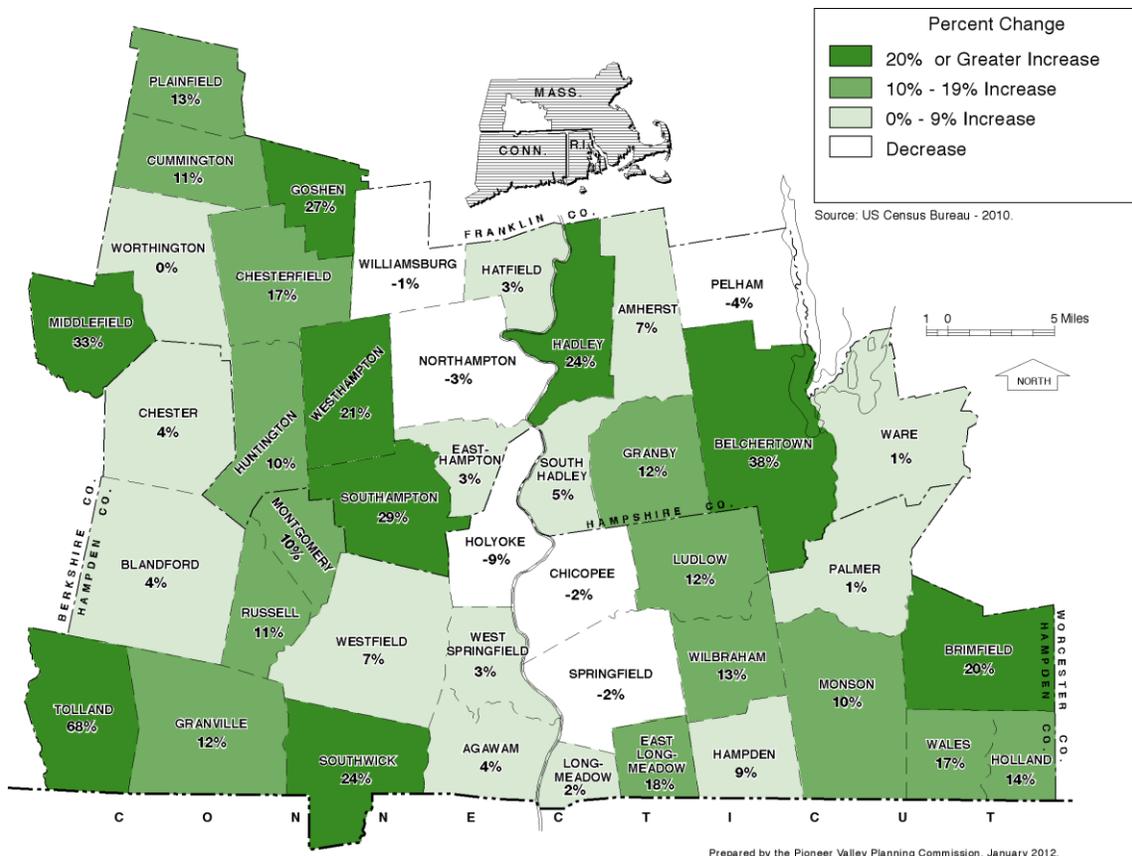
**TABLE 3: COMPARATIVE REGIONAL POPULATION TRENDS**

Geography	1990	2000	2010	% Change 1990 to 2000	% Change 2000 to 2010
Granville	1,403	1,521	1,566	8%	3%
Blandford	1,187	1,214	1,233	2%	2%
Granby, CT	9,369	10,347	11,282	10%	9%
Hartland, CT	1,866	2,012	2,114	8%	5%
Russell	1,594	1,657	1,775	4%	7%
Southwick	7,667	8,835	9,502	15%	8%
Tolland	289	426	485	47%	14%
Westfield	38,372	40,072	41,094	4%	3%
Pioneer Valley Region	602,878	608,479	621,570	1%	2%
Massachusetts	6,016,425	6,349,097	6,547,629	6%	3%

Source: U.S. Census Bureau Decennial Census, 1990, 2000, 2010.

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

**Percent Change in Population (1990 - 2010)**



## POPULATION BY AGE

Population density has been steadily increasing and is projected to continue to trend in that direction. While there were 203 people per square mile in 1970, in 1985 the population density had grown to 233 people per square mile. Between the years 1930 and 1990 the town's increase in population was 35.4% per decade. Based on the above numbers, the 1990 census data shows a density of 244 people per square mile with an increase to 284 people per square mile in the year 2000. In 2010 there were 300 people per square mile.

**TABLE 4: SOUTHWICK POPULATION BY AGE: 1990 TO 2010 COMPARISON**

	<b>Population in 1990</b>	<b>Percent of Total 1990 Population</b>	<b>Population in 2010</b>	<b>Percent of Total 2010 Population</b>
<b>Under 5 years</b>	539	7%	417	4%
<b>5 to 9 years</b>	615	8%	574	6%
<b>10 to 14 years</b>	589	8%	729	8%
<b>15 to 19 years</b>	559	7%	623	7%
<b>20 to 24 years</b>	481	6%	442	5%
<b>25 to 34 years</b>	1,365	18%	859	9%
<b>35 to 44 years</b>	1,378	18%	1,328	14%
<b>45 to 54 years</b>	791	10%	1,835	19%
<b>55 to 59 years</b>	305	4%	713	8%
<b>60 to 64 years</b>	311	4%	584	6%
<b>65 to 74 years</b>	460	6%	703	7%
<b>75 to 84 years</b>	227	3%	474	5%
<b>85 years and over</b>	47	1%	221	2%
<b>Total Population</b>	<b>7,667</b>	<b>100%</b>	<b>9,502</b>	<b>100%</b>
<b>Median Age</b>	<b>33.0</b>	<b>n/a</b>	<b>43.6</b>	<b>n/a</b>

*Source: U.S. Census Bureau, 1990 & 2010 Decennial Census*

## POPULATION BY RACE, ETHNICITY & ANCESTRY

The Pioneer Valley Region is continuing to become more diverse in race and ethnicity. Immigration and subsequent births to the new arrivals during the last few decades of the 21st century played a major role in changing the racial and ethnic composition of the Pioneer Valley as well as the U.S. population as a whole. The Pioneer Valley went from being 82 percent white in 2000 to 80 percent white in 2010. The region's Hispanic population grew significantly during this time from 12 percent in 2000 to 17 percent in 2010. Southwick is primarily a middle class community of mixed religious affiliations. The non-white population comprises approximately 3.6% of the total population. There are no Environmental Justice populations in Southwick.

**TABLE 5: POPULATION BY ETHNICITY**

	Massachusetts	Percent of Total	Southwick	Percent of Total
<b>Total</b>	<b>6,547,629</b>	<b>100 %</b>	<b>9502</b>	<b>100%</b>
White	5,265,236	80.41%	9,157	96.4%
Black or African American	434,398	6.63%	85	0.9%
American Indian and Alaska Native	18,850	0.29%	24	0.3%
Asian	349,768	5.34%	77	0.8%
Native Hawaiian and Other Pacific Islander	2,223	0.03%	3	0.0%
Some Other Race	305,151	4.66%	37	0.4%
Total Number of Persons of Two or More Races	172,003	2.63%	119	1.3%
<i>Hispanic, Any Race</i>	<i>627,654</i>	<i>9.59%</i>	<i>198</i>	<i>2.1%</i>

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

## HOUSEHOLD INCOME & POVERTY

Southwick is still considered semi-rural, although more of the open space will be developed as the town becomes more suburban. The median family income according to the 2005-2009 American Community Survey was \$70,423, which was higher than the \$64,496 estimated statewide median household income over this same period.

The U.S. Census Bureau’s American Community Survey estimated that almost three percent of Southwick families and almost nine percent of children had incomes below the poverty level in 2005-2009. The estimated percentage of individuals below the poverty level over this same period was four percent.

The percentage of students who receive free and reduced lunch at school and households receiving fuel assistance can also be used to gauge financial need in a community. A total of fifteen percent of students enrolled within the Southwick-Tolland Regional School District participate in the free and reduced lunch program.<sup>1</sup> Approximately nine percent (319 households) of Southwick received fuel assistance in 2011.<sup>2</sup>

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

<sup>2</sup> Households earning approximately 60 percent of the Springfield Metropolitan Area’s Median Income (approximately \$59,000 for a family of four in FY 2011) may be eligible for fuel assistance.

## ECONOMIC CHARACTER & EMPLOYMENT TRENDS

As of 2000 only 44% of the labor force in Southwick worked within the town. The primary areas of employment within Southwick include the service industry, wholesale and retail trade, manufacturing and engineering. Transportation, finance, construction, agriculture, and restaurants are other areas of employment.

**TABLE 6: PLACE OF WORK FOR SOUTHWICK RESIDENTS, 2003**

	Number	Percent of Total
Southwick	994	22%
Westfield	504	11%
Springfield	451	10%
Elsewhere in Pioneer Valley	990	22%
Elsewhere in Massachusetts	63	1%
Hartford County	1,385	31%
Elsewhere in Connecticut	111	2%
<b>Total number of residents for whom data was computed</b>	<b>4,498</b>	<b>100%</b>

*Source: U.S. Census Bureau, 2003 Commuter Survey*

**TABLE 7: SOUTHWICK INDUSTRY TRENDS 2001 TO 2010**

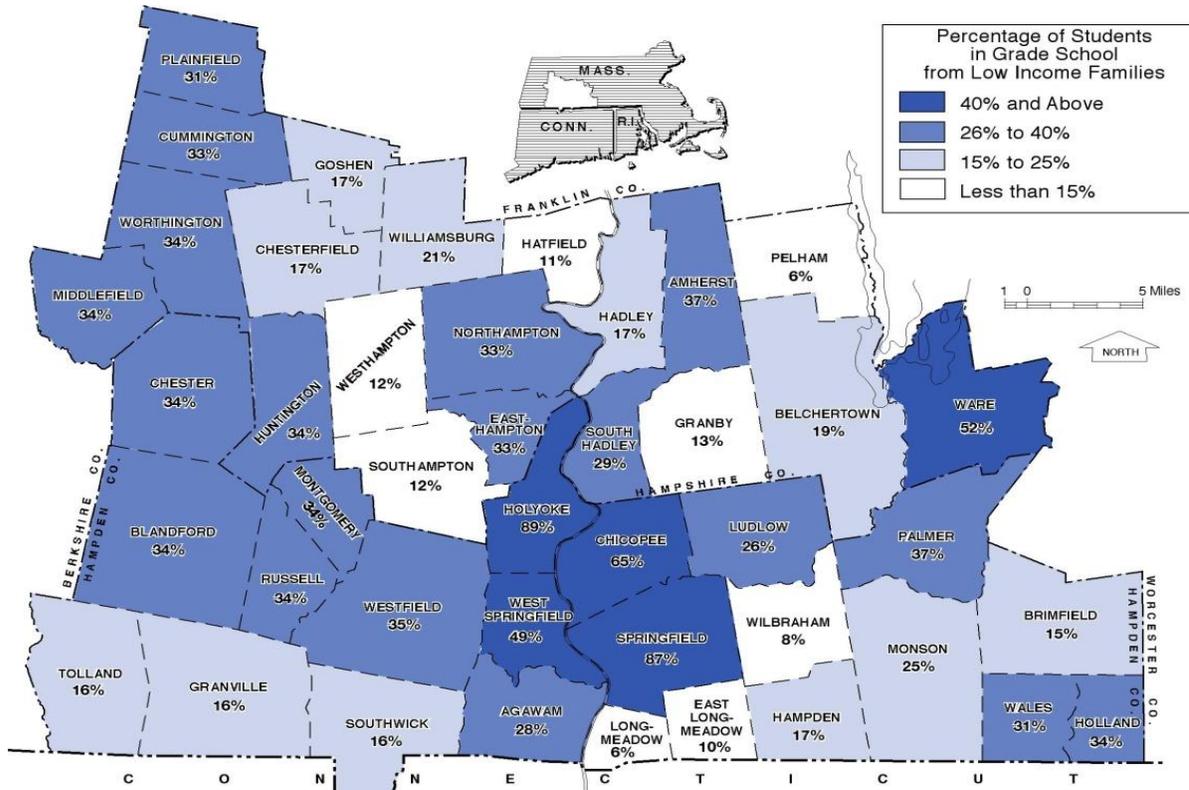
Number of Establishments		Average Monthly Employment		Average Weekly Wage	
<u>2001</u>	<u>2010</u>	<u>2001</u>	<u>2010</u>	<u>2001</u>	<u>2010</u>
251	273	2,593	2,541	\$500	\$646

*Source: Massachusetts Executive Office of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010.*

**TABLE 8: SOUTHWICK INDUSTRY BY NUMBER OF ESTABLISHMENTS, EMPLOYEES AND WAGES, 2010**

<b>Description</b>	<b>Number of Establishments</b>	<b>Average Monthly Employment</b>	<b>Average Weekly Wage</b>
<b>Total, All Industries</b>	273	2,541	\$646
<b>Natural Resources and Mining</b>	15	120	\$292
11 - Agriculture, Forestry, Fishing & Hunting	13	116	\$284
<b>Construction</b>	38	101	\$770
23 - Construction	38	101	\$770
<b>Manufacturing</b>	16	452	\$1,161
31-33 - Manufacturing	16	452	\$1,161
<b>Trade, Transportation and Utilities</b>	57	448	\$459
42 - Wholesale Trade	13	22	\$1,096
44-45 - Retail Trade	37	393	\$401
48-49 - Transportation and Warehousing	7	32	\$745
<b>Financial Activities</b>	14	82	\$752
52 - Finance and Insurance	10	52	\$867
53 - Real Estate and Rental and Leasing	4	30	\$551
<b>Professional and Business Services</b>	32	198	\$866
54 - Professional and Technical Services	9	40	\$699
56 - Administrative and Waste Services	22	72	\$471
<b>Education and Health Services</b>	18	483	\$724
62 - Health Care and Social Assistance	14	150	\$606
<b>Leisure and Hospitality</b>	37	443	\$223
71 - Arts, Entertainment, and Recreation	9	123	\$220
72 - Accommodation and Food Services	28	320	\$224
<b>Other Services</b>	39	112	\$391
81 - Other Services, Ex. Public Admin	39	112	\$391

*Source: Massachusetts Executive Office of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010.*



Prepared by the Pioneer Valley Planning Commission, December 2010.

## D. GROWTH AND DEVELOPMENT PATTERNS

### PATTERNS AND TRENDS

Although Southwick's roots were agricultural, Southwick is now primarily a residential community. In 1990, there were 2,934 housing units, compared to 3,533 in 2000. Most of these are single-family homes on individual lots. Lot sizes vary from as little as 5,000 square feet for a number of the older lots around the lakes to 60,000 for the lots approved since 1972 in the R-40 zones in town. Table 12 includes data for land use changes between 1971 and 1999 for 19 land use category.

**TABLE 9: SOUTHWICK HOUSING UNIT CHANGE: 1990 TO 2010**

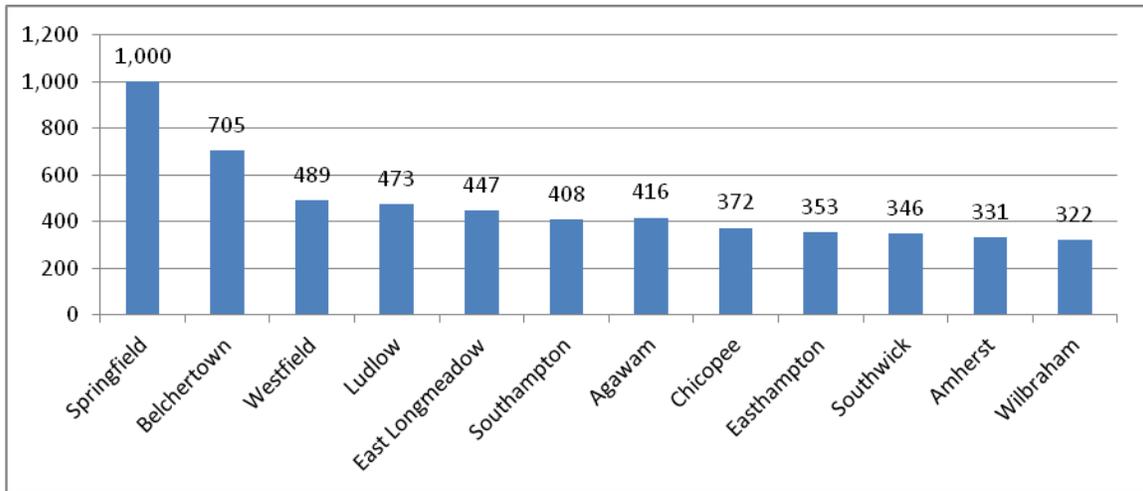
	1990		2000		2010		Percent Change 1990 to 2010
Total Housing Units	2,934	100%	3,533	100%	3,916	100%	33%
Occupied Housing Units	2,713	92%	3,318	94%	3,710	95%	37%
Vacant Housing Units	221	8%	215	6%	206	5%	-7%
Vacant Housing Units that are Seasonal Units	87	3%	45	1%	64	2%	-26%

*Source: U.S. Census Bureau, 1990, 2000, 2010 Decennial Census*

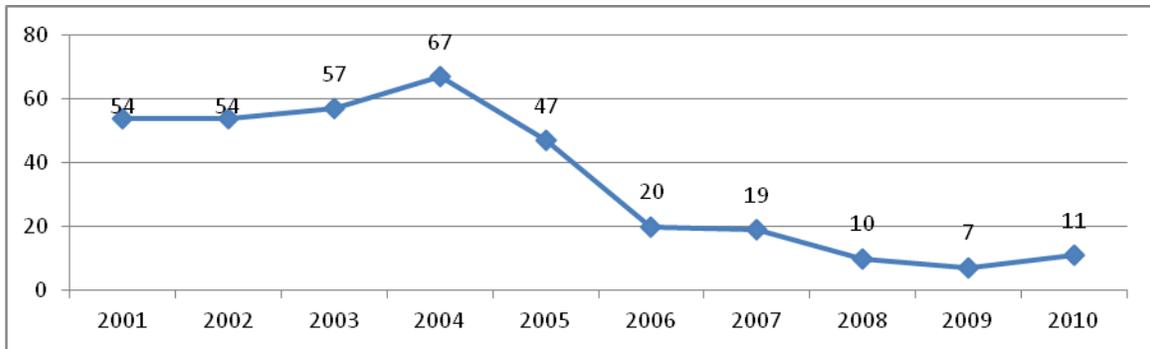
A large portion of Southwick's housing stock is relatively new. The 2005-2009 ACS estimated that 30 percent of all Southwick homes have been built since 1990 (approximately 1,200 units) compared to the regionwide and statewide percentages of 11 percent and 13 percent respectively. In 2010, 82 percent of all Southwick homes were owner-occupied and 18 percent were renter occupied.

Comparatively, building permit activity in Southwick has been voluminous over the last decade. The town of Southwick ranked tenth in the region for the number of building permits issued from 2001 through 2010 (Figure 8). The number of building permits issued for new single family homes over the course of a decade compares to towns whose populations are triple to quadruple the size of Southampton respectively as shown in Figure 2. During this past decade residential construction reached its peak in 2004 with 67 building permits issued. Since 2004 the volume of residential construction decreased significantly in Southwick as in most of the Commonwealth and the nation (Table 10).

**TABLE 10: REGIONAL COMPARISON OF BUILDING PERMIT ACTIVITY FROM 2001 THROUGH 2010**



**TABLE 11: NUMBER OF BUILDING PERMITS ISSUED BY YEAR, 2001-2010**



**TABLE 12: LAND USE CHANGES IN SOUTHWICK BY CATEGORY**

<b>Category</b>	<b>1971</b>	<b>2005</b>	<b>Change (acres)</b>	<b>Change (percent)</b>
Active Agriculture	3,835	2,659	-1,176	-31%
Pasture	817	635	-183	-22%
Forest	12,062	11,630	-433	-4%
Non-Forested Wetland	264	474	209	79%
Mining, gravel pit etc	112	128	16	14%
Open land, powerlines, no vegetation	355	387	31	9%
Participation Recreation	355	597	242	68%
Spectator Recreation	0	0	0	0%
Water Recreation	1	5	4	344%
Multi-Family	4	84	80	1,966%
Residential less than 1/4 acre lot	26	29	3	10%
Residential 1/4 - 1/2 acre lot	785	741	-44	-6%
Residential Greater than 1/2 acre lot	863	1,770	907	105%
Commercial	104	242	138	132%
Industrial	4	57	54	1,490%
Urban Open, parks, institutional, cemeteries	99	125	27	27%
Transportation	3	15	12	415%
Waste Disposal	9	40	32	358%
Water	498	540	41	8%
Woody Perennial, orchards, nurseries	56	62	6	11%
<b>Total Acres</b>	<b>20,254</b>	<b>20,236</b>	<b>-18</b>	<b>--</b>

*Source: MassGIS McConnell Land Use data 1971, 1985, 1999, 2005. Due to technological advances, the spatial accuracy of the 2005 data is substantially more accurate than data for the years 1971, 1985, and 1999. Prior to 2005, the state manually interpreted land cover and land use categories based on aerial photos. In 2005, the land use map was derived directly from an ortho image. This new method maintains much compatibility with the older system.*

*- Negative numbers mean loss of land*

In the 1979 Southwick Open Space Plan, a comparison between the 1972 and 1952 dates showed 34.7% decline in agriculture and open land between those years. This considerable loss of valuable agricultural land both to development and abandonment to natural

succession continued into through the 1990s with a 12% decline in agriculture (cropland and pasture) and open land between 1971 and 1999. Forestlands decreased 11.2% between 1971 and 1999 most likely due to the continued development trends.

There was a 191% increase in residential land use (4 residential categories combined), a 189% increase in commercial land use, and 927% increase in industrial land use between 1971 and 1999. Some of the more recent growth trends are due to the following factors:

- Southwick is located within commuting distance of several regional employment centers including Springfield and Hartford;
- Large amounts of prime agricultural land are now being developed into residential subdivisions. For example, between 1990 and 2000 the total number of parcels increased from 2,565 to 3,163, or 23.3%. Presently, 84.7% of the total parcels are single family residential; and,
- Southwick is undergoing strong pressures from residential growth, which is out pacing commercial and industrial growth by six times the amount.

These factors have lead to the following results:

- Housing prices have increased steadily since 1997; the median home price is approximately \$263,000 for a single family dwelling;
- The number of households in Southwick is increasing more rapidly than the size of the population;
- Increased residential growth is projected to significantly increase traffic on both major arterial roads as well as connector streets; and,
- With 7,747 acres of developable land without constraints, residential growth is expected to continue.

## INFRASTRUCTURE

### TRANSPORTATION

Southwick does not have any form of public transportation. Such services are available only by traveling to Westfield (bus and airplane, Barnes Municipal Airport), Springfield (bus and train), or (airplane, Bradley International Airport) in Windsor Locks, Connecticut. Consequently, most traveling is done by automobile.

Although the emphasis has been primarily on vehicular transportation, there has been an increase in the amount of bicycle use in recent years. A feasibility study conducted by the Pioneer Valley Planning Commission determined that a fixed bus route on certain roads could not pay for itself. The town is divided into four major units by Routes 10/202, which run in a north to south direction, and by Route 57, which runs in an east to west direction.

Most roads within town are in very good condition, however, there are a few roads where development recently occurred, that are as yet unpaved and may stay so for quite some time. Some of these unpaved roads can be classified as scenic ways (as long as they are classified as town roads). Major improvements include the widening of Route 57 proposal from Agawam to the Southwick line. This will increase the ease of access and will likely result in increased residential development within the town. The state has also planned to widen and repave Routes 10/202 from the Connecticut line to the Westfield line, which will improve the ease by which people access Southwick from the northerly and southerly direction through the use of vehicular transportation.

### WATER SUPPLY

Most of the town's population east of Routes 10/202 and a very small portion of the town west of Routes 10/202 are supplied by town water drawn from the Great Brook Aquifer. Most of the western section of Southwick will not have access to public water for a long time and relies on private wells. A few homes on the west side of the town draw on a small aquifer at the base of Drake and Sodom Mountains (Loomis Ridge Aquifer), located in the Munn Brook Valley. In 1996 the water main on College Highway was replaced with a larger line, with an extension on Depot Street being constructed in 1997. In 2003, the Congamond Road water line was replaced. The cities of West Springfield and Westfield also have municipal wells that draw from the Great Brook Aquifer and share the Zone II aquifer recharge area. Presently a new well, called a redundant well, is being installed in proximity to the original well for increased pumping capacity.

The Board of Health has recently reviewed their guidelines and restrictions for development within the Water Supply Protection District, and are proposing stricter measures be added to the zoning bylaw to improve protection of the town's water supply.

### SEWAGE SYSTEMS

Currently, there is only a limited sanitary sewer system in Southwick. The recently installed sewer system primarily covers the center of town, and the lakes area. This new system

## 2012 Southwick Open Space & Recreation Plan

should go a long way towards addressing the age-old problems of septic system failure and drainage run off. This is especially true along the more densely populated Congamond Lakes, where nutrient loading from septic systems has contributed to an increase in eutrophication and other environmental problems. Otherwise, most homes, businesses, and industries must still provide and depend upon individual septic systems. Septic systems and other means of on-site sewage disposal are regulated by the Southwick Board of Health under Title 5 of the Massachusetts Environmental Code.

### STORMWATER

The Lake Management Committee (LMC) began the initial work in 1997 on a long-term plan to address storm-water management around the Congamond Lakes, a Category 4c Waters on the Massachusetts List of Impaired Waters for nuisance aquatic weeds.

In addition to an intensive aquatic weed management program overseen by the Conservation Commission, the Town has undertaken investments to improve the Congamond Lakes and the municipal infrastructure that exists within the watershed including:

- Mapping all outfalls and catch-basins in Southwick with GIS and creating a database for their operation and maintenance;
- Installing ten (10) deep-sump catchbasins and four (4) Baysavers™ for fine particulate and oil/grease removal. The outfall for each of the subwatersheds was restored with grassed swales to the lake's edge in the Middle Pond watershed at:
  - Berkshire Avenue, Grandview Street and White Street
  - Berkshire Avenue, Echo Street , Evergreen Street, and Wood Street
  - Berkshire Avenue, Pine Street and Brayton Drive
  - Berkshire Avenue, Evergreen Street, Oak Street, and Island Pond Road
- Performing annual street sweeping;
- Purchasing of a vacuum truck for regular cleaning of catch-basin sumps; and
- Installation of a detention basin and vegetated swale at a 42" outfall on Middle Pond.
- *Eagle Street Restoration* – Installed 3 catchbasins, a Baysaver, restore outfall with grassed swale and macadam berm/road milling to road edge to redirect runoff.
- *Castle Street Restoration* – Installed 1 deep sump catchbasin, 2 catchbasins, a Baysaver, restore outfall with grassed swale and macadam berm/road milling to road edge to redirect runoff.
- *North Lake Avenue and Summer Street Restoration* – Installed 8 deep sump catchbasins; Stormtech Infiltration Chambers; macadam berm at road edge to redirect runoff, outfall restoration with grassed swale, in-lake sediment removal at outfall, grading and restoration of adjacent unpaved access road including installation of a vegetated trapezoidal channel.
- *Lakemont and Veteran Street* – Installed 4 deep sump catchbasins, a Baysaver, restore outfall with grassed swale and macadam berm/road milling to road edge to redirect runoff.

## 2012 Southwick Open Space & Recreation Plan

- *136 Berkshire Avenue* – Replaced 3 shallow catchbasins with deep sump basins, a Baysaver, Stormtech Infiltration Chambers; macadam berm at road edge to redirect runoff.

### SOLID WASTE

Currently, there is a town operated transfer station in Southwick that places emphasis on recycling, which was increased to meet the recycling goals set in the state’s Solid Waste Master Plan. The town currently sends its trash and recyclables to regional facilities.

## LONG-TERM DEVELOPMENT PATTERNS

### CURRENT AND FORESEEABLE DEVELOPMENT PATTERNS

Construction of new homes in subdivisions has replaced many areas of farmland and forested land. Care must be taken to protect and manage remaining open space for water supply protection, habitat and recreation.

Some open space is being created through the Flexible Residential Development (FRD) zoning bylaw which requires 40% of the buildable area to be devoted to open space. The eight FRD subdivisions that have been built in Southwick are listed in Table 13. This can happen in three ways:

- Open space is given to the town
- Open space is put into a homeowners association
- Open space is conveyed to a farmer with an agricultural preservation restriction

**TABLE 13: FLEXIBLE RESIDENTIAL SUBDIVISIONS**

<b>Subdivision</b>	<b>Acres</b>	<b>Owner / Manager</b>
Patriot’s Wood	6.6	Homeowners Association
Amber Leaf	9.76	Homeowners Association
Ferrin Heights	36.52	Homeowners Association
Whispering Pines	10.8	Homeowners Association
Laurel Ridge	61.07	Homeowners Association
Woodland Ridge	32.14	Conservation
Jered Estates	21.43	Homeowners Association
Pearl Brook	35.72	Conveyed to farmer

The FRD by-law is being revised under the Master Plan to make it usable in the Water Supply Protection District. Currently it is not feasible for a developer to use FRD because the lots within this district require 40,000 square feet to be buildable.

## 2012 Southwick Open Space & Recreation Plan

Open space has also been obtained through donation from developers or voluntary conservation restrictions. Table 14 provides a list of other parcels of protected open space.

**TABLE 14: OTHER OPEN SPACE DEVELOPMENTS**

<b>Development</b>	<b>Acres</b>	<b>Owner / Manager</b>
One R Pauline Circle	2.4	Conservation Commission
Pine Knoll I	7.45	Water Commission
One R Sterrett Drive	11.20	Conservation Commission
North Pond Views	.62	Homeowners Association
Liberty Meadows	1.07	Homeowners Association
Lexington Circle	4.61	Homeowners Association
Sunnyside Ranch	64.65	Conservation Restriction

With the increase in residential growth, the character of the town could be lost if efforts are not made to retain more open space. People are building their homes here because of the farms and forests, but this development can threaten Southwick’s rural character.

### LOCAL ZONING

The zoning in Southwick is characterized by 90% of the land being zoned for a variety of residential uses, 8% zoned industrial restricted, and only 2% of the land being zoned for business. Approximately 19% of the town is zoned as an Agriculture and Conservation District, however residential uses are allowed by special permit in this zone.

Unless we plan for protection of open space now, urbanization will continue in Southwick at a significant rate, leaving little or no open space for the future. Because the amount of developable land in Westfield and Agawam is limited, development pressure will continue in Southwick if not controlled.

The majority of Southwick’s land surface zoned residential is divided into two densities. Present zoning calls for lots of a minimum of 40,000 square feet in the R-20 Zone, and 60,000 square feet in the R-40 Zone. West of 10/202 is predominantly zoned R-40, while much of the Congamond Lakes area is R-20. The Zoning Bylaws allow for duplexes in both the R-40 and R-20, with increased frontage and lot area requirements. The Zoning Bylaws also allow for apartments in the R-20-A zone under special conditions.

The Flexible Residential Development (FRD) Zoning Bylaw was adopted in 1992 and allows for 40% of a subdivision be set aside as open space with the potential for recreational pursuits or to preserve farmland that gives Southwick its rural character. This type of development is allowed in any residential zone, except those that fall within the Agriculture / Conservation zone and allows for lot sizes to be as small as 40,000 square feet.

The Flexible Residential Development Bylaw requires that a subdivision development leave a minimum of 40% of the buildable land as open space. In return the Planning Board can waive certain requirements such as cul-de-sac length and lot size. The open space cannot include wetland areas or slopes greater than 25%. The open space can be deeded in three

## 2012 Southwick Open Space & Recreation Plan

ways. It can be deeded to a farmer who will maintain the agricultural use of the land, a homeowners association can be formed, or the land can be turned over to the town.

In addition to the FRD, the adoption of a Phased-Growth Bylaw represents another method the town has adopted to ensure that growth occurs in a strategic, orderly and planned manner. This allows for the preparation and maintenance of high quality municipal services.

The Phased-Growth Bylaw, adopted in June of 1996, provides for 50 building permits per year for the next five years, with a maximum of 100 permits over a two-year span. This time period enables the town to finish essential infrastructure projects, facilitates rewriting and implementation of the master plan, and provides time for action on the recommendations of this report. This bylaw was extended for an additional five years in 2001 in the best interest of the town.

In 1974, the town established an Agricultural and Conservation District (AC). This covers the floodplains along the Great Brook as well as the town's well fields, and also includes the Sodom Mountain Range and the Provin Mountain Range, Goose Pond Area, and prime agricultural areas. The purpose of the AC zone is to protect natural drainage, flood retention areas and the natural water table, to prevent water pollution and soil erosion, and to continue and promote agricultural use. Residential homes may be constructed here with the granting of a Special Permit.

On January 9, 2006 at Town Meeting the voters unanimously agreed to establish an Agricultural Commission to represent Southwick's agricultural community. The Commission shall serve as a facilitator to encourage the pursuit of agriculture in the Town of Southwick, shall promote agriculture-based economic activities in the Town, shall act as mediators, advocates, educators, and/or negotiators on agricultural issues; shall work for preservation of prime agricultural lands and; shall pursue all initiatives appropriate for creating a sustainable agricultural community.

The term agriculture shall include, but shall not be limited to, the production of crops, livestock, equine, horticulture, aquaculture, forestry, nurseries, greenhouses, apiaries and related activities. The members of this Commission have been sworn in and they have had their first meeting.

The Southwick Planning Board, through recommendations made by the Board of Health has implemented restrictions on both residential homes and business/industrial uses located within the Wellhead Protection District (which includes the Zone I, Zone II and Zone III Aquifer Recharge Areas). Some of the restrictions include no underground storage tanks, limitations on pesticides and fertilizers, and specific restrictions on septic systems and periodic septic tank pumping.

Along two sections of Routes 10/202 lies the Business Restricted Area, in which businesses are permitted with the issuance of a Special Permit. Additionally, scattered in other sections of town there are areas zoned Business (B), including an area on the southern portion of

## 2012 Southwick Open Space & Recreation Plan

Routes 10/202 where the Big Y/Ocean State Job Lot shopping center is located and a small shopping center across the street with McDonald's and several small businesses.

In both Business zones residences are prohibited. There are two types of Industrial Zones (IR or I), while regulated, much of the IR zone also lies within the Wellhead Protection Area. At this time, most of the Industrial Land is idle except for agricultural use, because Southwick is not able to compete with neighboring communities for business or industry.

The industrial area located on the eastern side of route 10/202 near the Connecticut line remains agricultural. The main industrial area that is in use is located along Route 57 across from the High School and includes the manufacturing firms of Thales, Whalley Precision, Whalley Computer, Westfield Gage, Progressive Tool, Target Restorations, B&E Tool and D & S. Manufacturing.

A Flood Hazard and Wetlands District was established in 1978 in the Zoning Bylaws, which regulated development in the 500 year (or .2% probability each year) floodplain of lakes, rivers and streams. This district is displayed on the Zoning District Map and is based on the preliminary flood insurance mapping that was available from the National Flood Insurance program at the time. The Zoning District Map was updated and revised in 1986 to include the Federal Emergency Management Agency Floodway maps dated July 16, 1984.

### BUILD-OUT SCENARIO

The 2002 Build-Out Plan approximates the expected development growth and capacity in Southwick, if there were to be no control methods. The build out scenario uses information from past and present development trends, and predictions of development for the future. With large tracts of agricultural land available for development, there is a projected increase in the amount of residential homes being built on these lands. A saturated growth limit for the town under current zoning laws would occur in the year 2056. At this point, approximately 16,000 acres would be in use or almost 80% of Southwick's land area. Nearly 14% of the land would be industrial and commercial areas, with only 4% remaining as open space and forested areas (this would include the Congamond Lakes). Such a forecast leaves the town with a low percentage of open space, excessive demand for water supply, overcrowded schools, and a severely strained tax base.

# SECTION 4: ENVIRONMENTAL INVENTORY AND ANALYSIS

## A. GEOLOGY, SOILS AND TOPOGRAPHY

### TOPOGRAPHY

Southwick's eastern border with Agawam and western border with Granville are formed by the Provin and Sodom Mountain ranges, respectively. Both provide scenic vistas as well as recreational opportunities for the surrounding towns and region. The Metacomet-Monadnock Trail passes north to south through the Provin Mountain range. The Provin Mountain range extends to the south as Suffield Mountain in Connecticut. Just west of Suffield Mountain and Mountain Brook lies the parallel ridgeline of Huckleberry Mountain, which forms the eastern limit of drainage to the Congamond Lakes.

Going westward, the land drops more gently down rolling hills to an extensive area of flat-topped terraces overlooking Great Brook and the Congamond Lakes. These terraces, with flat tops and steep sides are typical of the entire east central area of the town from Congamond Lakes in the south to the Westfield border in the north.

The western half of town, including much of the town center along College Highway, is characterized by rounded or elongated (north to south) hills interspersed with more level areas of wetland, stream bottom, or small terraces. In the northwestern area of town, the Munn Brook Valley has extensive areas of flatter terraced land and floodplain.

Along the western edge of town, the land rises steeply to form the rugged Sodom Mountain and Drake Mountain at the northwestern corner of town. The Sodom Mountain range has several town conservation areas, among which are the Granville Gorge, an area of distinctive rock formations and a beautiful waterfall, which drops, into a shallow pool.

### SOILS

The Pleistocene glaciation was the prominent influence that shaped much of the present surface of Southwick and the drainage basin of the Congamond Lakes. Glacial erosion smoothed the higher hills and glacial till is generally reddish-brown, compact, nearly impermeable, unstratified, and non-sorted to poorly-sorted.

2012 Southwick Open Space & Recreation Plan

It is composed mostly of sand, silt, and clay and locally contains pebbles, cobbles, and boulders. The thickness is highly variable, but probably averages about 15 feet. In some areas, where the till was molded into streamlined hills or drumlins, the thickness may be as much as 100 feet. Deposits of this type cover most of the western half of the town, except for the Munn Brook Valley and adjacent terrace. Till is also found on Stony Hill, Round Hill, and the slopes from Provin Mountain to North Longyard Road. Bordering the Congamond basin on the east and west are glacial till deposits on Huckleberry Mountain and along Sheep Pasture Road.

Soils are a major consideration in planning for wise management of Southwick’s land use and natural resources. Soils are a product of geologic history, the parent material, topography, climate and time. The soils of Southwick have formed primarily in materials influenced by glaciation. The upland hills, ridges, and drumlins are covered with 2 to 3 feet of relatively permeable, often stony, sandy loam material underlain by heterogeneous glacial till (normally with a dense hard pan), or bedrock (ledge). The hard pan soils are often subject to seasonally high water tables. The mountain ridges to the east and west generally have extensive areas of shallow to bedrock soils with numerous bedrock outcrops.

The soils of the terraces above Great Brook, Munn Brook, and the Congamond Lakes are formed in materials influenced by glacial melt water deposits. Surface soils in these areas are generally permeable non-stony, sandy loams, underlain primarily by sands, gravels, and silts, with some clays. Low-lying areas often have a high water table. The major wetlands are underlain either by deposits or till. Along the larger streams, such as Great Brook or Munn Brook, there is often a narrow band of alluvial soils formed by over bank flooding and channel deposits. The major soil types found in Southwick are described in Table 15.

**TABLE 15: MAJOR SOIL TYPES**

<b>SOIL TYPE</b>	<b>DESCRIPTION</b>
Charlton-Woodbridge-Paxton	well and moderately well drained on glaciated uplands, nearly level to steep
Wethersfield-Meckesville	well drained on glaciated uplands, gently sloping to moderately steep
Hinckley-Windsor-Merrimac	excessively and somewhat excessively drained on glacial out wash terraces, nearly level to steep
Rock Outcrop-Holyoke	shallow, somewhat excessively drained soils on glaciated uplands, gently sloping to steep rock outcrop

The Charlton-Woodbridge-Paxton soils are primarily located along the western edge of town and in the central portion east of the Congamond Lakes. The Wethersfield-Meckesville soils are found centrally located within the town from the Westfield border to the

Congamond Lakes. Hinckley-Windsor-Merrimac soils are found throughout the town in the western section, in the southern tip of town extending along the lakes and representing the majority of soils in the eastern half of Southwick. The Holyoke Rock Outcrop along Provin Mountain characterizes the eastern edge of Southwick.

Most of the development over the past several years has occurred within the Hinckley-Windsor-Merrimac soil areas (nearly the entire eastern half of the town). This presents problems in regard to aquifer pollution since the soils are excessively drained. Increased use of septic systems within these areas could nullify the natural filtration process and thereby contaminate the town's water supply.

## B. LANDSCAPE CHARACTER

Southwick is bounded by Sodom and Drake Mountains on the west and by Provin Mountain on the east. Elevations range from a high point of 1100 feet on Drake Mountain to 150 feet along Great Brook. The central portion of the town is characterized by rolling hills and is dissected at many points by small streams. There are relatively level terraces that are found extensively in the Congamond Lakes and Great Brook regions.

The diversity of vegetation is also important to the scenic qualities of Southwick. Present are a mix of forests, farms, abandoned fields, open water bodies, and wetlands. Specific scenic areas include the Congamond Lakes, Provin and Sodom Mountain ranges, Granville Gorge, Solek Hill, Goose Pond, and the Great Brook. The variety of this terrain offers spectacular scenic vistas and recreational opportunities, and offers a wide variety of landscape features for future protection and preservation.

## C. WATER RESOURCES

### WATERSHEDS

Southwick is located within portions of three watersheds. The majority of the Town is within the Westfield River Watershed (HUC 01080206) and contains the Great Brook and the Munn Brook drainage basins. Also, small areas of the southwest corner and eastern side of the Town are in the Farmington River Watershed (HUC 01080207) containing the Bradley Brook and Palmer Brook drainage basins and the Lower Connecticut River Watershed (HUC 01080205) containing the Still Brook drainage basin respectively.

### SURFACE WATER

Southwick boasts a total of over 465 acres of surface water, or over 2% of the town's area. The major surface water resource of Southwick is the chain of three connected lakes, collectively known as Congamond Lakes (North, Middle, and South Ponds). The lakes drain southward into Canal Brook, and northward into Great Brook, the town's largest surface stream.

## 2012 Southwick Open Space & Recreation Plan

These lakes are the focus for considerable recreational use and are ringed by residences and recreational facilities. Boating, fishing, and swimming are popular forms of lake recreation. Public access consists of 4 locations: North and South Boat Ramps located on either end of Middle Pond (owned by the state and managed by the Lake Management Committee), South Pond Beach open to the public for swimming and recreational activities (managed by the Park and Rec. Commission), and the Fishing Pier and adjacent Gazebo which is used for fishing and picnicking (managed by the Lake Management Committee).

Canal Brook begins at the southern end of South Pond, and flows southerly into Connecticut, and eventually into the Farmington River.

Great Brook, from its outlet at the south end of Middle Pond flows west and north of the lakes, turning easterly just south of the town center and then northeasterly into Westfield. Both streams eventually flow into the Connecticut River.

Great Brook flows past the well fields for Southwick, the City of West Springfield, and the City of Westfield. It is reported that the West Springfield well fields can cause significant induced infiltration from the brook. Owing to the wetlands and/or steep escarpments adjacent to Great Brook, there has been little development immediately along the brook. However, it does flow adjacent to the most densely developed area of town.

The towns' other major stream, Munn Brook, in the northwest section, flows out of Granville down a steep and scenic gorge through an area of town owned conservation land. It then turns northerly flowing through a broad valley of mixed residential and agricultural land use. The Munn Brook Valley is underlain by an aquifer, running north to south on the west side of town, which could provide a water supply for that side of town.

In addition to the Congamond Lakes and the above-mentioned brooks, there are numerous small brooks, as well as ponds, and impoundments throughout the town. These water bodies are a valuable community resource that contributes greatly to the scenic and rural character of the town. They include Pearl Brook, Johnson Brook, Tuttle Brook, Shurtleff Brook, White Brook, Palmer Brook, Bradley Brook and Slab Brook. Many of the ponds are natural, but some are old farm ponds built during the WPA period and are used for irrigation, water supply, fire protection, and recreation.

The water resources in Southwick are vital components of its open space and recreation. They play an important role in recreation opportunities and are a vital economic resource as well. The lakes offer residents a variety of water-based recreation including boating, water skiing, fishing, and swimming.

Small streams provide greenways for hiking, fishing, and nature study while contributing to the open rural character of the town. They also provide wildlife habitat and serve to protect corridors for wildlife movement.

Several large wetlands, most notably in the Goose Pond area and north of South Longyard Road, provide habitat for wildlife, serve as nature study and conservation areas for residents, and reduce flooding by storing stormwater runoff and releasing it gradually.

## FLOOD HAZARD AREAS

These are areas that are susceptible to overflow of streams during periods of heavy flooding including the 500 year storm event (or .2%). The Flood Hazard and Wetlands District is displayed on the zoning map. It is based on the preliminary flood insurance mapping that was available from the National Flood Insurance Program when the town established this zoning district in 1978. In addition, the zoning map was revised and updated in 1986 to include the Federal Emergency Management Agency Floodway maps dated July 16, 1984.

For the most part, Southwick's floodplains are narrow corridors that follow very closely the paths of streams and brooks. These are highly susceptible to flooding at any time of the year when heavy storms can dramatically increase stream levels within a short period of time.

The floodplains of Great Brook and Munn Brook are the areas most prone to flooding. Most of the smaller streams feed into these two and thus they experience the heaviest flooding and cause the most damage during prolonged rainfall.

The areas along the Congamond Lakes are also cause for concern. In addition to damage of buildings directly on the floodplain, development can result in a loss of natural flood storage capacity and can increase the water level of the lakes. Flood levels may then increase, causing damage to structures not normally in the flood path.

Despite the potential for destruction, floodplains can still be considered a positive asset for Southwick. They often make excellent agricultural areas because of flat slope and deposition of fertile sediments and nutrients during flooding.

Floodplains contribute to open space and provide esthetically pleasing views of the rural countryside. Their natural boundaries provide ideal open space linkages. Finally, these areas are valued for recreational activities such as fishing, hiking, and nature studies because of open expanses and varied habitats.

## WETLANDS

Southwick has approximately 2,800 acres of wetlands and wet soils. Most of the upland wetlands consist of wooded swamps with limited areas of shrub swamp, shallow and deep marsh and wet meadow. The most extensive wetland area in town is along Palmer Brook, South Pond, Canal Brook and the Goose Pond area at the southern end of the Congamond Lakes. This wetland includes large areas of marsh, shrub swamp, and bog as opposed to the wooded swamps of the upland wetlands. An extensive wetland area also borders Great Brook from its beginning at the Congamond Lakes northward toward the center of town.

## 2012 Southwick Open Space & Recreation Plan

The floodplain of Great Brook, from South Longyard Road north, includes substantial areas of wetlands as well.

Important wetlands are also found along Munn Brook and the Honey Pot wetland complex on North Loomis Road and Honey Pot Road. This area known as the Loupinski Wildlife Management Area and managed by the Massachusetts Department of Fish and Game is considered one of the most important amphibian breeding sites in the state, hosting 15 of the state's 22 amphibian species. This site consists of a 35 acre wetland complex comprised of 15 different wetland habitats including vernal pools, swamps, bogs and streams.

Wetlands are extremely valuable to a community because of the important role they play in maintaining a safe and healthful environment. Some of the functions they perform are:

- During periods of heavy rainfall they act as natural water storage areas, reducing damage from flooding. Preserving wetlands can reduce the need for expensive structural flood control measures.
- Wetlands protect water quality by trapping and filtering sediments from upland runoff. If wetlands are altered these sediments may then clog stream channels and fill ponds and lakes.
- By trapping nutrients from runoff, wetlands make highly productive ecosystems and contribute to the overall balance and diversity of the environment.
- Wetlands provide habitat for a great variety of amphibians, plant and animal life, and thus can provide recreational and educational opportunities for residents.
- Wetlands are generally linked to the ground water system. Depending upon underlying formations, surface water may percolate through and add to ground water supply.
- Wetlands serve as discharge/recharge areas for aquifers. Alteration here can seriously disrupt the ground water system, create drainage problems and affect water quality.

### AQUIFER RECHARGE AREAS

Southwick's most significant ground water resource is the Great Brook Aquifer, a deep buried sand and gravel deposit at least 40 feet thick, which is saturated year round. The Great Brook Aquifer closely parallels the course of Great Brook north of the Congamond Lakes, and lies beneath the lakes as well. The Aquifer provides water that does not require filtration or any chlorination. This important regional resource provides the communities of Southwick, Westfield, and West Springfield with a total of 12.5 MGD (million gallons per day). It is estimated that potential supplies may equal or exceed 20 MGD. The storage volume of the aquifer is estimated to be 15 billion gallons.

Aquifer recharge areas are areas of porous soils that allow for the downward infiltration of surface water. Like aquifers, these are typically sand and gravel deposits where water can pass through freely. In Southwick, the major recharge areas lie within the town and

## 2012 Southwick Open Space & Recreation Plan

contribute directly to the ground water supply; thus activities on the surface have a direct effect on the water quality of the aquifer.

## D. VEGETATION

### GENERAL INVENTORY

Southwick's vegetative cover is as diverse as its topography and is a major facet of the town's scenic and rural character. Its forests and farms provide aesthetic, economic, and recreational benefits. Wetlands and abandoned fields also add important habitat elements for a diverse wildlife population. The Southwick Resources Inventory of 1973 states:

“Approximately 60% of Southwick is forested. Southwick still has an abundant supply of woodland resources to adequately meet its immediate needs. However, prompt and serious consideration should be given to forestry and forestland in any town planning. With population throughout the state increasing, it is obvious the woodlands of such towns as Southwick will receive much heavier use and demand in the near future. It is, therefore, increasingly important that both private and public lands of Southwick be retained where possible and managed on a multiple use basis to derive the maximum products and services for the benefit of the largest number of people. Since many persons with varying objectives and interests control the forestland in Southwick, it is difficult to institute the multiple-use management on a large scale. Public understanding of the importance of forests to the economy and welfare of Southwick and of many other less tangible values available from the forest is needed in order to gain necessary popular support for intensive town-wide multiple use forest management”.

### FOREST LAND

Even though there has been a loss of forestland since this original resource inventory, Southwick still had 11,658 acres of forestland in 1985 according to the University of MA aerial photographic study. This constituted approximately 58% of the town. The concerns expressed in 1985 are still valid today and town-wide multiple use forest management should be pursued vigorously. The MassGIS 2005 Land Use data layer identified 11,630 acres of forest, a 4% decrease since 1971. The Forest Land Assessment Act (M. G. L. Chapter 61) provides an incentive for good stewardship of forestlands. The law provides for a tax deferment on forestlands of over 10 acres that are managed in accordance with a plan approved by a state forester. In addition, financial assistance is available for certain forest management practices through a federal cost share program administered by the Agricultural Stabilization and Conservation Service.

As of June 2012, there are 871.53 acres of land enrolled in Chapter 61 Forestry program or approximately 4.3% of the land in Southwick. The town is home to a variety of species including oak, hickory, and maple which are characteristic of the region's deciduous forests. Also present are the coniferous species of pine and hemlock.

## 2012 Southwick Open Space & Recreation Plan

**TABLE 16: CHAPTER LANDS AND APR**

<b>Chapter</b>	<b>Acreage</b>
61	871.53
61 A	3,680.54
61B	1,276.87
APR	851.39
<b>TOTAL</b>	<b>6,680.33</b>

*Source: Southwick Assessor's Office*

**TABLE 17: APR PROPERTIES**

<b>Present Owner</b>	<b>Acreage</b>
Brzoska/Greany	152
Brozka, Stanley	19.35
Fox Russell Stone	54.74
Strain	70.27
Garden Farm Properties LLC	89.57
Flynn	62.92
Calabrese	70
Bannish	68.29
Town of Southwick – Pauline Circle	2.5
Kosinski	7.12
Jaydub LLC	99.52
Coward	33.84
Tuckahoe Turf Farm	64.36
<b>TOTAL</b>	<b>886.21</b>

*Source: Southwick Assessor's Office*

### RARE, THREATENED AND ENDANGERED SPECIES OF FLORA

Table 18 identifies six vascular plant species recorded by NHESP as present in Southwick.

## E. FISHERIES AND WILDLIFE

### INVENTORY

The town has an abundance of most types of animals native to the region. Because of the diversity of the vegetation and access to wetlands, birds and small animals abound. Residents have reported numerous bobcat, black bear, moose and deer sightings. In certain areas, small, but visible deer herds thrive. Migratory birds, especially waterfowl, find

## 2012 Southwick Open Space & Recreation Plan

Southwick attractive due to the nature of its cover and available food. One birder in town has reported to the Massachusetts Audubon Society that he has sighted a total of 178 species of birds in the vicinity of Goose Pond over a nine-year span.

Game hunting opportunities have steadily diminished with the increase in commercial and home building activities. Pheasants are still stocked in Southwick, but in fewer areas than former years. Natural reproduction of wild birds is quite evident in many sections of town, but a good percentage of the areas are out-of-bounds due to housing encroachments or landlord preference for no hunting or limited hunting on their lands. Whitetail deer hunting opportunities are limited for the same reasons. Deer hunting areas can still be found in the western part of the town in the hill country adjacent to the town of Granville. Grouse, woodcock, raccoon, and gray squirrel are to be found in this same habitat. Black squirrels, originally imported to Westfield from the south, have migrated to Southwick in recent years as well. Limited duck hunting can be had in the area of Goose Pond and Great Brook. Congamond Lakes serve as a staging or gathering area for ducks in the fall, but due to legal restrictions, hunting the waterfowl is outlawed. Nature enthusiasts, wildlife photographers, and waterfowl observers make a great deal of use of this area.

In the year 2008 Massachusetts Fish and Wildlife purchased 250 acres off of South Longyard Road that is now a Wildlife Preserve that abuts a 250 acre Wildlife Preserve in Connecticut that provides bird hunting for both states. Field edges are common in the large agricultural holdings, especially in the eastern section of Southwick, and provide habitat that harbors many kinds of wildlife such as songbirds, rabbits, and pheasants.

Southwick has many small ponds, which were formerly used for irrigation water. These small ponds ranging from  $\frac{1}{4}$  to several acres in size provide excellent habitat for fish, waterfowl, furbearers, and songbirds. The Congamond Lakes are an excellent area for fishing. Congamond Lakes provide a fine fishing area for both warm water and cold-water species. Trophy size lake trout and large-mouth bass are taken every year, and warm weather species such as bass, pickerel, and perch are abundant.

The Commonwealth stocks trout and salmon annually and heavy pressure is experienced there in the early stages of the trout season. Alewives were introduced decades ago and serve as forage for trout and sports fish species.

Two state access points to the lakes are heavily used by boaters as well as fisherman. Another 65-space public parking area recently constructed by the Lake Management Committee with a Massachusetts Turnpike Tourism Grant serves as a parking lot for fisherman and general sight seers.

The town's Lake Management Committee also sponsored the addition of a 200-foot long handicap-accessible public fishing pier and boarding docks at the North Ramp. The pier, boarding docks and associated amenities were built with a combination of Massachusetts Public Access Board bond funds and another Massachusetts Turnpike Authority Tourism

## 2012 Southwick Open Space & Recreation Plan

Grant. This committee manages the access areas, along with the new fishing pier and associated gazebo and park-like facilities.

Stream fishing for trout can be enjoyed in Munn Brook and Great Brook. Congamond Lakes and Munn Brook are stocked once or twice a year by the Division of Fisheries and Wildlife. Many of the streams and brooks support native trout and are supplemented by annual stocking.

Marshes and small ponds are also common across Southwick. One hundred acres of swamp off of South Longyard Road and a large swamp south of Goose Pond provide excellent habitat and hunting for waterfowl, woodcock, and furbearers.

### VERNAL POOLS

There are 3 Certified Vernal Pools and 52 Potential Vernal Pools as mapped by MassGIS.

### CORRIDORS

The major corridors for wildlife migration within the town include the Sodom and Provin Mountain ranges, the Great Brook corridor, the wetland area of Goose Pond, the significant open farmland south of South Longyard Road, and the many scattered open fields and farmland throughout the town. Munn Brook is an especially important stream flowing out of Granville Gorge, along the base of Drake Mountain (in the Provin Mountain Range), into the Honey Pot wetland complex, recognized for supporting a diversity of rare amphibian species.

### RARE, THREATENED AND ENDANGERED SPECIES OF FAUNA

The Loupinksi Wildlife Management Area and Honey Pot Wetland Complex is considered one of the most important amphibian breeding sites in the state, hosting 15 of the state's 22 amphibian species. This site consists of a 35 acre wetland complex comprised of 15 different wetland habitats including vernal pools, swamps, bogs and streams. In 2002, NHESP recognized the Honey Pot wetlands to support six known state-protected rare species including: the only known population in New England of the Agassiz's Clam Shrimp (*Eulimnadia agassizii*) – Endangered; the once abundant but presently very limited Eastern Spadefoot Toad (*Scaphiopus holbrooki*) – threatened; one of only three known sites in Massachusetts and Florida for the American Clam Shrimp (*Limnadia lenticularis*) – Special Concern; the Spotted Turtle (*Clemmys guttata*) – Special Concern; the Jefferson Salamander (*Ambystoma jeffersonianum*) – Special Concern; and the Four-toed Salamander (*Hemidactylium scutatum*) – delisted, formerly Special Concern.<sup>3</sup>

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<sup>3</sup> Gabriel, Marea, NHESP. Letter to Joel Lerner, EOEa regarding Southwick's Self Help Proposal for the Loupinksi Property. 2002. Both shrimp species are listed in just over the town line in Westfield and not included in NHESP

2012 Southwick Open Space & Recreation Plan

TABLE 18: RARE AND ENDANGERED SPECIES

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Amphibian	<i>Ambystoma jeffersonianum</i>	Jefferson Salamander	SC	1988
Bird	<i>Ammodramus savannarum</i>	Grasshopper Sparrow	T	2008
Bird	<i>Botaurus lentiginosus</i>	American Bittern	E	1987
Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	SC	2007
Reptile	<i>Terrapene Carolina</i>	Eastern Box Turtle	SC	2005
Vascular Plant	<i>Eriophorum gracile</i>	Slender Cottongrass	T	1989
Vascular Plant	<i>Liatris scariosa var. novae-angliae</i>	New England Blazing Star	SC	1914
Vascular Plant	<i>Lygodium palmatum</i>	Climbing Fern	SC	2006
Vascular Plant	<i>Ophioglossum pusillum</i>	Adder's tongue Fern	T	Historic
Vascular Plant	<i>Persicaria setacea</i>	Strigose Knotweed	T	1914
Vascular Plant	<i>Ranunculus pensylvanicus</i>	Bristly Buttercup	SC	1914
<i>Source: NHESP, May 24, 2012</i>				

## F. SCENIC RESOURCES AND UNIQUE ENVIRONMENTS

### AGRICULTURE

Agriculture is still an important, although changing, industry in Southwick. Southwick's agricultural productivity is as varied as the town itself. Dairy and beef cattle farms, horse farms, vegetable farms (and farm stands), orchards, Christmas tree farms, nursery establishments and green houses are all part of Southwick's agricultural base. Since 1971, there has been a 30% decrease in cropland production, and a 22% decrease in pasture land. Acreage in orchard/nursery production has increased slightly.

TABLE 19: ACREAGE IN AGRICULTURAL PRODUCTION

Agricultural Form	1971	1985	2005
Cropland	3,835	3,844	2,661
Pasture	817	816	635
Orchard	56	54	12
Nursery			50

## 2012 Southwick Open Space & Recreation Plan

Southwick should continue to encourage agricultural enterprise in the future. Too many communities have realized too late the important role agriculture can play in the well being of a town. The diversity created by hedgerows, stonewalls, and open fields producing crops tend to relieve the monotony of surrounding forested land. The cropland-woodland edges provide open space and an attractive aesthetic. The encouragement of the traditional agriculture business will benefit the community as a whole. Massachusetts General Laws Chapter 61A provides for tax assessment of agricultural lands based on the crops produced, rather than the development value of the land. This helps to ease the owner's tax burden and contributes to economic survival of the property. In return, the town has the right of first refusal if the farm is to be sold, and a penalty of back taxes must be paid if the land is ultimately developed.

There were 4,453 acres of farmland as of September 1998, under the Chapter 61A program within the town, which equaled approximately 20.2% of Southwick's land area. In 2010, there are 3,996.14 acres of farmland in 61A (including APR); in 2012, 4,483 acres of farmland in Chapter 61A and APR combined, an increase of 487 acres since 2010.

Farms enrolled in or eligible for Chapter 61A are also eligible for the state's Agricultural Preservation Restriction Program. This program provides another tool to help preserve agricultural land. Under this program, farmers who apply and are selected will be paid the difference between the development and agricultural values of their land, for a permanent restriction of the land from development. In 2012 there are 795 acres under APR, an increase of 28 acres since 2010. The program is administered locally by the Southwick Conservation Commission.

### OTHER SCENIC RESOURCES

The area surrounding Coes Hill Road is a very significant view-shed region with rolling hills and pastures that truly characterize the rural history of the town. In the summer, the tobacco farms net shade the tobacco and provide a charm found only in a very few communities in Massachusetts. The protection of these agricultural areas is of prime importance. The following is a list of very significant unique environments located within the town of Southwick that deserve high consideration for protection.

Southwick has seven miles of the Hampden-Farmington Canal System, built between 1829 to 1835 to carry passengers and freight from New Haven, Connecticut to Northampton, Massachusetts. Remains of the canal can be viewed at various places within town. This canal has historic value and depicts one of the early, fairly primitive modes of transportation. The Historical Commission is presently working with Westfield, Southampton, Easthampton and Northampton to place the canal on the National Register of Historic sites.

Goose Pond is bordered on the south and east by a rare quaking bog, of which there is only one other as great in size in Western Massachusetts. A bog is a floating mat of vegetation that extends over a short distance in a water body. Bogs contain many species of plants that

## 2012 Southwick Open Space & Recreation Plan

grow only in that habitat such as cranberries, pitcher plants, and Virginia Chain Fern, as well as many beautiful flowers, including orchids, azaleas, and pond lilies. However there is limited public access to this area. The Southwick Conservation Commission contracted with Mass Audubon in 2003 to complete an inventory and natural communities map of the area so that they could more readily identify priority parcels and significant habitats bordering the pond and rail trail locations. Based on this information, the town applied for a North American Wetlands Conservation Act (NAWCA) small grant to acquire a 37-acre parcel near Goose Pond as well as funds to restore a wetland buffer area that has been degraded by the heavy use of all terrain vehicles. These grants were awarded in March, 2004.

On Drake Mountain there is an unusual, man-made, stone structure also called a “beehive” due to its shape, whose origin and purpose is unknown. These are quite rare and extremely old. They are hypothesized to have been used to store gunpowder by early colonists or were built before colonial settlement.

The Granville Gorge, located on Munn Brook at the foot of Drake Mountain, is a unique area of exceptional scenic quality. The area has interesting rock formations, and an attractive waterfall, which drops into a shallow pool. The water appears to be as clear as any in the area and has several parts that are deep enough for both diving and swimming.

The Metacomet-Monadnock Trail is a continuous trail running over 200 miles from near Long Island Sound in Connecticut to Mt. Monadnock in New Hampshire with 117 miles of which runs through Massachusetts. The Metacomet-Monadnock Trail in Southwick runs north/south along Provin Mountain ridge on the boundary of Southwick/.Agawam or Southwick/Westfield for a distance approximately of 6 or 7 miles. The M&M trail in Southwick begins at the Suffield, Connecticut town line and extends to the town of Westfield, Massachusetts. This trail provides scenic vistas of Springfield and the Pioneer Valley as well as breathtaking views of Granville and the foothills of the Berkshires. The trail is currently part of a National Scenic Trail Feasibility Study being conducted by the National Park Service and the Pioneer Valley Planning Commission.

Big Rock-- A is a large solitary stone about the size of a small house that is located west of Sheep Pasture Road and east of the Great Brook. In geological terms it is called a “glacial erratic” because the stone was carried in the ice sheet that covered Southwick thousands of years ago and was deposited when the glacier melted and receded north. Currently, the Big Rock is only accessible on foot, but has the potential to become a local attraction and a significant landmark as part of a hiking trail that could be developed along the Great Brook stream corridor.

There are several open rights of ways for utilities (gas, electric etc.) that could be used as trails and greenway connections. The southwestern portion of town contains one of these rights of ways, and there is another right of way running the length of the town east to west.

## G. ENVIRONMENTAL CHALLENGES

The major environmental problems that occur within Southwick affect the Great Brook Aquifer and its recharge areas. Soils on aquifer recharge areas have a natural capacity for purifying some pollutants as surface water percolates downward to the water table. In addition, precipitation can dilute some pollutants to below dangerous levels. Therefore, a certain amount of human activity can be supported on recharge areas without adversely affecting the water quality of the aquifer.

The town should take care to regulate the type and amount of activities that can bring about contamination or depletion of water supplies especially since much of the aquifer recharge area in town contains soils that drain excessively to somewhat excessively, and that most of the development within the town occurs in these areas. Such activities include:

Overloading recharge areas with septic systems so that the quality of discharged effluent is more than naturally purified through percolation and dilution.

Man-made structures, such as houses and parking lots which bring about a significant reduction in the surface recharge areas, can cause depletion in ground water quantity. Water that would normally seep through the soil simply runs off these impervious surfaces to collect in streams or storm drainage systems.

The location of the current Transfer Station is over the aquifer and recharge area

The current industrial areas in town are located above the aquifer and recharge areas.

Use of de-icing salts on roads in aquifer recharge areas can readily pollute ground water. Dissolved salt percolates unaltered through the soil and may not be detected until the aquifer is already contaminated (recent efforts have been made to mix in the salt with a ratio of sand).

Agricultural practices such as excessive use of fertilizers and pesticides or improper waste disposal from confined livestock operations may pollute the ground water supply.

The illegal use of motorized dirt bikes along the former Hampden/Hampshire (Conrail) railway has caused severe erosion in several areas.

Automotive and heating oil businesses located on recharge areas are potential pollution sources from toxic substances such as petroleum, chemicals, and acids.

As noted above, there are no Environmental Justice populations in Southwick.

# SECTION 5: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

## INTRODUCTION

This section discusses the difference between protected lands and unprotected lands and will identify sites with potential for protection or uses related to the town's objectives. These sites may not now be protected or available for public use. Listing them as "potential sites" does not necessarily mean that the town will act to secure these sites.

Land is considered permanently protected if the entirety of the property interest called the "fee" interest, or some lesser interest in land, such as its development rights (DRs), is permanently held for conservation purposes by a public or private entity. These entities can include the Town of Southwick through its Conservation Commission, one of the state's conservation agencies such as the Department of Environmental Protection (DEP), Department of Environmental Management (DEM) or Department of Conservation and Recreation (DCR), or others; a private non-profit land trust or conservation organization such as the Massachusetts Audubon Society (MAS), or The Nature Conservancy (TNC). Land is also defined as permanently dedicated if the town received state or certain federal conservation funds for the purchase or improvement of the property such as the Massachusetts Self Help Program of the Executive Office of Environmental Affairs (EOEA).

Privately-owned land is considered permanently protected open space if it is subject to a properly signed and recorded Conservation Restriction (CR) or Agricultural Preservation Restriction (APR) pursuant to Massachusetts General Laws Chapter 184 Sections 31-33. Recording a CR is synonymous with giving or selling the developmental rights. CRs and APRs, and the underlying DRs are "held" or "overseen" by one or more public or private conservation entities or "land stewards".

Some permanently protected lands owned by a public entity or private organization provide public access as part of the management plan for the land, some do not. All permanently protected open space provides some form of public benefit, whether through habitat conservation, vista protection, aquifer safeguarding or through walking access and other forms of recreation.

## 2012 Southwick Open Space & Recreation Plan

Unprotected land or land not permanently dedicated which nonetheless is maintained as open space for the present can be secured through private deed restrictions, subdivision covenants, and through enrollment of land under the state Chapter 61 Laws.

Such lands are not permanently dedicated to open space. Covenants and private deed restrictions against development, which do not follow the procedures for recording a standard CR under Ch.184, are impermanent.

Enrollment of land under the Forest Lands, Agricultural Lands and Recreational Lands Assessment Act-General Laws Chapter 61, 61A, 61B provides a significant local property tax benefit to the landowner, but the land can be withdrawn from the programs at any time, sometimes with penalty. Because the land is not permanently protected landowners do not enjoy federal income tax or estate tax benefits. For many landowners, the pressure of increasing property taxes forces a decision to develop land.

Recreational facilities within Southwick include Edgewood Golf Course, Southwick Country Club golf course, The Ranch Golf Course, Longhi's Driving Range and Miniature Golf course, the Granville Gorge area, Sofinowski and Loupinski Preserves, M&M Trail, Sodom Mountain and Southwick Acres Campgrounds, Southwick Schools Athletic Fields, Southwick Recreation Center, Prifti Park, Boy's and Girl's Club, American Legion Post 338, VFW, Motocross, town beaches, Lake George Sportsmans' Club, Agawam Bowmans Club, Wilderness Experiences and the State Boat Launch areas and Fishing Pier.

Tables 19-22 include a summary of open space and recreation lands in Southwick. Included in the Appendices is a more detailed description of these parcels including management agency, condition, grants for acquisition, public access, zoning and degree of protection.

## PUBLIC AND NONPROFIT PARCELS

Increased bicycle use in recent years has brought a need for safe biking trails. The Park and Recreation Commission developed a designated bike route through scenic and recreational areas of town as part of the 1976 Bicentennial. The 15-mile circuit passes by lakes, through woods, and over rolling hills. The existing bike route might have some safety concerns because no provisions have been made for increased shoulder widths. There are no signs for this bike route at present.

In 1994 a movement began to propose the development of the abandoned Conrail railway (a.k.a. Hampden/Hampshire Railroad) corridor into a multipurpose bike trail. This 6-mile bikeway would serve to protect an area that is currently being abused and vandalized.

The project received a large amount of support from the town, and monies for its construction were included in the Open Space Bond Bill that was approved in January of 1996. Several grants have been received for this endeavor, most recently for Phase I of construction design. Phase I of the Rail Trail was completed in 2009. Phase II of the Rail Trail has been funded and started construction completed in 2011.

## 2012 Southwick Open Space & Recreation Plan

The increase in mountain bike use has warranted development of combined hiking, biking and cross country skiing trails in conservation areas owned by the town as well.

**TABLE 19: CONSERVATION LANDS**

Site Name	Location	Acres	Ownership/Management	Description
	One Sterret Drive	11.1	Southwick Conservation Commission	Hiking, picnicking, fishing
West Springfield Well Fields	Laro Road, east bank of Great Brook	262.28	Town of West Springfield	If public access granted, property could serve as recreational area and a greenway connection.
Keenan Park	7R, 5R South Longyard Road	3.55	Southwick Conservation Commission	Wooded area near Great Brook and that abuts rail trail corridor.
56C Berkshire Avenue	155 Berkshire Avenue	13,200 sq.ft.	Southwick Conservation Commission	Wooded area sloping to 100' of lake frontage; access is poor.
Sofinowski Preserve	155 Mort Vining Road	122.37	Southwick Conservation Commission	Trails, ponds and open fields for hiking and picnicking; parking available.
Loupinski Wildlife Management Area	36 Honey Pot Road	68	MADFW and Town of Southwick	Former farm open to the public for passive recreation and hunting (in season); parking; trails through open and wooded areas.
Loupinski Fields	Off North Loomis Road	8	Southwick Conservation Commission/Restriction	Leased to farmer for hay.
Sodom Mountain	Granville Road	45.1	Southwick Conservation Commission	Steep wooded slopes in landlocked area; limited public access; provides protected habitat on the mountain.
Pauline Circle	One R Pauline Circle	2.4	Southwick Conservation Commission	Open field near recent residential development; could provide connection to the Rail Trail.
Granville Gorge	384 Granville Road	9.19	Southwick Conservation Commission	Wooded gorge with a stream and series of pools and waterfalls, trails and fishing spots; parking for 12 vehicles; could be used as a trailhead for nearby Sodom and Drake Mountains.
Goose Pond Conservation Area	Southern & Easterly parcels near Goose Pond extending to the CT state line.	105.6	Southwick Conservation Commission	Wetlands bordering Goose Pond and a rare quaking bog; interest in acquiring nearby lands in Massachusetts and Connecticut to create the Manituick Wildlife Refuge, which could provide wildlife habitat protection, natural

## 2012 Southwick Open Space & Recreation Plan

				resource protection, and variety of passive recreation.
Woodland Ridge Open Space	14 South Longyard Road and Woodland Ridge Road	32.14	Southwick Conservation Commission	Fields, forest and wetlands along Great Brook given to the town through a Flexible Residential Development; connects to Washout and Fletcher Park.
Tobacco Road	East of Tobacco Road	0.15	Southwick Conservation Commission	Small wooded lot; could provide playground area.
New England National Scenic Trail	Rising Corners Road	43	Southwick Conservation Commission; MM Trail managed by Appalachian Mtn. Club	2.2 mile section of Metacomet-Monadnock Trail; runs from Southwick/Agawam border, past Hart Pond along Provin Mountain ridge to Feeding Hills Road (Rte 57)
South Longyard Wildlife Management Area	123 South Longyard Road	252	MADFW	Mostly open field habitat being managed for bird habitat and successional growth. In-season hunting is permitted.

## 2012 Southwick Open Space & Recreation Plan

**TABLE 20: PARK AND RECREATION LANDS**

Site Name	Location	Acres	Ownership/ Management	Description
New Town Beach	South Pond and 14 Beach Road	15.3	Southwick Park and Recreation	Recently renovated beach area with lifeguard stands, beach house and parking; handicap accessible; access to the Congamond Lakes; potential for more recreational development; 12 acres of wetland.
Town Hall - Renovated	454 College Highway	13.5	Southwick Park and Recreation; Board of Selectmen	Refurbished basketball courts and new volleyball courts; Could serve as a major entry to the Great Brook Trail system with its parking and downtown location and outdoor sitting area for Town Hall employees.
Old Town Beach	Middle Pond on Berkshire Avenue	1.397	Southwick Park and Recreation	Parking for 3-4 cars; picnic tables; gated walkway.
Miller Road	59 Miller Road and South Road	30.06	Southwick Park and Recreation; Conservation Commission	Open wetlands and sandpit bordering the rail trail corridor to the East; wetland is home to endangered species and listed Biomap core habitat; possible canoe and kayak launch areas with access from CT and rail trail.
Rail Trail Corridor	Town line in West Suffield, CT to Westfield, MA	6 miles	Southwick Park and Recreation	Rail Trail constructed in 2011 linking to CT; eventual plans for link from Westfield to connect to regional trail system.
Prifti Park	454 College Highway	2.8	Southwick Park and Recreation	Open recreational area with new playground equipment; parking in adjacent town hall lot is convenient; Volleyball court.

## 2012 Southwick Open Space & Recreation Plan

**TABLE 21 MUNICIPAL AND PUBLIC LANDS**

<b>Site Name</b>	<b>Location</b>	<b>Acres</b>	<b>Ownership/ Management</b>	<b>Description</b>
Water Tower	West of College Highway near Town Center	2.07	Southwick Water Commission	Tower on hilly area off Southwick Hill; possible greenway link, could be an important area for wildlife habitat protection, and passive recreation.
Southwick-Tolland Regional School Campus and Athletic Fields	Route 57 and Powder Mill Road	109.6	Southwick-Tolland Regional School District	High School hill provides sledding and tobogganing during the winter; could serve as connection to a comprehensive trail system (Rail Trail, Great Brook Trail), due to its central location and accessible parking.
Southwick Water Supply Lands	Laro Road	29.09	Southwick Water Commission	Wooded area with Great Brook; could provide for passive recreation activities, connect to the Great Brook Trail or a few athletic fields.
Well Field and Pumping Station	159 Feeding Hill Road	52.61	Southwick Water Department	Water supply areas located along the Great Brook; proposed multi-use recreational complex with lighted athletic fields for a variety of sports, walking trails, and an outdoor amphitheater; could provide access to Great Brook Trail.
Former Southwick Public Library	475 College Highway	0.25	Southwick Board of Selectmen	Former public library located in center of town with limited parking; historic building is vacant; could provide for a meeting place and greenway link along the Great Brook Trail.

2012 Southwick Open Space & Recreation Plan

## PRIVATE PARCELS

TABLE 22 PRIVATE PARCELS

Site Name	Location	Acres	Ownership/ Management	Description
Metacomet-Monadnock Trail	From Hart Pond on CT border along Provin Mountain ridge to Westfield	2.2 miles	Managed by Appalachian Mountain Club	Trail runs along Hemlock groves and old logging trails; National Scenic Trail Feasibility Study currently underway.
Lake George Sportsmen's Club	West of North Loomis Street	4.46	Lake George Sportsmen's Club	Recreational area with membership required for use; could serve as an entry point for a trail along Drake Mountain, and be part of a larger conservation area.
Pioneer Valley Live Steam Railway	Hillside Road	10.23	Live Steamers Inc.	Recreation area with four tracks of different sizes that are used to run scale model replicas of steam trains; serves to protect portions of the scenic Hillside and Hastings Road area, with potential for picnic areas and other means of passive recreation.
Agawam Revolver Club	302 Feeding Hills Road	13.16	Agawam Revolver Club	Membership club for target shooting; could be part of a larger conservation area for Provin Mountain.
Agawam Bowman Club	309 Feeding Hills Road	34.86	Agawam Bowman Inc.	Wooded area along a hilly slope that is used as a private membership club for Archery practice; possible parking area and entry point for the Metacomet-Monadnock Trail and could become a part of a Provin Mountain protection area.
Sodom Mountain Camp Ground	233 South Loomis Street	245	Janice S Lafrance Trustee	Wooded campground on a mountainside plateau; could serve as entry point for a Sodom Mountain biking and hiking trail, cross country skiing area.
American Legion Post 338 and Motocross	56 Powder Mill Road	56.6	American Legion Post #338	The motocross track is adjacent to Great Brook and nationally ranked race course; could provide a Great Brook trail entry and parking, with connecting loops to the Recreation Center and schools.
Southwick Recreation Center	58 and 64 Powder Mill Road	24.09	Southwick Recreation Center Inc.	Flat open fields used as athletic fields; heavily used and in need of serious improvements in the ball fields.
Southwick Golf Course	739 College	109.53	Southwick Golf	Public golf course; aids in

## 2012 Southwick Open Space & Recreation Plan

	Highway		Course Inc.	preservation of rural character with large expanses of open areas along a major highway in town.
The Ranch Golf Club	65 Sunnyside Road	238.22		Former dairy farm that has been recently reopened as a PGA level golf course with clubhouse and restaurant located in the original barns and a 50-lot subdivision around the perimeter;
Edgewood Country Club	161 Sheep Pasture Road	164.78	Edgewood Country Club	Scenic and rolling site with a variety of elevation changes and partially wooded areas Potential: A greenway linkage and possible connections to the Rail Trail.
Longhi's Driving Range	300 Feeding Hills Road	7		Driving range, miniature golf course, and par 3 course in a wooded setting set back from Route 57. Potential: Parking and a trail connection to Provin Mountain.
Town Green	Corner of Depot Street and College Highway	0.33	Congregational Church	In front of historic Congregational Church; parking; used as a War Memorial
R W Kellogg Post VFW	151 Point Grove Road	5.71		Picnic Grounds
Strain Family Horse Farm	Vining Hill Road	70.27	William H. Strain	Variety of terrain including rolling hills, streams, and woodlands; currently houses a horse stable and outdoor ring, with trails for horseback riding; could provide a large conservation area with walking trails and cross country skiing, and would help to buffer Pearl Brook.
Sunset Ridge Stable	108 Coes Hill Road	5		Variety of terrain including rolling hills streams, and woodlands; horse stable and indoor/outdoor rings with trails for horseback riding; adjacent to conservation land.
Sylver Cryst Stable	233 Mort Vining Road	105	221 and 223 owned by Paul Gregoire (88.16 acres)	Variety of terrain including streams and woodlands; horse stable and indoor/outdoor arenas; abuts conservation property.
Kline View Stable	53 Kline Road	5.17	Vail C. Turner	
Valley Brook Stable	299 College Highway	87.87	Neil Deveno	Variety of terrain including streams, woodlands, meadows, hay fields; houses a horse stable and indoor/outdoor arenas.
Southwick Acres Campground	256 College Highway	50		A rural campground on grassy rolling terrain with adequate shade trees; located along the

## 2012 Southwick Open Space & Recreation Plan

				Great Brook, with Pearl Brook running through the campground. Potential: The campground could act as an entry/exit point along a Great Brook trail system, and could provide for activities such as hiking and cross country skiing.
Jimmy's Pizza	81 Point Grove Road	0.5		22 boat slips, a restaurant and a picnic area
The Cove Restaurant	90 Point Grove Road	3.5		Adjacent to the Hampden-Farmington Canal; picnic area, beach, playing field, pavilion, restaurant and banquet facility. Potential: Could provide public access to North Pond; pavilion and offices.
Saunder's Boat Launch and Rental	120 Congamond Road	0.75		This private boat launch is located in a business district and contains 80 boat slips and 50 moorings.
Southwick Jog Area	Area of town that extends into CT	~4,000 (approx x 6 sq.mi.)	Private and Public	Section of town that protrudes into Connecticut. Potential: Areas within jog area can be designated with signage (being considered by the Historical Commission)
Coes Hill Road Area	Coes Hill and Hillside Road	500	Private	This area is characteristic of Southwick's rural past, containing rolling hills, wooded areas and stone walls. Potential: Conservation and passive recreation with trails; greenway link, cross-country skiing, and scenic vistas
Moore House	86 College Highway	1.5	Town of Southwick Historical Society	Historical site that will be open to the public once it has been restored. Potential: Research and educational facility for historians and students; open to the public with grounds to include a parking area, as well as gardens containing examples of plants used in the 18th century households for cooking, medicinal, and decoration.
Gillette Cigar Factory	College Highway and Vining Hill Road intersection		Town of Southwick Historical Society	The cigar factory building is on both the Southwick and the Massachusetts Historic Resources Inventories. The Gillette Cigar Factory/Warehouse was constructed in 1872 and served as a cigar shop and sorting warehouse for locally grown tobacco.

## SECTION 6: COMMUNITY VISION

### A. DESCRIPTION OF PROCESS

The 11 member Open Space Committee served as the coordinating committee for the OSRP update. All of the Committee meetings were held at Town Hall and were open to the public. The committee met five times between April and December 2012 and these meetings were posted at town hall, and emailed to the Committee members, board chairs and department heads for all boards, departments and committees within Southwick.

A public survey was conducted between May 4<sup>th</sup> and June 30<sup>th</sup>, 2012. The survey was available on-line via SurveyMonkey, and in paper form available at Town Hall and the Public Library. The survey link as well as paper copies were distributed to every municipal department for dissemination to the residents they serviced. Notice of the survey was also published in the May 10, 2012 *Republican* newspaper.

The PVPC, in conjunction with the Southwick OSRP Committee, held a public workshop on September 12, 2012 at Town Hall to present the results of the public survey and develop a vision for open space and recreation including goals, objectives, and actions. During this workshop, participants were asked to name important natural resources, open spaces, recreation areas and landmarks in Southwick and then identify associated issues or conflicts. Based on this conversation, participants then identified open space and recreational needs. The final exercise involved the drafting of goals and objectives and associated actions. The public workshop is described further in Section 6 Community Vision.

Public meetings of the Open Space Committee devoted to development of OSRP chapters occurred on:

- March 28, 2012
- May 23, 2012
- July 18, 2012 co-sponsored with the Planning Board
- September 12, 2012
- October 17, 2012

Public meetings with other town departments, boards and commissions devoted to investigation and analysis of open space and recreation issues were held on:

- March 20, 2012 Assessor's Office
- April 10, 2012 Planning Board
- April 26, 2012 Lake Management Committee
- April 30, 2012 Board of Selectmen
- May 22, 2012 Park and Recreation Commission
- September 12, 2012 All Boards

## COMMUNITY SURVEY RESULTS

Southwick's Open Space and Recreation Survey was available for public comment for May and June 2012 online at SurveyMonkey.com. Paper copies of the survey were made available at Town Hall, the Senior Center, and the Public Library. Notice of the survey was published in the May 10, 2012 *Republican* newspaper, emailed to every municipal department, board and committee, and fliers mailed to every municipal department, board and committee for posting in their office and distributing to the residents they serve.

Survey responses are included in the Appendices. Just over 1% of the community (125 people) responded to the survey. Despite a widely distributed notice of the public survey, a low response rate was still experienced. This is not an uncommon phenomena in the region. To compensate for the low response rate, a public meeting will be held in September to present the final draft plan and re-open a public comment period for 30-days.

The survey responses supported the goals and objectives identified in Southwick's previous OSRPs. Protection of lakes, ponds, and streams (85.2%), groundwater/aquifer recharge (75.4%), wildlife habitat (68.9%), forests (63.9%), and farmland (62.3%) ranked as the top five most important resources for protection. Non-motorized trail use (79.5%), swimming (74.4%), boating (59.8%), fishing (42.7%), road biking (46.2%), and bird watching (46.2%) ranked as the top six activities most enjoyed in Southwick. In terms of recreational facilities people most wanted to expand or develop, nature trails were by far the highest ranking at 68.1%. Parks (51.6%), art and cultural events (47.3%), picnic areas (46.2%), and a dog park (31.9%) followed in importance for development and expansion.

## B. STATEMENT OF OPEN SPACE AND RECREATION GOALS

Goal 1: Maintain the ecological integrity of aquatic ecosystems and protect the quality and quantity of surface and groundwater drinking water supplies.

Goal 2: Permanently protect important open space and ensure conservation areas are appropriately managed for flora and fauna habitat integrity and resiliency.

Goal 3: Preserve working farms and forests in support of an agricultural way of life in Southwick.

Goal 4: Improve and expand recreational and environmental education opportunities for people of all ages while preserving Southwick's scenic, cultural and historic character.

## SECTION 7: ANALYSIS OF NEEDS

### A. SUMMARY OF RESOURCE PROTECTION NEEDS

The following locations are of concern within the town areas that have little or no protection and would add significantly to the quantity of the open space in Southwick.

#### Beehive - Unique stone structures on Drake Mountain

Unusual man made feature known as the cave or beehive due to its unusual shape. Origin and purpose is unknown. These are extremely old and quite rare. A large stone can cover the open top. They are hypothesized either to have been used to make charcoal, produce gunpowder or to store crops by early colonists or prior to colonial settlement.

#### Drake Mountain (proposed conservation and recreational areas)

This area has potential for many varied activities and has conservation, recreation, and historic value. It is located north of the proposed Munn Brook Conservation and Recreation area. With the acquisition of these parcels of land, a Sodom Mountain - Drake Mountain hiking trail could be established.

The trail would start at Sodom Mountain Road at an elevation of one hundred and fifty feet and run north ascending Sodom Mountain to an elevation of one thousand feet. It would then descend to about five hundred feet when it crosses Munn Brook. It would then descend Drake Mountain to an elevation of nine hundred feet and then descend to three hundred and thirty feet where it ends at Honey Pot Rd. for a distance of five miles.

This trail would follow the high point of land along the Granville town line, crossing Rt. 57 about one quarter mile from the Granville line, and then follow the high point of land along the Granville border and then descend to White brook and end at Honey Pot Road on the Westfield line.

Westfield and Granby, Ct. would be asked to extend the trail into their towns. Honey Pot Road provides access to Drake Mountain for the hiking trail, as well as for hunting and geological studies. The woodland in this area is suitable for forest management.

Due to variation in soil types, the higher sections of Drake Mountain are limited for forest production; however, on the lower slope, where the soils are more productive, better quality timber is found.

The immediate area across Munn Brook would join the Granville Gorge parcel, making both sides of Munn Brook accessible as a recreation and conservation area, and also provide protection of the Gorge. Access to the south side could be by right of way from North Loomis Street using the old Granville Road bed that serves as a logging road, bike trail and fire road access to Drake Mountain.

## 2012 Southwick Open Space & Recreation Plan

### Solek Hill

This is the highest point within the boundary of Southwick, excluding Provin Mountain and Sodom Mountain, and is of great scenic value. It is a grassy hill and knoll presently being used for hay by a farmer. It affords an excellent view in all directions, and is easily accessible from the west side (Hastings Rd.) following a farm road with the potential for passive recreation and winter activities such as sledding and cross-country skiing.

### Proposed Crescent Circle Park

The wetlands in Crescent Circle consist of several acres of swamp with some open water, maple, ferns, and wildflowers. The small area of open water could be enlarged for a wildlife pond. Several birdhouses could be installed and a nature trail with trees and shrubs marked and identified. This area would provide a spot for nature study and observation, and provide open space in a built up section of town. A memorial fund could be established to gradually create a more formal park, perhaps a Japanese garden with benches, etc. toward the entrance on College Highway, with the natural area fanning out towards the back.

In conjunction with this, the area to the west of Crescent Circle could be developed into a recreational area. There are about two acres surrounding a small pond, enough for a basketball court, playground, horseshoes, volleyball, picnic area, etc. The pond, stocked yearly, could provide fishing and during the winter, ice-skating. Sliding on a nearby hillside adds to winter pleasure. Parking facilities would be needed.

### Sodom Mountain/ Lambson's Hill

Proposed conservation/recreation areas) West of South Loomis Street on the south side of Granville Road are grassed slopes (Lambsons Hill) on the edge of a former tobacco field suitable for sledding and beginners skiing. The land abutting these slopes to the north, south, and west of Sodom Mountain would provide an area for hiking, hunting, mountain climbing, geologic study and cross country skiing. The woodland provides an opportunity for woodland management.

Route 57 near the Granville town line provides access to Sodom Mountain at the north. The ledges in this area are twisted with dike- like layers of lighter material and deposits of white quartz. Sodom Mountain Road, a winding, scenic mountain road, provides access at the southern end of the mountain. The ledge along Sodom Mountain Road is rich in white quartz, mica, granite and conglomerate rocks. The existing wooded road on the mountain provides hiking with excellent views of the eastern mountains, with the valley of Southwick in the foreground. There are existing trails for snowmobiles and motorized dirt bikes throughout this mountain range, as well as mountain biking. The greater portion of this whole area is presently in the Agriculture-Conservation District.

### Pine Grove (John Mason Road)

West of John Mason Road and southwest of Fred Jackson Road there is a tall stand of pines

## 2012 Southwick Open Space & Recreation Plan

bordering a wetland. According to local residents, robins stay there the year round, as it is approximately thirty degrees warmer in the winter. This privately owned area covers about fifteen to twenty acres, and the only access is through private property. This parcel of land should be preserved as a bird sanctuary.

### Fletchers Grist Mill

The site of Fletcher's Grist Mill is just east of the old railroad underpass (removed several years ago) on Depot Street where South Longyard Road starts. It was located down a steep incline in a hollow by Great Brook. This land contains the remains of a gristmill, the mill canal, one of the gristmill grinding wheels, and a key stone arch under which the canal passed. All of which have historical value.

In 1875 Boyle and Gilbert, then owners of the old Grist Mill, asked William Fletcher to come to Southwick to operate the mill for them. He leased the mill and began his famous Old Fashioned Flour business, consisting of Buckwheat-Graham and Rye flour. He operated the business for nearly 60 years. He retired from business in 1936. In July of 1955, the mill was destroyed by fire caused by lightning during a heavy storm. This site, if owned by the Town, would connect two conservation areas, Fletcher Park and Joseph Keenan Park.

### Hampden-Farmington Canal Lock

Located on the north side of South Longyard Road is the remains of the last known lock of the Hampden-Farmington Canal of 1826. All other known areas in Southwick where the canal existed have been destroyed by flood, natural erosion, or construction. Some areas of the original towpath remain, but erosion, natural succession, and neglect leave little remains of a once flourishing canal boat run from New Haven, Connecticut to Northampton, Massachusetts.

This is the lock that lowered the boats to the level of Great Brook before crossing to the north side and proceeding onward. It is a historical landmark that should be preserved. It is within a 2 to 3 acre area owned by Reginald Phelps. Great Brook is to the north, Granado Estates to the east, and undeveloped land to the west and south.

### Shepard's Pond Swamp and South Provin Mountain Ridge Area

The north to south ridge on the eastern boundary of Southwick is cut sharply just north of the Connecticut line by the Still Brook, which drains a mostly wooded swamp several hundred acres in area. The area is well over a mile long, lying north and east of South Longyard Road and Foster Road.

In the center of the swamp, much of which was owned by a tobacco company, an earthen dam creates a ten-acre pond and marsh, originally used for irrigation purposes. A road passes over the dam to a cultivated field at the foot of the steep ridge with many rocky ledges, which is heavily wooded with some stands of mature conifers. There are many bike trails here and the summit would afford a view of both east and west valleys.

## 2012 Southwick Open Space & Recreation Plan

This is an extensive wild area forming an island in farming and suburban country for many animals and birds now found only in the Berkshire Hills.

### Hardwood Swamp , West of South Loomis Street

The forty-acre hardwood swamp with some open water and cattails, located west of South Loomis Street near the Connecticut state line, is suitable for management and preservation as wildlife habitat for duck and furbearers. The acquisition of this parcel would complete the plan for the very western side of Southwick in a Conservation/Recreation area.

### Proposed Rest and Information Area on College Highway (south)

College Highway is traveled heavily by both passenger vehicles and trucks. Located across from an industrial zoned area, is a low area with the meandering Johnson Brook to the southwest. There is a pleasant view to the south and west, of farmhouses, brooks, and rolling terrain beyond. The area is suitable for a roadside rest area and would require grading for parking, tables and trash containers. The property use has been discussed with the owner who may possibly deed it to the Conservation Commission. There are no rest areas along the highway in Southwick. The land is in the flood plain and unsuitable for building.

### The Old Watering Trough

In the 1940s, Charles M. Arnold wanted a place to water his farm horses, and decided to build it by the side of Sheep Pasture Road. It is about 1/4 mile from the junction of Point Grove Road and Sheep Pasture Road, almost at the northern edge of Edgewood Golf Course. It was gravity fed by a well upon the west hill. The water was piped underground and always bubbled in the old boiler cylinder that served as the watering place. The water has been turned off and now only the old boiler set on a concrete base is left with wildflowers and grasses growing around it. The Historical Society has recently renovated and restored this small area by placing a historic marker and cleaning up the area.

### Johnson's Land and Rare Ferns

On Eldon Johnson's property (1978) near the Connecticut state line is an old feeder canal of the New Haven-Northampton Canal cutting across the field. Along its banks grow the rare Hartford Fern. The scientific name for this climbing fern is *Lygodium palmatum*. There are three places that Mr. Johnson knew of where the fern grows: one is in Hartford, one is Northampton, and the other is in Southwick. This property was purchased from Constance Johnson by Jack and Maureen Feldman in 1996. They continue to grow potatoes in the agricultural fields located on the property.

### South Pond/Goose Pond Wetlands Area & Proposed Maniuck Wildlife Area

This area within Southwick consists of almost 850 acres of woods, swamps, and cropland, southwest of South Pond, east of College Highway and south of Congamond Road to the state line. There are an additional contiguous several thousand acres of wetland and upland habitat in Connecticut. The entire area is proposed as the "Maniuck Wildlife Refuge". Access points would be needed for the public from both Massachusetts and Connecticut.

### Coes Hill Road Area

## 2012 Southwick Open Space & Recreation Plan

Located on Coes Hill and Hillside Roads this region is a prime example of Southwick's rural past, providing a scenic view of rolling hills, meadows, and pastures. This agricultural area is privately owned and currently has no protection from development. The Brozka family has recently received an APR restriction on their 159-acre farm located in this area.

### Environmentally Sensitive Areas

"Sensitive Areas" are land or water areas which serve an important productive or protective function for the community in their present natural state. Man's intervention can disrupt delicate ecological relationships, threaten the general welfare of the community and result in serious economic loss. Proper management and protection of sensitive areas are necessary to preserve important productive lands and maintain the environmental health and quality of the community.

Six types of sensitive areas have been identified and mapped in Southwick: wetlands, aquifers, possible aquifer recharge areas, flood plains, steep slopes and streams and stream banks.

Certain areas, such as wetlands, have inherent ecological value, where alteration or destruction will seriously impair vital environmental processes on which the community depends for its wellbeing.

Other areas, such as steep slopes pose limitations for development because of serious consequences that result when improper techniques are utilized.

Development need not be totally restricted in sensitive areas, as these are often highly desirable locations. However the town should take care to ensure that development is compatible with the natural capabilities of the land.

Finally, sensitive areas are frequently pleasing to the eye, offer a wide range of recreational opportunities, and provide habitat for fish and wildlife. Allowing for such alternative uses of sensitive areas can add significant contributions to the community and preserve environmental benefits.

### 1. Aquifers and Aquifer Recharge Areas

In 1967-68, the Massachusetts Water Resources Commission conducted an investigation of potential water yields in the Great Brook Aquifer, identified roughly paralleling the course of the Great Brook in the northeast part of town with a layer of sand and gravel at least forty feet thick saturated with water year round. The study concluded that this aquifer has a great deal of potential to serve as a water source for Southwick. West Springfield currently operates a well field here for its own supply, but the report states that ample water remains for Southwick to meet its future needs, without relying on an outside system (Springfield).

The protection of aquifers is critical to ensure an adequate water supply for the present and future growth of the community. Pollution can seriously impair water quality and over pumping in excess of natural recharge can deplete the existing supply. Groundwater moves very slowly and it may take many generations for clean water to replace a contaminated aquifer. Southwick should take measures to protect ground water quality and quantity for future growth.

## 2012 Southwick Open Space & Recreation Plan

In Southwick, the major recharge areas lie within the town and contribute directly to the ground water supply; thus activities on the surface have a direct impact on the water quality of the aquifer. Sand and gravel terraces above and surrounding the aquifer help to recharge the ground water supply as precipitation infiltrates surface layers as it slowly seeps into the underlying aquifer.

In the Great Brook study another major source of recharge was identified as North Pond. Deep layers of saturated material were found to transmit large quantities of water that originate in the lakes and surrounding area then move through highly permeable sand and gravel deposits.

The area in which the aquifer and aquifer recharge areas lie are seeing a significant amount of residential development at this time and care needs to be taken to make sure that the area is not overloaded with septic systems, storm runoff, and increased flood potential which may severely damage the quality of Southwick's drinking water.

### 2. Floodplains

On a large scale, the flood plains of Great Brook and Munn Brook occupy a significant area. Most of the smaller streams feed into these two and thus they may experience the heaviest flooding and cause the most damage during prolonged rainfall.

### 3. Wetlands

Southwick has numerous wetland areas that serve a variety of purposes such as flood water storage areas, wildlife habitat, protection of water quality, and recharge areas for ground water. The town has major wetlands in the southeastern corner of town, along Great Brook, Munn Brook running along North Loomis, and other smaller areas scattered throughout town.

### 4. Steep Slopes

Areas that can be classified as having steep slopes in Southwick include Sodom and Drake Mountains along the western edge of town, and Provin Mountain along the very eastern edge bordering Agawam. These are areas with slopes greater than 20 percent and having highly erodable soils.

### 5. Streams and Shoreline

The numerous streams and brooks in Southwick are valuable community resources that contribute greatly to the pleasing rural character of the town. These include Great Brook, Pearl Brook, Johnson Brook, Shurtleff Brook, Munn Brook, White Brook, Palmer Brook, Kellogg Brook, and Slab Brook. They add to open space by offering attractive scenery and providing enjoyable retreats for hiking, fishing, and nature study. They furnish habitat for wildlife and provide a protective corridor for movement. The protection of streams and buffer zones along their banks helps not only to preserve amenity values, but also to maintain ecological harmony over a wide area. Unrestricted activity along streams and banks can seriously impair water quality and have a profound impact upon important functions that contribute to a balanced and healthy environment. For example, in the Great Brook aquifer study, it was found that this stream tends to recharge the ground water through a process known as induced infiltration. Because of the water pumped by West

Springfield's wells, the direction of ground water flow is altered causing water to be drawn down from the brook.

Maintaining streams in their natural state helps to protect the habitat and spawning grounds of fisheries. Development may open up large areas to sunlight, raising stream temperatures to levels which trout cannot endure.

## B. SUMMARY OF COMMUNITY'S NEEDS

Residents responding to the survey overwhelmingly requested the protection of the aquifer and the Town's water supply. However, since most of the development occurring within Town is within the aquifer area, residents will have to decide whether or not to put further restrictions upon this area to protect the water supply.

Also, the main reason people choose to live in Southwick is its rural character, which is being threatened in the eastern and center portions of Town with the current development pattern. Citizens will need to decide if further restrictions will be required, such as increasing the open space for Flexible Residential Developments from a minimum of 40 percent to upwards of 50 or 60 percent.

Recreational needs were also important questions asked on the survey, with a wide variety of activities to choose from. These activities included community events, youth oriented events, outdoor recreation, playgrounds, bicycling, music related events, swimming, and tennis.

Currently, the town has a shortage in most of these areas, with the exception of youth oriented events which may need to be advertised more to increase public awareness and participation. Other findings of these surveys include:

- A preference for new residential housing to be single-family homes, rather than multi-family housing condominiums
- A preference for new business to be professional offices, specialty shopping centers, or quality restaurants, rather than nightclubs
- A strong preference for a new multi-purpose teen recreation and social center
- Services provided in or by the town were generally highly rated, except for roads, which were rated fair
- A preference for general tax revenues to be used for building improvements, except for water and sewer systems and public recreational facilities, where user fees were preferred
- A preference for a limit on the number of building permits issued annually
- A strong preference for improved water quality protection measures

The needs of this community albeit diverse, can be viewed as components of three main issues sustaining the rural character of the town, further protecting the water quality, and providing for additional recreational services.

## 2012 Southwick Open Space & Recreation Plan

According to Massachusetts Outdoors 2006, the statewide SCORP, a distinctive pattern emerges in the Connecticut Valley Region in terms of recreational need. Hiking (10.7%) and playground activity (11.3%) ranked high with swimming and road biking, but also hiking, mountain biking (10.3%), and cross country skiing (4.1%) are ranked higher than in any other region. These results are consistent with the results of the community survey in Southwick.

The following is a summary of the most important needs for the Town of Southwick:

- Additional areas for, mountain biking/hiking and passive recreation throughout the town
- Additional athletic fields and multipurpose recreational facilities that can accommodate a variety of family activities
- The permanent protection of farmland to preserve the rural character of the Town
- Acquisition of open space for an assortment of uses such as additional recreational areas, natural resource protection, creation of greenway links, and protection town character.
- An increase in the selection of available outdoor recreational activities to include cross-country skiing, outdoor skating rinks, outdoor performances, and hiking
- Additional areas for the elderly within reasonable distances such as walking trails, shuffleboard, chess/checker tables, shaded parks, and gardens.
- Creation of passive recreational facilities with parks, gardens, trails, scenic vistas, and unique landscape features
- Increased public access to the Congamond Lakes
- Enabling the Town to protect open space and farmland when such land becomes available for purchase or donation
- Increased access for the disabled, especially in areas such as the Sofinowski Preserve is to be implemented and improved for public use. The Open Space Committee is actively working on the design and funding for a handicap accessible trail and platform from the parking lot to a cat tail marsh.

### C. MANAGEMENT NEEDS, POTENTIAL CHANGE OF USE

The next step in examining the resource needs of the community is to plan for its management requirements and to plan for potential changes in land use. The need for communication between the various Town agencies is essential, especially when presented with Chapter 61 land that comes before the Board of Selectmen for the right of first refusal to purchase the property. The exchange of information between the various Town officials can help to prevent important areas from being lost permanently to development. In addition to this need, a plan is needed to determine potential lands for acquisition and their order of importance. The Town has improved communication concerning Chapter 61 parcels that come up for sale. Southwick has the CPA fund for acquisition of properties.

The new rail trail has been a huge success, drawing people from all over southern Hampden County and northern Connecticut. The acquisition of land along the future bike trail will better enable access to the trail, create additional greenway links, and provide for further

## 2012 Southwick Open Space & Recreation Plan

recreational activities.

Workshops and informational sessions, as well as other assistance, is used to encourage owners of farmland and woodland to permanently protect their properties and manage natural resources.

Public relations regarding Town facilities and programs have improved to better inform the citizens of what is available to them. The Town now has a web site and cable Channel 15 to encourage more people to participate in various events, which help to sustain worthwhile activities.

## SECTION 8: GOALS AND OBJECTIVES

**Goal #1: Maintain the ecological integrity of aquatic ecosystems and protect the quality and quantity of surface and groundwater drinking water supplies.**

Objective 1-1: Improve water quality in the Congamond Lakes by reducing nonpoint source pollution.

Objective 1-2: Continue to reduce invasive aquatic weed populations in the Congamond Lakes.

Objective 1-3: Improve local regulations to ensure the protection of drinking water supplies, quality and quantity.

Objective 1-4: Protect aquatic habitat by restoring stream continuity through improved culvert replacement projects.

**Goal #2: Permanently protect important open space and ensure conservation areas are appropriately managed for flora and fauna habitat integrity and resiliency.**

Objective 2-1: Identify and protect important unprotected parcels of open space for protection including securing funding for fee simple land acquisition and/or purchase of Conservation Restrictions.

Objective 2-2: Promote innovative forms of Low Impact Development (LID) appropriate to Southwick's rural character

Objective 2-3: Maintenance protocols are established and implemented for all protected open space including conservation land and recreational facilities.

**Goal #3: Preserve working farms and forests in support of an agricultural way of life in Southwick.**

Objective 3-1: Ensure the viability of agriculture as a way of life in Southwick.

Objective 3-2: Ensure the protection of important agricultural farmland.

Objective 3-3: Assist private woodland owners in developing and implementing forest stewardship plans and management practices.

**Goal #4: Improve and expand recreational and environmental education opportunities for people of all ages while preserving Southwick's scenic, cultural and historic character.**

Objective 4-1: Continue summer recreation program(s) for community.

Objective 4-2: Implement trail system in Goose Pond area.

Objective 4-3: Properly manage existing recreational facilities and control non-authorized uses.

Objective 4-4: Increase community awareness of conservation areas for public use and outdoor education opportunities.

## SECTION 9: SEVEN-YEAR ACTION PLAN

2012 Southwick Open Space & Recreation Plan

Objective	Responsible Party	Action Item	Potential Funding Sources
<b>Goal #1 Maintain the ecological integrity of aquatic ecosystems and protect the quality and quantity of surface and groundwater drinking water supplies.</b>			
Objective 1-1: Improve water quality in the Congamond Lakes by reducing nonpoint source pollution	Board of Health, Conservation Commission, DPW; Citizens Restoring Congamond; Lake Management Committee	<p>Continue to expand sanitary sewer to North Pond watershed and other identified areas of town.</p> <p>Continue public outreach program about water quality best management practices.</p> <p>Continue coordination between all lake oversight entities for monitoring, restoration, and recreational improvements including Cyanobacteria monitoring.</p> <p>Work with MA DFWELE to have local fishing and boating access fees remain in Southwick to fund lake management and enforcement.</p>	Connecticut River Stormwater Committee (through PVPC)
Objective 1-2: Continue to reduce invasive aquatic weed populations in the Congamond Lakes	Conservation Commission, Lake Management Committee, DPW, Citizens Restoring Congamond; Canal Restoration Committee	<p>Continue to implement an aggressive aquatic weed monitoring and control program.</p> <p>Conduct sediment removal analysis for Great Brook, Canal Brook, South Pond near South Boat Ramp in conjunction with South Ramp reconstruction project, and cove opposite North Ramp.</p>	See attached list of grant programs for invasive species control (Appendices)
Objective 1-3: Improve local regulations to ensure the protection of drinking water	Board of Health, Planning Board, Water Commission, Board of Selectmen, Conservation Commission	<p>Update aquifer protection bylaw to meet current DEP standards.</p> <p>Sponsor annual household hazardous waste collection day or participate in a regional collection day.</p> <p>Strengthen private well regulations to ensure consistency with</p>	

2012 Southwick Open Space & Recreation Plan

supplies		municipal water conservation goals.	
Objective 1-4: Protect aquatic habitat by restoring stream continuity through improved culvert replacement projects.	DPW, Conservation Commission	Support design and construction of priority culvert replacements at: North Loomis Street at Shurtleff Brook Granville Road, Kline Road Fred Jackson Road at Shurtleff Brook.	
<b>Goal #2 Permanently protect important open space and ensure conservation areas are appropriately managed for flora and fauna habitat integrity and resiliency.</b>			
Objective 2-1: Identify and protect important unprotected parcels of open space for protection including secure funding sources for open space protection.	Conservation Commission, Board of Selectmen, Community Preservation Committee, Planning Board, Open Space Planning Committee	Utilize Community Preservation Act Funds for land acquisition.  Work with property owners to permanently protect land through fee acquisition and/or conservation restrictions  Work with local land trusts to secure funding and negotiate land conservation arrangements.  Record CRs for Jered Estates, Laurel Ridge, Whispering Pines, and Patriots Woods.	CPA Funds  MA DAR  LAND Grants  EEA Drinking Water Supply Protection Grants (not offered in FY13)
Objective 2-2: Promote innovative forms of LID appropriate to Southwick's rural character	Planning Board, Board of Selectmen, Conservation Commission	Revise Flexible Residential Development Bylaw to include: 1) process for ensuring CRs are established before subdivision approval is granted; 2) guidelines for the type(s) of land, size and configuration that CRs should be placed on; 3) eliminate the "farmer" option for land protection.	DLTA (from PVPC)  LTA (from PVPC)

2012 Southwick Open Space & Recreation Plan

		<p>Improve communication with homeowner associations to establish CRs and record legally.</p> <p>Encourage conventional developers to set aside 10% of land as open space, at a minimum.</p> <p>Encourage communication across all land use boards so that innovative techniques are consistently supported and approved.</p>	
Objective 2-3: Maintenance protocols are established for all protected open space including conservation land and recreational facilities	Planning Board, Conservation Commission, Park and Recreation Commission, Open Space Committee	<p>Develop protocols for annual CR monitoring.</p> <p>Work with owners (public and private) of conservation areas to develop and implement management plans suitable for site specific habitat and species.</p>	
<b>Goal #3 Preserve working farms and forests in support of an agricultural way of life in Southwick.</b>			
Objective 3-1: Ensure the viability of agriculture as a way of life in Southwick	Planning Board, Conservation Commission, Board of Selectmen, Community Preservation Committee	<p>Promote Agricultural Preservation Restrictions</p> <p>Encourage the use of Chapter 61A for active farming operations.</p> <p>Implement a 'Buy Local' farm products program and perform public outreach.</p> <p>Promote Farmer's Market</p>	MA DAR APR Program

2012 Southwick Open Space & Recreation Plan

Objective 3-2: Ensure the protection of important agricultural farmland	Planning Board, Conservation Commission, Board of Selectmen, Community Preservation Committee	Promote the use of APR for farmland preservation.	MA DAR APR Program
Objective 3-3: Assist private woodland owners in developing and implementing forest stewardship plans and management practices.	Conservation Commission, Open Space Planning Committee	Host workshops on conservation easements, estate planning, APR, and Chapter 61 programs Promote private timber sales	
<b>Goal #4 Improve and expand recreational and environmental education opportunities for people of all ages while preserving Southwick's scenic, cultural and historic character.</b>			
Objective 4-1: Continue summer recreation program for community.	Park and Recreation Commission	Seek funding and implement programs	
Objective 4-2: Implement trail system in Goose Pond area.	Park and Recreation Commission, Conservation Commission, Open Space Planning Committee	Design trail system and seek construction-Audubon is currently creating a Recreation Plan for Goose Pond.  Design canoe and kayak launch areas that do not disturb habitat.	MA DCR Trails Grant  EEA PARC Grant

2012 Southwick Open Space & Recreation Plan

<p>Objective 4-3: Properly manage existing recreational facilities and control non-authorized uses.</p>	<p>Park and Recreation Commission</p>	<p>Adopt Article 97 warrant at Town Meeting for Prifti Park to protect as parkland.</p> <p>Improve and expand amenities at Prifti Park including ADA playscape and woodchips, basketball court, light for flag pole, and parking.</p> <p>Improve/expand parking at Swamp Park.</p> <p>Establish Rail Trail parking and access on Miller Road or other suitable location as identified.</p> <p>Support on-going renovation and ADA upgrades at New Town Beach including funding for horseshoe pits, barbecue stands, picnic tables/seating, ADA all-terrain wheelchair (2 or more), bacci ball court.</p> <p>Remove moguls that attract dirt bikes and snow mobiles on Miller Road area.</p> <p>Build a sheltered area for organized groups such as Boy Scouts to camp at town-owned land.</p>	<p>EEA PARC Grant</p>
<p>Objective 4-4: Increase community awareness of conservation areas for public use and outdoor education opportunities.</p>	<p>Park and Recreation Commission, Conservation Commission, Open Space Planning Committee</p>	<p>Promote the use of Old Town Beach for passive recreation.</p> <p>Develop park and conservation land brochure with map and regulations for distribution to the public.</p>	

## SECTION 10: PUBLIC COMMENTS

- A. *Planning Board Letter*
- B. *Letter from Chair of the Board of Selectmen*
- C. *Pioneer Valley Planning Commission Letter*

## SECTION 11: REFERENCES

MA Department of Conservation and Recreation, Pioneer Valley Planning Commission, Franklin Council of Governments, June 2009. *Southwick Reconnaissance Report: Connecticut River Valley Reconnaissance Survey, MA Heritage Landscape Inventory Program.*

MassGIS Landuse, 2005. <http://www.state.ma.us/mgis/lus.htm>

*Metacomet Monadnock Mattabesett Trail System*, Draft Report, National Park Service, 2006.

*Open Space Planners Workbook*, Executive Office of Energy & Environmental Affairs, Revised 2008.

*U.S. Census Bureau, Decennial Census 1990 & 2010*

*Massachusetts Department of Education, 1995 & 2010 student enrollment data.*

*U.S. Census Bureau, 2003 Commuter Survey*

*Massachusetts Executive Office of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010.*

*Massachusetts Executive Office of Labor and Workforce Development, Employment and Wage (ES-202) data, 2010.*

# SECTION 12: APPENDIX

## MAPS

SEVEN YEAR ACTION PLAN MAP

OPEN SPACE MAP

REGIONAL CONTEXT MAP

ZONING MAP

SOILS & GEOLOGIC FEATURES MAP

WATER RESOURCES MAP

INVENTORY OF OPEN SPACE AND RECREATIONAL LANDS

PUBLIC OUTREACH

NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM

COMMENTS

FUNDING RESOURCES GUIDE

ADA SELF-EVALUATION



