

Sturbridge, Massachusetts 2005 Open Space & Recreation Plan

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Prepared by the Sturbridge Open Space & Recreation Committee
Technical Assistance Provided by:
The Central Massachusetts Regional Planning Commission

TOWN OF STURBRIDGE

OPEN SPACE & RECREATION PLAN

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Section 1: Plan Summary

In late June of 2005, the Central Massachusetts Regional Planning Commission was requested by the Town of Sturbridge to assist in the update of its Open Space and Recreation Plan. Updating the plan was initially driven by the Town's intention of applying for a Self-Help grant during the 2005 Fiscal Year. During the update process, the Open Space Committee in concert with other relevant municipal entities recognized the opportunity to establish a broad-based planning process that would examine land use more comprehensively.

Previous to the update effort, a citizen survey was completed in late 2004 as part of a municipal strategic planning exercise. The survey used a targeted random sample approach and was sent to 246 Sturbridge households, out of which 197 responded (an 80% response rate). In terms of open space and recreation, the survey contained the following results:

- Most residents (72%) believe the environmental resources of the town are being adequately protected and 93% indicated that it was important for development to be designed and sited to protect significant water, plant and animal habitats.
- Most residents (79%) felt the town should actively pursue the town-wide trail system that is currently underway.
- Most residents (95%) felt that the historic assets of the community should be protected.
- Most residents (85%) felt the town should be working to acquire open space.
- Most residents (88%) felt the town should provide flexible design to encourage open space in subdivisions.
- Most residents indicated an interest in seeing that recreation programs were funded through user fees (51%) or a combination of user fees and property taxes (40%).

The Town's Open Space Committee also sponsored an open space and recreation public forum on October 6, 2005 to solicit input on the goals and objectives for this plan. At the forum, the following open space and recreation goals were presented to the public and discussed in detail:

1. Preserve community character
2. Acquire land for conservation, recreation and other municipal purposes
3. Provide recreational opportunities for all residents
4. Create a multi-objective town-wide trails and greenways system

Analysis of the inventory of protected and unprotected land revealed that, although the Town has been very fortunate in having the state and federal governments protect a great deal of open space, Sturbridge actually owns and controls very little land itself. Efforts of residents to create additional passive and active recreational facilities to address the needs of a growing and changing population have been complicated by the relative lack of Town-owned land. Additionally, the Town has little influence over state and federal decisions and policies relating to the land they own and control. In comparing Sturbridge to some other communities in Massachusetts, we find the percentage of Town-owned conservation and recreation land is lower than the average of such lands in towns surveyed.

As in the last iteration of this Plan in 1998, the Committee remains concerned about the amount of land for active recreation purposes and is recommending that the Town's Recreation Committee and Public Works Department join together to perform a Level of Service (LOS) analysis for Sturbridge's active recreation facilities. With the anticipated growth in population, the demand for recreation facilities will no doubt increase and the Town would benefit from conducting its own LOS analysis instead of relying on national standards that have little applicability to Sturbridge. In fact, the National Recreation and Parks Association no longer promotes population-based recreation standards and now encourages communities to utilize the LOS analysis method.

In completing the Plan, our research showed that although the Town's rate of growth seems moderate, it has averaged over 20% growth each decade from 1920 through 1990, slowed down considerably during the 1990s, and has since increased again. In the last five years alone the Town has issued building permits for 459 new residential structures. Sturbridge needs to plan for the preservation of its open spaces and the provision of recreation facilities for its citizens now before new development precludes such opportunities.

This document is not a plan in the true sense of reflecting a data collection effort, analyzing that data, integrating data with the attitudes and beliefs of the residents, making conclusions, laying out an implementation strategy and detailing work items. It instead lists various issues that need further discussion by Town boards and the residents and suggests a path towards a coordinated, integrated implementation strategy. The plan proposes a series of actions for implementation. The five most critical actions are:

1. The Planning Board works on the flexible development provisions within the Zoning Bylaw and consider the impacts of down-zoning for the purpose of protecting open space.
2. The Open Space Committee continues its ongoing dialogue with the Community Preservation Act Committee concerning lands currently within the various Chapter 61 programs prior to their withdrawal (i.e., exercising the Town's right-of-first-refusal for open space acquisition).
3. The Planning Board continues with its efforts to incorporate trail design and increased landscaping and buffering requirements within its Subdivision Regulations.
4. The Open Space Committee study programs for the preservation of agricultural and forest lands.
5. The Recreation Committee continues to develop a strategy/policy to provide additional active and passive recreation opportunities for all Sturbridge residents.

The majority of work items relate to these five major actions. It is through reading this plan in its entirety, continuing with the resolution of issues and development of policies, and by implementing the work items in the Action Plan that the plan comes together and becomes a *Plan*.

Section 2: Introduction

Sturbridge is a scenic, attractive community in the southwest corner of Worcester County. Since Sturbridge is home to “Old Sturbridge Village,” a nationally known interpretative museum and Wells State Park, tourism is a substantial portion of the Town’s economy. The Town’s residential population has grown substantially during the 20th century, increasing an average of 21.8% each decade from 1930 to 1990, slowing down considerably during the 1990s, and then returning to double-digit growth during the last five years. As the population increased and continues to increase, open space will be increasingly important to maintain the landscapes and natural features valued by the Town’s residents as well as the many tourists who visit. Historically, growth occurred in the town’s villages, particularly Fiskdale on the western end of the Route 20-Quinebaug River corridor, although development in the latter part of the 20th century, especially residential development, has been scattered throughout town.

A. Statement of Purpose

Although many of the goals of the Town’s 1995-2000 Open Space Plan have been accomplished, with the onset of recent development projects, there has been an increasing awareness of the need to “do something” about open space in Town. The popularity and success of trails in other communities has spurred local interest in trail development. The opportunity to create a trail along the Quinebaug River, one of the Town’s most important environmental and scenic resources, has provided further motivation for open space planning. As open land disappears and the population increases, open space and trails will be increasingly important to maintain the landscapes and natural features valued by both residents of the Town of Sturbridge as well as the many tourists who visit.

Sturbridge retains much of its natural beauty in the hills, woods, lakes and ponds that characterize the Town. Its past is present at every turn from the Town Common and cemeteries to the cellar holes and stone walls standing as silent reminders of past hopes and dreams. Tourism is a major industry in the community and the need to preserve the community’s character and appearance is an essential part of maintaining the Town’s economic base and viability, as well as a key ingredient in its economic development efforts.

The Town of Sturbridge itself does not own very much in the way of conservation land. Significant State land holdings, from Wells State Park and recent acquisitions by the State’s Division of Fisheries and Wildlife as well as federal land holdings in the form of flood easements protect portions of the Town from development. Active recreation activities are housed at Town and regional School Department facilities as well as Town lands under the control of the Board of Selectmen. To increase the amount of conservation and passive recreation land and to provide for the maintenance, improvement and development of active recreation areas, Open Space efforts need to be incorporated in the Town’s ongoing capital planning process.

The purpose of this Plan is to reassess the Town’s past open space and recreation goals, determine what’s been accomplished, ascertain changes since the previous Plan was written and adopted and continue to plan for future open space and recreation needs.

When complete, this 2005 Open Space and Recreation Plan will:

- Articulate the goals and objectives for open space preservation and active and passive recreation opportunities in the Town of Sturbridge,
- Provide a comprehensive planning document to give direction to Town boards, committees and citizens in planning for the open space and recreation needs of the community, and
- Begin the process of reviewing Town bylaws, regulations and policies to determine their impact on Open Space preservation.

B. Planning Process and Public Participation

The Sturbridge Open Space Committee used two methods of obtaining the public's participation in the preparation of this document: a citizen survey conducted in late 2004 as part of a municipal strategic planning exercise and a public forum held at the Town Hall on October 6, 2005. The Committee used the results of the survey and input from the forum in the development of the Plan's goals/objectives (Section 8 of this document) and the five-year action plan (Section 9 of this document). With only a few exceptions, the Committee met on a monthly basis throughout the plan's preparation and all meetings were advertised and open to the public.

Members of the Committee were responsible for much of the research contained in this plan, and contributions were received from the Town Administrator, Town Planner, Assessor's Office, Board of Selectmen, Planning Board, Conservation Commission, Recreation Committee, Public Works Department and the Historical Commission. The Central Massachusetts Regional Planning Commission (CMRPC) provided technical assistance in assembling the plan's various elements.

Section 3: Community setting

Sturbridge is a suburban-rural community located at the junction of Interstate 84, Interstate 90 and US Route 20 in south-central Massachusetts on the Connecticut-Massachusetts boundary. A major tourism destination, the Town is noted for its historic character and natural beauty.

A. Regional Context

Sturbridge is surrounded by the Towns of Brimfield, Charlton, East Brookfield, Holland, Southbridge, Union, CT and Woodstock, CT. Sturbridge sits in a strategic “area of influence,” with Worcester being 22 miles to the northeast, Springfield 23 miles to the west, Providence and Hartford each 40 miles to the south, and Boston 55 miles to the east. Sturbridge’s location and highways provides convenient access to the Town and supports a thriving day tourism industry. In addition to various tourism-related businesses, the Town promotes its favorable location for other forms of economic development. The 1988 Master Plan said: “Sound economic growth should be sought by providing for the ‘labor force’ segment of the Sturbridge population, supplying broad employment opportunities and a diversified economic base.”

Sturbridge’s geographic location and natural amenities offer a unique opportunity to provide linkages in a regional open space corridor/multi-use trail greenway system. The Central Massachusetts Regional Planning Commission investigated the feasibility of this trail connection in its 2001 study entitled, Southwest Subregion Inter-Community Trail Connection Feasibility Study. The Mid State Trail could be linked coming from the north through Wells State Park and there are two options for linking Wells State Park with the Wolf Swamp Wildlife Management Area to the northwest in Brookfield. Further creative linkage efforts could provide greenway access to state parks and important open space and view sheds throughout Massachusetts, Connecticut and even Rhode Island. The 2000 inclusion of nine Massachusetts communities (including Sturbridge) into the Quinebaug and Shetucket Rivers Valley National Heritage Corridor has resulted in additional opportunities for trail linkages and resources.

Presently retail development is generally limited to tourist specialty stores, although Route 20 contains a few small shopping plazas, and a larger shopping center that contains several national retail stores and restaurants. There is also a shopping plaza on Route 131 (south of the Town Common area) containing a Shaw’s Supermarket, JC Penney and some smaller stores, primarily supplying goods for local residents.

Some of the communities east of Sturbridge are experiencing high levels of residential development, most notably the Town of Charlton, which has averaged 92 new dwelling units per year during the last five years (the same annual average as Sturbridge for the last five years). With the excellent transportation access that Sturbridge enjoys to all points in New England, it seems inevitable that any upcoming development boom will include Sturbridge in a significant manner.

B. History of the Community¹

A little more than three hundred years ago, an Indian trader on his way to the Connecticut Region unexpectedly encountered some of the “Tantiusque Indians” who showed him some samples of a “black rock.” These proved to be specimens of graphite (which was commonly called “lead” at that time as it is today in pencils). The discovery of the mine developed interest in what was then known as the “Lead Mine Region.” Beginning in 1658, and for many years thereafter, the region was intermittently engaged in mining. In 1729, petition was made to the general court to open the land for settlement. The request was granted that year with the following stipulations, “in seven years time from this date to settle and have actually on the spot, fifty families, each of which is to build a house of eighteen feet square at least; to break up and bring fit to plowing seven acres of land; to settle a learned, orthodox minister . . .” This then was the beginning of the Town of Sturbridge which was named in honor of some of its early settlers whose origins were in the Town of Stourbridge, England. The town was formally incorporated as the Town of Sturbridge in 1738 and held its first Town Meeting in September 1738. From the Town’s founding until well into this century, Sturbridge was primarily an agricultural community.

By 1742 the Town had organized its first school. Three schoolhouses were built by 1753. Eventually 13 school districts were established in town. About 1770, Colonel Ebenezer Crafts built the “hotel” now known as the “Publick House”, which underwent a restoration in 1937, at which time a new front entrance of colonial design replaced the former front door.

By 1795, the Town was actively settled and contained 14 sawmills, 4 grist mills and shops producing carriages, pistols, chairs, tables and looms as well as thriving farms. In 1812, the Sturbridge Manufacturing Company started the first cotton mill in town, which operated until 1882 when it was struck by lightning and destroyed. In 1826, the Quinebaug Manufacturing Company was established and a mill was constructed in the Fiskdale section to produce cotton and woolen materials. In 1833, a second mill was built and several tenement houses were erected to house mill workers. In 1852, the Snell Manufacturing Company erected a factory in the Fiskdale section to produce augers and bits, which supplemented older buildings that had been operating on the same site. In 1895, fire destroyed two of the original buildings and in 1909 the third, and newest building was likewise burned. These were subsequently replaced by the most recent Snell Manufacturing Company building, also located in Fiskdale.

Agriculture continued as a significant factor in the local economy through the 19th century. The 1859 report of the Worcester South Agricultural Society lists 152 members from Sturbridge (compared with 48 members from Charlton, 10 from West Brookfield and 30 from Dudley). Of the 262 listings for real property in the 1875 Sturbridge Assessors’ Report, 40% (or 106) list a farm as part of the valuation. An indication of the decline of agriculture in Sturbridge was included in the 1936 Selectmen’s report which explains that the Highway Department work has now become a year round function “because we find now that we have living in the outside districts people who are dependent entirely upon our highways from transportation to and from the different industrial plants for their living.”

¹ Excerpted in large part from the Town’s 1971 Master Plan, with additions and corrections by Selectman Charles Blanchard and others.

In 1937, the “Quinebaug Village” was begun as a model New England Village of the year 1800. The Town of Sturbridge was selected as the locale for this model because of its charm and the beauty of its surroundings. In 1947, the project was taken over by “Old Sturbridge Village” and has experienced continual growth in scope since that time. In 1966, Old Sturbridge Incorporated acquired approximately 1,000 acres of land adjacent to the present “Village” and is now the largest nongovernmental landowner in the Town.

More recent years have seen the Town of Sturbridge take on the characteristics of a suburban, residential community as it continues to attract new families who are employed in the local industries or who find the commutation to more distant areas increasingly convenient due to the development of the excellent highway network serving the general area. The recent completion of the Route 146 interchange with the Massachusetts Turnpike has resulted in increased market interest in Sturbridge for residential development. The Town’s scenic qualities and other amenities that are valued by today’s residents could prove an incentive for additional residential development.



Town Hall

C. Population Characteristics

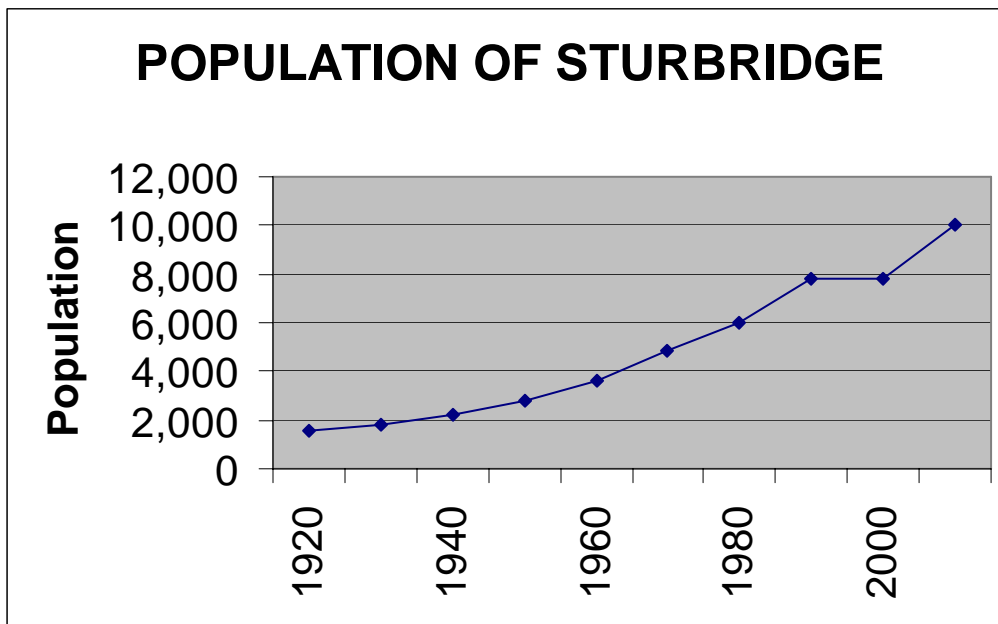
A comparison between the 1970, 1980, 1990 and 2000 US Census data shows double-digit increases for each decade up until 1990, and then a very modest increase of barely 1% between 1990 and 2000. Most residents would insist that the Town’s development pressures have increased unabated during the last decade; however, both the Year 2000 US Census population count (7,837 residents) and Town Clerk population count (7,892 residents) would indicate otherwise. This seems to have been a temporary respite, as the Town’s population has again grown by double-digits (13.4%) in just the last five years. According to the Sturbridge Town Clerk’s annual census, the Town’s population now stands at 9,050. This represents an increase of over 1,150 new residents since 2000. Now that the Route 146 interchange is complete, it appears that the Town’s attractiveness as a place to live has only increased, as it has become much easier and faster to get to Sturbridge than ever before.

Perhaps the best indication of the level of growth in Town is an examination of its building permit data. Between 2000 and 2005, the Town issued building permits for 459 new residences. This five-year figure is almost double the number of building permits issued during the entire decade of the 1990s (284 building permits). Thus, it is clearly evident that after a brief lull, development in Sturbridge is back in full swing. The recently updated population projections of the Central Massachusetts Regional Planning Commission indicate that Sturbridge will grow to 9,500 residents in 2010 and 9,800 residents in 2020, although these figures may be a bit low considering the recently heightened rate of development.

Table 1 – Sturbridge Population Growth

	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020
STURBRIDGE	1,573	1,772	2,227	2,805	3,604	4,878	5,976	7,775	7,837	9,991	11,145
PERCENT INCREASE		11.2%	20.4%	20.6%	22.2%	26.1%	18.4%	23.1%	0.1%	21.6%	10.4%

1920-2000 US Census; 2010-2020 CMRPC estimates.



The population increases are primarily families (especially families with young and school-aged children). More families with children increase the demand on existing recreation facilities and ultimately results in a demand for additional recreational areas and amenities. Because of market factors and the cost of housing, families tend to be higher income than historically lived in Sturbridge. These families may expect more plentiful and diverse recreational amenities available in their community, particularly if they have relocated from a suburban or urban place with recreation and other municipal amenities.

The US Census data clearly indicates that the older segments of the Town’s population are growing faster than the younger segments. In 1990, the Town’s elderly population (residents over 65 years of age) accounted for 12% of the community’s total population; by 2000, the elderly accounted for 13.4% of the community’s total population. More telling is the growth in

the “soon to be seniors” population (45-64 years of age). In 1990, the soon to be seniors accounted for 19% of the total population, and by 2000 this age group accounted for 26.3% of the total population. The growth in the Town’s older population segments mirrors a phenomenon occurring across the nation: the “graying of America”, that is, our nation’s elderly population (defined as 65 years of age and over) is expanding at a faster rate than the younger population categories. The increase in the Town’s median age also bears this out. In 1990, the median age of a Sturbridge resident was 34.6 years of age; by 2000, the median age had increased to 39.3 years of age. The demographic trends indicate that additional recreation facilities and activities for seniors will be needed during the next decade. The increase in the senior population spurs the need for passive forms of recreation such as walking trails and parks.

The tables below include various demographic data from the 2000 US Census. The statistics show the Town to be comprised of overwhelmingly white, predominantly family households that are middle income.

DEMOGRAPHIC DATA
Town of Sturbridge
(2000 US Census)

Age Distribution

	<u>Persons</u>	<u>%</u>
Under 5	468	6.0
5-19	1,677	21.3
20-44	2,572	33.0
45-64	2,068	26.3
65 & Over	1,052	13.4

Race & Ethnicity

	<u>Persons</u>	<u>%</u>
White	7,657	97.7
Black	49	0.6
Indian, Eskimo or Aleut	39	0.5
Asian or Pacific Islander	10	1.3
Hispanic Origin	102	0.5
Other	38	0.5

Households by Type

	<u>Households</u>	<u>%</u>
Married Couple Family	1,860	60.7
Male Householder	85	0.7
Female Householder	268	8.7
Non-Family Household	853	27.8

Income Distribution

	<u>Households</u>	<u>%</u>
Less than \$10,000	85	3.8
\$10,000 - \$14,999	51	2.3
\$15,000 - \$24,999	157	7.0
\$25,000 - \$34,999	204	9.1
\$35,000 - \$49,999	335	14.9
\$50,000 - \$74,999	484	21.5
\$75,000 - \$99,999	350	15.6
\$100,000 or more	581	25.9

Median Household Income

Sturbridge: \$64,455
 State Rank: 155
 % of State Average: 127.6%

Per Capita Income

Sturbridge: \$25,559
 State Rank: 162
 % of State Average: 98.5%

D. Growth Patterns

While residential development in Sturbridge used to be town wide and industrial development existed along the Quinebaug River, the introduction of the Turnpike and Interstate 84 along with several US Routes has changed this settlement pattern significantly. Due to ease of access, industrial and commercial growth exists along the main US Routes, which run through Sturbridge, Routes 20 and 131. Residential areas are centered around lakes and ponds and along the collector roads, which run into the numbered highways. Less residential development exists on the outskirts of Town.

Water and sewer service exists throughout the central section (urbanized portion) of Town. At present the system has expanded to include the majority of Main Street beginning at Riverview Ave and proceeding easterly on Route 20 to the Route 20/131 intersection, then turning southeasterly on Route 131 to the Southbridge Town line. The system also serves the Tantasqua Regional High School on Route 148 approximately three miles north of Route 20. Other areas in Town that have water and sewer utilities to various degrees are: Fiske Hill Road, south of Summit Ridge; the perimeter of Cedar Lake; the perimeter of Big Alum; the Technology Park industrial area; portions of Arnold Road, Cedar Street and New Boston Road.

The Town is currently studying issues related to size, age and efficiency of its existing wastewater treatment plant and may investigate a change in the NPDES (National Pollution Discharge Elimination System) discharge permit from 750,000 gallons per day (gpd) to 1,000,000 gpd if financially feasible and approvals are received from the State Department of Environmental Protection (DEP) and the Federal Environmental Protection Agency (EPA).

The Town is also proceeding with plans to secure an additional well withdrawal point off Shattuck Road in order to stabilize maintenance needs within the water system. The Town is trying to expand/improve existing utilities while maintaining a fairly stable user fee schedule at the same time. Fees have gone up within the last few years; however they remain compatible within the region.

The Town currently has a floodplain district, which does not allow building in the flood plain. Sturbridge adopted a groundwater protection overlay district in 2002 that delineates contribution areas to the Town's water supply wells and places use restrictions on these areas. While the Town technically does not have a cluster housing or open space subdivision design option in its Zoning Bylaw, there is a provision for multiple dwelling projects that requires 10% of the land to be left as open space and limits the amount of impervious surface for such developments to 25% of the total lot area. Adjacent land use with the surrounding towns is primarily open/recreational space with minimal or no development. Future development has been sought along Route 20 east of Interstate 84. There is a shopping center along Route 20, close to its intersection with Route 49.

Many of the Town's long-range planning efforts are being concentrated in largely undeveloped areas such as the Route 15 corridor, which runs north/south through town. The Town will continue looking at buildout numbers and scenarios under existing and proposed zoning to determine best use of this area. Protecting scenic value along this corridor, which is an impressive gateway into Massachusetts from Connecticut, is very important.

Sturbridge's town center consists of a town hall, library, post office, churches and a town common. The Town's commercial center of activity is located along Route 20 west of Interstate 84. There is a benefit of having the Town's institutional/symbolic center "off of the beaten path." At present, the Town Common is used for community concerts (at the gazebo-style bandstand) and other local events, and is also used as a passive recreation area with benches. Because of existing and open lands around the center, there is an opportunity to create green areas that buffer and protect the center from the noise and presence of the highways just north and east.



Sturbridge experienced a high level of residential growth in the 1980s, a leveling off during the 1990s, and then back to double-digit growth during the last five years. The Town's favorable location, demand for homes, low interest rates and the local amenities may show increased demands for new homes in Town.

Year Structure Built
(US Census)

<u>Timeframe</u>	<u>Units</u>	<u>%</u>
1990-1999	419	12.6
1980-1989	933	28.0
1970-1979	540	16.2
1960-1969	419	12.6
1940-1959	531	15.9
1939 or earlier	493	14.8

Dwelling units authorized by building permits
(Sturbridge Building Department)

<u>Year</u>	<u>Permits</u>
2000	53
2001	62
2002	102
2003	125
2004	87

A comparison of land use maps from the years 1971, 1985 and 1999 shows the amount of land converted to residential use during a span of 28 years. Most of the land used for new development between 1971 and 1999 came out of forestlands and, to a lesser extent, farmlands. The data on the following chart is from the University of Massachusetts - Amherst from its most recent statewide land use mapping effort (1999) and its two previous efforts from 1985 and 1971. The classification “other” includes forested areas, vacant/unused land, wetlands (though water bodies are included in the last) and other land that does not seem to be actively used. Urban open land includes parks, cemeteries and other developed open spaces. Transportation is land used for transportation purposes. In Sturbridge, this represents the land devoted to roadway right-of-ways and would also include trucking terminals, etc. A comparison of the land use data indicates a substantial increase in residential, industrial and commercial development, and a substantial loss of forest and farmlands between 1971 and 1999.

LAND USE CLASSIFICATION

LAND USE	1971 acres of land	1971 % of land total	1985 acres of land	1985 % of land total	1999 acres of land	1999 % of land total	% Increase (1971-99)
Other	20,337	81.6%	19,754	79.3%	17,925	71.9%	-11.9%
Agriculture	983	3.9%	814	3.3%	707	2.8%	-28.1%
Urban open	192	0.8%	192	0.8%	192	0.8%	0.0%
Waste disposal	49	0.2%	49	0.2%	49	0.2%	0.0%
Water	961	3.9%	963	3.9%	963	3.9%	0.0%
Commercial	118	0.5%	154	0.6%	239	1.0%	+102.5%
Industrial	45	0.2%	57	0.2%	63	0.3%	+40.0%
Mining	83	0.3%	115	0.5%	95	0.4%	+14.5%
Recreation	134	0.5%	151	0.6%	177	0.7%	+32.1%
Transportation	697	2.8%	714	2.9%	723	2.9%	+3.7%
Residential	1,326	5.3%	1,886	7.6%	2,594	10.4%	+95.6%

Source: MacConnell “map-down” land use analyses, University of Massachusetts, Amherst

A graphic depiction of Sturbridge’s zoning scheme can be found on the following page as Map 1 (Zoning Map).

Insert Zoning Map Here (1)

Section 4: Environmental Inventory Analysis

A. Geology, Soils and Topography

Sturbridge, situated in the southwest corner of Worcester County, exhibits the geomorphological results that are typically associated with glaciated landscapes in central New England. The terrain is hilly with generally north to south oriented ridgelines that are interspersed with extensive wetland systems in areas of lower relief. Large areas of the Town are overlain with thick deposits of glacial till. There is, however, an important swath of stratified deposits that can be found in the central part of Sturbridge from the northern boundary in the vicinity of South Pond going southerly all the way to the Connecticut border. Elevations range from just over 1,115 feet above sea level, down to approximately 510 feet above sea level in the lowest areas. The major stream is the Quinebaug River that bisects the Town flowing in a general west to east direction from Brimfield into Southbridge. There are numerous smaller streams and vegetated wetland areas distributed throughout the Town. The entire Town of Sturbridge is located within the Quinebaug River watershed.

Sturbridge is located on the central plateau of Worcester County. The plateau as a whole is so thoroughly dissected that large areas of smooth plateau surface do not exist within the county – and certainly not within Sturbridge. The surface of the plateau is interrupted in many places by hills rising higher than the general plateau elevation, which averages 800 to 900 feet in the southern portions of the county. These hills are predominately small in area and consist largely of elongated, rounded hills with the longer axes generally oriented north-to-south. Some of the hills are piles of unconsolidated clay, gravel and sand, called “drumlins” by geologists. These drumlins are the result of glacial activity in the past. The most recent glacier is estimated to have retreated some 12,000 to 15,000 years ago. As the glacier melted and retreated, it dumped along the receding face the load of boulders, stones and soils it gathered while moving southward. The material left by the glacier is called glacial “till” and, with drumlins, constitute most of the land surface area of Worcester County. Some of the hills within the central plateau consist of rock hills with a thin layer of unconsolidated material covering them. Hills in Sturbridge, particularly the southern section of town, are both types.

Much of the most easily developed land has been developed; road frontage lots without development constraints such as wetland, ledge and unsuitable percolation tests for septic systems are increasingly hard to find. The result has been the creation of large interior tracts of land as yet inaccessible by road systems and still economically unattractive because of site development costs. At some point the cost of development will be exceeded by the return on the development. This will make these large tracts vulnerable to development pressures.

The soils in Sturbridge are generally unsuitable for agricultural purposes and many of the areas with more suitable soils for agriculture have been developed residentially. According to the USDA-Natural Resources Conservation Service report of 1998, Soil Survey of Worcester County, Massachusetts, Southern Part, Sturbridge can be divided into six soils categories. A graphic depiction of the Town’s soils can be seen on the following page as Map 2 (Soils Map).

Insert Soils Map Here (2)

- Paxton-Woodbridge-Ridgebury Soils: Nearly level to steep, very deep, well drained to poorly drained soils on glaciated uplands. This soil type consists of soils on upland hills and ridges dissected by many small drainage ways. Stones cover more than 3% of the surface in most areas. The soils were formed in glacial till derived from schist, gneiss, and granite. This is the predominant soil type found in Sturbridge, covering much of its western half and the northeastern corner of Town.
- Brookfield-Brimfield Soils: Gently sloping to steep, very deep and shallow, well-drained and somewhat excessively drained soils on glaciated uplands. This soil type consists of soils on upland hills and ridges that have rock exposures throughout. Stones cover more than 3% of the surface. The soils were formed in glacial till derived from micaceous schist. This soil type covers a small section of the Town's southeast corner.
- Freetown-Swansea-Saco Soils: Nearly level, very deep, very poorly drained soils on uplands, outwash plains and floodplains. This soil type consists of soils on broad flats that have small depressions. These soils are in old glacial lakes or small ponds adjacent to streams. The soils were formed in organic deposits and alluvium. In Sturbridge, this soil category is located along either side of Westville Lake and the Quinebaug River.
- Canton-Montauk-Scituate Soils: Nearly level to steep, very deep, well-drained soils on glaciated uplands. This soil type consists of soils located on upland hills and rolling glacial till flats. It is dissected by broad drainage-ways that flatten out on the lower slopes. Stones cover more than 3% of the surface in most areas. The soils were formed in friable glacial till. In Sturbridge, this soil category covers a large section in the south of Town.
- Chatfield-Hollis Soils: Gently sloping to steep, moderately deep and shallow, well-drained and somewhat excessively drained soils on glaciated uplands. This soil type consists of soils on hills and ridges that have bedrock exposures throughout. Stones cover more than 3% of the surface in most areas. The soils were formed in glacial till. In Sturbridge, this soil category is found in two locations: a small area west of Walker Pond, and another small area located between Hamant Brook and Breakneck Brook.
- Merrimac-Hinckley-Windsor Soils: Nearly level to steep, very deep, excessively drained and somewhat excessively drained soils on outwash plains. This soil type consists of soils located on broad, flat plains and in rolling to steep areas throughout the southern portion of Central Massachusetts. The soils were formed in water-sorted deposits of glacial outwash. In Sturbridge, this soil category appears as a series of thin strips in the center of Town.

B. Landscape Character

Sturbridge is characterized by its abundance of natural features – the hills, woods, lakes, and streams. The strong influence of the hills and their pronounced northeasterly-southwesterly orientation, determines much of the land use and settlement patterns in the Town. The hilly and

forested aspects of the Sturbridge landscape offer many pleasant vistas and view sheds. Most notable are those which include the Route 84/15 corridor as well as the Route 49 corridor and portions of Route 20, particularly on the west end of town at the intersection of Route 148 continuing west to Long Pond along the Quinebaug River. Much of this area is threatened due to limited protection and development pressures at the present time.

It is important for the Town to encourage partnerships with the State and organizations such as Old Sturbridge Village, which controls approximately 1,224 acres, to provide protection for existing and future areas, which are valued by the community. Where private and State partnerships are not feasible, the Town needs to utilize grant funds and/or set up an open space trust fund to purchase identified parcels as they become available. Now that the Town has adopted the Community Preservation Act (a surcharge on real estate transactions), a portion of the money raised under this initiative can be earmarked for the purpose of land preservation.

C. Water Resources

Located within the Town are seven major open water bodies: Cedar Pond, Walker Pond, Leadmine Pond, Big Alum Lake, East Brimfield Lake (Long Pond), Breakneck Pond and South Pond. These are either wholly or partially within the boundaries of Sturbridge. Public access to the major water bodies is available through either State or town owned properties. Also located within the Town is a section of the Quinebaug River, which offers excellent potential for trail linkages throughout the region. There are several large forested and unforested wetlands most notably Hobbs Brook, McKinstry Brook and Breakneck Brook. The FEMA Map shows many small north /south flood plain striations. The Town has adopted bylaws that limit construction in floodplain areas. The Army Corps of Engineers owns land and easements within the floodplain of the Quinebaug River totalling nearly 600 acres.

The Town has three municipal wells and there are 25 additional water systems registered with the State Department of Environmental Protection (DEP) that, because of the number of persons served, are regulated as public water supplies under the federal Drinking Water regulations. The Town owns most of the land falling within the Zone I contribution areas and what land they don't own is under the purview of the Army Corps of Engineers. Zone II contribution areas have been delineated for all three municipal wells and have received DEP approval. The Town is in the process of getting a fourth well approved. This well is located in the vicinity of Shattuck Road. The well's Zone II contribution area has been delineated and the DEP is currently reviewing said delineation. Sturbridge adopted a local groundwater protection bylaw within its Zoning Bylaws that limits the types of land uses permitted in these areas, as well as the amount of development and impervious surface. A graphic depiction of the Town's water resources can be found on the following page as Map 3 (Water Resources Map).

The Town has adopted a local wetlands bylaw, which requires Commission review for development within 200' of wetlands. The bylaw also affords protection for seasonal wetlands. These regulations in addition to the Rivers Protection Act are having developers give serious consideration to the Town's wetland resources.

Insert Water Resources Map Here (3)

The Division of Fish and Wildlife has certified 33 vernal pools in Sturbridge (mostly located within Wells State Park) and local conservationists believe there are many more scattered throughout the community; in fact, there are 193 sites in Town that the State considers “potential” vernal pools. Vernal pools are unique wildlife habitats best known for the amphibians and invertebrate animals that use them to breed. Vernal pools, also known as ephemeral pools, autumn pools and temporary woodland ponds, typically fill with water in the autumn or winter due to rising groundwater and rainfall and remain ponded through the spring and into summer. Vernal pools dry completely by the middle or end of summer each year, or at least every few years. Occasional drying prevents fish from establishing permanent populations. Many amphibian and invertebrate species rely on a breeding habitat that is free of fish predators. Some vernal pools are protected in Massachusetts under the Wetlands Protection Act regulations as well as several other federal and state regulations. The Natural Heritage Endangered Species Program (NHESP) serves the important role of officially “certifying” vernal pools that are documented locally. The locations of the State-certified vernal pools in Sturbridge can be seen on Map 5 (Unique Features and Scenic Resources Map), further ahead in this document.

In addition to the scenic and unique environments identified by the residents as part of the planning process for this document, it should be noted that Sturbridge contains a large swath of land that has been identified by the NHESP as “Core Habitats” for aquatic, plant and wildlife species. In 2001, with funding from the EOE, the NHESP developed a BioMap for the entire Commonwealth in order to identify the areas most in need of protection to ensure native biodiversity. The BioMap identified Core Habitat areas based on verified data that corresponds to actual locations on the ground. The areas mapped were determined by biologists to be those most suitable to support viable plant and wildlife species.

The NHESP’s Living Waters Project attempted to identify and map the State’s most critical sites for maintaining freshwater aquatic biodiversity. These Core Habitat sites represent where the State will focus its conservation priorities. In Sturbridge, the Core Habitats for aquatic, plant and wildlife species appear in a large area in the south of Town and extending into neighboring Southbridge. This Core Habitat area narrows as it approaches the center of town and then extends northward into Wells State Park. The Living Waters Project has identified Big Alum Lake, East Brimfield Lake and the Quinebaug River as water-related Core Habitat areas. A graphic depiction of the Town’s Core Habitat areas can be seen on the following page as Map 4 (BioMap Core Habitat Areas).

D. Vegetation

Despite recent development trends, large portions of Sturbridge remain forested. Some important open agricultural land is still undeveloped. The forest type is northern mixed hardwood with the dominant tree species being red oak, white oak, red maple, white ash, white pine and eastern hemlock. Of the nearly 18,000 acres of forested land, over half is predominantly large hardwood stands. Nearly 1/3 is large mixed wood stands while less than 5% is mostly large conifer stands.

Insert Bio-Map Here (4)

Sturbridge also contains a variety of wetland habitats, each with its own distinctive plant communities. Seasonally flooded basins occur primarily on stream flood plains and are populated by grasses and herbaceous species. The shrub swamps contain a variety of woody species including alder, buttonbush, dogwood and willow. The meadows contain numerous grasses and sedges. The shallow marshes are home to a distinctive vegetation complex, which includes cattails, bulrushes, burreed, pickerelweed and arrowhead. The deep marshes also have water lilies and a variety of pondweeds.

There has been substantial loss of open farmland over the last fifty years. Some farmlands have reverted to forest, but much has been developed residentially. A few large examples of typical agricultural land do remain. A floral inventory for State listed species has been done at Wells State Park with a few species identified within the park boundaries.

The Massachusetts Natural Heritage and Endangered Species program lists the following plant species for Sturbridge (note the two plant species listed as “endangered”):

Taxonomic Group	Scientific Name	Common Name	State Rank	Federal Rank	Most Recent Observation
Vascular Plant	<i>Adlumia fungosa</i>	Climbing Fumitory	T		2000
Vascular Plant	<i>Asplenium montanum</i>	Mountain Spleenwort	E		1946
Vascular Plant	<i>Clematis occidentalis</i>	Purple Clematis	SC		1998
Vascular Plant	<i>Corallorhiza odontorhiza</i>	Autumn Coralroot	SC		1984
Vascular Plant	<i>Eriophorum gracile</i>	Slender Cottongrass	T		1997
Vascular Plant	<i>Liatris borealis</i>	New England Blazing Star	SC		1934
Vascular Plant	<i>Lygodium palmatum</i>	Climbing Fern	SC		1937
Vascular Plant	<i>Platanthera flava</i> var <i>herbiola</i>	Pale Green Orchis	T		1933
Vascular Plant	<i>Poa languida</i>	Drooping Speargrass	E		2000
Vascular Plant	<i>Ranunculus pennsylvanicus</i>	Bristly Buttercup	T		1997

State: E=Endangered, T=Threatened, SC=Special concern, WL=Unofficial watch list. Federal: LE= Federally Endangered, LT=Federally Threatened

E. Fisheries and Wildlife

The large forested tracts and abundant wetland areas provide the necessary habitat requirements for the typical flora and fauna of southern New England. There are frequent sightings of coyotes, turkeys and white tailed deer. Fisher and bobcats are known to inhabit the town. Numerous beaver impoundments have been created on many suitable sites, which Great blue Herons now use as nesting sites. Moose and black bear sightings occur on an annual basis. State estimated habitat maps indicate a number of sites where State listed wetlands species exist. At Wells State

Park, a population of State listed non-wetland endangered reptiles has been discovered. Field research is currently underway to gather more information on this population. Because of the large interior forested tracts, the potential for permanent wildlife corridors exists. Further research will be needed to document corridors, habitats, and other features related to wildlife in Town.

The State annually stocks Long Pond, Big Alum, Leadmine Pond and the Quinebaug River with trout. Indigenous fish exist in other ponds and streams within the Town.

The most recent listing of the Massachusetts Natural Heritage and Endangered Species program shows the following species existing in Sturbridge (note the two wildlife species listed by the State as “endangered”, as well as the entry for the Indiana Myotis, which is listed as a “federally endangered” species):

Taxonomic Group	Scientific Name	Common Name	State Rank	Federal Rank	Most Recent Observation
Fish	<i>Notropis bifrenatus</i>	Bridle Shiner	SC		1951
Amphibian	<i>Ambystoma opacum</i>	Marbled Salamander	T		1999
Amphibian	<i>Hemidactylium scutatum</i>	Four-Toed Salamander	SC		1999
Reptile	<i>Clemmys guttata</i>	Spotted Turtle	SC		2001
Reptile	<i>Clemmys insculpta</i>	Wood Turtle	SC		1997
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	E	(PS:LT,PDL)	1999
Mammal	<i>Myotis sodalis</i>	Indiana Myotis	E	LE	1938
Mammal	<i>Sorex palustris</i>	Water Shrew	SC		1996
Mussel	<i>Alasmidonta undulata</i>	Triangle Floater	SC		1999
Mussel	<i>Strophitus undulatus</i>	Creeper	SC		1999
Crustacean	<i>Crangonyx aberrans</i>	Mystic Valley Amphipod	SC		1997
Butterfly/Moth	<i>Callophrys hesseli</i>	Hessel's Hairstreak	SC		1997

State: E=Endangered, T=Threatened, SC=Special concern, WL=Unofficial watch list. Federal: LE= Federally Endangered, LT=Federally Threatened

F. Scenic resources and unique environments

The rural character of the Town is an essential part of both residential quality of life as well as economic development. The long, straight stretch of Route 49 presents some serene travel through wooded landscape and hilly terrain and also prevents the interruption of intersecting roadways. Visitors and residents alike consider the entrance to Wells State Park particularly scenic. The Park borders Walker Pond and boasts a spectacular view off Carpenter's Rock as

well as numerous recreational amenities from mountain biking to camping to swimming. The Westville Recreation Area, shared with the Town of Southbridge, provides good fishing and has several recreational fields and picnic areas. The Streeter Recreation Area provides a public beach, boating, fishing and picnicking areas. Another unique and scenic area is the 266-acre Opacum Woods. Located close to Sturbridge Center, this site is accessed via the trailhead at Old Brook Circle within the subdivision known as “the Preserve”. The Woods contain a large beaver pond, historic and prehistoric sites, 3.5-miles of walking trails, and allows for a variety of passive recreation opportunities. The Woods also serves as habitat for a variety of wildlife species.

The Mass Turnpike corridor through Sturbridge is generally considered scenic, with rolling wooded hills and views of water. South of the Turnpike and along the Brimfield town line, Long Pond and the Quinebaug River provide both attractive vistas as well as recreation. While the land along much of the Quinebaug River is privately controlled, access is usually tolerated and several walking trails exist along its southern banks with views and great fishing. Scenic roads run through much of the Town and from Fiske Hill Road and McGilpin Road, there are vistas of the valley over Charlton.

Sturbridge is well known for its historic appearance, with the National Historic District located around the Town Common. The district contains 42 historic buildings and structures. This area also includes the Hobbs Brook Conservation Area, a valuable wetland estuary, which is home to blue heron and many other species. On the south side of Town, the Trustees of Reservations maintain a 77-acre tract known as the Tantisques Leadmine, the site of the discovery of graphite in 1633. This area features the mineshafts and tunnels where the graphite was extracted. Old Sturbridge Village is a major cultural attraction and complements other historic areas in Town. The expansiveness of the Breakneck area, which includes a large portion of the Southbridge aquifer and also abuts portions of Nipmuck State Forest in Connecticut, may have sufficient qualities to be considered an ACEC (Area of Critical Environmental Concern).

The Town's scenic features have been cited in survey after survey as one of the major reasons that residents have moved to Sturbridge. The Town's hills, water bodies, and woodlands have all been identified as scenic. The views along roads, the rural character, with stonewalls and stands of trees, have been mentioned as scenic features as well. A graphic depiction of the Town's unique features and scenic resources can be found on the following page as Map 5 (Unique Features and Scenic Resources Map).

**Insert Unique Features and Scenic Resources Map
Here (5)**

G. Environmental Problems

a. Surface water pollution

Aquatic weeds and the presence of fecal coliform have become concerns for the health of Cedar Lake and the people who use Cedar Lake as a recreation resource. The Town, through feasibility studies, determined that the best way to remedy the situation would be to install sewer lines around the perimeter of Cedar Lake to eliminate the influx of contaminants from septic systems into the lake. Over the last five years, the Town’s Public Works Department has extended sewer lines along much of the lake’s shoreline and continues to monitor its water quality.

b. Identified Polluted Sites in Town

The Massachusetts Department of Environmental Protection currently lists ninety-one 21E sites (also known as “brownfields”) in Sturbridge; however, this list is a bit deceptive as it contains multiple instances of contamination on a single property. The Town’s “brownfield” sites are as follows:

Release Tracking Number(RTN)	Release Address	Site Name/Location Aid	Notification Date	Compliance Status	Phase	RAO Class	Chemical Type
2-0014915	27 BROOKFIELD RD	27 BROOKFIELD RD UST	09/16/2003	RAO		A1	
2-0012488	319 BROOKFIELD RD	TANTASQUA REGIONAL HIGH SCHOOL	11/10/1998	RAO	PHASE II	A2	Oil
2-0014436	45 BURGESS SCHOOL RD	BURGESS ELEMENTARY SCHOOL	08/13/2002	RAO		A1	Oil
2-0014875	175 CEDAR ST	CEDAR ST POLE #47	08/13/2003	RAO		A2	
2-0015483	100 CHARLTON RD	CARRIER INDUSTRIES, INC.	11/14/2004	RAO		A1	Oil
2-0012570	149 CHARLTON RD	VILLAGE AUTOMOTIVE	12/23/1998	RTN CLOSED			Oil
2-0012615	149 CHARLTON RD	GIFFORD RD	01/19/1999	RAO		A2	Oil and Hazardous Material
2-0000434	149 CHARLTON RD	VILLAGE AUTOMOTIVE INC	10/15/1988	TIER 2	PHASE IV		
2-0013348	201 CHARLTON RD	NEW ENGLAND TRUCK STOP	06/30/2000	RTN CLOSED			Oil

Release Tracking Number(RTN)	Release Address	Site Name/Location Aid	Notification Date	Compliance Status	Phase	RAO Class	Chemical Type
2-0015544	201 CHARLTON RD	NEW ENGLAND TRUCK STOP, INC	12/29/2004	UNCLASSIFIED			Oil and Hazardous Material
2-0015168	315 CHARLTON RD	T & S TRUCK SERVICE	03/19/2004	RAO		A2	Oil
2-0012387	CHARLTON RD	NEW ENGLAND TRUCK STOP	09/08/1998	RAO	PHASE III	A3	Oil
2-0012301	CHARLTON RD RTE 20	HALL ROAD 1700 FT NORTH OF	07/17/1998	RTN CLOSED			
2-0012420	CHARLTON RD RTE 20	149 CHARLTON RD	09/25/1998	RTN CLOSED			Oil
2-0013981	3 FALLS RD	RESIDENCE	09/07/2001	RAO		A1	Oil
2-0011875	126 FISKE HILL RD	RESIDENCE	09/10/1997	RAO		A2	Oil
2-0014724	51 HOLLAND RD	MUIRFIELD DEVELOPMENT	04/04/2003	RAO		A1	Hazardous Material
2-0015054	400 HYNES RD	STURBRIDGE ISLE TRUCK STOP	12/19/2003	RAO		A1	
2-0014785	LOTS 51 AND 55 HOLLAND RD	FORMER US FILTER	06/27/2003	RAO		A2	Hazardous Material
2-0010197	MA TPKE	MI MARKER 68E BRIMFIELD/WARREN LINE	02/17/1994	RAO		A2	Oil
2-0010512	MA TPKE	STURBRIDGE EXIT 9 PLAZA	10/08/1994	RAO		A1	Oil
2-0010531	MA TPKE	APA TRUCK LEASING	11/01/1994	RAO		A2	Oil
2-0010716	MA TPKE	EXIT 9	03/31/1995	RAO		A2	Oil
2-0010759	MA TPKE	REST STOP 5E	05/05/1995	RAO		A1	Oil
2-0011260	MA TPKE	INTERCHANGE 9	06/03/1996	RAO		A1	Oil
2-0012878	MA TPKE	MM79	07/26/1999	RAO		A1	Oil
2-0013011	MA TPKE	MA TPK MM 78E	11/03/1999	RAO		A2	Oil
2-0014107	MA TPKE @ EXIT 9	NEAR TOLL BOOTHS	12/04/2001	RAO		A1	
2-0015114	MA TPKE EASTBOUND MM 75	MA TURNPIKE ROADWAY RELEASE	02/05/2004	RAO		A1	
2-0014156	MA TPKE MILE MARKER 79	EXIT 9 EASTBOUND	01/10/2002	RAO		A2	

Release Tracking Number(RTN)	Release Address	Site Name/Location Aid	Notification Date	Compliance Status	Phase	RAO Class	Chemical Type
2-0015244	MA TPKE MM 78 5	CARDINAL FREIGHT CARRIERS	05/10/2004	RAO		A2	Oil
2-0014431	MA TPKE RT 84 AND RT 90	BEATON ROADWAY RELEASE	08/09/2002	RAO		A1	Oil
2-0010379	MA TURNPIKE E	MI MARKER 74.5	07/11/1994	RAO		A1	Oil
2-0010566	MA TURNPIKE E	MI MARKER 79.1	11/28/1994	RAO		A2	Oil
2-0010783	MA TURNPIKE E	MI MARKER 77	05/22/1995	RAO		A1	
2-0011424	MA TURNPIKE S	MI MARKER 78	10/03/1996	RAO		A2	Oil
2-0010142	MA TURNPIKE W	MI MARKER 79	01/04/1994	RAO		A2	Oil
2-0010188	MA TURNPIKE W	MI MARKER 79	02/11/1994	RAO		A2	Oil
2-0011425	MA TURNPIKE W	500 FT OF EXIT 9	10/05/1996	RAO		A2	Oil
2-0010776	MA TURNPIKE W MI MARKER 78	TRUCK ACCIDENT	05/11/1995	RAO		A2	Oil
2-0014922	277 MAIN ST	RTE 131 PUBLIC HOUSE	09/22/2003	RAO		A2	Oil
2-0010184	358 MAIN ST	CARRIAGE HOUSE INN	02/02/1994	RAO		A1	Oil
2-0013737	358 MAIN ST	SUPER 8 MOTEL INC	03/19/2001	RAO		A2	Oil
2-0012177	361 MAIN ST	LOT 15	04/03/1998	RAO		A2	Oil and Hazardous Material
2-0010133	365 MAIN ST	MOBIL STATION #10 PUMP	12/28/1993	RAO		A2	Oil
2-0015124	365 MAIN ST	MOBIL STATION	02/11/2004	RTN CLOSED			Oil and Hazardous Material
2-0000797	365 MAIN ST	MOBIL STATION 01-GX5	11/21/1990	REMOPS	PHASE V		Oil
2-0014118	379 MAIN ST	SOVERIGN BANK	12/13/2001	RAO		A2	Oil
2-0013305	40 MAIN ST	SUNOCO STA FMR	05/30/2000	RTN CLOSED			Oil
2-0014643	40 MAIN ST	IMPACTED RESIDENCE 27 MAIN ST	01/27/2003	RTN CLOSED			Hazardous Material
2-0015366	40 MAIN ST	JACKS GAS & AUTO REPAIR	08/13/2004	UNCLASSIFIED			Hazardous Material

Release Tracking Number(RTN)	Release Address	Site Name/Location Aid	Notification Date	Compliance Status	Phase	RAO Class	Chemical Type
2-0000370	40 MAIN ST	SUNOCO GAS STATION	04/15/1989	REMOPS	PHASE V		Oil
2-0000130	400 MAIN ST	FORMER ARCO STATION	01/15/1987	REMOPS			Oil
2-0013995	41 MAIN ST	SUNOCO STN	09/18/2001	RTN CLOSED			Oil
2-0010905	421 MAIN ST	ARLAND TOOL & MANUFACTURING	09/08/1995	REMOPS	PHASE V		Oil
2-0010781	441 MAIN ST	CPC ENGINEERING	05/15/1995	RAO	PHASE III	B1	Oil and Hazardous Material
2-0010907	441 MAIN ST	WHEELABRATOR TECH INC	09/08/1995	REMOPS	PHASE V		Oil
2-0014404	514 MAIN ST	SOUTHBRIDGE CREDIT UNION	07/23/2002	STMRET			Oil
2-0014753	544 MAIN ST	MA ELECTRIC POLE 97	05/03/2003	RAO		A1	
2-0013525	660 MAIN ST	CORNING NET OPTIX	10/19/2000	TIER 1B	PHASE III		Hazardous Material
2-0014563	660 MAIN ST	CORNING INC	11/21/2002	RTN CLOSED			Hazardous Material
2-0010053	MAIN ST	INTERSECTION	10/25/1993	RAO		A2	Oil
2-0010121	MAIN ST	MHD FACILITY 44	12/15/1993	RAO		A1	Oil
2-0011148	MAIN ST	MHD FACILITY 44	03/01/1996	RAO		B1	Hazardous Material
2-0012456	MAIN ST	STURBRIDGE DEPOT	10/14/1998	RAO		A2	Oil
2-0011264	11 MASHAPAUG RD	KRUCZEK RESIDENCE	06/03/1996	TIER 1D			Oil
2-0010151	400 MASHAPAUG RD	STURBRIDGE ISLE TRUCK STOP	01/12/1994	RAO		A1	Oil
2-0011047	400 MASHAPAUG RD	STURBRIDGE ISLE TRUCK STOP	12/26/1995	RAO		A1	Oil
2-0011255	400 MASHAPAUG RD	ROUTE 84	05/30/1996	RAO		A1	Oil
2-0011534	400 MASHAPAUG RD	STURBRIDGE ISLE TRUCK STOP	12/19/1996	RAO		A2	Oil
2-0011595	400 MASHAPAUG RD	STURBRIDGE ISLE TRUCK STOP	02/04/1997	RAO		A1	Oil

Release Tracking Number(RTN)	Release Address	Site Name/Location Aid	Notification Date	Compliance Status	Phase	RAO Class	Chemical Type
2-0011099	MASHAPAUG RD	STURBRIDGE MOBIL	02/08/1996	RAO		A1	Oil
2-0011138	MASHAPAUG RD	MOBIL/STURBRIDGE ISLE	02/27/1996	RAO			Oil
2-0014814	71 MASHPAUG RD	MASHPAUG RD @ POLE 28	06/19/2003	RAO		A1	
2-0013314	21 OLD HAMILTON ROAD EXT	POLE NO 39	06/07/2000	RAO		A2	
2-0012226	RT 84 AT RAMP	NO LOCATION AID	05/21/1998	RAO		A1	Hazardous Material
2-0014676	236 RTE 15	EXXON STATION	02/25/2003	RAO		A1	Oil
2-0013763	400 RTE 15	STURBRIDGE ISLE XTRA MART	04/03/2001	RAO	PHASE II	B1	Oil
2-0014206	400 RTE 15	STURBRIDGE ISLE TRUCKSTOP	02/26/2002	RAO		A1	Oil
2-0014659	400 RTE 15	DRAKE PETROLEUM	01/08/2003	RAO		A2	Oil
2-0000276	RTE 15 MASHAPAUG RD	MOBIL GAS ATLAS OIL 01QRC	07/15/1987	DEPNFA			
2-0010204	RTE 84	EASTBOUND NEAR REST AREA	02/23/1994	RAO		A1	Oil
2-0011355	RTE 84	CENTIMARK CORP	08/14/1996	RAO		A1	
2-0011893	RTE 84	AT INTERCHANGE 9	09/23/1997	RAO		A1	Oil
2-0011905	RTE 84	STURBRIDGE ISLE	09/30/1997	RAO		A2	Oil
2-0012394	RTE 84 W	REST AREA AT EXIT 2	09/10/1998	RAO		A1	Oil
2-0014524	RTE 84 W	BETWEEN EXITS 2&3	10/25/2002	RAO		A2	Oil
2-0011761	RTE 84E	BTWN EXIT 3A 3B	06/12/1997	RAO		A1	Oil
2-0010175	RTE 84W	BEHIND STATE POLICE BARRACKS	01/30/1994	TIER 1D			Oil
2-0011157	RTE 84W	RAMP ON EXIT 1	03/13/1996	RAO		A1	Oil
2-0011805	22 SECOND ST	RESIDENCE	06/09/1997	RAO		A2	Oil

The old municipal landfill site off Cedar Street has been capped. The current landfill is expected to last another twenty years and eventually this site might be suitable to be renovated as an open space area. The search has already begun for the location of the new landfill site.

c. Flood Control

The Army Corps of Engineers flood control system protects the area from severe flooding associated with the Quinebaug River. Dams exist at the east and west ends of Town along the Quinebaug River. Additionally the Town has a floodplain district bylaw that is very restrictive in terms of development in the floodplain.

Section 5: Inventory

The following inventories show the protected open space in Town as well as significant unprotected parcels. The Town of Sturbridge presently owns very little land itself and efforts by the Recreation Committee to develop new active recreation facilities has been considerably complicated by having to find land as well. A graphic depiction of the Town's protected lands and recreation sites can be found on the following page as Map 6 (Inventory of Protected Lands and Recreation Sites Map).

The following table presents a comparison of protected land for Sturbridge and its adjacent neighbors. The data is derived from the MassGIS protected lands coverage and may not be completely up-to-date for all of the communities presented. Please note that conservation land includes well protection areas. It appears that Sturbridge compares very well to its adjacent neighbors in terms of protected open space, having the highest acreage total of protected land and the third highest percentage of land protected of the communities compared. It should be noted that most of the Town's protected lands are under State and federal protection, with Wells State Park, the various Wildlife Management Areas and the Westville Lake/East Brimfield Lake flood control properties being the most prominent examples.

Community	Total Land Area (acres)	Total Amount of Protected Land (acres)	Protected Land as % of Total Land Area
Sturbridge	24,923	4,313	17.3%
Brimfield	22,583	3,634	16.1%
Brookfield	10,611	3,189	30.0%
Charlton	28,172	2,770	9.8%
East Brookfield	6,652	473	7.1%
Holland	8,373	1,793	21.4%
Southbridge	13,139	1,010	7.7%
Warren	17,682	830	4.7%

a. Protected land inventory

Parcel	Owner/Manager	Use	Funds Used	Condition	Recreation Potential	Public Access	Acres (SCORP)	Zoning	Protection
Wells State Park	State – DEM	State park	DEM	Excellent	High	Fee	1470	RR	Art. 97
Water Dept. Land	Town – EOS	Facilities &	Town	Good	Low	Unofficial	14	RR	Perpetuity
Breakneck WMA	State - DFWELE	Open	DFWELE	Excellent	High	Free	1,148+-	RR	Art. 97
Leadmine WMA	State - DFWELE	Open	DFWELE	Excellent	High	Free	341.17	RR	Art. 97
McKinstry Brook	State - DFWELE	Open	DFWELE	Excellent	High	Free	142.3+-	RR	Art. 97
Streeter Point Rec.	DOD - DCR	State park	Federal	Excellent	High	Fee	30	SR	Perpetuity
Leadmine P.A.	State - PAB	Great pond	State	Fair	Medium	Free	2.0	RR	Art. 97
Big Alum P.A.	State - PAB	Great pond	State	Good	Medium	Free	1.0	SR	Art. 97
Hamilton Forest Area	State – DFWELE	Open	State	Excellent	High	Free	70	RR	Art. 97
Tantiusques/Crowd	The Trustees of	Open	Private	Excellent	Medium	Free	54.31	RR	Perpetuity
Hyland Orchard &	Peter Towns/Sep '81	Orchard/APR	DFA	Excellent	Low	None	81	RR	Perpetuity
Walker Pond P.A.	Town – BOS	Great pond	Town	Good	High	Free	43	RR	Perpetuity
Cedar Pond P.A.	Town – BOS	Water body	Town	Fair	High	Free	23	SR	Perpetuity
Westville Lake R.A.	DOD – ACE	Recreation/flood	Federal	Excellent	High	Free	578	RR	Perpetuity
East Brimfield Lake	DOD – ACE	Recreation/flood	Federal	Excellent	High	Free	150	SR/RR	Perpetuity
Sturbridge Future	Town	Watershed	Town	Excellent	High	Free	96	RR	Perpetuity
Edward Ballard	Conservation Comm	Open/Habitat	Town	Unk	Unk		74.06	RR	Perpetuity
Wolf Swamp WMA	State – DFWELE	Open	DFWELE	Excellent	High	Free	128.37	RR	Art. 97
Hardy/McKinstry Brk	DFWELE	PrivProp/CR-	DFWELE	Excellent	Low	Free	31	RR	Art. 97
Pecci/Galonek/DFW	DFWELE	26-Ac in CR +	DFWELE	Excellent	Low	Free	91	RR	Art. 97
Shepard	Conservation Comm	Open	CPA	Good	Medium	Free	8	Comm	Art. 97
Long Pond	Sturbridge Town	Open	CPA	Good	Medium	Free	59.47	SR	Art. 97
Opacum Woods	Opacum L. Trust	Open/HabitatPro	Donation	Excellent	High	Free	266	SR	Perpetuity
Gaumond Sanc/168	Opacum L. Trust	Open/HabitatPro	Donation	Good	Low	None	30	SR	Perpetuity
1st Ac Swamp/50	Opacum L. Trust	Open/HabitatPro	Purchase	Average	Medium	Free	26.77	SR	Perpetuity
118-136 Mashapaug	Conservation Comm	Conservation	SubControl	Average	None	None	7.25	SR	Art. 97
Parc A, Arnold Rd	Conservation Comm	Conservation	SubControl	Average	Low	None	43.4	SR	Art. 97
67 Clarke Rd	Conservation Comm	Fee Simple	SubControl	Average	Low	Unk	13.67	SR	Art. 97
Hull Forestlands, LLC	Hull & DFW	Forestry/CR	DFWELE	Average	Low	Unk	617.04	RR	Art. 97

b. Unprotected land inventory:

The following is a list of significant holdings in Sturbridge in private ownership. These parcels are listed because they may be suitable for open space, conservation, recreation, or other public purpose, because they are currently subject to local tax abatement for recreation, agriculture, or forestry (and the Town would receive an option to purchase upon sale for development), or because they are particularly large or especially critically located.

Parcel	Owner/manager	Use	Condition	Rec	Public	Zoning	Protection	Acres	Parcel ID
208 Arnold Rd	B. Szugda	Forestry Ch 61	N/A	Low	none	RR	short term	84.08	123-01042-208
227 Brookfield Rd	R. Leclerc	Forestry Ch 61	N/A	Low	none	RR	short term	15.70	173-01433-227
45 Bushnell Rd	R. Hillman	Forestry Ch 61	N/A	Low	none	RR	short term	57	183-01215-031
281 Cedar St	D. Mapplebeck	Forestry Ch 61	N/A	Low	none	RR	Short term	12.43	202-01016-281
66 Westwood Dr	Lillian Palmer, Trustee	Ch 61B	N/A			RR	short term	11.48	678-2121-66
220 Holland Rd	Palmer, Marc & Joseph	For Ch 61 &	N/A			RR	Short term	128	348-3214-220
52 Streeter Rd	Kevin Palmer	Forestry Ch 61	N/A	Medium	unofficial	RR	short term	30.94	613-02733-052
119 Holland Rd	Palmer, Marc & Joseph	Forestry Ch 61	N/A			RR		22	348-3225-119
24B Holland Rd	Palmer, Marc & Joseph	Forestry Ch 61	N/A					14	348-3234-24B
281 Holland Rd	W. Szyszkiewicz	Forestry Ch 61	N/A	Low	none	RR	short term	42.57	348-03632-281
256 Walker Rd	D. Ouellette	Forestry Ch 61	N/A	High	unofficial	RR	short term	54.57	662-00721-256
337 New Boston	Holly Tremblay	Forestry Ch 61	N/A	Medium	none	RR	short term	32.92	455-00638-338
121 Paradise Ln	Rob Para	Forestry Ch 61	N/A	High	unofficial	RR	short term	48.03	505-00447-121
205C Podunk Rd	I. Jennings	Forestry Ch 61	N/A	Medium	unofficial	RR	short term	25.85	518-00825-205C
177 Podunk Rd	G. Suprenant	Forestry Ch 61	N/A	Low	none	RR	short term	16.78	520-00842-177
72 Shattuck Rd	W. Sujdak	Forestry Ch 61	N/A	Medium	unofficial	RR	short term	80.16	570-03734-072
37&53 Wells Pk Rd/59 Old	Walker Pond Corp	Ch 61B	N/A	Medium	none	RR	short term	53.3	3 parcels
220 Cedar St	R. Waraika	Forestry Ch 61	N/A	Medium	none	SR	Short term	37.6	202-01547-220
261 Holland Rd	Davis	Ch 61A	N/A	Medium	none	RR	short term	30.9	348-03652-261
221 Brookfield Rd, Brim	John Freeman/Freeman Farm	Ch 61A	N/A	Medium	none	?	Short term	9.16	173-01433-221
181 & 198 Podunk Rd	R. Moynagh	Ch 61A	N/A	High	unofficial	RR	short term	200	2 Parcels
4 Shumway Hill RD	Harold Heins/C. O'Brien	Ch 61A	N/A	High	none	RR	short term	125	683-02758-004
56 South Rd	M. Scheffler	Ch 61A	N/A	High	unofficial	RR	short term	121	595-04622-056
30 Whittemore Rd	Mae Dawn Suminski	Ch 61A	N/A	Medium	none	SR	short term	18.23	680-02937-030
14 & 50 Douty Rd	Gardiner, Debra q	Ch 61A	N/A	Medium	none	RR	short term	241.53	2 parcels
237 & 241 Holland Rd	Dupre, Keren	Ch 61A	N/A	High	unofficial	RR	short term	63.29	2 parcels

Parcel	Owner/manager	Use	Condition	Rec	Public	Zoning	Protection	Acres	Parcel ID
11,10,16,20,26,30&32 Ladd	C. Carrington	Ch 61A	N/A	Medium	none	RR	short term	91.31	7 parcels
21 South Rd	J. Rouse	Ch 61A	N/A	High	none	RR	short term	121	595-04252-021
38&40 Wallace/151 Shepard	E. Cloutier	Ch 61A	N/A	Low	unofficial	SR	short term	24.08	3 parcels
233 New Boston&24	Hamilton Rod & Gun Club	Ch 61B	N/A	High	fee	RR	Short term	144.24	2 parcels
246 Cedar St	Hamilton Rod & Gun Club	Forestry Ch 61	N/A					10.38	202-1527-246
294,298&300 Leadmine Rd	Andrews, James III	Forestry Ch 61	N/A		N/A		Short term	17.22	3 Parcels
176 Podunk Rd	Buell, Thomas J.	Forestry Ch 61	N/A					23.34	520-0841-176
110 McGilpin Rd	Cocalis, Clay	Forestry Ch 61	N/A					74.66	432-2657-110
21 High St	Gingras, Barry	Forestry Ch 61	N/A					24.35	335-2411-21
253 Breakneck Rd	Grimshaw, Fred H. Jr.	Ch 61B						6.5	170-5325-253
44 Allen Rd	Holdcraft, John D.	Ch 61A						20.24	110-0634-044
227 & 236 Podunk Rd	Kaszowski, Robert & Ken	Ch 61B	N/A					173.76	520-0343-
274 Brookfield Rd	Kearns, John S.	Ch 61B	N/A			RR		30	173-0923-274
33 Putnam Rd	Norwood, Marc & Cecil	Ch 61B	N/A					99.45	530-0312-33
27 Ladd Rd	Piergallini, Anthony	Ch 61B						20.77	375-1326-027
266 Holland Rd	Piette, Tina K.	Ch 61B	N/A					32.58	348-3612-266
99 Arnold Rd	Sosik, Matthew S.	Ch 61B	N/A					91.55	123-2023-99
61Falls/2Falls/2&124Walker	Sturbridge Properties	Forestry Ch 61	N/A					92.34	4 parcels
317&318 Leadmine Rd	Tourtellotte, K. Trustee	Ch 61B	N/A					40.19	400-3258-
221 Cedar/23&24 Cooper	Warrington, Ralph A. Tr	Forestry Ch 61	N/A					63.82	3 parcels
Parcels of Interest:									
Parcel	Owner/manager	Use	Condition	Rec	Public	Zoning	Protection	Acres	Parcel ID
52	MuirfieldDev/Westville Dev	Trails/Greenway	Excellent	High	unofficial	RR	none	118.91	3 parcels
4 Shumway Hill Rd	Heins, Harold	Trails/Greenway	Excellent	High				125	583-2758-04
234 Walker Rd	Tmimmim/fna Krock	Core Hab/Trail	Excellent	High	unofficial	RR	None	54	662-00724-234
7 Allen Road	Plimpton Meadows F.T.	Core Habitat						270.4	110-00655-007
372 New Boston Rd	Unknown	Core Hab/Trail	Excellent	High	unofficial	RR	none	211	455-00245-372
227 & 236 Podunk Rd	Kaszowski, Robert & Ken	Core Habitat	N/A	Medium				173.76	520-0343-
233 New Boston&24	Hamilton Rod & Gun Club	Core Habitat	N/A	High		RR		144.24	2 parcels
14 & 50 Douty Rd	Gardiner, Debra	Trails/Greenway	N/A	Medium	none	RR		241.53	2 parcels
McKinstry Br. Headwaters	Various – 33 parcels	open space	Excellent	High	unofficial	RR	none	544.56	Too many!
181 & 198 Podunk Rd	R. Moynagh	Core Habitat		High	unofficial	RR		200	2 Parcels

Parcel	Owner/manager	Use	Condition	Rec	Public	Zoning	Protection	Acres	Parcel ID
800 Main Street	Jean Sullivan	scenic/open sp.	Excellent	High	unofficial	SR	none	40.92	415-02321-800
704 Main Street	Robert Williams	open space	Excellent	High	unofficial	SR	none	43	415-02323-704
180 Breakneck Rd	Pontbriand	open space	Excellent	High	unofficial	RR	none	223.70	170-05045-180
181 Breakneck Rd	Misselwitz	Open space	Excellent	High	unofficial	RR	none	80	170-05056-181
M.T.A. (next to Hobbs Br)	Mass Turnpike Authority	Rec facilities	N/A	High	unofficial		none	ca. 12 a.	Map 42 lot 1
Southbridge Water Supply	T/Southbridge	Watershed	Town	Excellent	High	None		247.72	Various parcels
520 Route 15	Secure Fin Corp/Bovenzi	Hab/Wtr Prot						181.9	552-4461-520

Parcels of Interest: APR's

1. 52 Stallion Hill + 51 & 55 Holland Road Parcels: 605-2459-052; 51 Holland: 348-2717-51; 55 Holland: 348-2716-055
2. Hamilton Rod & Gun Club - 455-1613-233 (6.24a), 318-1632-024 (138a).
3. Gardiner (2 parcels) – 245-02717-014 (218.53a.), -050 (22a.)
4. Moynagh (2 parcels) – 520-00831-181 (129a.), -192 (71a.)

Recreational Properties:

Parcel	Owner/manager	Use	Condition	Rec	Public	Zoning	Protection	Acres	Parcel ID
Turners Field	Town - P&R	Ball field	Good	Medium	free	RR	limited	4.0*	
Cedar Pond Rec Area	Town - P&R	recreation area	Good	High	free	SR	limited	23.0*	
Tantasqua Regional Schools	Union 61 SD	rec facilities	Good	High	free	RR	limited	103.0*	
Burgess Elementary School	Town	rec facilities	Good	High	free	SR	limited	12.0*	
T. Barn Rec Fields	Town	ball fields	Fair	Medium	free	RR	limited	14.0*	
Old Sturbridge Village	OSV	living museum	Excellent	High	fee	RR	none		
Sturbridge Host Hotel	Sturbridge Host Hotel, Inc.	rec facilities	Good	Medium	fee	Comm	none		
Walker Pond Rec. Area	Walker Pond Association	rec facilities	Good	Medium	unofficial	RR	none		

* Acreages taken from the Sturbridge section of the Statewide Comprehensive Outdoor Recreation Plan (SCORP), EOEA-DCS, 2004.

From Unprotected Land Inventory, Parcel ID Column above. Various parcels:

1. Walker Pond Assoc (3 parcels) – 675-1724-053 (13.16a), 1744-137 (30.14a), 493-1715-058 (10a).
2. Moynagh (2 parcels) – 520-00831-181 (129a.), -192 (71a.)
3. Gardiner (2 parcels) – 245-02717-014 (218.53a.), -050 (22a.)
4. Dupre (2 parcels) – 348-03234-237 (49.05a.), -241 (13.24a.)
5. Carrington (8 Parcels) – 375-01324-011 (24.21a.), -01335-010 (13.89a.), -01345-016 (5.26a.), -020 (8a.), -01354-032 (10.75a.), -01355-026 (6a.), -030 (23.2a.)
6. Cloutier (3 parcels) 665-03932-038 (3a.), -03931-040 (15.82a.), 575-03848-151 (5.26a.)
7. Hamilton Rod & Gun Club - 455-1613-233 (6.24a), 318-1632-024 (138a).
8. Andrews (3 parcels) – 400-3238-294 (5.61a), 3238-298 (2.1a) & 3238-300 (9.4a)
9. Sturbridge Properties – 268-1255-061 (2.3a), 268-1736-002 (26.85a), 660-1746-0002 (55.36a), 660-1751-124 (7.83a).
10. Warrington – 202-1547-220 (2.38a), 226-2015-023 (10.65a), 226-2015-024 (50.79a)

Insert Protected Lands Map Here (6)

c. Recreation facilities

Natural resources in Sturbridge offer some valuable passive recreation. Lakes and ponds are widely used and available for the public use. Big Alum Lake and East Brimfield Lake (Long Pond) both offer public boat ramp access. East Brimfield Lake allows for East Brimfield and Sturbridge residents boat ramp and beach access to the lake. Natural quiet settings along streams and ponds and within state parks provide idyllic camping experiences. There are several campgrounds in Sturbridge that draw campers in from areas of the region and beyond. East of Interstate 84 in the southern section of Town there are two campgrounds and to the north there is one within the Wells State Park. Hemlock Ridge Golf Course, an open-to-the-public, nine-hole course, offers active recreation as well.

Largest recreational sites and activities:

Wells State Park - Owned and managed by the Department of Conservation & Recreation, the Park offers the following activities: boating (non-motorized), camping, cross country skiing, fresh water fishing, fresh water swimming, general play, hiking, horseback riding, hunting, motor boating, nature observing, organized events, picnicking, snowmobiling and walking/jogging.

Westville Dam – Owned and managed by the US Army Corps of Engineers, this facility offers baseball/softball, bicycling, boating-non motor, cross country skiing, football/soccer, fresh water fishing, general play, hiking, nature observing, organized event, picnicking, sightseeing and walking/jogging [Note: active recreation fields are leased to the Town of Southbridge for their municipal recreation and league activities, use during spring limited due to flooding].



Cedar Lake Recreation Area – Owned and operated by the Town, this site offers tennis courts, a basketball court, a skateboard park, a waterfront swimming area, picnic tables and a playground.

Outdoor World - Privately owned and operated, this facility offers bicycling, boating (both motorized and non- motorized), camping, fresh water fishing, freshwater swimming, hiking, and picnicking.

Yogi Bear Campground - Privately owned and operated, this facility offers overnight camping, boating, swimming, picnicking and a clubhouse.

Old Sturbridge Village, Inc. – Privately owned and operated, this historic New England village setting offers organized events, opportunities to observe nature, natural history, and sightseeing.

Hamilton Rod & Gun - Privately owned and operated, this facility offers boating (motorized and non-motorized), fresh water fishing, general play, hunting, nature observing, picnicking and target archery.

Hemlock Golf Course - This is a privately owned and operated golf course.

Tantasqua Regional School - Part of the regional school district, Tantasqua offers baseball/softball, basketball, football/soccer, general play, hiking, ice-skating, picnicking and tennis. The school building is new and many of its recreation facilities have been substantially renovated. Both the school and the town utilize the facilities at this site.



Burgess Elementary School - Town-owned and operated, the school offers baseball, softball, soccer, a playground and a Miracle Maze (play structure).

Turner's Field – Town-owned and operated, this site contains facilities for baseball and soccer.

Highway Barn Fields – Town-owned and operated, this site contains facilities for softball, soccer and a little league field.

Insert Trail Map Here (7)

Section 6: Community goals

A. Surveys

The Town of Sturbridge initiated a citizen survey in late 2004 as part of a municipal strategic planning exercise. The survey used a targeted random sample approach, sending a survey to every 35th household on the Town's street address. A grand total of 246 surveys were sent out, of which 197 were returned (an impressive response rate of 80%). In terms of open space and recreation, the survey contained the following results:

- Residents indicated opposition to increasing lake patrols (including those residents living on the lakes), as well as opposition to adding a new municipal employee to maintain Town recreation fields.
- Residents indicated support for developing a sports complex.
- Most residents indicated their vision for Sturbridge in the future was that of a family-oriented, rural community.
- Most residents indicated the three greatest threats to the future of Sturbridge was the potential for a casino development, high taxes, and not enough jobs/too much development (tied for second).
- Residents felt the Town needed to plan for the inevitable growth as development pushes west from the Boston-metro area and that commercial and industrial growth should occur near major activity areas. Most residents (81% of respondents) did not believe their neighborhood could accommodate more growth.
- Residents indicated growth should be limited to where there is adequate infrastructure and that the Town should develop more flexible zoning to guide the density of development.
- Most residents (72% of respondents) believe the environmental resources of the Town are being adequately protected and 93% indicated that it was important for new development to be designed and sited to protect significant water, plant and animal habitats.
- Most residents (79% of respondents) want the Town to actively pursue the town-wide trail system that is underway.
- Most residents (95% of respondents) want the Town to protect the historic assets of the community, but at present oppose the cost of renovating the Town Hall/Center School.
- Most residents (85% of respondents) think the Town should be working to acquire open space.
- Most residents (88% of respondents) believe the Town should provide flexible design to encourage open space preservation in new subdivisions; ensure business developments are attractively designed and landscaped (92%); create a lakefront zoning district (74%); and promote housing affordability (72%).
- Most residents (61% of respondents) felt that Sturbridge was on the right track and meeting their expectations in the areas of residential, commercial and industrial development, and the protection of open space. Most residents (83%) opposed the development of a casino in Sturbridge.

- Most residents indicated an interest in seeing that recreation programs were funded through user fees (51% of respondents), or a combination of user fees and property taxes (40% of respondents).
- Most residents (98% of respondents) indicated that Sturbridge was either a good or great place to live.

The Town's Open Space Committee used the results of the survey in its deliberations for the content of this Plan, particularly for the goals and objectives (see Section 8) and the five-year plan of action (see Section 9). The Committee also utilized the results of the October public forum on open space for this purpose. Taken together, the survey and public forum were instrumental in formulating the policies contained in this document.

B. Goals and Objectives

As a result of the findings of the survey, the Open Space Committee has identified these as community goals:

- Sturbridge is a beautiful community with wooded hills, beautiful lakes, ponds, streams, and rivers, and a rich sense of history. The citizens' desire to experience these amenities is indicated by their strong support of completing the Town's trail system, proactive local regulation protecting street trees and hopes to preserve significant parcels of presently undeveloped land.
- Although the Town has been very fortunate that the state and federal government have created most of the passive and active recreation areas in Town, citizens believe the Town should take stronger measures to protect open land and provide recreation (particularly passive recreation) facilities.
- Town character does matter – many residents cite the physical beauty of the town and its built environment (the Town's lakes, hills, woods, and the Quinebaug River – as well as the Town Common area) as being important to them.
- There is a growing realization of the importance of the natural environment – the costs of sewerage around Cedar Lake, the limits on Town water supply and other negative consequences of development have shown that the Townspeople are concerned about the effects of *too much* development.

Section 7: Analysis of needs

A. Summary of Resource Protection Needs

1. Groundwater Protection

The Town of Sturbridge adopted a Groundwater Protection District at its 2002 spring Town Meeting. The district covers the Town's groundwater resources as determined by the US Geological Survey, as well as the Zone II contribution areas for the Town's drinking water wells. The regulations of the district include a limit on the amount of impervious surfaces, a limitation on the types of allowable land uses and standards for the use and storage of hazardous materials.

2. Wetlands

The Town has adopted a Wetland Protection Bylaw and the Conservation Commission is charged with its administration. The Bylaw requires a 25-foot no disturbance zone around wetlands and streams, and an additional 25-foot no construction zone. Additional buffers are required for significantly sloping land in close proximity to wetlands. Exceptions are allowed on a case-by-case basis but only if mitigation measures are employed.

3. Flexible development and residential density

The Town's Multiple Dwelling Projects Bylaw (Chapter Seven) of the Zoning Bylaws should be evaluated on an ongoing basis to determine whether it achieves the goal of encouraging a creative approach to the development of residential land and the preservation of open space.

As in many growing, desirable communities in Massachusetts, the biggest threat to open space is development. Residential development, which in most of Sturbridge relies on on-site septic systems, should be concentrated in areas that are best suited for such development. The large amount of land in Town characterized by ledges and steep changes in grade have proved difficult to subdivide appropriately. Residential development is a major threat to farm and forestlands as well. The Town's Master Plans have recommended "down-zoning" the Rural Residential zoning district to two acres to better accommodate residential development at more environmentally-sensitive densities; however, this change has not occurred and the district still has a minimum lot size of one acre.

4. Habitats

Several endangered and/or threatened species have been identified in Sturbridge and the large tracts of State land, most especially the wildlife management areas, create corridors for the movement of wildlife. These corridors are interrupted by natural barriers (such as the Quinebaug River in parts) as well as built barriers (the Mass Pike being an example), but do exist to some degree. These corridors need to be documented for different species and appropriate corridor preservation strategies developed.

5. Streetscapes

The character of the community of Sturbridge is important to its residents. It may perhaps be even more important to its business community, particularly those catering to tourists, which relies on the historic and scenic qualities of the Town. A principal component of the Town's character, especially to tourists, is the experience from the road or the Town's streetscapes.

The Town's new Public Shade Tree bylaw proposed by the Tree Warden and adopted by Town Meeting in April 1997 and amended in April 1998 recognizes the esthetic, environmental, and economic value of street trees. It can be used to prevent the removal of healthy street trees and provides for penalties for unauthorized removal of trees. The Town's commitment to being a TREE CITY USA and its investment in preserving street and significant trees should be reinforced by additional plantings. Whether grant funds will continue to provide a supply of trees suitable for street tree planting purposes or other means (such as donations of money or memorial gifts, partnerships with garden clubs and other community organizations, or creation of a small town nursery to produce street trees cost-effectively) need to be identified, the program should continue.

The Town also adopted a Scenic Road Bylaw at the spring 2004 Town Meeting in accordance with MGL Chapter 40, Section 15C. Currently, portions of thirty-one local roads have been designated as Scenic Roads through Town Meeting action. A comprehensive listing of these roads can be found on file with the Town Clerk.

B. Summary of Community's Needs

The use of standards to determine whether or not a community has adequate open space and recreation is difficult due to changing trends in recreation, demographic and socio-economic characteristics of the community, especially in growing communities. The National Recreation and Parks Association and the American Academy for Park and Recreation Administration have prepared a set of guidelines for the local provision of open space and recreation facilities. These guidelines, established in 1996, suggest using a Level-of-Service (or LOS) guideline for planning active recreation facilities.

The LOS is a ratio expressed as acres-per-1,000 population, which represents the minimum amount of ground space needed to meet real time recreation demands of the local citizens. The LOS planning concept for active recreation facilities includes both the land needed for the actual facilities, but also ancillary land for parking, restrooms, walkways, etc. The LOS concept is used for mini-parks (typically associated with a single development), neighborhood parks, community parks and athletic complexes, but not for nature preserves, historic district parks or greenways. There is no one LOS standard that is applicable to every community; rather, each community should calculate its own LOS using the following formula:

- Determine the park classifications for which the LOS will apply.
- Determine the recreation activity menu for each park classification. The menu will be a list of all the recreation facilities intended to go into each park classification and for which a specific amount of space will be needed. The menu determines the facilities space requirements for the LOS formula.
- Determine the open space size standards for each park classification for which the LOS standards will apply.
- Determine the present supply of these recreation activity choices.
- Determine the expressed demand for these recreation activity choices (usually done through surveys of the populace).
- Determine the minimum population service requirements for these recreation activity choices.
- Determine the individual LOS for each park classification.
- Determine the collective LOS for the entire park and recreation system.

Performing a LOS analysis for the Town's active recreation facilities is beyond the scope of this project; however, it is recommended that the Sturbridge Recreation Committee work in conjunction with the Public Works Department to conduct a LOS analysis over the next five years. Such an effort will help the Town determine its own specific recreation standards and whether or not the currently amount of facilities meet said standards.

In terms of open space, such land cannot and should not be equated with a numerical standard of any kind; such an approach would be both impractical and counterproductive. There is no number of acres of floodplain or wetlands that every community should have in order to meet a national standard. Rather, a community should, through a strategic planning process, develop open space policies that reflect the unique resources of the community.

C. Management Needs, Potential Change of Use

1. Continue the Work of the Town's Open Space Committee

The Town should continue to support the endeavors of the Open Space Committee, which serves to advise, advocate and coordinate open space issues in Sturbridge. The Committee's first role is to advocate for open space and build consensus around land conservation issues. As an ongoing, standing group, the Committee is able to react in a timely fashion when necessary and provides a consistent, vigilant view of land conservation activities. It is the Open Space Committee who is responsible for the timely updating of this document. Having a State-approved Open Space & Recreation Plan maintains the Town's eligibility for State grants regarding recreation and open space acquisition.

The committee's various charges include:

- Maintain the Open Space and Recreation Plan.
- Report annually to the Town Meeting and Selectmen assessing progress on action plan.
- Evaluate all properties being considered for open space acquisition, including 61/61A/61B options offered to the Town (i.e., right of first refusal).

- Implement some of the action plan items, as appropriate.
- Serve as the Town's advocate for open space and open space issues.
- Liaison with State, regional, and federal agencies and non-profits on open space preservation and connection, maintain communications with open space advocates in abutting communities.
- Work with Betterment Committee when appropriate to acquire land and develop recreational facilities.

2. Prioritization for open space acquisition

Communities acquiring land for open space, recreation, and conservation purposes frequently attempt to devise a method to compare or prioritize land for acquisition. These systems often list locations of threatened or endangered plant or animal species as among the highest priority land to buy or protect. Also usually highly ranked is water supply protection land. Agricultural land, particularly productive land, ranks high as does keeping open land unbuilt in more densely settled areas without open space at present. Land that connects existing open space areas or create buffers between sensitive natural resources may rank high as well.

It is proposed that land for acquisition should either protect present or future water supplies, sensitive natural resource areas, provide public access to natural resources, connect existing open space land, or provide recreational facilities or amenities, particularly in settled areas. Land that achieves more than one of these objectives would be highly ranked. The Open Space Committee should evaluate these suggestions, utilizing its acquisition sheet and should continue to refine its system of prioritizing land for acquisition or acceptance by the Town.

3. Land Acquisition and Long-range Capital Plan

The Recreation Committee has worked many hours to develop a plan for the rehabilitation of various town recreation facilities. Their plans, though, have been perceived as a project-by-project effort and not generally seen as a part of a long-range plan for the Town's recreation facilities. A plan for the comprehensive development, rehabilitation and maintenance of the Town's recreation facilities, which prioritizes efforts, anticipates present and future needs, and provides for the periodic maintenance, routine as well as more extensive, for all facilities should be developed to provide adequate recreation facilities. This plan then needs to be incorporated within the Town's capital planning and Betterment process. As previously discussed, the lack of Town owned land has limited the Commission's ability to plan for additional facilities. There are three possible methods to increase the supply of land for recreation uses:

- A. Entering into agreements with the owners of open space (i.e. the various state agencies and others) to determine whether active recreation is appropriate and permitted in other locations in Town.
- B. Working with the Planning Board to encourage the creation of open land especially for active recreation as a part of new development (either through negotiations with applicants or by reserving land upon approval of a subdivision [M.G.L. Ch. 41 s. 81U final paragraph: "Before approval of a plan by a planning

board, said board shall also in proper cases require the plan to show a park or parks suitably located for playground or recreation purposes or for providing light and air and not unreasonable in area in relation to the area of the land being subdivided and the prospective uses of such land, and if so determined said board shall by appropriate endorsement on the plan require that no building may be erected on such park or parks for a period of not more than three years without its approval"].

- C. Acquisition of targeted parcels and/or exercising the Town's right of first refusal on lands about to be withdrawn from the State's Chapter 61 taxation program.

Section 8: Goals and Objectives

1. Community character
 - a. Identify those natural, built, and historic elements, which contribute to the character of the Town; develop preservation strategies.
 - b. Identify methods to preserve and promote streetscapes.
 - c. Review Town bylaws and regulations and incorporate requirements for high standards of design and landscaping. Mitigate the impact of development, particularly large-scale development, through zoning controls, landscaping requirements, and other developmental regulations.
 - d. Preserve agriculture and forestry land, which as working landscapes are important component of Sturbridge's character.
2. Land Acquisition
 - a. Initiate efforts to identify and acquire important parcels for conservation and resource protection purposes. These can include habitat for threatened or endangered plant or animal species, water supply protection land, agricultural land, and land that connects existing open space areas or creates buffers between sensitive natural resources.
 - b. Acquire land for conservation, recreation, habitat preservation, and natural resource protection.
 - c. Cultivate local, state and federal fiscal resources for open space funding.
 - d. Acquire and protect areas critical for water supplies.
 - e. Identify all municipal-owned parcels and make recommendation for Conservation Commission ownership under Article 97 protection.
3. Provide and Promote Recreational Opportunities for all Residents
 - a. Provide inclusive passive and active recreational opportunities, resources, and facilities for all citizens.
 - b. Improve access to the riverfront and to ponds.
 - c. Ensure sufficient supply of playing fields for team sports.
 - d. Incorporate recreational needs and facilities in the Town's capital budgeting process.

4. Trails
 - a. Complete process of planning and preserving trail and greenbelt corridors.
 - b. Incorporate trails, greenbelt and buffer requirements in local bylaws and regulations.
 - c. Develop trails for jogging, biking or walking, working towards a network connecting various greenway corridors.
5. Outreach
 - a. Increase public awareness and support of open space.
 - b. Continue dialogue and partnerships with the state, federal, conservation groups and non-profit owners of land in Sturbridge.

Although these goals seem distinctive and somewhat separate, it is the integrated approach to implementation that enables a comprehensive approach to resource protection, community and habitat preservation, sufficient active and passive recreation opportunities for residents and visitors, and preservation of the town's quality. All these goals are ingredients that contribute to the overall quality of life for people as well as animals.

Section 9: Five-Year Action Plan

Of the activities listed below, some are underway at present. It is presumed that these items will be completed the first fiscal year. Items can be moved from one year to another depending on issues facing the Town.

FY06

- Board of Selectmen and other boards and commissions adopt Updated Plan.
- Conservation Commission, Recreation Committee and Planning Board work with Trails Committee to develop trail system.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.
- Planning Board implements Scenic Roads Bylaw.
- Update inventory of unprotected lands and open parcels.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Open Space Committee collaborates with local land trusts.
- Town Meeting appropriates funds for Town Conservation Fund.
- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

FY07

- Recreation Committee continues with efforts to construct an additional recreational field.
- Recreation Committee refines needs and begins to develop a long-range capital plan.
- Update inventory of unprotected lands and open parcels.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.
- Planning Board study fiscal impacts of growth.
- Planning Board continues with efforts to incorporate trails and increased landscaping and buffering requirements in regulations.
- Continue with street trees programs; increase number of street trees planted or replaced.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Open Space Committee collaborates with local land trusts.

- Town Meeting appropriates funds for Town Conservation Fund.
- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

FY08

- Open Space Committee reports to Board of Selectmen and Town Meeting on progress implementing plan and other open space issues.
- Planning Board continues to develop Groundwater Protection Bylaws, either as a zoning or general bylaw of the Town.
- Planning Board and Conservation Commission continue work on incorporating wetlands protections in Town's zoning.
- Planning Board does update to build-out analysis to determine needs for reducing density of development and preserving open land.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.
- Update inventory of unprotected lands and open parcels.
- Open Space Committee refines identification of protective corridors or greenbelts through Town.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Continue with street trees programs.
- Open Space Committee and Town Administrator continue dialogue with non-profits, state agencies, and federal departments.
- Planning Board continues to analyze Census 2000 data if available and report to town boards on demographic trends and changes.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Open Space Committee collaborates with local land trusts.
- Town Meeting appropriates funds for Town Conservation Fund.
- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

FY09

- Open Space Committee report to Board of Selectmen and Town Meeting on progress implementing plan and other open space issues.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.

- Recreation Committee reviews recreation needs in light of demographic trends and changes, and utilizes the LOS analysis method to determine the Town's true demand and need for active recreation facilities.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee studies programs for preservation of agricultural and forest lands.
- Review the development of trail systems and proposals.
- Continue with street trees programs.
- Update inventory of unprotected lands and open parcels.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Open Space Committee collaborates with local land trusts.
- Town Meeting appropriates funds for Town Conservation Fund.
- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

FY10

- Open Space Committee reports to Board of Selectmen and Town Meeting on progress implementing plan and other open space issues.
- Open Space Committee begins open space plan update process.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.
- Continue with review and development of trail system and proposals.
- Recreation Committee continues with capital plan and implementation of long-range active recreation development program.
- The Open Space Committee and Recreation Committee continue to develop a strategy/policy to provide additional active and passive recreation opportunities for all residents.
- Update inventory of unprotected lands and open parcels.
- Open Space Committee dispenses information to residents about the tax advantages in donating land, easements, or restrictions to the Town or non-profit.
- Open Space Committee proposes ongoing dialogue with Community Preservation Act Committee concerning existing Chapter 61/61A/61B properties prior to their withdrawal from program, for future acquisition.
- Open Space Committee collaborates with local land trusts.
- Town Meeting appropriates funds for Town Conservation Fund.

- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

FY11

- Open Space Committee reports to Board of Selectmen and Town Meeting on progress implementing plan and other open space issues.
- Open Space Committee submits updated plan to Town and state for adoption and approval.
- Planning Board works on flexible development and considers impacts of down-zoning in protecting open space.
- Continue review of trail system development and proposals.
- Open Space Committee, Recreation Committee and Council on Aging continue to develop standards and goals for additional active and passive recreation opportunities for all residents.
- Planning Board reviews subdivision rules and regulations and other Town bylaws for preservation of stonewalls, natural features, and other elements of "rural" or "scenic" landscapes.
- Continue street tree efforts.
- Update inventory of unprotected lands and open parcels.
- Open Space Committee collaborates with a local land trust.
- Town Meeting appropriate funds for Town Conservation Fund.
- Open Space Committee will review the Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the Town.

Although these goals seem distinctive and somewhat separate, it is the integrated approach to implementation that enables a comprehensive approach to resource protection, community and habitat preservation, sufficient active and passive recreation opportunities for residents and visitors, and preservation of the town's quality. All these goals are ingredients that contribute to the overall quality of life for people as well as animals. A graphic depiction of the Town's five-year action plan can be found on the following page as Map 8 (Action Plan Map).

Insert Action Plan Map Here (8)

Action items sorted by goal:

Goal	Activity	By whom?	When?
1. Community character			
a. Continue to identify those natural, built, and historic elements that contribute to the Town's character.	Continue working with Quinebaug and Shetucket Rivers Valley National Heritage Corridor.	BOS	ongoing
	Update buildout analysis to determine needs for reducing density and preserving open land.	Planning Board	FY2008
a-2. Continue to develop preservation strategies.	Continue dialogue with CPAC concerning existing Ch.61/61A/61B properties prior to their withdrawal for possible future acquisition.	Open Space Committee	ongoing
	Develop flexible (or cluster) development bylaw and consider impacts of downzoning in protecting open space.	Planning Board	ongoing
b. Continue to identify methods to preserve and improve streetscapes.	Continue with street trees programs; increase number of street trees planted or replaced.	Tree Warden	ongoing
	Implement Scenic Road bylaw.	Planning Bd	ongoing
c. Review Town bylaws and regulations to mitigate the impact of development through zoning controls, landscaping requirements, and other regulations.	Review subdivision rules and regulations and other town bylaws for preservation of stone walls, natural features, and other elements of "rural" or "scenic" landscapes.	Planning Bd CPAC Open Space	ongoing
d. Preserve agriculture and forestry land.	Study agricultural and forest land preservation; develop local strategy for disseminating information.	Open Space	FY2009
	Continue dialogue with CPAC concerning existing Ch.61/61A/61B properties prior to their withdrawal for possible future acquisition.	Open Space Committee	ongoing
e. Advocate Smart Growth measures	Review Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the town.	Open Space Committee	ongoing

Goal	Activity	By whom?	When?
2. Land Acquisition			
a. Continue efforts to identify and acquire important parcels.	Continue prioritizing land for the acquisition of open space and conservation land.	Open Space Committee	ongoing
	Continue updating inventory of unprotected land and developing database of major open parcels.	Open Space	ongoing
b. Acquire land.	Create Town Conservation revolving fund.	Town Meeting	FY2007
	Contribute to Town Conservation revolving fund.	Town Meeting; Finance Committee	ongoing
	Begin OSRP plan update to maintain Town's eligibility for DCS Self-Help funds.	Open Space Committee	FY2010
c. Identify local fiscal resources.	Study fiscal impacts of growth.	PB	FY2007
	Continue collaborating with local land trusts.	Open Space	ongoing
d. Acquire or protect other critically important natural resource areas.	Continue incorporating wetlands protections in zoning.	Planning Bd ConComm	ongoing

Goal	Activity	By whom?	When?
3. Recreation for All			
a. Provide opportunities for passive and active recreation for all.	Consider recreational opportunities when acquiring land.	Open Space Rec Comm	ongoing
	Disseminate information to residents about the tax advantages of donating land, easements, or restrictions to the town or non-profit.	Open Space	ongoing
b. Incorporate recreation needs and facilities in the capital budget.	Refine needs and begin long-range capital planning through use of LOS analysis method..	Rec Comm	FY2008
	Continue with capital plan and implementation of long-range active recreation development program.	Rec Comm	FY2011

c. Consider the needs of all residents.	Continue developing a strategy/policy to provide additional active and passive recreation opportunities for all residents.	Open Space Rec Comm	ongoing
d. Provide recreational facilities for all age groups.	Continue to analyze Census 2000 data and report to town boards on demographic trends and changes.	Planning Bd	FY2008
	Review recreation needs in light of demographic trends and changes.	Rec Comm	ongoing
e. Improve access to the riverfront and to ponds.	Work with regional Trail Comm.	Rec Comm	ongoing
	Work with State Public Access Board to ensure public use of great ponds.	Open Space Rec Comm	ongoing
f. Ensure sufficient playing fields.	Evaluate need for playing fields and consider possible sites.	Rec Comm	FY2007

Goal	Activity	By whom?	When?
4. Trails			
a. Plan trails and greenbelt corridors.	Work with regional Trails Comm and Rec Comm.	Open Space, ConCom, Rec Comm, Planning Bd	ongoing
	Continue refining identification of protective corridors and greenbelts.	Open Space	ongoing
b. Incorporate trails, greenbelt, and buffer requirements in local bylaws and regulations.	Incorporate trails, greenbelt, and buffer requirements in local bylaws and regulations.	Planning Bd	ongoing
c. Develop trails for jogging, biking and walking.	Work with regional Trails Comm.	Rec Comm	ongoing

Goal	Activity	By whom?	When?
5. Outreach			
a. Increase public awareness and support.	Adopt updated Open Space plan.	BOS/CC/P B/Rec Comm	FY2006

	Report to Town Meeting and Board of Selectmen on progress implementing plan and other open space issues.	Open Space Committee	ongoing
b. Provide opportunities for passive and active recreation for all.		Rec Comm Open Space	ongoing
c. Continue dialogue and partnerships with the state, federal, and non-profit open space entities.		Open Space, Town Adm	ongoing

Work items sorted by responsible Board or department:

BOARD OF SELECTMEN

BOS	FY2006	Adopt updated Open Space plan
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CONSERVATION COMMISSION

ConComm	FY2006	Adopt updated Open Space plan
ConComm (w/ Planning Bd)	ongoing	Incorporate wetlands protections in zoning.
ConComm (w/ Rec Comm and Planning Bd)	ongoing	Work with regional Trails Committee.

Council on Aging (w/ Open Space & Rec Comm)	ongoing	Provide opportunities for passive and active recreation for all.
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OPEN SPACE COMMITTEE

Open Space Committee	ongoing	Work with State Public Access Board to ensure public use of great ponds.
Open Space Committee	ongoing	Report to Town Meeting and Board of Selectmen on progress implementing plan and other open space issues.
Open Space Committee	ongoing	Continue refining identification of protective corridors and greenbelts.
Open Space Committee	ongoing	Continue dialogue with CPAC concerning existing Ch.61/61A/61B properties prior to their withdrawal for possible future acquisition.
Open Space Committee and Town Administrator	ongoing	Continue dialogue with non-profits, state and federal agencies, and establish periodic communications.
Open Space	ongoing	Review Smart Growth Commonwealth Capital guidelines to make recommendations to the various committees and boards of the town.

Open Space	ongoing	Study agricultural and forest land preservation; develop local strategy for disseminating information
Open Space	ongoing	Disseminate information to residents about the tax advantages of donating land, easements, or restrictions to the town or non-profit.
Open Space	FY2010	Update inventory of unprotected land and database of major open parcels.
Open Space (Rec Comm)	ongoing	Continue developing a strategy/policy to provide additional active and passive recreation opportunities for all residents.
Open Space Committee	FY2010	Begin OSRP plan update to maintain Town's eligibility for DCS Self-Help funds.
Open Space	ongoing	Continue collaborating with local land trusts.
Open Space (w/ Rec Comm & Council on Aging)	ongoing	Continue developing standards and goals for additional active and passive recreation opportunities for all residents.

RECREATION COMMITTEE

Rec Comm	FY2006	Adopt updated Open Space plan.
Rec Comm	FY2008	1. Refine needs through use of LOS analysis method and begin long-range capital planning.
Rec Comm	FY2007	2. Evaluate need for playing fields and consider possible sites.
Rec Comm	ongoing	Review recreation needs in light of demographic trends and changes.
Rec Comm (w/ Open Space)	ongoing	Continue developing a strategy/policy to provide additional active and passive recreation opportunities for all residents.
Rec Comm	FY2011	Continue with capital plan and implementation of long-range active recreation development program.
Rec Comm (w/ Open Space and Council on Aging)	ongoing	Develop standards and goals for additional active and passive recreation opportunities for all residents .

PLANNING BOARD

Planning Bd	FY2006	Adopt updated Open Space plan.
Planning Bd	ongoing	1. Incorporate trails, greenbelt, and buffer requirements in local bylaws and regulations.
Planning Bd	FY2007	2. Study fiscal impacts of growth.
Planning Bd (w/ ConComm)	ongoing	1. Incorporate wetlands protections in zoning.
Planning Bd	FY2008	2. Update buildout analysis to determine needs for reducing density and preserving open land.
Planning Bd (w/ Con Comm and Rec Comm)	ongoing	3. Work with regional Trails Committee.

Planning Bd	ongoing	1. Develop flexible (or cluster) development bylaw and consider impacts of downzoning in protecting open space.
Planning Bd	ongoing	2. Continue to analyze Census 2000 data and report to town boards on demographic trends and changes.
Planning Bd	ongoing	Implement Scenic Road bylaw.
Planning Bd	ongoing	Review subdivision rules and regulations and other town bylaws for preservation of stone walls, natural features, and other elements of "rural" or "scenic" landscapes.

TOWN ADMINISTRATOR

Town Administrator (w/ Open Space Committee)	ongoing	Continue dialogue with non-profits, state and federal agencies, and establish periodic communications.
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TOWN MEETING/FINANCE COMMITTEE

Town Meeting	FY2007	Create Town Conservation revolving fund.
Town Meeting; Finance Committee	ongoing	Contribute to Conservation revolving fund.

TREE WARDEN

Tree Warden	ongoing	Continue with street trees programs; increase number of street trees planted or replaced.
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Section 10: References

Burns, Brian. Sturbridge, a pictorial history. 1988.

Duerksen, Christopher J. et al. Habitat Protection Planning: Where the Wild Things Are. APA Planning Advisory Service Report #470/471, Chicago, IL, 1997.

Charles J. Fausold and Robert J. Lillieholm, The Economic Value of Open Space: A Review and Synthesis, a Lincoln Institute of Land Policy Research Paper [Cambridge, MA], 1996.

E.H. Lord-Wood Associates, Planning Consultants. Basic Studies, Sturbridge, MA 1964.

E.H. Lord-Wood Associates, Planning Consultants. Comprehensive Plan, Sturbridge, MA 1965.

E.H. Lord-Wood Associates, Planning Consultants. Master Plan, Sturbridge, MA 1988.

E.H. Lord-Wood Associates, Planning Consultants. Master Plan, Sturbridge, MA 1971.

National Recreation and Parks Association and the American Academy for Park and Recreation Administration. Park, Recreation, Open Space and Greenway Guidelines, 1996.

Small, Stephen J. Esq. Preserving Family Lands: A Landowner's Introduction to Tax Issues and other Considerations.

Town of Sturbridge, annual Town Reports.

The Trust for Public Lands. Community Choices: Thinking through Land Conservation, Development, and Property Taxes in Massachusetts. 1998.

The Open Space Planner's Workbook. EOEa Division of Conservation Services. 2001.

Massachusetts Statewide Comprehensive Outdoor Recreation Plan. EOEa Division of Conservation Services. 2004.

State of Massachusetts Departmental Websites: EOEa, DCR, DEM, DEP, DFWLE and DFA.

Small, Stephen J. Esq., Preserving Family Lands: A Landowner's Introduction to Tax Issues and other Considerations.

USDA Natural Resource Conservation Service (NRCS), Soil Survey of Worcester County, Massachusetts – Southern Part, 1992.

Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP),_A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters, 2004.

Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP), Massachusetts Section 303(d) Lists of Waters, 2004.

Central Massachusetts Regional Planning Commission, Buildout Analysis for Sturbridge, 2001.

Central Massachusetts Regional Planning Commission, Intercommunity Trail Connection Feasibility Study – CMRPC Southwest Subregion, 2001.

Massachusetts Statewide Comprehensive Outdoor Recreation Plan, EOEA Division of Conservation Services. 2004.

Section 11: Comments

Appendices

- A Funding Mechanisms and Programs
- B Land Protection Options (from the Open Space Planner's Workbook)
- C Section 504 Self-Evaluation - accessibility surveys

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Appendix A

Funding Mechanisms and Programs

Property Acquisition

1) Program/Method:	Municipal purchase
Sponsoring Agency:	Town of Sturbridge.
Approximate Funding Maximum:	Dependent on Town Meeting.
Program Description:	This tool is probably the most direct and effective way for a town to achieve the acquisition objectives of its open space plan. Towns may either issue bonds to cover purchases or in some cases include a purchase item in the general budget. Bond issues are quite common and provide communities with the flexibility to negotiate with property owners, knowing that money has already been authorized to complete the acquisition. In practice, towns generally ask for authorization to float a bond to cover open space acquisition, and then once a deal has been negotiated return to town meeting for the actual appropriation.
Priority for pursuing:	High.
Chances of success:	Moderate. Will depend on a vigorous public outreach campaign prior to town meeting and the general referendum.
2) Program/Method:	Massachusetts Self-Help Program
Sponsoring Agency:	Massachusetts Office of Environmental Affairs, Division of Conservation Services (DCS).
Approximate Funding Maximum:	\$250,000.
Program Description:	The Program provides a percentage (typically over 50%) of reimbursement for the purchase of land for conservation and passive recreation purposes. This program can provide funding for “regional”

projects, whereby several communities can combine their funding to cover a larger land purchase.

Priority for pursuing: High.

Chances of success: Moderate. Will depend on quality of town's application and level of competition.

3) Program/Method:

Massachusetts Highway Department (MHD) Open Space Program

Sponsoring Agency: Massachusetts Executive Office of Transportation and Construction (EOTC).

Approximate Funding Maximum: None, but program receives only \$1M/year to be spread around the State.

Program Description: This program acquires scenic areas adjacent to roadways. Funds are not available for recreation projects, though MHD has worked cooperatively with other state agencies and municipalities to assist in adjoining recreation projects. Scenic views and environmental protection are the two areas of program focus.

Priority for pursuing: Low.

Chances of success: Low, unless a great scenic resource is involved.

4) Program/Method:

Federal Land and Water Conservation Fund

Sponsoring Agency: National Park Service.

Approximate Funding Maximum: Not known as the Program has just recently been reactivated.

Program Description: The first iteration of this Program provided up to 50% reimbursement towards the cost of acquisition or improvement of recreation land, including the development of active recreation facilities.

Priority for pursuing: Moderate.

Chances of success: Moderate depending on the funds to be made available upon the Program's new startup.

5) Program/Method

Community Preservation Act (CPA)

Sponsoring Agency:

Town of Sturbridge.

Approximate Funding Maximum:

Dependent on Town Meeting.

Program Description:

This program allows the Town to collect money from real estate transactions in Sturbridge, which is then partially matched through the State Community Preservation Program within the Executive Office of Environmental Affairs (EOEA). Sturbridge was one of the very first communities in Central Massachusetts to enact this program. A local CPA Committee is charged with collecting and expending funds, as well as deciding which local projects to pursue with the money collected. As land protection is one of the specific goals of the CPA, the program represents an excellent tool for preserving key properties in Town.

Priority for pursuing:

High.

Chances of success:

High.

Studies and Construction/Maintenance

1) Program/Method:

Lake and Pond Grants

Sponsoring Agency:

Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum:

\$10,000.

Program Description:

This program is the successor program to DEP's Clean Lakes Program (Chapter 628). Eligible activities include, lake management analysis and planning, public education, and watershed and in-lake management techniques. The program requires a 50% cash match. Applications are due in November of each year.

Priority for pursuing:

Moderate.

Chances of success:

Moderate.

2) Program/Method: **The National Recreational Trails Act (NRTA)**

Sponsoring Agency: Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum: \$30,000.

Program Description: Part of the federal Intermodal Surface Transportation Act, NRTA provides funds for trail projects. Eligible projects include: trail construction, land/easement acquisition, handicapped accessibility, interpretative areas/facilities, and education. Trails must be recreational, e.g. intra-city, on-road bikeways would probably not be eligible. There is no limit on grant funds, but a 50% local match is required (matching funds can be “non-cash”). Motorized and non-motorized trail use must be included in the grant with at least thirty percent of funds going to each activity. Applications are due in October of each year.

Priority for pursuing: Moderate.

Chances of success: High with a good proposal.

3) Program/Method: **Greenways and Trails Demonstration Grant Program**

Sponsoring Agency: Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum: \$5,000.

Program Description: Greenways and trail projects are at the center of this program. Funding categories include: planning, research, mapping, public education and community outreach, ecological assessment, and trail construction, maintenance and expansion. In recent years focus has been placed on projects that either educate the public or work on river greenways. However, all greenway/trail projects are eligible with the exception of those confined to a single

parcel of land. Applications are due in January/February every year and no local match is required.

Priority for pursuing: Moderate.

Chances of success: High with a good proposal.

4) Program/Method: **Inter-Modal Surface Transportation Efficiency Act (ISTEA), Regional Transportation Improvement Program**

Sponsoring Agency: Massachusetts Highway Department, Central Massachusetts Metropolitan Planning Organization. (MPO).

Approximate Funding Maximum: No maximum.

Program Description: Funds are available for transportation related open space improvements. A bike path that connects dense areas of housing with employment or shopping centers would clearly fit the criteria. However, the state and the MPO have been relatively flexible about definitions and projects that are slightly less directly related to transportation may be eligible e.g., an open space parcel adjacent to a road programmed for repairs; the parcel provides a roadway rest area and access to walking trails.

Priority for pursuing: Moderate with an appropriate project.

Chances of success: Low.

5) Program/Method: **Inter-Modal Surface Transportation Efficiency Act (ISTEA), Enhancement Program**

Sponsoring Agency: Massachusetts Highway Department (MHD), Central Massachusetts Metropolitan Planning Organization.

Approximate Funding Maximum: None, but a \$100,000 minimum is requested by MHD.

Program Description: Money is provided to a variety of transportation “enhancement” projects. Among those eligible are bikeways, walking paths and rail trails. This is a special dedicated fund that amounts to 10% of statewide spending from ISTEA monies.

Priority for pursuing: Moderate.

Chances of success: Low.

Non-acquisition programs

1) Program/Method:

Conservation Restrictions (CRs)

Sponsoring Agency: Massachusetts Office of Environmental Affairs, Division of Conservation Services (DCS).

Approximate Funding Maximum: Only technical support available.

Program Description: Conservation restrictions (CR’s) are legal, enforceable agreements, authorized by the state, which are made between a landowner and a charitable organization, or a town. They are used primarily to keep land in a "natural or scenic open condition". Restrictions can be written so that certain uses are permitted and others prohibited, e.g. the current owner may continue to occupy an existing house on the land, but may restrict the construction of any additional houses. Grantors of restrictions may also be able to benefit by reductions in various taxes including property, estate and income.

Priority for pursuing: High.

Chances of success: Depends on property owner.

2) Program/Method:

Assessment Act (M.G.L. Chapters 61, 61A and 61B)

Sponsoring Agency: Massachusetts Department of Environmental Management, Department of Food and Agriculture, and Department of Revenue (respectively).

Approximate Funding Maximum: No public funds available.

Program Description: These programs work by making available special property tax assessments to owners who agree to restrict their land to a particular use. Chapter 61 applies to lands actively devoted to forestry use, 61A applies to active agricultural lands, and 61B applies to public recreational lands like wildlife sanctuaries and golf courses. Generally properties are assessed at their current use value rather than their highest use. This usually translates into a substantial property tax savings for owners. The program also requires a right-of-first-refusal option to the town when property owners look to sell their land.

Priority for pursuing: Moderate.

Chances of success: Depends on property owner.

3) Program/Method: **Agricultural Preservation Restrictions**

Sponsoring Agency: Massachusetts Department of Food and Agriculture.

Approximate Funding Maximum: No public funds available.

Program Description: This program insures that active farms stay in agricultural production. The state purchases a farmer's development rights. The price paid is the difference between the full market value of the property and its appraised agricultural value. A permanent restriction is then put in place prohibiting all non-agricultural uses on the parcel. The farmer is taxed at the agricultural value rather than the highest use value.

Priority for pursuing: High.

Chances of success: Depends on property owner.

APPENDIX B: LAND PROTECTION OPTIONS

Open space and resource protection is becoming increasingly complex - in terms of both the pressures impacting landowners and the many options available to protect land. Careful consideration and a creative approach are often required to determine the proper techniques, or combination of techniques, to be employed in each case.

Some of the available options are described briefly below. This is intended as an overview only: binding decisions should not be made without first consulting the appropriate advisor - whether it be for financial, legal, or other reasons. State and local governments and nonprofit conservation groups are good sources of additional information and guidance.

General Tips for Approaching Landowners

1. **Know why you want to protect it** - To select the most appropriate protection strategy, it is important to know your objectives. For example, it may be determined that preservation of a specific viewshed and public pedestrian access are the primary objectives for a given tract. Having identified the objectives, you can explain to the landowners why you are interested in protecting their land. Determining the objectives also enables you to select the optimum strategy.
2. **Know what the owners want** - It is also essential to determine the desires and objectives of the property owners, and incorporate them into your proposed protection strategy. These concerns and desires may relate to numerous issues, including liquidating the equity that exists in the property; current or future tax burdens (including real estate, income and estate taxes); and family concerns regarding the future land uses on the property.
3. **Know the property itself** - It is also worthwhile to become familiar with the property before meeting with the owner. By demonstrating a sound knowledge of the physical characteristics of the property, you are likely to gain the respect of the landowner. Can you really expect landowners who consider their land significant and worthy of protection to be comfortable entrusting it to you if you aren't even familiar with its layout or resources?
4. **Be prepared to suggest several options** - Spend enough time studying the situation before contacting the owners to be prepared to suggest several possible approaches to them. Be able to explain the advantages to themselves and to the town of each option on the table.
5. **Build trust and stay in touch** - Once you are clear about your own objectives and the probable objectives of the landowners, it is time to approach them regarding protection of their land. At this point it is important to acknowledge the importance of trust in your relationship with the landowner. By demonstrating a knowledge and appreciation of the significance of their property, having a clear understanding of what they want to achieve, and a sound strategy to achieve it, a good foundation for trust is developed. By maintaining regular communication and monitoring specific circumstances affecting ownership and staying in touch over time, you can be properly positioned to react quickly if necessary. It is often at times of family distress or other need for property transfer that an opportunity to acquire, or otherwise protect, a parcel of critical importance exists. The existence of mutual trust often makes the difference between a successful or failed effort.

By taking the time to think through these issues ahead of time, and then discussing them with the landowners, you increase your chances of a successful encounter.

Specific Protection Techniques

The following is a brief description of several ways that you can meet your resource protection objectives. These descriptions are not intended to make you an expert in their use, but rather to familiarize you with some of the most important issues to consider in each.

Transfer of Title

This is the most traditional, simple and sure means of protecting a given tract: the fee-simple interest is purchased by, or donated to, someone who wants to preserve the property. Although there are numerous variations on the use of this technique, this section will address the three most common: donations, sales and transferring title subject to attached conditions.

Donation: An individual may give his land to the town or a nonprofit land trust; that is, donate the fee interest. This is also called a complete charitable transfer or outright gift. There are also somewhat more

complicated arrangements. The landowner may opt to donate the property subject to a life estate, which allows her to live on the property for the rest of her life. Or, she may decide instead to donate property while retaining certain rights in the land (removing firewood, having general access rights, or retaining rights to keep a particular view open). However, these restrictions may reduce property value, and thus the tax savings.

Advantages of a donation:

1. It's free! Sometimes, certain indirect costs, such as appraisal, title, survey, hazardous waste inspection, recording fees, etc., must be borne by the grantee. However, even in these cases, since there is no purchase price, precious acquisition funds can be saved for another effort.
2. Donations, particularly complete charitable transfers, generate maximum allowable tax savings for a given property transfer. It is worth proposing, though you may not know which landowners are in a financial position to benefit from the tax consequences of a donation. Each landowner will need to consult an attorney or accountant familiar with these tax laws. However, for those to whom it is beneficial, it is one of the best ways to obtain significant capital gains and estate tax savings.
3. Donations can become contagious within a given area. That is, as more conservation donations are made, more people become aware of the numerous benefits to the donor. The benefits to the receiver are obvious while the benefits to the giver often are not. The public recognition and appreciation for the donor's generosity and public-spiritedness can be significant. Some landowners may enjoy the idea of a public park bearing their name.

Sale: In real estate terms, sale is the transfer of ownership for a price. Groups involved in the acquisition and holding of land range from federal, state and local environmental agencies to certain nonprofit conservation groups and others. Funding sources include the sale of municipal bonds, dedicated annual funds, conservation trust funds, real estate transfer fees, grant programs and charitable contributions. While acquisition at market value is the most traditional type of sale, there are several creative alternatives to be considered.

Bargain Sale: This approach combines the partial donation of a property with the sale of it. A bargain sale occurs when a parcel is sold for less than its market value. The difference between the market value and the bargain sale price represents the amount of donation. There are two main advantages to this approach: the grantor receives income from the sale and also gains tax benefits from the reduced sale price. The grantor must obtain an appraisal that the IRS will accept, in order to receive the full tax advantages of the bargain sale.

Advantages of Bargain Sale

- Can be a "win/win" situation: landowner benefits from sale income and tax advantage, and town acquisition funds are conserved.
- Minimizing the purchase price enhances the chances of a successful re-sale to another conservation group to ensure long-term protection.
- May help to leverage additional bargain sales and outright gifts within a given neighborhood or region.

Transfer with Restrictions: This technique is often used when a landowner must sell the property but wants to govern the future use of the land. In this case, the owner may choose to attach various restrictions to the deed prior to the sale. These determine the activities that can and cannot take place on the land in the future. Although this may reduce market value of the parcel somewhat, and IRS tax benefits, the owner does gain income and achieve other objectives as well. Future owners are obligated to abide by the restrictions.

Limited Development: This technique involves the sale of a portion of a parcel of land for development to subsidize the protection of the rest. It is probably the most controversial, and risky, approach to land protection. However, in the right circumstances (a healthy market and insufficient acquisition funds), this tool may be used with very positive results. It works best where there is a portion of the parcel that is not environmentally-sensitive and can be sold for carefully planned development. The following example may help illustrate limited development, and was successfully used by the towns of Harvard, Grafton and Westford:

A conservation group wants to preserve a parcel that contains endangered species in the rear portion. The owners are moving out of the area and the property is on the market. The asking price is more than the conservation group can come up with. However, they know of several buyers interested in house lots along the road. The conservation group buys the entire property, but immediately sells the road frontage lots (the most expensive part of the parcel), thereby needing to use less from their acquisition fund to protect the endangered species.

This technique can also be used when a landowner, perhaps a nonprofit land trust, faces unmanageable carrying costs for a parcel. In this case, the owner can identify an "insignificant" portion and sell it, reducing the carrying costs and providing funds to pay future costs. Although this points out why this technique sparks controversy, it can sometimes be the only way to avoid selling the entire parcel.

Advantages of Limited Development:

- Can be the only way to afford to protect a parcel.
- Good way to incorporate other community objectives, such as affordable housing, into the scheme.
- Provides flexibility when developing a conservation strategy for a particular parcel.

Deed Restriction

Ownership of property in the United States encompasses numerous rights relating to the various uses of that property. The full array, or "bundle" of rights is commonly referred to as the fee-simple interest or fee-simple estate. The granting of a restriction or easement is an example of a less-than-fee interest since both parties, the grantor and grantee, are holders of separate portions of the original bundle as a result of the conveyance. As described above, a deed restriction is a right-of-use that has been transferred to another party, so the owner is prevented from exercising one or more of the bundle of rights normally associated with a fee-simple estate. One form of deed restriction is a conservation restriction.

Often the terms restriction and easement are used interchangeably. However, many professionals in the fields of land and resource protection consider there to be a distinction. An easement is considered to involve a "positive" granting of rights or permitted uses. For example, a public access easement grants the right to use a trail; a construction easement grants the right to use a given area, generally adjacent to the permanent easement area, to facilitate construction within the permanent easement area; a utility easement grants the right to bury a gas line. A restriction is considered to be a "negative" granting of rights. For example, an agricultural preservation restriction gives away (or sells) the right to develop the land; a historic preservation restriction gives away or sells the right to modernize at will.

A conservation restriction (CR) is a legal document that embodies those limitations on land use that a landowner agrees to impose on his or her property in favor of a named grantee, not to undertake specified acts that they would presumably otherwise have the right to do. The restricted activities often involve the right to develop or subdivide the property. CRs are granted to Conservation Commissions and other government bodies, as well as to non-profit land trusts and conservation groups. In turn, these entities (grantees of CRs) agree to monitor and enforce the terms of the CR.

The scope and nature of the CR is very flexible, allowing for "custom tailoring," based on the particulars of a specific property and the desires of the landowners, to ensure an identified conservation objective. The restrictions are generally in perpetuity (forever), and consequently are recorded at the Registry of Deeds. The restriction becomes attached to the title, which remains with the landowner (grantor). Anyone who purchases this title (the property) in the future automatically becomes subject to the same set of restrictions. CR's are authorized in Chapter 184, Sec. 31-33, of Massachusetts General Laws and those held by land trusts and municipalities must be approved by the Secretary of Environmental Affairs. Be certain to get adequate legal guidance in drafting your CRs.

Since CRs are usually forever, it is important to identify things that could happen in the future and prepare for them. It is largely the anticipation of impacts in the future that determines the effectiveness of the CR to protect the property. In other words, if the Town receives the CR, but files the document away, doesn't map the location of the property, and doesn't pay attention when new landowners violate the conditions of the restriction, the CR is ineffective. Inspection and enforcement are essential and are the responsibility of the grantee. Or, if a small

nonprofit land trust receives the CR and no successor is named, what will happen to the property if the land trust goes out of business in 10 years?

A CR can be structured in various ways. They range from a very simple, one-page document to an enormously complex, multi-party "instrument". Fortunately, most fall somewhere in-between. The following is provided as a very general guide to some essential elements of CRs:

1. Grantor's Clause - states who parties are.
2. Legal Description of Property
3. Statement of Purpose(s) and Objectives(s)
4. Listing of Prohibited Uses
 - a) to ensure conservation objectives
 - b) whatever is NOT prohibited is assumed to be allowed.
5. Reserved Rights (Permitted Uses)
 - a) to the grantor or a third party
6. Monitoring and Compliance
 - a) This is critical. Access to the property by the grantee for monitoring on a regular basis is essential. Enforcement of the terms, as a result of regular monitoring, becomes the "teeth" of the restriction.
7. IRS-required clauses, if applicable
8. Signatures
 - a) Co-holding (more than one grantee) is often a good idea to share the responsibility of monitoring and enforcement. However, coordination between co-holders needs to be maintained over time to ensure that these important duties are carried out fully and consistently. A successor grantee is also a good idea, especially if a nonprofit is the grantee - to be prepared if something happens to the nonprofit.
 - b) Includes acceptance and approval
9. Subordination clause, if applicable
10. Exhibits, if applicable

For a more detailed description of conservation restriction format and construction, please refer to [The Massachusetts Conservation Restriction Handbook](#), EOE Division of Conservation Services, 2001, or [The Conservation Easement Handbook](#), by Thomas S. Barrett and Janet Diehl, Land Trust Exchange and Trust for Public Lands, 1988, as revised by [Model Conservation Easement and Historic Preservation Easement](#), 1996, by Thomas S. Barrett and Stefan Nageel, Land Trust Alliance.

The advantages of using a CR include:

- They are often flexible enough to incorporate many desires and concerns of both the grantor and the grantee.
- The title remains with the landowner (grantor). This allows for continued use of the land within the restriction called out in the document.
- They can be donated - a definite advantage to the grantee and there is usually a tax benefit to the grantor.
- The purchase price (if not donated) to the grantee is less than the fee-simple interest for a given parcel. The value (cost) of the CR being the difference between the value of the property without the restriction and its value with the restriction.
- The municipal tax assessor may endorse a lower evaluation (and hence, tax assessment) for a property that is subject to a CR. Unfortunately, this is not done consistently across the Commonwealth.

Another useful resource for is the [Land Conservation Options: A Guide for Massachusetts Landowners](#), by Essex County Greenbelt and The Trustees of Reservations, June 1998.

State Programs that Help Protect Resource Areas

Wetlands Conservancy Program

Formerly the Wetlands Restriction Program, this program has been changed to reflect the policy of no net loss of wetlands. The goal is to map all the state's wetlands, register them, and place land-use limitations on all of them, allowing only those activities that do not harm wetlands functions. The end product of the program is a permanent restriction order that is recorded at the Registry of Deeds and applies to the land regardless of ownership changes. The statewide program is implemented on a town-by-town basis, and is expected to take a few more years to complete. For more information, contact the Wetlands Conservancy Program, Division of Wetlands and Waterways, Department of Environmental Protection, 1 Winter Street, Boston, MA 02108 – (617) 292-5908.

Areas of Critical Environmental Concern Program

The purpose of the Areas of Critical Environmental Concern (ACEC) program is to identify and protect critical resource areas throughout the Commonwealth. There are several categories of resources that can be included in an ACEC, ranging from wetlands and wildlife habitats to farmland and scenic landscapes. The program works through a nomination, review and designation process that can be initiated by municipal boards and commissions. An ACEC designation directs state environmental agencies to administer programs and review projects under their jurisdiction to protect and preserve the resources of the ACEC. A designation is intended to complement local zoning and actions, and create a planning and management framework for long-term resource preservation. A brochure describing the program is available. For further information, contact (for coastal areas) Coastal ACEC Program, Office of Coastal Zone Management, 251 Causeway Street, Boston, MA 02114, (617) 626-1200; (for inland areas) Inland ACEC Program, contact the Department of Environmental Management, Division of Resource Conservation, 136 Damon Road Northampton, MA 01060 or call at 413-586-8706 ext. 21, or visit online at <http://www.state.ma.us/dem/programs/acec>.

Massachusetts Endangered Species Act

The act does two principal things:

1. Prohibits "taking" of any listed rare plants and animals (vertebrates and invertebrates) unless specifically permitted for scientific, educational or propagation purposes.
2. Protects designated "significant habitats". Significant habitat can be designated for endangered or threatened species populations after a public hearing process. Once designated, any alterations of significant habitat will, in most cases, require a permit from the Department of Fisheries, Wildlife and Environmental Law Enforcement. For more information, contact Division of Fisheries, Massachusetts Natural Heritage and Endangered Species Program, North Drive, Westborough, MA 01581, (508) 792-7821, or <http://www.state.ma.us/dfwele/nhesp/heritage>.