

5. Natural, Historic and Cultural Resources

Introduction

Sturbridge boasts many natural, historic and cultural resources, and it is particularly known for its open spaces, wetlands, forests, farmland, wildlife, and the iconic tourist destination Old Sturbridge Village. Residents have long valued these resources, seeing them as an integral part of the community. While Sturbridge has experienced significant land use changes over the years, the town strives to maintain its character and traditions as it manages its growth going forward. The preservation of historic places, natural resources and cultural assets is key to achieving this goal.

Natural, Historic and Cultural Resources Goals

- ▶ Provide better public access to water resources for passive recreation.
- ▶ Preserve water resources through stormwater management and lakefront zoning protection.
- ▶ Integrate natural, historic and archaeological resource identification, documentation, and evaluation into local planning.
- ▶ Develop and strengthen local planning and protection measures for natural and historic resources.
- ▶ Incorporate specific historic preservation objectives in community revitalization and economic development efforts.
- ▶ Create and enhance cultural opportunities in Sturbridge.

Natural Resources

Sturbridge is rich in natural resources. From forests to ponds and rivers, these resources add to the town's rural character, providing residents and visitors with scenic views and recreational opportunities. They also serve many important environmental and ecological purposes such as providing habitat for wildlife.

Many of the natural features in town are water resources, such as the Quinebaug River, which runs in a southeasterly direction to Southbridge. This and other waterways are an integral part of the town's landscape and groundwater supply.

Open space, conservation land, forests and parks are other significant resources in town. Wells State Park, for example, is a 1,400-acre woodland park that is popular among hikers and campers. Adjacent to Walker Pond, the property features 60 campsites and more than 10 miles of trails.

Because natural resources are important to Sturbridge residents, the Town has worked to preserve them through bylaws and land acquisitions. For example, the Town, in partnership with the state Department of Fisheries and Wildlife (DFW), bought 826 acres of land from Old Sturbridge Village in 2006.¹ The land is used for passive recreation as it has trails, ponds and streams.² The state owns a conservation restriction on the property, which prohibits development of the land. This land acquisition and restriction has resulted in a large corridor of green space in town—from the Leadmine Wildlife Management Area to Wells State Park.³

Additionally, the Town was able to acquire over 100 acres of land, at no cost to the Town, in a public/private partnership between a developer and the DFW. As a result, the Rudy Dumas Farm was incorporated into the McKinstry Brook Wildlife Management Area.

Existing Conditions

The following section describes the current state of natural resources in Sturbridge. It specifically addresses geology and soils, water resources, vegetation, fisheries and wildlife, and scenic resources.

Soils, Topography and Geology⁴

This section discusses the characteristics of the soils, topography and geology in Sturbridge. It largely draws on information from past studies, including the 2005 Open Space and Recreation Plan and the 2008 draft Sturbridge Comprehensive Wastewater Management Plan.

Soil Characterization

There are six main soil types in town: Paxton-Woodbridge-Ridgebury, Brookfield Brimfield, Canton-Montauk-Scituate, Chatfield-Hollis, Freetown Swansea-Saco, and Merrimac-Hinckley-Windsor.

- ▶ **Paxton-Woodbridge-Ridgebury soils:** This is the predominant soil type in Sturbridge, located in the western and northeastern sections of the town. These soils consist of glacial till uplands and ridges dissected by small drainage ways, and they have a firm to very firm substratum, which restricts water movement.
- ▶ **Brookfield-Brimfield soils:** Located in the southeastern corner of town, this soil type consists of upland hills and ridges with rock exposures throughout.
- ▶ **Canton-Montauk-Scituate soils:** These soils are located in the southeastern part of the town. Generally well drained, this soil type consists of soils on upland hills and rolling glacial till flats.

1 Town of Sturbridge website, http://www.town.sturbridge.ma.us/Public_Documents/F0000F20A/preservation

2 Penny Dumas, Community Preservation Committee.

3 Sturbridge Community Preservation Committee, http://www.town.sturbridge.ma.us/Public_Documents/F0000F20A/preservation

4 Sturbridge Comprehensive Wastewater Management Plan draft, Tighe and Bond, 2008; Sturbridge 2005 Open Space and Recreation Plan

- ▶ **Chatfield-Hollis soils:** These soils are located west of Walker Pond and near the Charlton town line. This soil type consists of well-drained to somewhat excessively drained soils on hills and ridges.
- Freetown-Swansea-Saco soils:** Located in the central part of town along the Quinebaug River, this soil type consists of soils on broad flats with small depressions. The soils are very poorly drained.
- ▶ **Merrimac-Hinckley-Windsor soils:** These soils are located in and around the center of town, particularly along Route 84, the Quinebaug River and Cedar Pond. This soil type is found on broad, flat plains and in rolling to steep areas, and the soils are excessively or somewhat excessively well drained.

Topography

Terrain in Sturbridge is hilly. Elevations range from a low of about 510 feet to a high of about 1,100 feet above sea level. The ridgelines generally run north to south with lower elevations in between. These lower areas include many wetlands and water bodies. Much of this topography has been influenced by the last glacial period, which was more than 12,000 years ago.

The topography, among other natural features, is considered in development plans under the Town's Open Space Residential Development (OSRD) bylaw adopted in 2009. The bylaw encourages "less sprawling and more efficient forms of development" that preserves open space and conforms to existing topography and natural features.⁵ Allowed by special permit, OSRDs must include at least 50 percent open space.

Water Resources

Water resources include watersheds, surface waters, wetlands, stormwater, groundwater and drinking water resources. Such resources are plentiful in the town of Sturbridge as there are many ponds, lakes and streams in addition to the Quinebaug River. The great ponds, in particular, are a valued asset in town. See Figure 5-1.

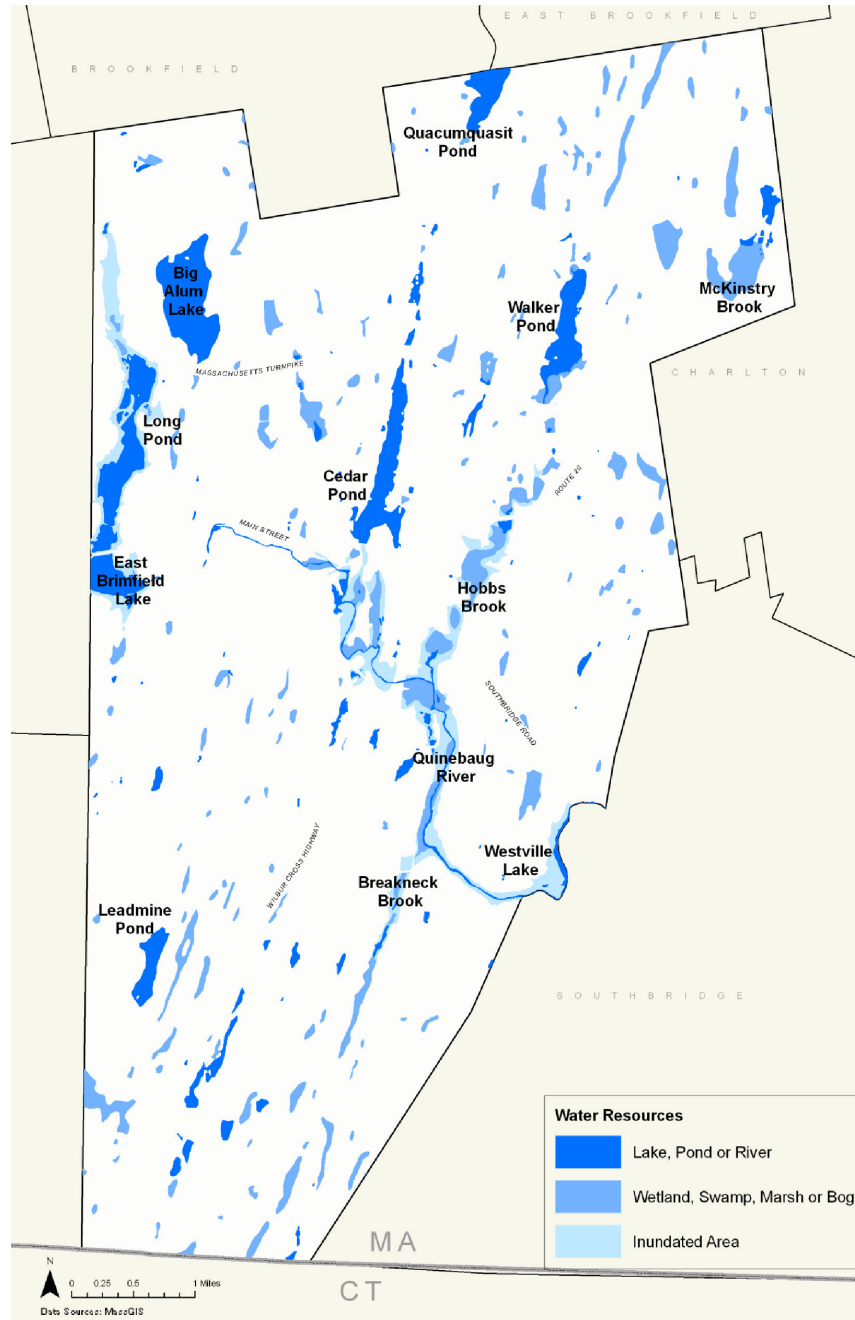
Watersheds

Sturbridge is primarily located within the Quinebaug River Watershed, which is in the southern part of central Massachusetts. Covering 850 square miles, the watershed extends south into Connecticut and western Rhode Island. To the north/northwest is the Chicopee River Watershed, to the west is the Connecticut River Watershed and to the east is the French River Watershed.⁶

⁵ Sturbridge Zoning Bylaws, http://www.town.sturbridge.ma.us/Public_Documents/SturbridgeMA_PlanningDocuments/Zoning%20Bylaw%202010?FCItemID=S02B54AC5

⁶ Massachusetts Executive Office of Energy and Environmental Affairs, http://www.mass.gov/Eoeea/docs/eea/water/watersheds_map.pdf

Figure 5.1 Sturbridge Water Resources



The Quinebaug River stretches about 65 miles, 19 of which are in Massachusetts.⁷ Its watershed is heavily forested and contains 54 lakes and ponds. Together with the French River Watershed and Quinebaug-Shetucket River Valley, it forms the Thames River Watershed.

Surface Waters



Cedar Lake

Rivers, streams, lakes and ponds serve many different functions in Sturbridge, including habitat for wildlife and areas for recreational activities. Residential areas are also largely centered around lakes and ponds in town.

Part of the Quinebaug River is located in Sturbridge, as was mentioned earlier. The river runs in a southeasterly direction through the central part of town. There is a six-mile canoe trail on the river, running from Holland Pond to East Brimfield Lake. Hamant Brook, a stream located on the grounds of the old Camp Robinson Crusoe property, also offers recreational opportunities as it is a popular fishing spot. There are several walkable trails on the property. Breakneck Brook is located within the Breakneck Wildlife Management Area.

There are also seven major open water bodies in town, according to the 2005 Open Space and Recreation Plan. They include Cedar Lake (Pond), Walker Pond, Leadmine Pond, Big Alum Lake, East Brimfield Lake, Long Pond, Westville Lake, Breakneck Pond and Quacumquasit Lake, also known as South Pond. The following descriptions come from the Natural, Cultural and Historic Resources focus group.⁸

- ▶ **Big Alum Lake:** Covering roughly 195 acres, the lake can primarily be accessed via residential routes, though there is a walking route around the lake, which is more than 3 miles long. There is also a public boat ramp at the end of Clarke Road.
- ▶ **East Brimfield Lake:** This 360 acre lake straddles Sturbridge and neighboring town Brimfield. Connecting to the lake to the north is Long Pond, which can be accessed at a fishing area off of Champeaux Road. There are two public access ways to East Brimfield Lake, both off of Route 20. Several activities are allowed in the area, including motorized boating, fishing (license required), picnicking, canoeing and hunting in forested wetland and upland areas (license required).

⁷ Ibid, French and Quinebaug Rivers Watershed, http://www.mass.gov/?pageID=eoeeterminal&L=4&L0=Home&L1=Air%2C+Water+%26+Climate+Change&L2=Preserving+Water+Resources&L3=Massachusetts+Watersheds&sid=Eoeea&b=terminalcontent&f=eea_water_french-quinebaug&csid=Eoeea

⁸ Natural, Cultural and Historic Resources focus group, Issues Paper draft, Sept. 4, 2010.

- ▶ **Cedar Lake:** Located in the north-central section of town, this lake is roughly 183 acres. The Town's recreational beach is located near the southwest end of the lake, and Sturbridge Host Hotel on Route 20 is on the south end. Hotel guests or restaurant patrons can access a small beach on the lake. There is also a small area on the west side of the lake that is a popular fishing site.
- ▶ **Walker Pond:** This 104 acre body of water is located in the northeast corner of town, east of Wells State Park. The park provides access to the pond with its admission fee for campers only.
- ▶ **Quacumquasit Lake:** Also known as South Pond, it is located in the northeastern section of town, near the Brookfield town line. There is a small beach at the north end, off of Lake Road. It is 218 acres in size.
- ▶ **Westville Lake:** This 23 acre lake is located near the Southbridge town line and was created by the construction of the Westville Lake Dam in 1962. Westville Lake Recreation Area, which is operated by the U.S. Army Corps of Engineers, includes picnic facilities and athletic fields. There are also hiking and biking trails and fishing spots around the lake, though swimming is not allowed.
- ▶ **Leadmine Pond:** This 53 acre lake is located at the southwestern corner of town.

The Sturbridge Recreation Department operates the Town Recreation Area at Cedar Lake, mentioned above. The Recreation Area includes tennis and basketball courts and is home to a Town-sponsored summer camp.

The Sturbridge Annual Town Meeting established the Sturbridge Lakes Advisory Committee (SLAC) in 2007. This committee is made up of a representative from each of the five Lake Associations (Big Alum, Cedar Lake, South Pond, Walker Pond, and Leadmine Pond), one representative from East Brimfield Reservoir/Long Pond, one from the Board of Selectmen, and one from the Conservation Commission. The objectives of SLAC include:

- ▶ inventory the current state of the lakes (current water quality and conditions, watershed description, recreational uses and public access, active lake management, etc.);
- ▶ identify potentially synergistic interests in town-planning, recreation, public lands (trails) or ecotourism;
- ▶ provide a draft mission statement; and
- ▶ define communication protocols between town boards and lake associations.

Among the more significant issues to address, SLAC identified water quality, aquatic invasive species, boating regulations, overcrowding on the water, parking, and development of the watershed.⁹

9 "Report to the Sturbridge Board of Selectman from the Lakes Advisory Committee: Report and Recommendations," October 2008

Wetlands

Wetlands occur along the streams, rivers and creeks of Sturbridge. In particular, they are located near the Quinebaug River, Hobbs Brook, McKinstry Brook, Hamant Brook and Breakneck Brook. They provide groundwater and aquifer recharge, moderate changes in water supply, prevent pollution by filtering contaminants, provide food and habitat for wildlife, provide flood storage, and add to the natural landscape.

Wetlands are protected under the Massachusetts Wetlands Protection Act (MGL c. 131 § 40), which was originally enacted into law as the Hatch Act in 1972 and amended by the 1996 Rivers Act. The law aims to protect public and private water supplies, prevent storm damage and pollution, protect wildlife habitat and fisheries, reduce the effects of potential flooding and protect groundwater supplies.¹⁰ Under the Act, work within wetland resource areas and their buffer zones cannot occur without approval from the Sturbridge Conservation Commission.

Like other Massachusetts communities, the Town of Sturbridge has adopted a local wetlands bylaw that is more stringent than the state law.¹¹ Enacted in 2002, it serves to not only protect wetlands and natural resources but also provide erosion and sedimentation control and protect water quality, rare species habitat, recreational values, and agriculture and aquatic activities.¹² Activities within 200 feet of wetlands require review and approval by the Commission so as to ensure there will be “no significant adverse impact” to the wetlands.¹³ In addition, the local bylaw creates a 25-foot “no disturb” buffer and mandates that new structures be at least 50 feet from any wetlands, though waivers can be granted.

Floodplains

Floodplains—areas adjacent to waterways that are inundated with water during times of increased flow—are also protected in Sturbridge. Specifically, within the Town’s Zoning Bylaws is a Flood Plain District, which seeks to “protect the public health, safety and general welfare, to protect human life and property from the hazards of periodic flooding, to preserve the natural flood control characteristics and the flood storage capacity of the flood plain, and to preserve and maintain the ground water table and water recharge areas within the flood plain.”¹⁴

In the Flood Plain District, structures cannot be built or substantially improved, and earth or other materials cannot be filled or dumped without a special permit granted by the Planning Board.¹⁵ Some uses such as agricultural and outdoor recreational uses are allowed in the district as long as “they are permitted in the underlying district and they do not require structures, fill, or storage of materials or equipment.”¹⁶

10 Wetlands Protections Act regulations, <http://www.mass.gov/dep/service/regulations/310cmr10a.pdf>

11 According to the Massachusetts Association of Conservation Commissions, 195 MA cities and towns have adopted non-zoning wetlands bylaws or ordinances.

12 Town of Sturbridge website, http://www.town.sturbridge.ma.us/Public_Documents/SturbridgeMA_ConsInfo/conservation

13 Ibid, http://www.town.sturbridge.ma.us/Public_Documents/SturbridgeMA_ConsInfo/Regulations/Introduction1.1

14 Sturbridge Zoning Bylaws

15 Ibid.

16 Ibid.

These kinds of restrictions help protect against disruptions to floodplain areas and the water-holding capacity of those areas. When such disruptions occur, flooding beyond the boundaries of floodplains can take place, which can potentially damage roads and buildings.

The Army Corps of Engineers, which owns land within the floodplain of the Quinebaug River, also provides flood control in the area. There is a dam along the Quinebaug River at Westville Lake on the town's border with Southbridge. It is part of network of six dams maintained by the Corps to "relieve the effects of flooding along the major rivers of the Thames River Basin."¹⁷

Vernal Pools

Vernal pools are seasonal depressions that typically hold water during certain times of the year, generally in the fall or winter. They are breeding grounds for a host of amphibians and invertebrate animals. As of January 2010, there were 46 certified vernal pools in Sturbridge, according to the Natural Heritage Endangered Species Program (NHESP) of the DFW.¹⁸ These vernal pools are protected under several state and federal laws, including the Wetlands Protection Act and the Federal Clean Water Act. The Town's local wetlands bylaw includes a provision that creates a 200-foot buffer around certified and potential vernal pools.

Water

Groundwater

In Sturbridge, groundwater resources can be found in the areas along the Quinebaug River and Hamant Brook. Aquifer areas in the central part of town—such as those in the Quinebaug River valley—have higher yields, estimated at greater than 300 gallons per minute. Other areas have yields closer to 10 to 100 gallons per minute.

The Town adopted a Groundwater Protection District in 2002, which was updated in 2009 to include the area for well #4. The overlay district limits the types of uses allowed in delineated aquifers or recharge areas.¹⁹ It requires a special permit for certain activities such as those that "render impervious" more than 15 percent or 2,500 square feet of any lot, and it prohibits other uses such as landfills.²⁰

Drinking Water Supply

As mentioned in the Public Facilities and Services chapter, the Town of Sturbridge provides public water service to most of the suburban residential, commercial and industrial zones. As of mid-2010, the system had nearly 1,700 connections, serving roughly 4,616 people.

¹⁷ Westville Lake, Army Corps of Engineers website, <http://www.nae.usace.army.mil/recreati/wvl/wvlfc.htm>

¹⁸ DFW website, Natural Heritage Endangered Species Program, Vernal Pools, http://www.mass.gov/dfwele/dfw/nhesp/vernal_pools/vernal_pool_data.htm

¹⁹ Sturbridge Zoning Bylaws

²⁰ Ibid

The source of water is three active wells south of Main Street or Route 20. (See Figure 8.4 in the Public Facilities and Services chapter.) These wells are located 130 to 500 feet from the east bank of the Quinebaug River.²¹ The Town is also constructing a fourth well off of Shattuck Road that is expected to come online in the spring of 2011.

Stormwater Management

Communities are required to manage stormwater runoff under federal law. This is because stormwater carries nutrients and pollutants from lawns, fields, roads, construction sites, and other sources into waterways and sewer systems. Sturbridge has taken many steps to manage and filter stormwater runoff. A Continuous Deflective Separation (CDS) unit has been installed, for example, at the Millyard Marketplace to help filter stormwater that runs off the road.²²

Stormwater management planning is also incorporated into various development review processes in town. For example, the Town adopted a Stormwater Bylaw and the standards are incorporated into the Planning Board regulations. A stormwater management permit and plan are required when other permits are needed for land disturbing activities. Additionally, applicants for a special permit to develop an OSRD must include a narrative explanation as to the proposed systems for stormwater drainage and the potential onsite impacts and on abutting properties.²³ As stated in the OSRD bylaw, the Planning Board encourages developers to use “Soft Stormwater Management Techniques and other Low Impact Development techniques” that allow ground infiltration and reduce impervious surfaces.

Similarly, best practices for stormwater management—such as use of rain gardens and roof water collection—are encouraged under Site Plan Review. Stormwater Management Plans are also required for projects on Priority Development Sites, which are those designated by the Town for expedited permitting.

Vegetation and Forest Resources

Nearly 18,000 acres of land in Sturbridge—or approximately 75 percent of the total land area—is forested.²⁴ The forests are northern mixed hardwood, and they include a variety of tree species, including red and white oak, red maple, white ash, white pine and eastern hemlock.

One of the many forested lands in Sturbridge is 266-acre Opacum Woods, a permanently protected conservation area owned by the Opacum Land Trust.²⁵ The property has ponds, swamps, vernal pools and historic sites, and it is home to a numerous plant species.

Town wide, there are two endangered plant species, according to the NHESP. Table 5.1 shows species in Sturbridge that have been designated by the state as endangered, threatened, or species of special concern.

21 Tighe and Bond, 2008.

22 Town of Sturbridge website

23 Sturbridge Zoning Bylaws.

24 2005 Sturbridge Open Space and Recreation Plan

25 Opacum Land Trust website, http://www.opacumlt.org/opacum_woods.html

Table 5.1 NHESP Rare Plant Species

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Vascular Plant	<i>Adlumia fungosa</i>	Climbing Fumitory	SC	2008
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 scariosa</i> var. <i>novae-angliae</i>	New England Blazing Star	SC	1934
Vascular Plant	<i>Lipocarpa micrantha</i>	Dwarf Bulrush	T	2007
Vascular Plant	<i>Lygodium palmatum</i>	Climbing Fern	SC	1937
Vascular Plant	<i>Platanthera flava</i> var. <i>herbiola</i>	Pale Green Orchid	T	1933
Vascular Plant	<i>Poa saltuensis</i> ssp. <i>languida</i>	Drooping Speargrass	E	2000
Vascular Plant	<i>Ranunculus pensylvanicus</i>	Bristly Buttercup	SC	2008

Source: Natural Heritage and Endangered Species Program
 E = Endangered, T = Threatened, SC = Special Concern

Fisheries and Wildlife

The natural spaces in Sturbridge are home to many different species of wildlife. These spaces include everything from vernal pools to forests to rivers. Three waterways in town have been stocked with trout by the state this year: Big Alum Pond, Long Pond and the Quinebaug River.²⁶

Large sections of Sturbridge have been identified by the NHESP as “Core Habitat” sites, which are the most important areas in the state for maintaining and protecting biodiversity.²⁷ Delineated during the BioMap2 and biodiversity assessment, the Core Habitats for wetland, forest, aquatic, plant, and wildlife species include the southwestern corner of town and the area around Wells State Park, and the Core Habitats for freshwater biodiversity include Long Pond, East Brimfield Lake and the Quinebaug River.²⁸ These resources are shown in Figure 5-2.

NHESP has also designated Priority Habitats for rare species throughout Massachusetts. These areas are home to state-listed rare plants and animals, and habitat alterations within the areas require review by the NHESP.²⁹ In Sturbridge, Priority Habitats are largely located along the Quinebaug River through the central part of town and in the areas around Long Pond, East Brimfield Lake and Wells State Park.

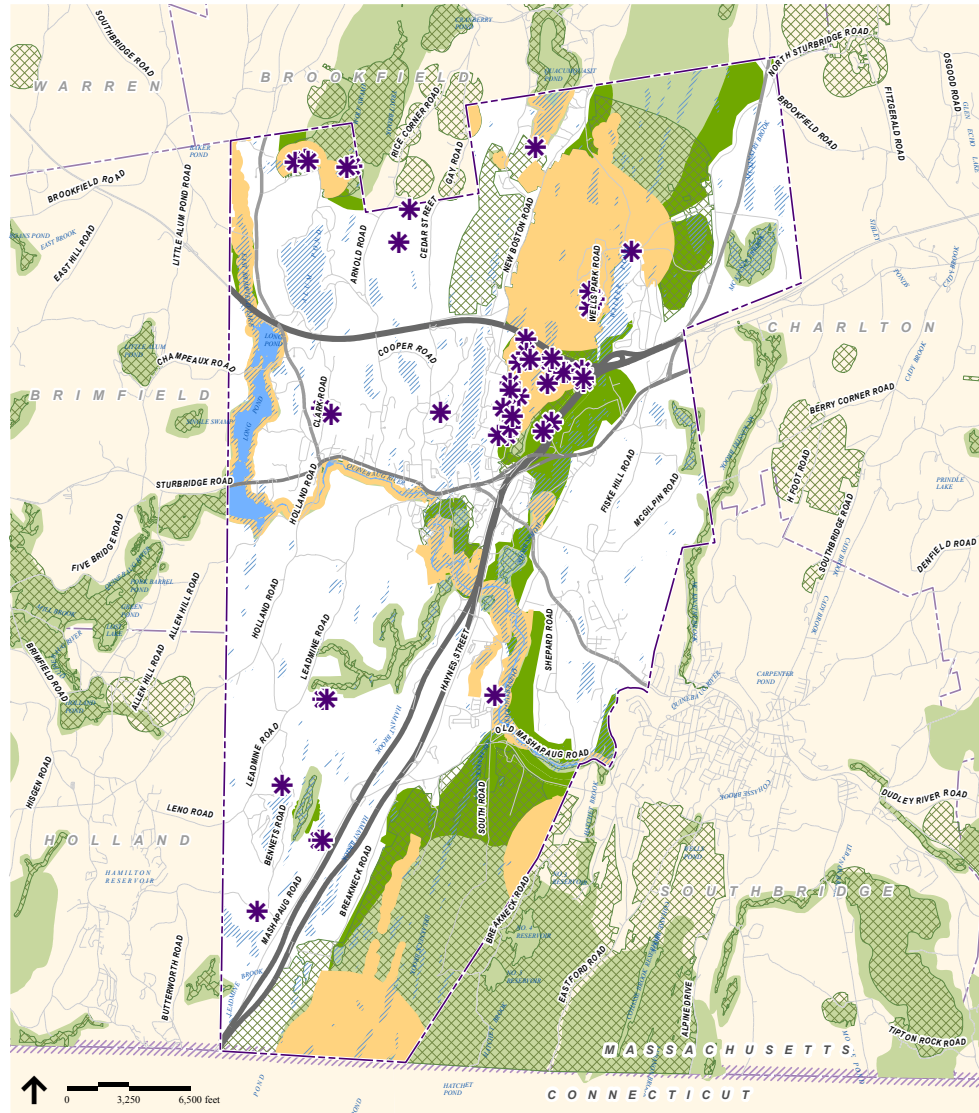
²⁶ DFW website, Natural Heritage Endangered Species Program, Trout-Stocked Waters
http://www.mass.gov/dfwele/dfw/recreation/fishing/trout/trout_waters_cd.htm

²⁷ Ibid, Biomap and Living Waters, http://www.mass.gov/dfwele/dfw/nhsp/land_protection/twnrpts/sturbridge_core_habitats.pdf

²⁸ Ibid, An Interactive BioMap and Living Waters, http://www.mass.gov/dfwele/dfw/nhsp/land_protection/interactive_map.htm

²⁹ Ibid, Priority Habitats and Estimated Habitats for Rare Species,
http://www.mass.gov/dfwele/dfw/nhsp/regulatory_review/priority_habitat/priority_habitat_home.htm

Figure 5.2 Wildlife Habitats



Source(s): MassGIS

Legend

- NHESP Certified Vernal Pools
- NHESP Living Waters Core Habitats
- Water Resources
- NHESP Priority Habitats of Rare Species
- NHESP BioMap Core Habitat
- BioMap2 Core Habitat
- BioMap2 Critical Natural Landscape

Vanasse Hangen Brustlin, Inc.

Figure 5.2
Wildlife Habitats

Sturbridge Master Plan
Sturbridge, Massachusetts

In addition, MassWildlife has identified waters in Sturbridge—and across the state—that are known to have coldwater fisheries resources.³⁰ They include McKinstry Brook, Hamant Brook and Hatchet Brook. These waters were defined as coldwater fisheries resources if they met at least one of the following criteria: brook, brown or rainbow trout reproduction has been determined; slimy sculpin, longnose sucker, or lake chub are present; or the water is part of the Atlantic salmon restoration effort or is stocked with Atlantic salmon fry.

There are two endangered species in Sturbridge, according to the NHESP. One of those species, the Indiana Myotis (a mid-sized bat), is listed as “endangered” by both the State and U.S. Fish and Wildlife Service. Table 5.2 identifies the status of rare animal species in Sturbridge.

Table 5.2 NHESP Rare Animal Species

Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
Amphibian	<i>Ambystoma opacum</i>	Marbled Salamander	T		2003
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	E		1999
Butterfly/Moth	<i>Callophrys hesseli</i>	Hessel's Hairstreak	SC		1997
Fish	<i>Notropis bifrenatus</i>	Bridle Shiner	SC		1999
Mammal	<i>Myotis sodalis</i>	Indiana Myotis	E	E	1938
Mammal	<i>Sorex palustris</i>	Water Shrew	SC		1996
Mussel	<i>Alasmidonta undulata</i>	Triangle Floater	SC		2004
Mussel	<i>Strophitus undulatus</i>	Creeper	SC		2004
Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	SC		2005

Source: Natural Heritage and Endangered Species Program
E = Endangered, T = Threatened, SC = Special Concern

Scenic and Unique Resources

Sturbridge has a rural character and boasts many scenic resources, including roads, woodlands and water bodies. In 2005, the Town adopted a Scenic Road Bylaw that aims to “protect the scenic quality and character of certain roads within the Town of Sturbridge.”³¹ Specifically, within the public right-of-way in designated scenic roads, stone walls cannot be destroyed, trees cannot be removed, and roads cannot be repaired or reconstructed without approval of the Planning Board.

³⁰ Ibid, Coldwater Fisheries Resources, http://www.mass.gov/dfwele/dfw/fisheries/conservation/cfr/cfr_home.htm

³¹ Town of Sturbridge General Bylaws, http://www.town.sturbridge.ma.us/public_documents/SturbridgeMA_Bylaws/1022F598F.0/General%20Bylaws%20Updated%202008%20Final.pdf



Quinebaug River

In addition to roads, scenic resources in town include Wells State Park, Westville Lake Recreation Area, the Quinebaug River, Long Pond, Opacum Woods and Tantiusques. Acquired by the Trustees of Reservations in 1962, Tantiusques is a 57-acre site that was the center of one of New England's first mining operations.³² The site, which was mined for graphite between the mid-17th century and the early 20th century, was listed in the National Register of Historic Places in 1983.³³

The Town Common area in the center of town is a National Register Historic District, which was established in 1977. Extending along Main Street between Hall Road and I-84, the district includes 47 properties, including Town Hall.³⁴ As mentioned in the Public Services and Facilities chapter, Town Hall and the Center Office Building are both listed in the National Register of Historic Places. The appearance of both buildings has been improved through recent rehabilitation work.

Another major amenity is Old Sturbridge Village. The open air historic museum depicts and interprets New England village life of the early 19th century. It was established in the 1940s, and it currently covers more than 200 acres. With its historic buildings, costumed interpreters, educational programs, and collection of artifacts, it has long been a major tourist attraction in the town.

Environmental and Management Challenges

Public access to the town's natural, cultural and historic resources is limited, inconsistent or in some cases, non-existent, according to the Focus Group. Access to the lakes in Sturbridge is of particular concern as the points of access are poorly defined. This means many of the lakes and other resources cannot be fully enjoyed by residents or visitors alike. Improving access would allow more people to not only take advantage of these resources but to better appreciate, value and potentially protect them. The Town has taken steps toward this end, having recently formed the Sturbridge Lakes Advisory Committee, which seeks, in part, to improve public access to the lakes.

Development and redevelopment around the lakes is another major issue. Over the years the Town has seen an increasing number of summer lakefront cottages being converted from seasonal homes to year round residences. As a result, the Town regularly reviews applications for Special Permits and Orders of Conditions pursuant to the Wetlands Protection Act to tear down and rebuild homes near lakes, and it

32 The Trustees of Reservations, <http://www.thetrustees.org/places-to-visit/central-ma/tantiusques.html#t5>

33 Waymarking website, http://www.waymarking.com/waymarks/WM4QMC_Tantiusques_Graphite_Mine

34 Sturbridge Reconnaissance Report, <http://www.mass.gov/dcr/stewardship/histland/reconReports/sturbridge.pdf>

has been difficult to determine what constitutes an appropriate development given the location.³⁵ Specifically, the Town wants to continue to allow people to improve their properties but seeks to ensure the lakes are protected as well. Stormwater runoff from impervious surfaces and septic system discharge can affect water quality.

According to the 2005 Open Space and Recreation Plan, there have been concerns about the health of Cedar Lake given the presence of aquatic weeds and fecal coliform. The Town, however, has extended sewer lines along much of the lake's shoreline as means of preventing contaminant flow from septic systems into the lake.³⁶ The water quality of the lake is also monitored.

Historic and Archaeological Resources in the Town of Sturbridge



Town Common

The Town of Sturbridge has a rich history represented in physical cultural resources, its historic and archaeological resources, which include buildings, structures, objects, burial grounds, landscapes, and archaeological sites. These historic and archaeological resources provide a valuable material record of the history of Sturbridge and significantly enhance the quality of life in the town. They enhance the scenic qualities of the landscape, establish community character and identity, and in large part define what is unique about the Town of

Sturbridge. The historic properties and sites that comprise the cultural landscape in Sturbridge are both finite and non-renewable. Therefore, this section of the Master Plan presents a plan to assist in the management of Sturbridge's rich and varied historic resources.

The following section of the Master Plan contains information associated with the identification and evaluation of historic and archaeological resources in Sturbridge. This section provides a brief overview of the Massachusetts Historical Commission's Inventory of Historic and Archaeological Assets of the Commonwealth as well as the State and National Registers of Historic Places, and notes the properties and districts in Sturbridge that are included in both the State and



Oliver Wight Tavern

³⁵ Jean Bubon, Town Planner

³⁶ 2005 Open Space and Recreation Plan

National Registers. The tools and programs that could potentially be utilized by the Town for historic preservation purposes can be found in Appendix 2.

Identification of Historic and Archaeological Resources

The identification and documentation of historic and archaeological resources in the Town of Sturbridge is a fundamental research and preservation planning process designed to provide basic information on the current location, appearance, and condition of historic resources throughout the community. Evaluation of their significance and resultant recognition through their listing in the State Register of Historic Places and National Register of Historic Places is an important additional step. Properties that have been documented on state inventory forms are, after acceptance by the Massachusetts Historical Commission, included in the Inventory of Historic and Archaeological Assets of the Commonwealth (the Inventory). Properties that have been evaluated and are determined significant through an official review and approval process (local landmarks and districts, National Register-listed properties, properties with preservation restrictions) are listed in the State Register of Historic Places. Only properties that have been determined significant through a state and federal nomination and approval process are listed in the National Register of Historic Places. The Inventory and State and National Registers of Historic Places are described below.

As noted in more detail below in Appendix 2, the National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects that have been determined significant in American history, architecture, archaeology, engineering, and culture. The State Register of Historic Places was established in 1982 as a comprehensive listing of buildings, objects, structures, and sites that have received local, state or national designations in Massachusetts based on their historical or archaeological significance.

Inventory of Historic and Archaeological Assets

The Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets (the Inventory) is a statewide list that contains information about all properties that have been documented on a MHC inventory form. In order to be included in the Inventory, a property must be documented on one of several types of MHC inventory forms, which is then entered into the MHC database. This searchable database, known as MACRIS, is now searchable online at <http://www.sec.state.ma.us/mhc>. The inventory forms for all of Sturbridge's documented properties (excluding archaeological sites) are available online at MACRIS in PDF version.

Documented Above-ground Properties

According to the MACRIS, Sturbridge's Inventory documents over 200 above-ground properties ranging from the turn of the 18th century to the late 20th century. The documented properties include the Sturbridge Town Common, Sturbridge Fairgrounds, Fiskdale Mills and workers' housing, and the small community of Snellville, as well as many houses, commercial buildings, and religious structures. Much of this inventory was completed between 1971 and 1974 by members of the Sturbridge Historical Commission. A list of the inventoried properties is included in Appendix 3.

A reconnaissance survey of Sturbridge's heritage landscapes was undertaken in 2007 as part of a wider survey of the communities within both the John H. Chafee Blackstone River Valley National Heritage Corridor and the Quinebaug and Shetucket Rivers Valley National Heritage Corridor. Although the survey did not document properties on MHC forms, a number of priority landscapes were identified. These priority landscapes are the Quinebaug River, the Barrett Farm, Fiskdale, the Town's ponds, Sturbridge Town Common National Register District, Hobbs Property, and Old Sturbridge Village. The report is online at: <http://www.mass.gov/dcr/stewardship/histland/reconReports/sturbridge.pdf> and the map which shows their location at: http://www.mass.gov/dcr/stewardship/histland/reconReports/sturbridge_map.pdf.

The reconnaissance report actually functions more as a planning document; it contains a number of valuable and insightful recommendations which are incorporated into this master plan.

Documented Archaeological Sites

According to MHC's site file records, there are 48 documented historical archaeology sites within the town of Sturbridge. One of the sites, the Tantiusque Lead Mine Historic Archaeology Site (STU-HA-45), is located within the Tantiusque Reservation, which is listed in the National and State Register of Historic Places. Otherwise, none of the other sites have been determined individually eligible for listing in the National Register of Historic Places.

Site types include an historic lead mine (Tantiusque Mine STU-HA-45), the Haynes harness and carriage shop (STU-HA-40), the Fording Place at Tantiusque (STU-HA-39), and the Wight Saw Mill (STU-HA-18). Because of swiftly flowing and powerful streams, many area sites date to the industrial periods, including the Fiskdale Mill Complex (1826–1888) (STU-HA-43), the Upper Mill Dam Site (STU-HA-41), and elements associated with the Grand Trunk Railroad (STU-HA-34).

There are 18 prehistoric archaeological sites documented in the town of Sturbridge. Site types include lithic flake find spots (19-WR-756, Mt. Dan Road Native American Findspot), rockshelters (19-WR-688; the Forest Lane Rock Shelter), and an abrading stone indicative of woodworking (19-WR-337 Westville Dam). None of these sites contains extensive archaeological information and none is listed in the National or State Registers of Historic Places.

Please note that no information concerning archaeological resources, especially their locations, can be disclosed in documents prepared for public review in order to protect the sites from possible looting or vandalism. For additional information regarding archaeological resources in the Town of Sturbridge, please contact the State Archaeologist at the MHC.

To date, there have been 8 professional archaeological surveys conducted in the Town of Sturbridge. These include reconnaissance surveys of the Westville Dam (Ritchie and Lance 1988), an intensive archaeological survey along Main Street (Holmes et al. 1993), a reconnaissance survey of the East Brimfield Dam and Reservoir (Ritchie and Lance 1988), an historic properties management plan of East Brimfield Lake (Atwood 1998, 2000), an intensive survey of the Massachusetts Country Club (Milne & Ritchie 2000) and a combined reconnaissance and intensive survey at Big Alum Pond (Binzen and Wendt 2003). This research identified both historical period and ancient Native American sites, but none that met eligibility criteria for listing in the National Register of Historic Places as individual sites. That said, these surveys have been limited to specific project impacts, by and large, and it is possible that additional, unreported sites exist. Sensitive areas for prehistoric (ancient Native American) site include relatively level, elevated land forms within close proximity to potable water, on well-drained sandy soils, or adjacent to specific resources, such as knappable stone, or clay that can be formed into pottery. EuroAmerican sites are probably along Contact Period trails, at fording places in rivers in streams, near well-travelled highways, and where primary trails or highways intersect.

Although access to Old Sturbridge Village records and information about archaeological investigations are not currently accessible, Ed Hood at Old Sturbridge Village has considerable knowledge about Sturbridge archaeological sites that are not on file at the MHC.

State and National Registers of Historic Places

The Town of Sturbridge has a single historic district and two individual properties listed in the State and National Register of Historic Places. The Sturbridge Common Historic District, which includes 47 buildings, was listed in 1977. The Sturbridge Center School at 301 Main Street is a contributing resource in this district; the building is protected by a Preservation Restriction, which was placed on the building in 1999. Buildings which are protected by Preservation Restrictions are automatically included within the State Register of Historic Places. The two individually listed properties are the Oliver Wight House on Main Street (listed in 1982) and the Tantiusque Reservation Site near Leadmine Road (listed in 1983).

The Sturbridge Historical Commission has compiled a very preliminary list of pre-1850 structures, but further work needs to be done to determine the historical or architectural significance of these and potentially other buildings.

Old Sturbridge Village

Old Sturbridge Village (OSV), in part because of its name and location, is sometimes perceived to be a museum of Sturbridge's history. Rather, it is a living museum whose purpose is "to provide modern Americans with a deepened understanding of their own times through a personal encounter with New England's past. The museum is a nonprofit educational institution. Its collections, exhibits, and programs present the story of everyday life in a small New England town during the years 1790 to 1840".³⁷ The Articles of Organization filed for the Quinebaug Village Corporation, as it was known at the time, states that it was created to establish "a model village that depicts specimens and reproductions of the New England architecture and antiquities, the arts, crafts, trades, and callings commonly practi[c]ed in and about New England villages prior to the expansion of the industrial expansion...".³⁸ OSV was originally founded "for the educational benefit of the public"³⁹. It changed its name to Old Sturbridge Village in November 1950.

This is an important distinction, because OSV does not purport to be a resource for local Sturbridge history. At the same time, it represents a great opportunity to bolster the Town's efforts to identify, study, inventory, and potentially display historic and archeological artifacts from the Town's history. The Town should seek to develop a more direct working relationship with OSV to determine how it can leverage this opportunity to enhance an understanding of the Town's heritage.

Preservation-related Tools and Programs

Sturbridge already has important planning tools in place to document current conditions within the town, identify issues of concern to town residents, and to develop strategies for action. In Appendix 4 a variety of planning tools and programs (both voluntary and regulatory) are identified that are available for preservation planning purposes in the Town of Sturbridge.

Cultural Resources

Sturbridge is home to a host of cultural resources, including groups, events and traditions. These resources help shape the community's sense of place and draw tourists to the area. This section, which is based on the work of the Natural, Cultural and Historic Focus Group, outlines the many cultural resources available in Sturbridge.

- **Stageloft Repertory Theater:** This theater, which has been in Sturbridge since 1994, provides live adult and youth productions throughout the year.⁴⁰ Theater workshops for youth are also held in the summer.

³⁷ <http://www.osv.org/museum/index.html>

³⁸ July 15, 1938 Quinebaug Village Corporation Articles of Organization

³⁹ Ibid

⁴⁰ Stageloft Repertory Theater, www.stageloft.com/

- ▶ **Hayloft Dancers:** This square dance club has been dancing in the area since 1960.⁴¹ The club hosts a variety of events, including square dance lessons and special dances at Hayloft Barn in Sturbridge.
- ▶ **Mass Motion Dance:** This dance company has offered dance training in Sturbridge since 1983.⁴² Classes include ballet, jazz, tap, hip hop and Irish Step.
- ▶ **Joshua Hyde Library:** The public library provides a variety of programs for adults and children, including book discussions and presentations.
- ▶ **Concerts on the Common:** The Sturbridge Recreation Department holds a series of concerts on the Sturbridge Town Common during the summer. Performances have ranged from country music bands to a Beatles tribute band.
- ▶ **Sturbridge Harvest Festival:** This annual festival is held in October on the Common and at the Publick House. It features a pumpkin decorating contest, mini-train rides, children's games and a marketplace with vendors and artists.⁴³
- ▶ **Feast and Fire:** This annual event occurs during the Fourth of July weekend and includes a parade, picnic buffet, entertainment and a bonfire.
- ▶ **Sturbridge Lions All American River Race:** This annual canoe race takes place in April. It is a timed race that covers more than six miles between Turners Field and Westville Lake.⁴⁴

Many of the programs listed above are supported by small grants from the Sturbridge Cultural Council. The 7-member local Cultural Council aims to “foster the support of programs in the arts, humanities and interpretive sciences.”⁴⁵ It reviews and approves grant applications on a calendar year basis, with FY2010 grants helping fund school music programs, theater productions, storytelling programs and an “eco-art” project, among other programs.⁴⁶

Recommendations

Recommendations for Natural Resources

- ▶ Continue to develop, maintain and improve public access to water resources, open space and trails. The Sturbridge Lakes Advisory Committee should continue to look for ways to improve public access to the lakes in particular. Strengthening the Town's partnerships with lake associations and improving collaboration among the groups should be a priority.

41 Hayloft Steppers Square Dance Club, <http://www.hayloftsteppers.org/>

42 Mass Motion Dance, <http://www.massmotiondance.com/>

43 Publick House, http://www.publickhouse.com/harvest_festival.htm

44 <http://www.angelfire.com/ma3/sturbridgelions/events.html>

45 Sturbridge Cultural Council, http://www.town.sturbridge.ma.us/Public_Documents/SturbridgeMA_BoardCmt/cultural

46 Massachusetts Cultural Council, http://www.mass-culture.org/lcc_detail_overview.asp?coun_enum=273

- ▶ Consider adopting a Low Impact Development (LID) bylaw to minimize post-development stormwater runoff and further protect the town's water resources and surface and groundwater drinking supplies. Ideally, such a bylaw should apply town-wide, but it could be targeted specifically to areas that are especially sensitive from an environmental perspective. Review the design, construction, and maintenance of stormwater "best management practices" both by the Town and private developers to ensure that the Town is taking advantage of the most recent and effective approaches to LID.
- ▶ Continue monitoring the water quality of the lakes to determine which, if any, are in need of cleanup or protection.
- ▶ Consider enacting a lakes overlay district for the areas surrounding all of the lakes in town or only those of specific concern. The overlay district would help protect water quality, maintain natural beauty and minimize negative impacts of new development or redevelopment projects around the lakes. It could control building heights, densities, setbacks, stormwater management, and grade changes, among other issues.
- ▶ In conjunction with efforts to provide greater public access to the Quinebaug River, ensure that any new access points protect river water quality and shoreline vegetation.
- ▶ Using this Plan and the soon to be updated Open Space and Recreation Plan, the Conservation Commission should lead an effort to identify critical resource areas encompassing streams, ponds, vernal pools, floodplain, wildlife habitat, wetlands and other water bodies for conservation and preservation. This information could be used to guide future land use decision-making and potential regulations.
- ▶ Along with the continued development of walking trails through recently acquired open spaces, evaluate opportunities and locations that could be used to facilitate wildlife crossings and connect habitat areas within the town.
- ▶ Seek funding through NHESP, DFW, and other partners to fully evaluate and document the wildlife habitat values and natural communities in Sturbridge.
- ▶ In the course of updating the zoning bylaw, ensure that any revisions consider and incorporate appropriate best practices for such environmental protections as stream buffers or shoreline setbacks.

Recommendations for Historic, Archaeological, and Cultural Resources

- ▶ The Historical Commission should continue its work to inventory the built environment, identify properties eligible for listing in the National Register of Historic Places, and pursue such listings.
- ▶ Consider the preparation of a community-wide archaeological inventory which would identify areas of archaeological sensitivity that would aid in future planning and development efforts.
- ▶ Educate residents about the importance of maintaining the historic character of Sturbridge and its importance to their economic, aesthetic, and cultural investment in their community.
- ▶ Initiate and support local by-laws that will encourage preservation of historic assets.

- ▶ Study and consider the possibility of an Architectural Preservation District (APD) by-law, which would provide binding and non-binding review of exterior changes to buildings within designated APD districts.
- ▶ Continue developing more in-depth regional partnerships and programs with organizations with similar preservation and educational goals, including OSV; The Last Green Valley, Inc. (TLGV), the non-profit organization which oversees the Quinebaug-Shetucket Rivers National Heritage Corridor and the nearby Blackstone River Valley National Heritage Corridor; and the Trust for Public Land.
 - Create opportunities to work with OSV and these other organizations to co-sponsor cultural events, walking tours, and share resources to enhance understanding of the Town's history.
- ▶ Continue the preservation and improved access to important Town documents by seeking additional CPA funds and other likely funding sources.
- ▶ Continue to support the Town's implementation of the CPA for historical preservation.
- ▶ Consider modifying the demolition delay bylaw to include buildings more than 50 years of age and to extend the delay period to one year.
- ▶ Use arts to create a local identity for residents, capitalize on tourist attractions to make the Town a destination for annual cultural events (music festivals, art shows, poetry contests, open artisan studio events, etc).