Natural, Cultural, and Historic Resources



Introduction

There are several components of a town that leave lasting impressions and are vital to the community. Two of these essential pieces are the town's natural resources and cultural identity. Natural resources within a town encompass many elements; they include vegetation, water, soil, topography, and the relationship between them.

Cultural identity of a community is wide in its scope. It includes a mixture of the built and natural environment, history, events, and how they meld together to create a town's legacy. The definition and traditions are ever changing and evolving with the passage of time. It is important to protect the history and ambiance of a town to find success in the future. These elements bring the community together to share common goals and kinship.

The cultural and natural environment often interact with each other to create the overall picture of a town. Development and human activities have the potential to cause harm to the fundamentals that create this image and balance between the two. Careful planning to protect these aspects will ensure future success and maintain and develop the future vision of the town.

Baseline Conditions Analyses

Natural Resources

The Town of Sterling, Massachusetts is rich in rolling landscape, a variety of water resources, and a profound history of agriculture. The community currently enjoys a diverse range of natural resources including numerous ponds and rivers, and many unique ecological habitats. This section of the Master Plan utilizes the 2010 and 2019 Open Space and Recreation Plan Update (OSRP) created by the Sterling Open Space Implementation Committee, as well as additional local, state, and federal resources.

Geology, Soils, and Topography

Sterling's landscape is attributed to a combination of its valuable soil, plate tectonics, and glacial activity over millions of years. The town's bedrock is comprised mostly of the Merrimack Terrane, and more specifically two sub-belts: the Wachusett Mountain Belt and the Nashua Belt. The Nashua Belt also contains the Worcester Formation and the Oakdale formation, and the Wachusett Belt includes an igneous intrusion of Fitchburg granite.

The layer overlaying the bedrock is the result of glacial advancement, regression, and deposition. The topography of Sterling is carved by succession and regression of glaciers occurring during the Pleistocene Era, 11,000 to 1.8 million years ago. As the period of glaciation receded, melting ice carried sediment and formed glacial lakes depositing sediment throughout the town. As time progressed, the waters decreased leaving behind layered glacial deposits of sand and gravel that formed the Stillwater and Wekepeke Aquifers.

The town's topography is described in the 2019 OSRP as hilly with well-defined valleys and having elevations that range between 330 to 1,010 feet above sea level. Aside from the scenic views offered by the hills of Sterling, historical context is maintained because many are named after the families that once resided upon them, including Chace, Fitch, Kendall, and Ross hills. The hills and valleys of the town created a vast and multifaceted drainage network with streams and rivers that generally flow to the southeast. The vast drainage network has created floodplains along many of the town's water features, including the two main floodplains along the Stillwater River and Wekepeke Brook.

Soils

Sterling's soils contribute to its history of agriculture, much of which was created by the above-described glacial activity. The town contains a mixture of glacial till, sand, and silt. Many of the present-day rivers, streams, and tributaries are responsible for creating the valleys and plains within the town, as well as adding sediment and nutrients into the soils.

According to a Soil Survey of Worcester County conducted by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service¹ and also detailed in the 2010 OSRP, there are several naturally occurring soils associations in Sterling. The most substantial is Paxton-Woodbridge, occupying approximately 55% of the town. There are several variants of these soils with different slope ranges. Woodbridge units with slopes of 0-3% and 3-8% are classified as areas of Prime Farmland, while the Paxton variant with slopes of 8-15% is associated with Farmland of Statewide Importance.

The USDA Natural Resources Conservation Service is concerned with actions that can impair American agricultural productivity. The code of Federal Regulations defines Prime Farmlands as:

"Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up

¹USDA. 1985. SOIL SURVEY WORCESTER COUNTY NORTHEASTERN PART. Retrieved 2021 February. https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=MA

land or water.) It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods."²

Massachusetts has implemented the Agricultural Preservation Restriction (APR) Program which provides alternatives to development for prime and state important agricultural landowners, which includes the Chapter 61A program for agricultural or horticultural land. Additionally, there are two other programs offered in Massachusetts for the protection of other land types: Chapter 61 for forestry land and Chapter 61B for open space and recreational land. The programs are voluntary and provide financial incentives upon agreement to maintain land undeveloped for a specified timeframe.³

In Sterling, there are approximately 3,583 acres of Prime Farmland (see **Figure 4-1**). One of the main resources utilized to protect these soils and other important land is the above-mentioned Chapter 61 programs. As of 2019, per Town Assessors data, Sterling has about 2,566 acres in these programs, with approximately 297 acres in Chapter 61, 2,204 acres in Chapter 61A, and 65 acres are in Chapter 61B.⁴

Water Resources

Sterling is rich in water resources, including several ponds, lakes, and numerous streams and wetlands that are of excellent quality and integral to local and regional water supplies (see **Figure 4-2**). The town is located within the Nashua River Watershed, which in Sterling contains two vital sub-basins associated with the Stillwater River and the Wekepeke Brook.⁵

Rivers and Streams

The Stillwater River, which spans 9.9 miles from the Town of Princeton to the Wachusett Reservoir, is the most prominent river that flows within Sterling. This river is supported by many tributaries including Wachusett Brook, Ball Brook, Bailey Brook, Rocky Brook, Wilder Brook, Scanlon Brook, and Houghton Brook. The river and surrounding area are designated as Outstanding Resource Waters due to their contribution to the Wachusett Reservoir. The Stillwater River hosts many recreational activities, such as, canoeing, kayaking, and fishing, though such activities raise concern for their potential water quality impacts.

² USA.CODE OF FEDERAL REGULATIONS.7 C.F.R. §657.5.Retrieved.February 2021. https://www.ecfr.gov/cgi-bin/text-idx?SID=495eac4f412f764a8101158007d3bfc8&mc=true&node=se7.6.657 15&rgn=div8

³ MASSACHUSETTS.MASSACHUSETTS GENERAL LAW. M.G.L.ch.61. https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIX/Chapter61

⁴ Values represent full parcel acreage and do not account for any exclusions (e.g., residences and other structures).

MASSACHUSETTS WATERSHED INITIATIVE (MWI) NASHUA TEAM, NASHUA RİVER WATERSHED FIVE YEAR ACTION PLAN 2003-2007.2003. retrieved February 2021. http://www.nashuariverwatershed.org/5yr_plan/watershed/executive.html

Town of Sterling Master Plan

Figure 4-1. Agricultural Resources

Legend

Parcel Boundaries

MDAR Agricultural Preservation Restrictions

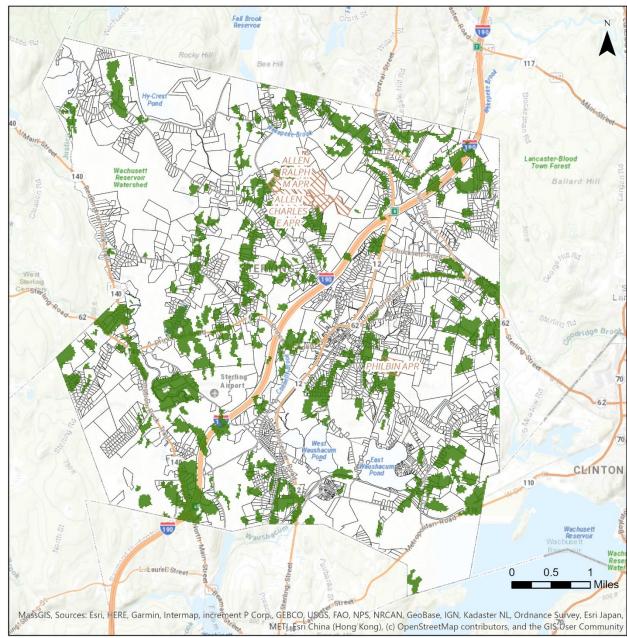
NRCS SSURGO-Certified Soils

Prime Farmland



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Reference System: NAD 1983 State Plane Massachusetts Mainland FIPS 2001



Town of Sterling Master Plan

Figure 4-2. Water Resources

Legend

Parcel Boundaries

USGS Rivers and Streams 25k

--- Perennial Stream

---- Intermittent Stream

National Wetlands Inventory (NWI) - Streams

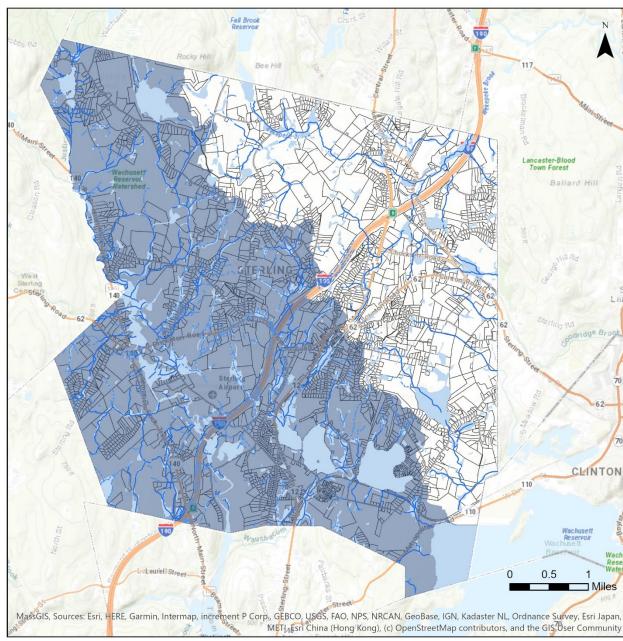
MassDEP Wetlands

Public Water Supply Watershed



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The Wekepeke Brook extends 5.1 miles and is in the northern portion of Sterling, exiting from the northeast corner. The brook, along with several of its tributaries, are designated by the Division of Fisheries and Wildlife (MassWildlife) as a cold-water fishery. The brook's watershed is a vital resource to Sterling and surrounding communities. Three of Sterling's municipal wells are within this aquifer. The Town of Clinton owns the Fitch, Heywood (partially in Sterling), Spring, and Lynde basins which the Wekepeke tributary connects. Another section of Wekepeke Brook between Pratts Junction Road and the former Agricultural Branch Railroad rail bed is owned by the Sterling Land Trust.

There are several more streams and brooks within Sterling's extensive drainage network, including Waushacum Brook and Connelly Brook, which flows through land owned by the Department of Conservation and Recreation's (DCR) Division of Water Supply Protection. South Meadow Brook flows through the southeast portion of town and is tributary to the Nashua River below the Wachusett Reservoir dam.

Ponds and Lakes

There are approximately 12 ponds and lakes fully located within Sterling, plus a portion of the Wachusett Reservoir which encompass about 737 acres (or 3.6%) of the town. Some of these water bodies are reserved for water supply and have limited access for recreational use.

The three largest open water sources within the town are a portion of the Wachusett Reservoir and East and West Waushacum Lakes. The Wachusett Reservoir is in the southeastern corner of the town and has very limited recreational access due to its use as a drinking water supply. East and West Lake Waushacum are both listed as Great Ponds by Massachusetts with public right of access. West Lake Waushacum is the smaller of the two with shores free of development and lies within DCR's water supply protection lands. As a result, there are also some limitations on recreation. East Lake Waushacum is much different from West Lake Waushacum, as it has a built-up shoreline with mostly residential units and a Town-managed beach and picnic area. East Lake Waushacum is a popular community location for swimming and boating.

Of the remaining 10 water bodies within the town, four are held in reserve by Clinton's water supply system: Fitch Basin, Heywood Reservoir, Lynde Basin, and Spring Basin. Hycrest and Muddy Ponds are both owned by DCR's Division of Water Supply Protection, and The Quag is also under DCR's jurisdiction.

The final three are Stuart, Stump, and Fitch Ponds. Stuart Pond is privately owned, access is limited to foot traffic and daylight hours. Stump Pond is a wildlife habitat for osprey and has a conservation easement on its surrounding area by the Sterling Conservation Commission. Fitch Pond, a Great Pond, is surrounded by privately owned property. Thirty acres of land nearby are designated as the Fitch Pond Floodplain Conservation Area, which is owned by the Sterling Land Trust.

Wetlands

The extensive water network within Sterling and its topography facilitates the creation of wetlands throughout the town. Wetlands are typically found in areas of low-lying

topography, and are areas saturated or flooded that produce hydric soils and support the growth of wetland vegetation.

A variety of wetland types, including swamps, marshes, bogs, and over 20 Certified Vernal Pools, are distributed throughout the town and border almost all the rivers, streams, ponds, and lakes. The Stillwater River and Wekepeke Brook systems both host a considerable network of wetlands, as does Fitch Pond and The Quag and their associated tributaries.⁶

The Stillwater River has a sizeable network of wetlands located near the western boundary of Sterling along Route 140, which include a diverse selection of swamp types. Wekepeke Brook follows suit in the northeastern portion of the town with similar wetland diversity. Fitch Pond is surrounded by an extensive system including a variety of wooded swamps and a large deep marsh, while its tributaries host additional wooded swamps, marshes, and wet meadows. The Quag has a similar wetland makeup but with a smaller marsh area.

Biodiversity - BioMap2

In 2010, the Massachusetts Natural Heritage & Endangered Species Program and The Nature Conservancy's Massachusetts Program developed BioMap2 to aid in the conservation and protection of the state's biodiversity. The map layer can be viewed on Bureau of Geographic Information (MassGIS) and contains two main components: Core Habitat and Critical Natural Resources, and several sub-components. Core Habitat identifies areas of habitat that support the longevity of species identified in Massachusetts Endangered Species Act and The State Wildlife Action Plan. Critical Natural Resources depicts larger landscapes that are more suited to support ecological processes, disturbances, and a variety of species.

In Sterling, both Core Habitat and Critical Natural Resource exist (see **Figure 4-3**). Core Habitat and Critical Natural Resource areas are portrayed heavily in the western portion of the town along the Stillwater River and Wachusett Reservoir and extending eastward along the Wekepeke Brook. Additionally, portions of The Quag and West Waushacum Pond and adjacent areas, as well as portions near the Sterling Airport, are illustrated. Many of these areas encompass the wetlands and surface water within Sterling's water network.

Known Threats to Natural Resources

Floodplains

Floodplains are areas adjacent to surface water that are vulnerable to flooding during increased water flow and are critical to the protection of both human and environmental well-being. The 1% flood zone as mapped in Federal Emergency Management Agency (FEMA) Flood Insurance Rate maps is found along the many areas of surface water in Sterling, including the Stillwater River and Wekepeke Brook. These areas also coincide with stipulations in Sterling's bylaws that prohibits encroachment within the zone without following proper procedures so as not to increase flooding. Changes in both the built and

⁶ MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS.Layers include NHESP Certified Vernal Pools, MassDEP wetlands. Retrieved February 2021. http://maps.massgis.state.ma.us/map.ol/oliver.php

natural environment, including increased development, and loss of trees and vegetation within or near floodplains areas, can alter the level of flood waters.

Dams

The MassGIS Dam layer, ⁷ which sources information from historical records of the Massachusetts Office of Dam Safety, shows approximately 21 dams in Sterling, with five having a Significant Hazard designation and two having a Low Hazard designation. The remaining dams do not have designations. The National Inventory of Dams (NID) details a "Significant Hazard" designation as a dam that has the ability to cause a range of damage, including economic loss and/or environmental damage. The existence of dams within a river system can alter the natural processes and function of the river, including water movement, fish passage, and sediment flow, all of which are important to retaining the quality of water and habitat.

Water Quality and Consumption

The quality of water can be influenced by many factors. Sterling has an extensive water network that is vital both locally and regionally to water supply. Protecting Sterling's waters and the elements that contribute to them is essential to maintaining this vital resource.

The Nashua River Watershed 5-Year Action Plan identified several water resource issues related to the Stillwater River and Wekepeke Brook due to their contribution to the watershed. These issues include increased development resulting from the I-190 corridor that runs through both sub-basins, intersecting the Stillwater River and running along the Wekepeke Brook. Route 140 also runs along the Stillwater River for a significant portion of its reach. The presence of these heavily traveled roads not only contributes to increased development, but also additional run-off with potential contaminants such as de-icing salts and the reduction of pervious surfaces.

Development can also lead to other potential water quality impacts. For example, depending on their integrity and proximity to water sources, septic systems may release wastewater contaminants in drinking water and nutrients and pathogens to surface waters. Another development element that will require future monitoring is Sterling's landfill. It is currently closed and capped, but is located within the Wekepeke sub-basin and adjacent to Bartlett pond and the brook itself.

Water capacity is also a reported concern. Approximately 80% of the town is serviced by the public water system, while the remainder is serviced by private wells. Growth in development leads to increased water volume use, which is limited by permitted withdrawal rates established by the Massachusetts Department of Environmental Protection. Furthermore, one of Sterling's four wells is currently not in use due to contamination, which increases the burden on the remaining sources. All these aspects augment the difficulty in upholding the balance of water in and water out, and leads to the need to encourage water conservation and the possible search to find additional well locations.

⁷ The MassGIS Dams layer has not been updated since 2012 indicating that not all locations have been verified and layer is in the process of being updated.

Town of Sterling Master Plan

Figure 4-3. Ecological Integrity

Legend

Parcel Boundaries

- NHESP Certified Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

BioMap2 Core Habitat (CH)

BioMap2 Critical Natural Landscape

BioMap2 CH Priority Natural Communities

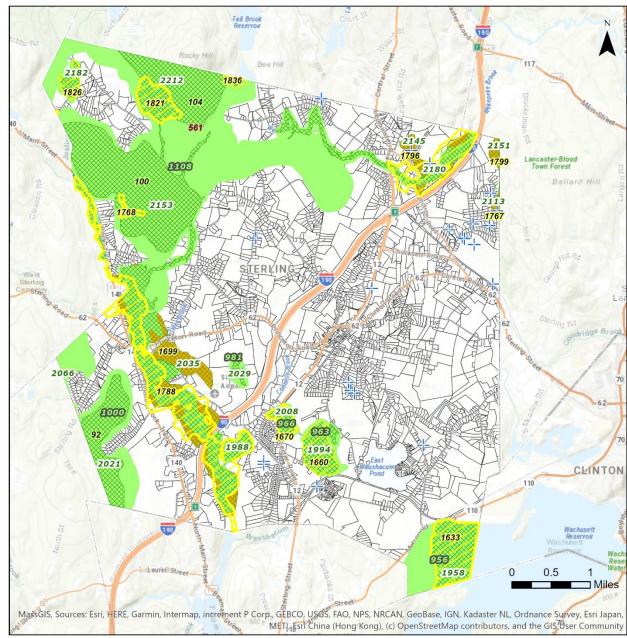
BioMap2 CH Forest Core

BioMap2 CH Species of Conservation Concern



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Historic and Cultural Resources

Historic and cultural resources often overlap in goals, audiences, events, and primary organizations. By considering these resources together as "heritage," we create a stronger link between the built environment, natural landscapes, and the people and communities that create and inhabit them. The loss of a historic building represents a loss in cultural memory as well; similarly, a failure to create cultural opportunities results in fewer traditions, stories, and artists that will become our community heritage in the future. Looked at a different way, however, actively seeking to preserve historic and cultural resources enhances the prominence and longevity of each individual resource.

When most people think about historic resources, they picture a specific building or streetscape. The range of physical, man-made resources that contribute to our heritage is much broader than buildings with four walls and a roof. The National Register of Historic Places (National Register), which was established in 1966 as the country's official list of the Nation's historic places worthy of preservation, recognizes five main categories of historic resources:

- Buildings: structures intended to shelter human activity, such as houses, offices, stores, farm buildings, churches, etc.;
- Structures: these constructions facilitate human activity but are not intended for long-term shelter, such as bridges, gazebos, and dams;
- Objects: these are often artistic works, which are relatively small in scale (in comparison with a building), such as monuments, fountains, and statues;
- Sites: land areas that are significant due to a past event or usage, such as archaeological sites, battlefields, parks, and gardens; and
- Districts: historic districts comprise multiple resources, and may contain any combination of the above property types.

Heritage also consists of less tangible resources as well, or resources that are not part of the built environment. These include artifact and document collections, displays of artistic expression, events associated with cultural and/or ethnic identity and heritage, and oral histories. These memory resources bridge the gap between physical historic places and modern users, making otherwise inanimate items relatable by adding "people" into "history."

Historic and Cultural Resources in Sterling

The diversity of what is considered a historic or cultural resource, and the dynamic nature of these categories mean there is no single, centralized place to consult for up-to-date data on which of these resources exist in Sterling. Instead, understanding which resources are currently recognized in the town requires information from a number of sources. Published documents, state-maintained databases, Town records, and interviews with key stakeholders were all consulted to gather information about priority cultural resources sites, programming, and events.

Sterling has hundreds of archaeological and architectural historic resources that have been documented by a variety of different entities, with the Sterling Historical Commission

serving as the primary driver of major survey efforts. The Massachusetts Historical Commission (MHC) serves as the central repository for these files.⁸ In addition, MHC staff authored a series of Reconnaissance Survey Reports across the state in the early 1980s, which details the pre-Contact and post-Contact periods of development and historic contexts.⁹ Although completed nearly 40 years ago, much of the historic overview is still relevant.



Photograph of the town center, dating from the turn of the twentieth century, is part of the Sterling Historical Society's extensive collections.

Recorded historic and archaeological resources include buildings, structures, objects, sites, and landscapes that are physical reminders of Sterling's heritage – both before and after the town's formation. These resources can be documented on an individual basis, such as a building or a farm, or grouped into districts that collectively tell a broader cultural story (see Figures 4-4 and 4-5). Some resources have been listed in the National Register, which is the national list of significant places that are especially worthy of preservation, while others have received similar recognition at the state level. In Sterling, there are over 150 properties in Massachusetts Cultural Resource Information System (MACRIS) that lie outside identified historic areas and of which the majority have no official designation. In addition, there are at least 10 areas in MACRIS that also have no official designation. These Inventoried structures and areas have some level of documentation on file, identifying them as potential subjects for further research.

⁸ The survey documents held by the Massachusetts Historical Commission (MHC) can be found in a searchable public database called MACRIS (Massachusetts Cultural Resource Information System) at http://mhc-macris.net/, and its companion GIS website at http://mhc-macris.net/.

⁹ A digital copy of the Massachusetts Historical Commission Reconnaissance Survey Town Report: Sterling, 1983 is provided here: https://www.sec.state.ma.us/mhc/mhcpdf/townreports/Cent-Mass/ste.pdf

Town of Sterling Master Plan

Figure 4-4. Historic Resources

Legend

Parcel Boundaries

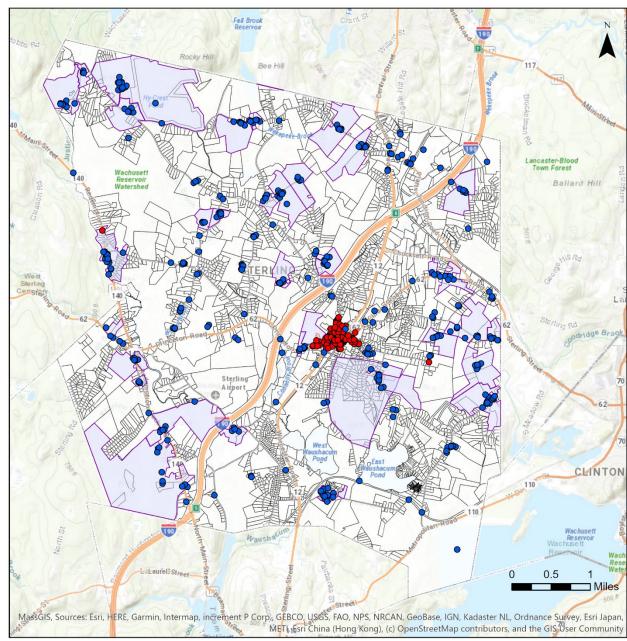
Massachusetts Historic Commission Inventory

- Inventoried Property
- National Register of Historic Places
- ★ Preservation Restriction
- Inventoried Area
- National Register of Historic Places
- Preservation Restriction



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Town of Sterling Master Plan

Figure 4-5. Historic Resources, Town Center Detail

Legend

Parcel Boundaries

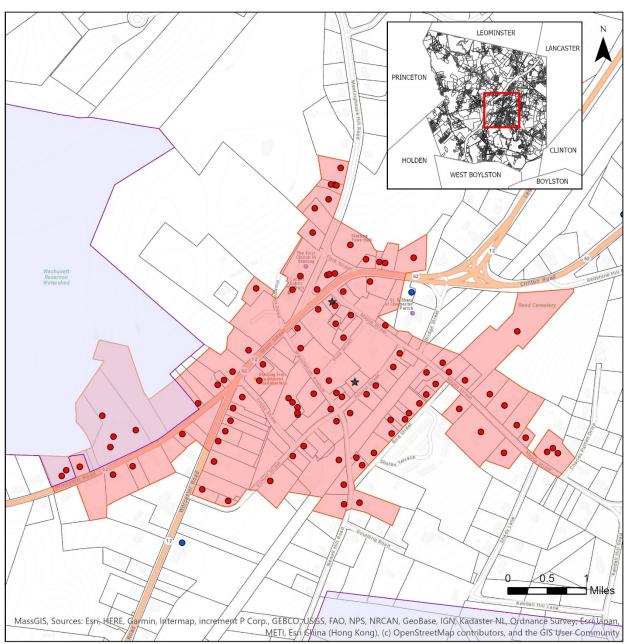
Massachusetts Historic Commission Inventory

- Inventoried Property
- National Register of Historic Places
- ★ Preservation Restriction
- Inventoried Area
- National Register of Historic Places
- Preservation Restriction



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Reference System: NAD 1983 State Plane Massachusetts Mainland FIPS 2001



The following are the town's National and State Register listings:

- Sterling Center Historic District (listed 1988);
- Stephen Hastings House (listed 2005); and
- Sawyer Homestead (listed 2000; however, the house was burned by arsonists and replaced in 2007).

2001 Farmstead Survey

In addition to inventoried resources included in MACRIS and the MHC Reconnaissance Survey Report, a farmstead survey report and associated MHC inventory forms were published in 2001. ¹⁰ The project was funded by Sterling and a matching Survey and Planning Grant from MHC. The project undertook an intensive survey of historic farmsteads, which augmented and expanded the previous inventory of the town's historic, architectural, and cultural resources. The farmstead study focused only on agricultural, or formerly agricultural properties, which retained a considerable portion of their outbuildings, farm structures, and in many cases, their agricultural landscapes. In total, 30 MHC Area forms and 28 individual Building forms were written covering 84 properties. The study report also includes the following recommendations for further study:

- Expansion of the farmstead survey,
- Additional documentation of the farmstead resources surveyed,
- Research to identify builders' and designers' names, and
- Future updating of inventory forms.

The MHC Survey and Planning Grant Program is a federally funded, reimbursable, 50/50 matching grant program to support historic preservation planning activities in communities throughout the state.¹¹ Eligible applicants include all local historical commission, local historic district commissions, planning offices, and other eligible public and non-profit historic preservation organizations.

Cemeteries

There are six cemeteries in Sterling included in MACRIS; Chocksett (est. ca. 1736), Legg (est. ca. 1756), Fairbanks (est. ca. 1760), Cookshire (est. ca. 1782), Oak Hill (est. ca. 1817), and Hillside (est. ca. 1930) Cemeteries. The inventory forms are dated between 1969 and 1974 and were all recorded by the Sterling Historical Commission. The forms for Oak Hill and Hillside Cemeteries offer very little information other than the name and location of the cemetery. The forms for Chocksett, Legg, Fairbanks, and Cookshire Cemeteries include a varying level of information such as a list of the markers, inscriptions, brief histories, and photographs. In 2000, MHC evaluated the National Register Eligibility of the Legg Cemetery; however, MHC found the level of existing documentation insufficient to make a determination at that time. Although the inventory forms have not been updated since they were recorded, an inventory of the markers at each cemetery has been record on the public

¹⁰ The Sterling Historical Commission provides a digital copy of the Historic Farmstead Survey report here: https://www.sterling-ma.gov/sites/g/files/vyhlif1266/f/pages/thecompletefarmsteadsurvey-2018.pdf

Massachusetts Historical Commission Survey and Planning Grant Program overview is provided here: https://www.sec.state.ma.us/mhc/mhchpp/surveyandplanning.htm

website www.findagrave.com, including names, inscriptions, and most photographed. However, a list of burials without markers and the condition of the landscape and markers is not included in either the inventory forms or the findagrave.com inventory.

Inventory Patterns

The MACRIS inventory has a number of limitations – most importantly, it is not comprehensive and instead reflects the historic priorities of each town at any given time. A high percentage of the inventory forms were completed between the 1970s and the mid-1980s, when funding for large-scale surveys was more readily available which means that buildings that are now nearing the 50-year threshold for National Register eligibility consideration, are underrepresented in the town inventory. A town-wide survey effort in 2001 focused overwhelmingly on agricultural or agricultural-related properties. Additionally, historic research, descriptions, and architectural style typologies have become more rigorous over time, meaning there is a wide spectrum of information included on forms in the MACRIS inventory.

However, the inventory remains a valuable resource in identifying general patterns of recorded historic resources in Sterling, and potential opportunities for further study. It is possible to pinpoint informational gaps to help inform future survey priorities and possible threats to as-yet unidentified significant resources.

Nearly all of Sterling's existing inventory in MACRIS, over 600 forms, dates to volunteer-run survey efforts conducted in the 1970s through 1980s and the farmstead survey undertaken in 2001. Approximately 70% of the individual inventory forms are grouped into the 35 areas, and the thoughtful grouping of these properties is an excellent foundation for identifying historic patterns, stories, and contexts for educational and documentation purposes.

One example of this is illustrated by the MACRIS inventory in the Waushacum Village¹², which has a dense concentration of surveyed resources. The inventory is represented by a dense area, highlighted as "STE.A," and several individual properties indicated by points. All of the individual properties were surveyed as part of the area documentation in 2001 (not part of the 2001 Farmstead Survey). It may be beneficial to look at this village with a modern perspective and consider whether the heritage of the village actually encompasses this concentration of properties or if there is a need to expand the district. Considerations can include noting alterations, demolitions, and infill where appropriate; resources that have reached 50 years of age (the threshold often used in National Register evaluations) since the 2001 survey; and prioritizing the themes best represented by extant resources for educational, documentation, and designation purposes.

¹² Waushacum Village is identified as "Sterling Campground" in MACRIS.



Photograph of the Sterling Campground, dating from the turn of the twentieth century, looking southeast on Circle Avenue (courtesy of the Sterling Historical Society).

The 2001 Farmstead Survey identified several agricultural districts including the Clinton Road Farms (STE.K), the Goss-Butterick Farms Area (STE.H), Davis Farm (STE.I), and the Butterick-Nourse Farm (STE.J). Several of these agricultural districts already encompass a mass of current or formally agricultural properties, like the Clinton Road Farms. However, several farmsteads have been identified as possible contributing properties to larger districts, like the Goss-Butterick Farms Area possibly combined with the Davis Farm and the Butterick-Nourse Farm to create a contiguous agricultural landscape along Redstone Hill and Rugg Roads.

General Time Periods

The architectural style recorded on MACRIS inventory forms can be used to understand which time periods are well-represented. Historic architectural styles tend to remain popular for a few decades before tastes transition to new building forms and decorative features. While the assignment of architectural style has not been entirely consistent over the course of time, common eighteenth and nineteenth century styles tend to be interpreted uniformly. This often presents a more accurate record of time period than using construction date data from MACRIS; although the construction date is available through the Geographic Information System (GIS) metadata, these dates are often based on unsubstantiated sources and are far more variable in representation (examples may include: 1880, c. 1880, 1880s, late nineteenth century, etc.). In addition, over 400 of the almost 620 inventoried resources are secondary/agricultural outbuildings, landscapes, cemeteries, structures, and objects that do not include styles and cannot adequately be assessed.

Looking at a breakdown of inventory forms by architectural style (see **Figure 4-6**) can reveal general trends that indicate the priorities of previous survey efforts (both intentional and unintentional). For underrepresented time periods, it is often worth investigating whether the lack of inventory forms reflects a chronological lull in development or suggests an

Georgian

Federal

Greek
Revival

Gothic Revival

Victorian Eclectic

Colonial Revival

No Style

Not Researched

opportunity to proactively expand the inventory before little-understood resources are threatened.

Figure 4-6. MACRIS Inventory Forms by Architectural Style; Town of Sterling

Even with the limitations of the data available through MACRIS, a few patterns are discernible. The chart consists of styles that are represented by at least four properties in the inventory and are solidly eighteenth and nineteenth century styles, such as Colonial, Federal, and Greek Revival are fairly well-represented in the inventory. Transitional styles such as Victorian Eclectic and Colonial Revival were used into the first quarter of the twentieth century and are represented by somewhat smaller ratios or not recorded. The least-represented categories (fewer than four examples) are not called out in the chart, and include other styles associated with the first quarter of the twentieth century (or last few years of the nineteenth century) such as Second Empire, Queen Anne, English Revival, and Craftsman. Later twentieth century styles such as Art Deco and Cape/Postwar Traditional represent a much smaller ratio than earlier time periods.

Confirming the cause(s) of this decline of representation in the inventory over time may be helpful. For instance, perhaps previous survey efforts had a definitive stop date, so later inventory forms are few and far between. Alternatively, Sterling's agricultural history is strong represented by multi-generational farms where an eighteen or nineteenth century house was lived in by multiple generations. Understanding whether the drop-off of inventory forms for buildings dating post-1920s is due to sample size or survey restrictions may be useful to identify focus areas for future inventory activities or the development of adequate parameters for a demolition delay ordinance.

Resource Types

Some resource types are poorly represented in the inventory simply because they are relatively recent categories and have few inventoried/designated examples or are not distinguished in the available data as subtypes of National Register districts, such as cultural

landscapes. Thematic surveys, such as the Farmstead Survey in Sterling, have been used as a tool in the last decade by towns that are witnessing steady redevelopment of rural and agricultural-related resources.

Heritage landscape resources, often identified as rural landscapes, agricultural landscapes, and/or cultural landscapes, consider manmade and natural features that together are significant in telling the story of the development of a town. These landscapes can incorporate scenic and ecological land use patterns as well as community history to tell broad, and often complex, stories. Significant viewsheds, important routes, and the ways cultural traditions influence construction and planning are some of the less "tangible" resources that can be documented on a landscape scale. Massachusetts has been particularly proactive in studying its heritage landscapes, through the Heritage Landscape Inventory program. This partnership between the DCR and the Freedom's Way and Essex National Heritage Corridors worked with members of the public to identify priority heritage landscapes facing some level of threat by disuse, potential development, or environmental evolution. Sterling has not participated in the Heritage Landscape Inventory Program.

Archaeological Investigations

Sterling has a minimal number of identified archaeological sites, just over 10 pre-Contact (i.e., those that predate Native American contact with Europeans) sites and nearly one-half-dozen post-Contact sites, which is roughly average for the communities in the northern part of Worcester County.

The majority of the identified pre- and post-contact sites are concentrated in the southern portion of the town, primarily around Lake Waushacum where activities from those periods would have been attractive.

Historic and Cultural Entities and Events

It truly does "take a village" to promote, protect, and celebrate Sterling's heritage. Several community groups, Town departments, Town committees (and subcommittees), and dedicated volunteers have taken on responsibilities to connect the town's past, present, and future residents.

Sterling Historical Commission (M.G.L. Chapter 40 s. 8D)

The five-member Sterling Historical Commission (SHC) is appointed by the Select Board and mandated to protect and preserve historic buildings, structures, properties, cemeteries, and archaeological sites in the town. To achieve this goal, the SHC's responsibilities include the following:

- Identify, compile, and maintain an inventory of the town's historic assets according to MHC guidelines;
- Identify resources for nomination to the National Register of Historic Places;

¹³ Massachusetts Heritage Landscape Inventory Program https://www.mass.gov/lists/heritage-landscape-inventory-reconnaissance-reports

- Encourage community awareness of and promote interest in Sterling historical heritage; educate community about preservation issues and how preservation can positively impact the town's economic development and property values;
- Advise Town boards, committees, departments, and administration in all matters relating to historic preservation, including any proposed alteration, destruction, or relocation of historical assets;
- Encouraging renovation and adaptive reuse as alternatives to demolitions of historic properties;
- Advocate for local ordinances, bylaws, and public actions that encourage the thoughtful, preservation-minded planning and development in keeping with the character and history of Sterling; and
- Be an active participant in the town planning process.

Sterling Historical Society (SHS)

The Sterling Historical Society (SHS) was founded in 1963, as a volunteer organization dedicated to preserving the rich history of Sterling. The SHS and museum is in the Blood-Peck House at 7 Pine Street in the Sterling Center National Register Historic District. They hold an extensive collection of artifacts, research materials and other exhibits on display covering the people and events of Sterling's past. They also have a large collection of digital and physical information and documents, including a repository of records specific to family names and antique homes. The museum is open to the public on Tuesdays 9:00-12:00 or by appointment.

Sterling Cultural Council (SCC)

The Sterling Cultural Council's (SCC) mission is "To promote excellence, inclusion, education and diversity in the arts, humanities, and sciences to foster a rich cultural life for all Massachusetts residents and contributes to the vitality of our communities and economy. The council pursues this mission through a wide range of grants, initiatives, and advocacy for artists, communities, organizations, and schools." As the local council representative of the Massachusetts Cultural Council, the SCC administers and distributes grant funding for a variety of projects, including concerts, exhibitions, broadcasts, shows, school programs, and field trips.

Aside from grant funding provided from the Massachusetts Cultural Council, the town has previously allocated monies from its general operating budget to the SCC. The latest allocation amounted to \$3,550 in fiscal year 2020. The SCC requested and received the same amount for fiscal year 2021.

Conant Public Library (CPL)

Like many public libraries across the county, the Conant Public Library (CPL) has evolved into a community center, classroom, local repository, and cultural meeting and display space – as well as a physical and online resource for books and other media. The original main block of the library was dedicated in 1886. A large addition was constructed in 1986, providing a new lobby, children's room, book storage, and reading room. In 2004, the library was renovated, including upgrades to its systems, creation of a program room, and

creating Americans with Disabilities Act (ADA) access to the building. In 2019, the Library Trustees voted to use some donated funds to update the interior and in addition, the town provided a Capital Fund to replace the carpeting. The Library is currently (2021) engaged in a Capital Funds Project to address an old elevator and aging ADA lift. The library holds local history resources as well as public access to online resources like Ancestry.com that complement the collections of the Sterling Historical Society's extensive repository.

Sterling-Lancaster Community Television (SLCT)

The public access television station is a useful tool to promote the activities and initiatives of the town's historic and cultural resources. Broadcasts include public meetings and events, and community news programs.

The SHC has utilized the station to promote restoration activities around Sterling, like the Sterling Boy Scout Troop 189, Legg Cemetery Restoration Project Interview from May 15, 2019.

The Sterling Fair

This agricultural fair first took place in the early nineteenth century, when it was established by the Sterling Cattleman's Association and it ran until the late 1950s. The tradition was reinstated in 1981 for Sterling's bicentennial, and since then it has been run by the town as a municipal fair every fall. Today's participants can enjoy attractions including fireworks, livestock, contests for children, and a Ferris Wheel. The Sterling Fair is currently the largest free fair of its size in New England.

Inspire Sterling

This art show encourages members of the Sterling community to create artwork that celebrates life in their town. No restrictions on mediums are given and participants are able to submit their pieces through an online form. The event was developed in order to celebrate Sterling's 240th Anniversary and also to support the restoration of the West Sterling Schoolhouse, which is the last one-room schoolhouse in the town. The show took place in the school itself between June 4-6, 2021.

Art in the Park

In developing this festival, the SCC hopes to create a new annual or semi-annual, art-centered event that residents can enjoy for years to come. The main purpose of the event is to provide Sterling artists with a platform from which they can showcase their work and compete for prizes. However, the SCC will also use the opportunity to publicize the Massachusetts Cultural Council grants in order to encourage attendees to develop other similar programs. The first Art in the Park event took place in Sterling's Memorial Park and Town Common on August 21, 2021.

Sterling Summer Concert Series

The Sterling Summer Concert Series is an annual event held by the Recreation Department that brings musical artists to Sterling's residents over the summer months. Held centrally in

Memorial Park, the concerts create a sense of community and foster an appreciation for the arts.

Other Community Organizations and Events

- ► The recently formed Sterling Arts Collaborative, a 501(c)(3) organization, which envisions sponsoring art shows, photography exhibitions, open mic nights, poetry slams, guest speakers, published authors, etc.
- ▶ The Sterling Community Theatre, which operates out of Parish Hall of The First Church.
- The Sterling Academy of Gymnastics and Dance.
- Seasonal musical performances at the Sterling Senior Center.
- Chocksett Cemetery Walk & Make Your Own Gravestone Rubbing Event, which invites participants to learn about historic New England gravestones and how to do a proper gravestone rubbing.

Protections

Scenic Roads Bylaw

In 2004, Sterling enacted a Scenic Roads Bylaw¹⁴ to help the town maintain and enhance its rural, "small-town" character by ensuring that work done to trees and stone walls on public right-of-way of scenic roads is done in a way that helps preserve the scenic, historic, and aesthetic characteristics of the public right-of-way. The Planning Board, the Select Board, the Conservation Commission, the Historical Commission, or a citizen of Sterling can propose a "scenic road" status for any road in Sterling other than a numbered route or a state or federal highway. A majority vote at a Town Meeting is required for a designation. To date, 74 Town-owned roads, including Pratts Junction Road and Tuttle Road, are designated a Scenic Road.¹⁵

State and Regional Partners, Programs, and Resources

Massachusetts Historical Commission (MHC)

The MHC is a statewide commission chaired by the Secretary of State, established "to identify, evaluate, and protect important historical and archaeological assets of the Commonwealth" (M.G.L. Ch. 9 Sections 26-27D). The name also applies to the State Historic Preservation Office (SHPO), comprising the State Historic Preservation Officer, State Archaeologist, and professional staff who support the commission. The office has three divisions:

 Preservation Planning – Assists and supports local entities with survey and inventory initiatives, National and State Register nominations, and local historic designations. This

¹⁴ The Sterling Planning Board adopted "The Regulations for the Designation of Scenic Roads and Alterations of Trees and Stone Walls Thereon" to implement the provisions of the "Scenic Roads Act," M.G.L. Chapter 40 Section 15C.

¹⁵ The full list of Scenic Roads, which have been adopted at Town Meeting, can be found at https://www.sterling-ma.gov/sites/q/files/vyhlif1266/f/uploads/list of scenic roads.pdf.

division also assists local historical commissions with planning and the use of preservation bylaws.

- ► **Grants** Administers federal grants-in-aid and state matching grants for preservation activities.
 - Survey and Planning Grants provide 50% matching federal funds for the preparation of community surveys, preservation plans, preparation of historic district studies and legislation, archaeological surveys, nominations to the National Register, and educational preservation programs. Eligible applicants are local historical commissions, Certified Local Governments, local and state agencies, educational institutions, and private organizations.
 - Massachusetts Preservation Projects Fund (MPPF) provides money for the restoration, rehabilitation, stabilization, and documentation of historic and archaeological properties owned by municipalities or nonprofit organizations. Up to 50% matching grants are available to qualifying properties listed on the State Register, to ensure their physical preservation. Scopes of work for projects range from the acquisition of an endangered property, to the restoration of an historic building, to research projects such as historic structures reports.
 - Preservation Restrictions are easements that protect historic resources into the future, whether for a set number of years or in perpetuity. Preservation restrictions can be donated or purchased by a government body or private preservation organization and are enforced by the holder of the restriction. Charitable donations of easements on historical buildings or archaeological sites may qualify for federal income tax deductions.
- Technical Services Oversees historic review and compliance processes, including Section 106 and State Register Review.
 - This division also administers the <u>Historic Preservation Certification</u> program on the local level, a federal historic tax credit incentive for the rehabilitation of income-producing historic buildings. There is currently a state historic tax incentive program as well, overseen by Technical Services, which can be awarded in tandem with the federal program.

Preservation Massachusetts (PM)

Preservation Massachusetts (PM) is the statewide preservation advocacy organization in the Commonwealth. This non-profit organization promotes local preservation on the state level, through a variety of lobbying efforts, educational offerings, and services. Of particular note is the following:

- Circuit Rider Program These part-time staff members work directly with communities as a resource for preservation projects, development planning, and local issues. They facilitate intra-community networking and information sharing, to help enhance grassroots preservation efforts. There is a Circuit Rider for Central and Western Massachusetts communities.
- Preservation Action Center This webpage gathers years of PM experience into one centralized library, covering technical topics, funding questions, project models, and toolkits for local preservation efforts.

Local Commission Resource Library – In cooperation with the MHC's Director of Local Government Programs, PM has recently added a webpage with resources specifically geared to the needs and questions of local historical commissions. Additions to the page are ongoing, but as of September 2020 the page includes information on public outreach, local bylaws and ordinances, and procedures for public meetings and hearings (including virtual meetings).

Massachusetts Cultural Council (MCC)

As a state agency, the Massachusetts Cultural Council (MCC) promotes arts, humanities, and sciences throughout Massachusetts, often through local commission partners.

In partnership with MassDevelopment, the Cultural Facilities Fund provides grants to support the acquisition, design, repair, rehabilitation, renovation, expansion, or construction of nonprofit cultural facilities, many of which utilize vacant historic buildings as studio, gallery, classroom, and shop spaces.

Goals and Actions

Natural Resources

Goal 1: Implement effective strategies to preserve and protect the town's water resources and unique ecological habitats.

Action Item #1: Implement a public educational program on proper septic system use and maintenance. Include a focus on using phosphate-free cleaning products, correct hazardous waste disposal practices, avoiding the use of garbage disposals for food waste, and conducting regular inspections and pumping. Encourage the installation of advanced treatment systems that result in greater nitrogen or phosphorus removal, in contrast to typical septic tanks.

Action Item #2: Review the town's Title 5 requirements, administered by the Board of Health, to ensure proper setback distances between new or upgraded septic systems and proximate waterbodies. Revise accordingly.

Action Item #3: Work with partners, including the Massachusetts Department of Transportation and the Department of Conservation and Recreation, to reduce salt use on major roadways, particularly those near aquatic ecosystems and drinking water supplies.

Action Item #4: Sponsor stormwater management educational programs for residents to address potential sources of contamination of stormwater, to encourage stewardship of water resources.

Action Item #5: Continue efforts to secure funding to address nutrient loading to East Lake Waushacum.

Action Item #6: Investigate and require, as feasible and where applicable, provisions for buffering developments from the South Meadow Brook to ensure protection from nutrient loading and stormwater erosion.

Action Item #7: Work with the town's farming operations to reduce the use of pesticides and herbicides.

Action Item #8: Assess the potential of establishing green corridors that would connect natural areas and areas of open space for the purposes of providing habitat for wildlife and enhanced mobility and recreational opportunities for the town's residents and visitors. Green corridors are typically thin, linear strips of land – often acquired through conservation restrictions. In the identification of potential sites for green corridors, consider the town's Core Habitat and Critical Natural Resources (see BioMap2).

Action Item #9: Working with relevant partners, evaluate appropriate levels of conserved lands in Sterling, balancing community priorities such as community character and economic development. As appropriate, increase the town's inventory of conservation lands and drive the granting of conservation restrictions on privately-held lands.

Action Item #10 For existing and new conservation restrictions, ensure the town has the proper monitoring and enforcement protocols in place.

Action Item #11: In partnership with the Conservation Commission, Sterling Land Trust, and Department of Conservation and Recreation, work to create/coordinate local forest management plans, with a focus on maintaining and improving biodiversity.

Action Item #12: Continue to engage property owners with lands eligible for the State's Chapter 61 programs and encourage program enrollment. Provide to them education on the programs, as applicable, including their tax benefits.

Action Item #13: Investigate the certification of additional vernal pools in Sterling to provide them with regulatory protections.

Action Item #14: Leveraging the town's tree inventory, create a documented tree management plan that outlines future management practices for the community's trees and forests. Consider including a public tree and maintenance plan for trees in street rights-of-way and parkland that would prioritize tree pruning and removals, replacements, and new plantings.

Action Item #15: Work with Clinton, as well as private entities, to advance efforts to fix the dams that are designated as a significant hazard.

As part of this Master Plan's second community survey, when asked "how concerned are you with the protection of local waterbodies," 75.5% said they were "very concerned" or "extremely concerned."

And when asked "how concerned are you with the loss of natural lands to new development," 67.5% said they were "very concerned" or "extremely concerned."

Goal 2: Promote water conservation techniques to residents and businesses to reduce the demand for potable water and alleviate the future need for additional public wells.

Action Item #1: Conduct a water conservation campaign to reduce use of potable water for landscaping purposes. This campaign should be targeted by household, using a comparison of winter and summer time usage. Households with the greatest change in usage should be provided with educational materials that include a comparison of their water usage against others in the community.

Action Item #2: Consider opportunities to encourage or require water efficient design and water efficient landscapes for new construction and major renovations. Advocate for such inclusions in the State's Building and Plumbing codes.

Action Item #3: Encourage the use of private irrigation wells instead of making connections to the town's potable water supply.

Action Item #4: Promote the use of rain barrels, which are intended to collect rainwater for landscape irrigation purposes. Consider partnering with a local rain barrel vendor on a program that provides rain barrels at a reduced cost to residents.

Action Item #5: Work with local farming operations to promote water-saving farming techniques, such as the use of alternative water sources and proper irrigation scheduling.

Goal 3: Leverage nature-based solutions in preparing Sterling for the impacts of climate change.

Action Item #1: Promote the adoption of a Low Impact Development (LID) Bylaw. LID is a development approach that first identifies natural resource areas for preservation and then applies stormwater best management practices (BMPs) to preserve those natural features and associated hydrology. Examples of such practices include permeable pavers, bioretention, and green roofs. LID techniques are applied instead of traditional stormwater management methods of collecting, conveying, and piping away stormwater runoff.

Action Item #2: Review the town's Stormwater Management Bylaw and ensure that LID techniques are sufficiently incorporated and promoted.

Action Item #3: Prepare a town-wide green infrastructure plan that would integrate green infrastructure, such as LID, into the town's stormwater, combined sewers, and roads. Green infrastructure has the benefits of managing flooding, preparing for drought, reducing urban heat island effects, among others.

Action Item #4: In coordination with Natural Resources Goal 1, Action #7, assess the need to prioritize municipal tree replacements and new plantings in areas that would reduce heat islands (e.g., around buildings, at pavements in parking lots and along streets).

Historic and Cultural Resources

Goal 1: Enhance Planning Tools Centered on Historic and Cultural Resources.

Action Item #1: Develop a historic resources Preservation Plan for the town or for individual neighborhoods that establishes priorities and strategic milestones for the identification, management, and promotions of Sterling's historic properties. The MHC Survey and Planning Grant Program can be a source of financial support for the creation of this plan.

Action Item #2: Support efforts to pass the Community Preservation Act, which provides funding for the direct preservation of historic resources; the preparation of structural assessments and feasibility studies for building reuse; and hiring an architect to create construction plans.

Action Item #3: Become a Certified Local Government (CLG) through the MHC and National Park Service, which provides additional opportunities for funding and technical assistance.

Additionally, becoming a CLG would allow Sterling to participate directly in the review and approval of National Register nominations.

Action Item #4: Evaluate the adoption of a Demolition Review Bylaw or Demolition-By-Neglect Bylaw. Demolition Review allows the Sterling Historical Commission to impose a demolition delay on preferably preserved historic buildings that allows time to identify future uses that will save the building (on-site or elsewhere). A Demolition-By-Neglect Bylaw helps protect neighborhood character by disallowing the intentional deterioration of buildings.

Action Item #5: Develop a strategy to assess the needs of the town's numerous historic cemeteries. Prioritize cemeteries according to significance and threats, and contract specialists in cemetery preservation to delineate the grounds and develop restoration and maintenance plans.

Action Item #6: Develop a Heritage Landscape Report, based on the former Department of Conservation and Recreation's Heritage Landscape Inventory program. Heritage landscapes consider natural and manmade features together, such agricultural lands, woodlands, scenic viewsheds, and industrial waterways. Identifying priority heritage landscapes, perhaps including Wekepeke Brook, is the first step in identifying tools to protect them and can inform development and planning initiatives town-wide.

Goal 2: Support the protection and promotion of Sterling's heritage resources.

Action Item #1: Assess the need to repurpose Town-owned facilities for community needs by identifying short-term and long-term planning goals for surplus properties.

Action Item #2: Sponsor the preparation of an expansion of the Sterling Center Historic District and the listing of the Waushacum Village, formerly known as Sterling Campground.

Action Item #3: Develop interactive programming such as tours, scavenger hunts,

the top ranked choice was "establishing/refining historic districts." and family photo scanning, around the significant historic resources, including the West

Also as part of this Master

Plan's second community

survey, when asked to "rank the

town's most pressing historical

and cultural resource needs,"

Action Item #4: Use the National Register districts to market the use of historic tax credits by existing and future owners and developers.

Action Item #5: Promote awareness of Sterling's heritage through the publication of articles in local community papers, social media posts, installing heritage-related signage, and pursuing collaborations with community organizations to develop co-sponsored programming. Enlist related volunteer efforts from the town's elders.

Goal 3: Enhance support and promotion of the local arts and community programming.

Sterling Schoolhouse, the town-owned cemeteries, or the Town Pound.

Action Item #1: Develop a network of community partners to bring programming to a wider audience by engaging local organization and committees, such as the Sterling Senior Center Council on Aging, Conant Public Library, Sterling Historical Society, Sterling Historical Commission, Sterling "Young Adults Helping Out Others" Y.A.H.O.O., and Sterling Public Schools.

Action Item #2: Encourage the engagement of local artists, including students, through the use of public art and performance throughout the town.

Action Item #3: Support year-round arts and cultural programming by securing temporary spaces, such as the 1835 Town Hall, that encourage visitation during different seasons and provide resources for local organizations and entities to expand virtual programming.

