

CHARLESTOWN COMPREHENSIVE PLAN



The Town of Charlestown, Rhode Island

Town of Charlestown, Rhode Island
COMPREHENSIVE PLAN



**Adopted by the Planning Commission and the Town Council
of the
Town of Charlestown**

May 4, 2021

**Approved by the RI Division of Statewide Planning
*Month Day, 2021***

CHARLESTOWN COMPREHENSIVE PLAN

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 1. INTRODUCTION

BACKGROUND

The comprehensive plan that follows is the work of the Charlestown Planning Commission and the Charlestown Planning Department, with review and input by all town departments, various boards and commissions, civic and environmental organizations and the community at large.

During many meetings that were held starting in 2014, the Planning Commission reviewed, revised, rewrote and drafted all of the comprehensive plan components. The work originally began as a rewrite of the 2006 Comprehensive Plan 5-Year Update, which was an update of the comprehensive plan originally prepared in 1991, but eventually became the development of a new comprehensive plan, supplemented by updated Census and other data, recent analyses of growth and its impacts, and a presentation of issues that are current to 2020.

This update is done according to the requirements of the Rhode Island Comprehensive Planning and Land Use Regulation Act, as amended. The plan identifies the current status, issues and opportunities and goals for each component, the policies which the Town of Charlestown intends to pursue, and the actions needed to implement those goals and policies over a twenty-year time frame.

The Planning Commission and the Town Council adopted the Charlestown Comprehensive Plan at a joint public hearing held on May 4, 2021.

CHARLESTOWN: A “South County” Treasure

Charlestown today represents over 10,000 years of history and culture in a scenic, rural and coastal setting. This history includes glacial, Native American and Colonial, through the Nineteenth and Twentieth centuries to the present day. Route 1, the historic travel corridor known as Post Road which connects New York City and Boston, divides the northern more topographically diverse and less dense part of town from the southern coastal pond region. The landscape throughout Charlestown has remnants of its farming, fishing and textile manufacturing past, with historic homes, inns and mill villages.

The Charlestown Comprehensive Plan, while based on the past, incorporates a vision for the future. It focuses on the environment, community vitality and history, infrastructure, education, social issues, public health and safety, the economy, housing and more.

Charlestown will continue to protect its natural and cultural resources which provide a rural character and healthy living environment that its residents value and its visitors and tourists seek.

Charlestown has characteristics of the countryside and the small town, including the use of private and community wells and on-site septic systems rather than municipal water and sewer, and limited commercial activity. It is outside the Urban Services Boundary, as defined in the RI State Guide Plan. Many commercial facilities are accessible in adjacent communities such as Westerly, South Kingstown and Richmond. This enables Charlestown to remain a less developed and active community, a characteristic that its residents seek to maintain.

Its rural character, particularly in the area north of Route 1 is reflected by the following:

- low density of housing
- relatively narrow winding roads without sidewalks
- stone walls indicative of past farming practices and the stony nature of the soil
- native vegetation along the roads and shielding some of the development that has occurred
- views of farmland that has been in agriculture for generations
- Large and small tracts of land preserved in perpetuity providing recreational possibilities while preserving wildlife habitat, protecting the water supply and acting as a carbon sink

In the south of Charlestown, its small town character is revealed in summer colony cottages, dense neighborhoods and small businesses serving primarily local needs. The geography is dominated by the salt ponds and the barrier beaches, which have served as a draw for tourists and second homes owners.

Community surveys have consistently shown that residents favor limited, sensitive development and maintaining the rural character of the town. Many different entities have helped to preserve much of the land: the Town of Charlestown and the Charlestown Land Trust, US Fish and Wildlife Service, Rhode Island Department of Environmental Management, The Nature Conservancy, Audubon, and significantly, large numbers of residents that place their land in conservation easements. Local farmers' markets and farm stands, especially honor ones, reflect this feeling. Community events such as art and Christmas walks, a New Year's Eve bonfire, Halloween activities, and a variety of recreational and educational programs, all help bring residents together and promote common values. The town newsletter, the Pipeline, helps distribute important information to all. This is important in a town where there are several distinct areas separated by the Narragansett Indian Tribe Settlement Lands.

The community spirit has been evident when large numbers of residents have engaged to prevent a nuclear power plant from being built, or a new high speed rail from disrupting historic villages, farmland and preserved areas, or to prevent large volumes of water from being transported out of the community to cool a power plant in northern Rhode Island. The designation of Route 1 as a Scenic Highway and the Wood Pawcatuck River as a Wild and Scenic River resulted from the dedicated actions of numerous volunteers in the community to preserve these features.

THE CHARLESTOWN COMPREHENSIVE PLAN

The goals, policies and recommendations of this comprehensive plan are designed to:

- Provide residents with a high quality of life
- Protect the natural and cultural resources through preservation, maintenance, knowledge and legislation
- Provide active and passive recreational opportunities for all ages
- Maintain town-owned facilities to ensure that they are useful for a long time
- Provide a broad base of services that support the needs of businesses and residents
- Maintain a healthy environment to ensure safe drinking water and high air quality
- Support sustainable development and the use of alternative energy sources
- Address the need for resiliency in the face of natural hazards and climate change
- Provide alternative transportation opportunities such as bikeways
- Create positive interaction with the Narragansett Indian Tribe and its lands
- Maintain dark skies through education and legislation
- Support local businesses in a highly seasonal environment
- Encourage housing that is affordable for a wide range of incomes
- Address new technology and development in a sensitive way that does not detract from the town's character and natural environment

To maintain what residents desire and tourists seek, namely relatively quiet and undeveloped beaches, open spaces to walk, hunt or watch birds, and clean waterways to canoe and kayak or fish, vigilance is needed in terms of future development and actions. Growth that happens must be sensitive to the character of Charlestown and preserve the environment on which the quality of life of residents depends.

VISION STATEMENT

Charlestown will be a community united by its desire to provide a healthy, high quality of life which depends upon the protection of its natural, cultural and historic resources. These resources also protect wildlife and mitigate future climate change, and provide economic benefits in terms of tourism.

Limited facilities and service demands keep our property taxes low and thoughtful land stewardship and careful land regulation will ensure the same quality of life and experiences for future generations.



NATURAL RESOURCES

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's natural environment and conservation lands, issues and opportunities related to its protection and management, and recommendations to achieve the goals of natural resource protection and environmental sustainability.

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- NR-3 Surface Water and Wetlands**
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Cover Photo: Frances Topping

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 2. NATURAL RESOURCES

INTRODUCTION

Charlestown's abundant natural resources shape the town's rural character while providing a high quality of life for its residents and a source of great attraction for its visitors.

Its beaches and coastal ponds, and rivers, streams and many freshwater ponds provide habitat for fish and shellfish and many recreational opportunities. Its wetlands provide unique ecosystems and flood control. Its forested lands provide clean air and water, and ecological diversity as well as habitats for birds and animals and trails for hiking. Its valuable farmland soils provide food for sustenance and wood for fuel. Its aquifers provide the only source of drinking water. Its dark skies protect wildlife and human health and are an astronomical resource.

In conjunction with these resources, Charlestown's scenic and rural landscapes complete the fabric of the town and provide a sense of place. Protection and enhancement of natural resources is critical to sustaining the vitality of the community as well as its tourist and recreation-based economy. Charlestown is fortunate in that many of its natural resources are owned and managed by other entities such as US Fish and Wildlife, RI Department of Environmental Management, The Nature Conservancy, Charlestown Land Trust and Audubon Society. The Settlement Lands of the Narragansett Indian Tribe also contain valuable natural resources. Over generations, this has led to a shared vision for Charlestown as a place to celebrate its outdoors and its history, and to plan for a future that relies on the protection of the natural environment rather than growth or overdevelopment to sustain the economy.

RELATIONSHIP TO OTHER CHAPTERS

This chapter complements a number of others:

Recreation Chapter and Economic Opportunity Chapter

Recreational programs and assets are described in the Recreation chapter, with an emphasis on outdoor activities that rely on Charlestown's exceptional and varied natural resources. The main source of economic activity in Charlestown is tourism, which is directly tied to the natural environment and the recreational activities it supports – boating, swimming, fishing, hiking, cross-country skiing, bird watching, stargazing and sight-seeing. The tourist economy is described in detail in the Economic Opportunity chapter.

Services and Facilities Chapter

Charlestown depends upon its groundwater to provide drinking water and its soils to treat wastewater. A priority of this plan is to ensure an adequate long-term supply of high quality drinking water, whose only source in Charlestown is groundwater. Drinking water and other necessary community resources are described in the Services and Facilities chapter.

Energy Chapter

Energy production and use in Charlestown is inexorably tied with natural resources; all forms of energy require use of and/or have an impact on natural resources. Planning for future energy needs is discussed in the Energy chapter, with an emphasis on achieving energy goals and managing the impacts of climate change in a manner that also protects the natural environment.

Natural Hazards Chapter

The vulnerability of natural resources to natural hazards, particularly forecasted sea level rise and more frequent and severe storms as a result of climate change, is an essential component of this plan. The potential effects of natural hazards on Charlestown's coastal and inland riverine resources and the manner in which the community is planning for these eventual changes are contained in the Natural Hazards chapter.

EXISTING CONDITIONS

Geology and Landscape

Long before humans made their mark on the landscape, geologic forces created Charlestown's most notable features and shaped its topography, soil characteristics, water bodies and drainage patterns. When the last glacier advanced and retreated over New England, it pushed up a broad moraine alongside what is now Route 1, holding back the water of the Pawcatuck River basin. Charlestown's landscape is divided by this glacial recessional moraine, a ridge of steeply rolling hills on the north side of Route 1 that run east to west parallel to the coast (see Figure NR-1). The flat sandy coastal plain extends southward from the moraine to Block Island Sound, where barrier beaches were formed across coastal embayments, creating the salt ponds. North of the moraine, the land is characterized by a series of north-south ridges between which lie large wetlands such as Indian Cedar Swamp and open water bodies such as Watchaug, Schoolhouse and Pasquisset Ponds. The northern boundary of the town is defined by the Pawcatuck River.

A description of Charlestown's physical geography, from south to north:

Barrier beaches – long and narrow beaches that run parallel to the coastline and are separated from the mainland by lagoons, and have elevations below 20 feet

Coastal headlands – knolls of outwash or till, reaching elevations between 20 and 30 feet

Coastal ponds – brackish and estuarine waters impounded by the barrier beaches

Coastal outwash plain – areas of glacial outwash between the ponds and the moraine, spotted with kettle holes and reaching elevations of approximately 50 feet at the base of the moraine

Moraine – a ridge of accumulated glacial debris (soil and rock) with numerous steep slopes, also containing kettle holes, and reaching elevations at the top from approximately 100 feet in the west to over 200 feet in the east

Interior lowlands – flat low-lying areas north of the moraine, generally poorly drained, that contain major ponds and wetland areas and drain either northwest to the Pawcatuck River or very slowly southward under the moraine

Interior uplands – generally bedrock high points that are covered by thin layers of till and which may occur with kame terraces, level step-like outwash features with steeply sloping sides

Pawcatuck River – main drainage pathway for lands north of the recessional moraine

All of these landforms were vital to shaping the history and culture of Charlestown. The inland lakes, rivers, streams and springs, the forests and farmland, and the salt ponds and beaches help make Charlestown the special place that it is today.

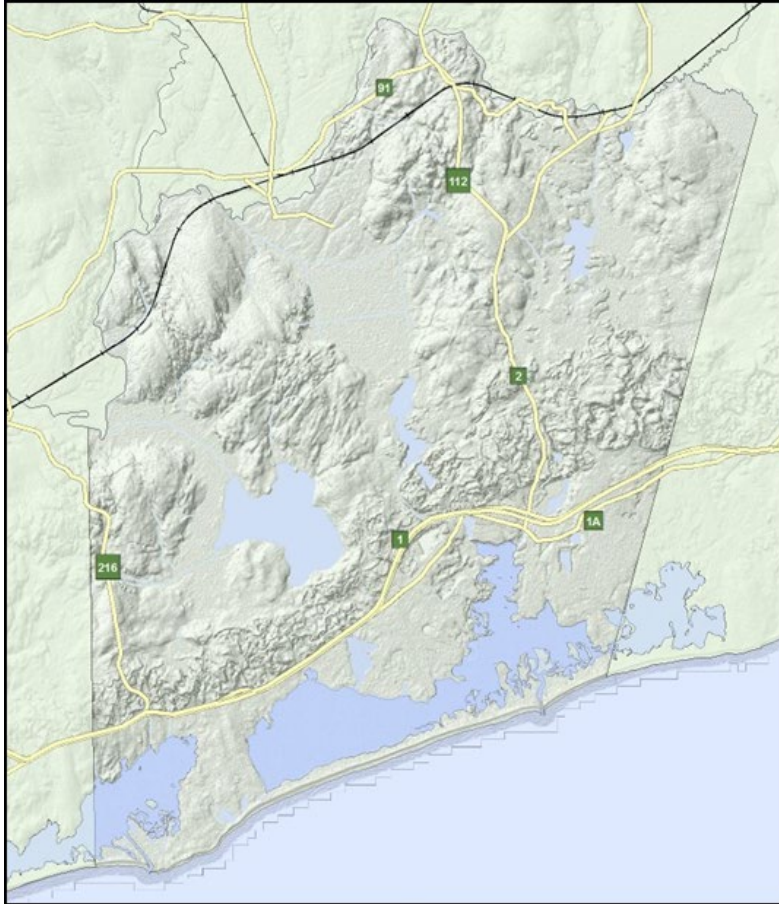


Figure NR-1 Topography of Charlestown Source: ESRI

Soils

Charlestown’s soils were formed over a landscape of glacial till and outwash. Differences in soil types can be attributed to the physical and chemical properties of these underlying materials as affected by weathering. The Soil Survey of Rhode Island, with soils mapped by the Soil Conservation Service of the US Department of Agriculture in the 1970s, provides a detailed inventory of soils throughout the state, including the potentials and limitations of each soil type in general terms. Although on-site investigation is necessary to determine precise soil types when locating hydric soils or wetlands, establishing septic system design parameters, and assessing overall suitability for development, the survey is still very useful for planning purposes.

Map NR-1 *Soils Constraints to Development*, indicates the areas of Charlestown with moderate constraints to development, with seasonal high water table and with ledge and slopes over 15%. It also identifies those areas with hydric and subaqueous soils, as well as those with rock or sand, including the entire barrier beach. Areas with these soils are considered to be areas with severe constraints to development.



Frances Topping

Charlestown Farm Scene

Soils suited for agricultural purposes are discussed in the Economic Opportunity chapter; Map EO-1 shows the location of prime farmland soils, soils of statewide importance and active farmland in Charlestown. Most of this active farmland is north of the moraine where the glacier deposited finer soils, while much of the best farmland soil in Charlestown has been developed for housing, especially south of Route 1.

Groundwater

Groundwater and soils are inextricably connected, as the water holding capacity of soil is directly linked to particle size and porosity. The best supplies of groundwater are found in the glacial sand and gravel deposits above the bedrock. The thickness of this deposit varies greatly, but generally provides an abundance of water for low-density development.

The land surrounding Pasquiset Pond and to the northwest of the Indian Cedar Swamp contain a large percentage of excessively drained soils, providing deep aquifer deposits, replenished by rainfall and streams, that are capable of yielding large volumes of groundwater for water supply use; see Map NR-2 *Groundwater*. The presence of these aquifer deposits makes Charlestown relatively water rich as compared with other Rhode Island communities and protecting these aquifer deposits is critical for the future of the community.

South of the moraine in the outwash plain, groundwater is primarily recharged by local rainfall. The depth to bedrock is shallow, less than 30 feet. This groundwater is the water source for a dense population, particularly the Quonochontaug peninsula and the area around Charlestown Beach Road (4 or more houses per acre) and is subject to pollution and saltwater intrusion.

The Pawcatuck River Aquifer, designated as a sole source aquifer by the US Environmental Protection Agency in 1988 (see Figure NR-2), provides the source for much of the wells in Charlestown and surrounding communities (southwest Rhode Island). Further discussion on Charlestown's drinking water is contained in the Services and Facilities chapter.

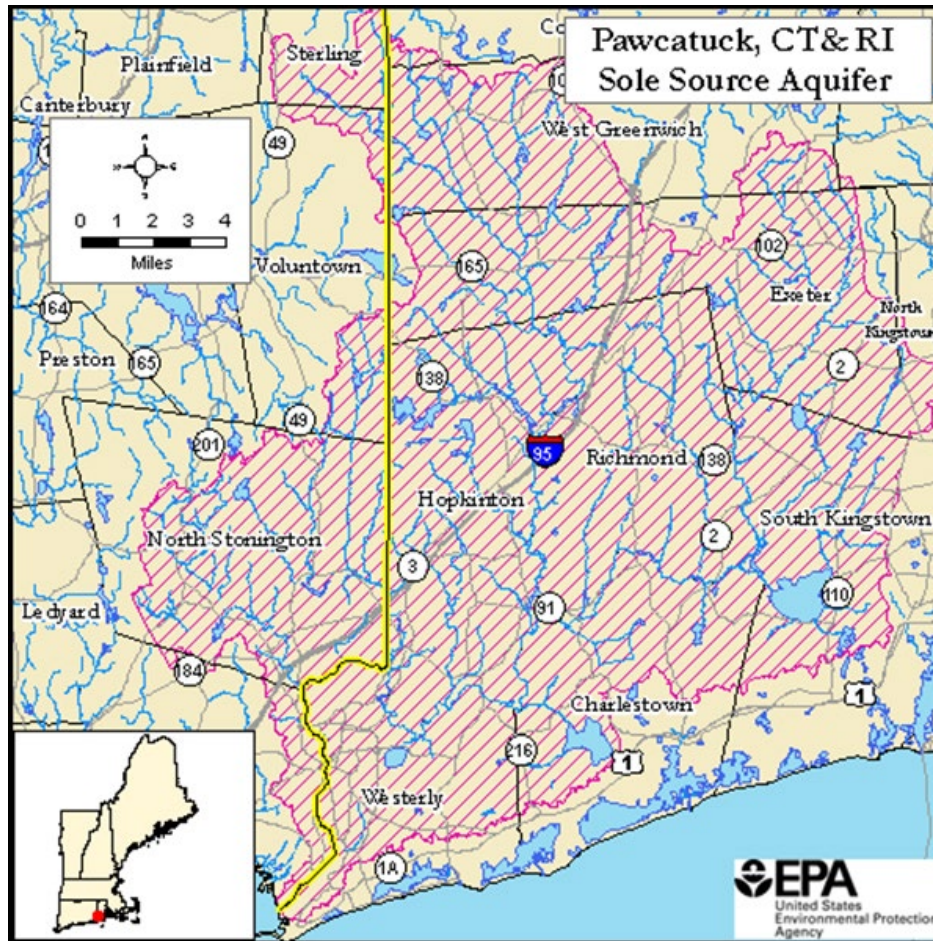


Figure NR-2 Pawcatuck Sole Source Aquifer Source: EPA

Wetlands

The groundwater and wetlands of the town are also connected, especially where wetlands overlie the glacial outwash deposits. In these areas, groundwater alternately discharges into streams, or is recharged by surface water entering the outwash deposits through the wetlands. The level of groundwater (water table) influences the conditions of the wetlands, and the wetlands filter material out of water entering the outwash.

Wetlands are found in small and large depressions throughout the town, as well as along the edges of rivers, streams and open bodies of water. Wetland soils have high water tables or at least seasonally high water tables. While the soil survey and GIS data do not provide a definitive depiction of wetland boundaries on specific properties, they do provide general locations of wetlands within the town that are useful for planning purposes. Map NR-3 *Surface Water and Wetlands* shows the general location of wetlands in Charlestown.

The northern border of the town is defined by the Pawcatuck River. This river receives water from three broad freshwater wetland systems located within the central portion of the town – Watchaug Pond wetlands, Indian Cedar Swamp and Pasquiset Pond/Pasquiset Brook wetlands. The Pawcatuck River and extensive inland wetland systems serve valuable functions in terms of providing flood storage, water quality maintenance, wildlife habitat and recreational opportunities.

Both forested and shrub wetlands are prominent in Charlestown. They are distributed throughout the town, but can be found in greatest concentrations in association with the largest ponds and groundwater aquifer areas. The majority of the forested wetlands are dominated by deciduous trees such as red maple. However, the town does contain several white cedar swamps, notably the Indian Cedar Swamp. Cedar swamps are unique; they provide diversity of habitat and they are important overwintering areas for white-tailed deer. Shrub swamps occur primarily in open areas along the river or in association with forested wetlands where soils are too wet to sustain trees. Some are the result of prior disturbance of forested wetland and represent vegetation in earlier successional stages.

The receding glacier also left many small depressions that often contain wetlands and small ponds, especially along the moraine. Many of these dry up seasonally. These areas, known as vernal pools, are important habitat for species that can only live or breed successfully where there are no fish. Most vernal pool species also require undeveloped land around the ponds to survive when they are not using the ponds.



Frances Topping Vernal Pool

The southern border of the town is defined by Block Island Sound, which adjoins the barrier beaches and coastal headlands. The coastal ponds created by the barrier beaches receive freshwater input from groundwater recharged by rain and several small wetland systems that drain south from the glacial moraine. As a result, the town is provided with several unique brackish and coastal wetland systems. These systems are valued as sources of seafood, as wildlife habitats and bird migratory sites, and as commercial and public recreational assets.

Pawcatuck River and Freshwater Streams

The predominant riverine system is the Pawcatuck River, which serves as Charlestown’s entire border with the Towns of Richmond and Hopkinton. The river flows southwesterly from Worden’s Pond, which lies within the Great Swamp Management Area in adjoining South Kingstown, entering Block Island Sound at Watch Hill in Westerly. From Worden's Pond and its confluence with the Usquepaug River at the South Kingstown / Richmond / Charlestown border,

to its confluence with the Wood River at the Richmond / Hopkinton / Charlestown border, and through much of Westerly, it is a river with high habitat values and good water quality. The nearly 18 miles of river in Charlestown flows through the historic mill villages of Kenyon, Shannock, Carolina and Burdickville. It has been designated by Congress as a Wild and Scenic River, a federal designation for rivers with outstanding natural, cultural and recreational value.

The Pawcatuck River Basin also comprises a major riverine system within the state. Combined with the Wood River Basin, the Wood-Pawcatuck Watershed covers approximately 300 square miles. Approximately two thirds of the Town of Charlestown is located within the Pawcatuck River Basin. It is a valuable resource in terms of its contribution to the aesthetic and recreational quality of the town, as well as for the wildlife habitat and groundwater recharge that it provides.

The extensive wetlands systems and freshwater ponds and springs are fed by numerous streams, including Perry Healy Brook and Poquiant Brook (feeding Watchaug Pond), Cedar Swamp Brook (feeding Indian Cedar Swamp and Schoolhouse Pond) and Pasquiset Brook (feeding Pasquiset Pond). See Map NR-3.

Freshwater Ponds

Charlestown's Geographic Information System (GIS) identifies nearly 90 freshwater ponds within the town. The three largest are Watchaug, School House and Pasquiset Ponds. Watchaug Pond is mostly surrounded by protected open space as part of Burlingame State Park and Management Area. The land around School House Pond is either part of the Narragansett Indian Settlement Lands, or is public, including the town's School House Pond Preserve. Pasquiset Pond is surrounded by privately held land, although The Nature Conservancy (TNC) holds a 200 acre parcel nearby (Pasquiset Pond Preserve). Among the many smaller ponds in Charlestown are Deep Pond, Saw Mill, Hanna Clarkin, Cross Mills (Mill Pond), King Tom, Perry Pond and Maple Lake. With the exception of Cross Mills Pond, which is adjoined by 76 acres of land owned by the Charlestown Land Trust, and TNC property as well, these ponds have either limited or no public access. See Map NR-3. Most of the ponds, even if private, provide recreation opportunities, contribute to the aesthetic quality of Charlestown, and have value as wildlife habitat and groundwater recharge.



Jane Weidman Wooded Trail to Watchaug Pond

Forested Lands

Much of Charlestown's undeveloped land is forest. In addition to its habitat value, forests provide recreational opportunities such as hiking and hunting, and are important for quality of life, a healthy environment and maintaining water quality. The Burlingame State Park and Management Area, a contiguous forested tract located around Watchaug Pond, is known to be a movement corridor for wildlife. The forested areas of Burlingame, Indian Cedar Swamp, Francis C. Carter Memorial Preserve and other properties provide residents and visitors with open space, trails and scenic views. The value of these parcels as conservation lands are described in detail below.

Salt Ponds

Charlestown's salt ponds are coastal lagoons which lie on the glacial outwash plain of the south shore (see Figure NR-3). They represent an ecosystem of diverse habitats consisting of barrier beaches, salt marshes, intertidal flats, lagoons and adjacent shorelines with tributary streams and ponds. The salt ponds within the Town of Charlestown include the eastern portion of Quonochontaug Pond, all of Ninigret Pond and a very small part of Green Hill Pond (Allen Cove and inlet).

The relatively shallow salt ponds are fed by freshwater from springs and streams, and by seawater through narrow breachways. This confined area and relatively slow flushing keeps the salt and nutrient concentrations ideal for salt marshes, eelgrass and phytoplankton, which in turn support the spawning and growth of a variety of fish and shellfish sheltered from being swept out to sea. It also makes the salt ponds vulnerable to water quality and habitat degradation from human uses, including contamination from sewage, and use of chemicals in the ponds or their watersheds.

Ninigret Pond is the largest of the salt ponds along the south shore of Rhode Island. It measures over 3 miles long, yet is less than a mile at its widest point, with a total surface area of 1,647 acres. Two main tributaries flow into Ninigret Pond from the north, both entering Fort Neck Cove – one drains Cross Mills Pond north of Route 1 and the other drains King Tom Pond, which is connected hydrologically to Deep Pond and Schoolhouse Pond. With the exception of Ninigret National Wildlife Refuge, and the protected portions of the barrier beaches, much of the surrounding areas are residential. There are three marinas and several canoe/kayak launching areas that provide direct boating access to the pond. Ninigret Pond has a long history of supporting local fisheries, both commercial and recreational, and is actively used for boating, both motorized and non-motorized.

Quonochontaug Pond, which Charlestown shares with the Town of Westerly, is smaller and deeper than Ninigret Pond, having a total surface area of 745 acres. Two main tributaries flow into the pond – Ninigret Cove Brook and Harmonic Brook, both on the Westerly side of the pond. Residential communities surround the pond. There are no commercial marinas, but there are two

small yacht clubs on opposite ends of the pond and a state boat launch near the Quonochontaug Breachway. Motor boating, sailing and fishing are the most common uses of the pond.

Green Hill Pond is principally within the Town of South Kingstown; only Allen Cove is located in Charlestown. Green Hill is connected to Ninigret Pond by a very shallow channel under Creek Bridge. Teal and Factory Brooks, two streams that flow into the northeast end of the pond, both contribute significantly to the bacterial loading due to the developed nature of its watershed. Once one of the last natural oyster producers in the state, shell fishing has been prohibited due to high bacterial levels.

The salt ponds are local and regional attractions, with a popularity due to abundant fish and shellfish resources, great beauty and a long history of both commercial and recreational use. They are critical to Charlestown’s tourist economy. The salt ponds are discussed in great detail, including their history, environment and current uses, in the Charlestown Harbor Management Plan, adopted September 2017.



Figure NR-3 Salt Ponds of Charlestown Source: Charlestown GIS

Beaches

The salt ponds, marshes, tidal flats and their ecosystems would not exist without the barrier beaches. There are nearly six miles of sandy beaches backed by a dune system along the south

shore of Charlestown. In addition to being a major recreation resource and tourist attraction, the barrier beaches provide essential habitat, allowing the salt ponds to function as nursery grounds for finfish and shellfish. The barrier beach – salt marsh habitats are important stop-over sites for migratory birds, part of the US Fish and Wildlife Service Mid-Atlantic Flyway, a major migratory bird corridor along the East Coast. A number of endangered and federally regulated species are present, including the salt marsh sparrow, and the piping plover, which nests and rears its young along the barrier beaches from April to September. The beaches are also the first line of defense, protecting the mainland side of the ponds from ocean swells and storms.

Dark Skies

From space one sees bright lights along the East Coast between New York and Boston, but also an exceptionally dark spot in Rhode Island. Charlestown’s dark skies are a valuable natural resource, and in 2010, the town enacted a commercial lighting ordinance¹ to protect its dark skies for purposes of astronomy, tourism and general enjoyment; to protect residents and wildlife and the surrounding environment from the effects of light pollution; to promote energy efficient and sustainable lighting practices; and to minimize adverse off-site impacts from new lighting installations, while permitting reasonable uses of outdoor lighting for security, productivity and commerce.



John Repoza Starry Night at Ninigret Park

Natural Habitats

The natural resources of Charlestown represent some of the most significant habitat areas in the state. The RI Natural Heritage Program (NHP), a comprehensive inventory of the state’s rarest and most vulnerable species and natural communities has identified several areas within the town that contain rare plant and animal species and represent unique habitat types. The NHP inventory was initiated by RI DEM and The Nature Conservancy (TNC) in 1979. Today, representatives from the RI Natural History Survey, DEM, TNC and the URI Environmental Data Center work together to maintain the inventory, which serves as a resource for management and stewardship needs, and identification of threats to critical areas. Areas identified in Charlestown, which are indicated on Map NR-4 *Natural Heritage Areas*, include (portions of) the following:

¹ <https://ecode360.com/16099584>

- Deep Pond/Schoolhouse Pond Complex
- Shumankanuc Hill
- Kings Factory Road/Power Line Right of Way
- Ninigret and Quonochontaug Ponds
- Great Swamp/Kingston Pine Barrens

Deep Pond/Schoolhouse Pond Complex

The NHP considers the coastal plain pond shore habitat surrounding Deep Pond and Schoolhouse Pond as some of the best in the state. Habitats of this type are found almost exclusively in Washington County, north of the recessional moraine. The habitat is characterized by widely fluctuating water levels, sandy substrate and gently sloping shorelines. This habitat supports six species of rare plants, most of which are considered regionally rare.

Shumankanuc Hill

The area west of Shumankanuc Hill includes a variety of habitats that support three state endangered plant species, as well as a number of other unique species. Habitat types in this area include coastal plain quagmire and wet meadow. Quagmires are usually associated with wooded swamps, primarily those dominated by Atlantic white cedar. They are similar in many respects to the coastal plain pond habitats, except that the water levels are fairly stable.

Kings Factory Road/Power Line Right of Way

A high-voltage power line that crosses the northern portion of Charlestown serves a surprising alternate purpose; in the area to the west of where the power line crosses under Kings Factory Road (about a third of a mile south of where the road crosses the Pawcatuck River) this power line right-of-way provides a maintained wet meadow habitat. This area includes several plants listed by the state as rare. It is also identified in the State Guide Plan as a “State Green Way”. Power lines can act as wildlife corridors to facilitate movement and mating activities, but can also allow predators and invasive species easy access and should be monitored, if possible.

Ninigret and Quonochontaug Ponds

Two areas within Quonochontaug Pond and one within Ninigret Pond have been identified by the NHP as significant habitat sites. The areas include the Quonochontaug Breachway and tidal flats located to the east of the breachway, and the freshwater wetlands and ponds (West and Garden Ponds) located between Quonochontaug and Ninigret Ponds. The third area is roughly defined as the southern part of the Ninigret National Wildlife Refuge.

The Great Swamp/Kingston Pine Barrens

These two sites identified by the NHP are located largely within the Town of South Kingstown, but their proximity makes them significant natural resources for consideration in the Charlestown Comprehensive Plan. The areas known as the “Great Swamp” and the “Kingston Pine Barrens” are considered high-priority areas for protection in the region. Land within Charlestown, lying adjacent to these two areas, provides valuable buffers from encroaching development.

The Great Swamp comprises the largest wetland complex in the state, and contains a multitude of unique habitat types. Wetlands located in Charlestown and just south of the Pawcatuck River, though not contained within the Great Swamp Management Area, are a valuable portion of that wetland system. Sixty-one acres in Charlestown were added to the Great Swamp Management Area in 1999; 55 acres are in state ownership, and the remaining 6 acres in private ownership with a conservation easement owned by the state. There is an additional 140 acres in private ownership with an easement held by the Charlestown Land Trust that is contiguous with both the Great Swamp Management Area in Charlestown and the Pawcatuck River (see Map NR-5).

The Kingston Pine Barrens is one of the few remaining scrub oak/pitch pine habitats in the area. This type of habitat is suitable for a variety of rare plants and animals, including invertebrates specifically adapted to the presence of scrub oak. This area is located in the vicinity of Shannock Road on the border of Charlestown and South Kingstown.

Other Natural Habitats

Additional areas identified by the NHP include the western shore of Watchaug Pond, which receives inflow from one stream (Healy Brook), and serves as the headwaters of another (Poquiant Brook). Also identified is the area northwest of Shumankanuc Hill, north of the railroad tracks, and a large area of pitch pine habitat northwest of the former United Nuclear site on Narragansett Trail, which is now part of the Francis C. Carter Memorial Preserve.

Conservation and Open Space Lands

Much of the land area in Charlestown is protected from development or limited to passive recreation use through ownership or conservation easement. These sites are shown on Map NR-5 *Conservation and Open Space Areas*. The major publicly owned or accessible sites are described below by ownership. The recreation potential of these sites is described in more detail in Appendix REC-2 of the Recreation chapter.

Town Conservation and Open Space Land

The Town of Charlestown has a number of protected open space parcels set aside specifically for conservation, some of which also provide for public access and passive activities such as hiking, nature study and bird watching. These include the Charlestown Moraine Preserve, Arnold Family White Cedar Swamp, Richard Trails, School House Pond Preserve, South Farm Preserve and the most recent acquisition, the Patricia Sprague Forest Preserve.

Charlestown Moraine Preserve:

This 78-acre parcel on the north side of Route 1 has been owned by the town since it was purchased in 2013 with town open space bond funds. The property serves as an important forested wildlife corridor between the Natural Heritage areas of Watchaug Pond and the School House Pond/Deep Pond complex. The forest is dominated by oak with some white pine, and a thick understory of mountain laurel and huckleberry and supports a diversity of wildlife. The unfragmented forest, a stream draining School House Pond, and the rapidly draining soils work together to protect the water quality of the coastal ponds. The trail system is accessed off of Kings Factory Road.



Karen Jarrett Trail at Sprague Preserve

Arnold Family White Cedar Swamp:

Obtained by the town in 2006, this 12.8 acre natural wildlife habitat is classified as an Atlantic White Cedar bog, and provides an excellent opportunity for visitors to learn about the unique and valuable role of a White Cedar swamp in a coastal ecosystem. It is bounded on the north by Route 1, on the south by Route 1A and the west by the Cross Mills Library property. Currently no trails exist on the property and public access is only by foot, along Old Post Road and from the trail system in the wooded section behind the Cross Mills Library.

Richard Trails:

This 96-acre property off Route 2 has been owned by the town since 2002, purchased with funding from The Nature Conservancy. It is contiguous with a portion of the Ninigret National Wildlife Refuge on the north side of Route 1 (the Lewis Trail Unit), which forms part of a nearly 500-acre parcel of land protected for conservation, wildlife protection and passive recreation. A hiking trail through the property follows an old Native American trail.

School House Pond Preserve:

This 93.5-acre parcel has been owned by the town since 1991, purchased with funding from The Nature Conservancy, RI DEM and town open space bond funds. It lies across Kings Factory Road from the state-owned Burlingame Wildlife Management Area. The property consists of undeveloped frontage on pristine School House Pond and hiking trails through hardwood and pine forest that connect to a trail in Burlingame.

South Farm Preserve:

This 87-acre property has been owned by the town since 2002, purchased with funding from RI DEM and town open space bond funds. The property, which consists of approximately 2,700 feet of undeveloped frontage on Old Coach Road, is mainly forested, but also contains two large meadows, a reconstructed sheep barn and historical cemetery, a small pond (vernal pool) and other wetlands. Together with The Nature Conservancy land and Pasquiset Preserve, on the opposite side of the road, it provides an over 300-acre complex for conservation, wildlife and passive recreation.

Patricia Sprague Forest Preserve:

This property of nearly 28 acres along the Pawcatuck River in the Village of Carolina has been owned by the town since 2016. It was purchased with a DEM open space grant and town open space bond funds. Both the DEM and the Charlestown Land Trust hold conservation easements on the land. The property contains vernal pools, fertile meadows, open fields, forest and spectacular views from 1,700 feet of riverfront. Hiking trails lead to and along the river, where one can walk to the water's edge or to bluffs overlooking the river, and pass through two fields and a forested area.

Charlestown Land Trust

Mill Pond Preserve:

The Mill Pond Preserve, accessed by a dirt road off of Route 2 near the Route 1 intersection, is nearly 80 acres of woodland and wetland around the western perimeter of Mill Pond. Originally this land was owned by the American Fish Culture who operated a fish hatchery. The springs feeding the pond produce 200 gallons per minute at a steady temperature of 48 degrees year-round, providing the perfect environment for raising trout. By 1995 the decline in the private hatchery business led to the donation of the property to The Nature Conservancy, who later transferred title to the Charlestown Land Trust. It also abuts a 47-acre irregularly shaped parcel of land owned by The Nature Conservancy that connects the pond to Narrow Lane to the east. Mill Pond is part of Charlestown's history with the remnants of the once-thriving trout hatchery found on the property.

It has springs that are up to forty feet deep and ten feet wide. There are trails set in a woodland on the edge of the pond.



Frances Topping

Mill Pond Preserve

State of Rhode Island Conservation and Open Space Land

The State of Rhode Island owns several large tracts of land within the town's borders, which include the following owned and managed by the Department of Environmental Management: Burlingame State Park and Management Area, East Beach and Ninigret Conservation Area, the Great Swamp Wildlife Management Area (55 acres in Charlestown) and the Kimball Wildlife Refuge. In addition, the state has conservation and forestry easements over several properties, and owns agricultural development rights on others.

Burlingame State Park and Management Area:

The largest amount of open space and conservation land available for public access north of Route 1 in Charlestown is found in the Burlingame State Park and Management Area. This state park resulted from the acquisition of woodland around Watchaug Pond and adjacent parcels, either by direct purchase or through condemnation. Burlingame, which consists of 3,100 acres of rocky woodland, opened in 1934.

In addition to an active campground with over 700 camp sites, the park includes a large area, north of Buckeye Brook Road and abutting the Pawcatuck River, which is primarily used for hiking and hunting. Part of the Management Area also extends to the Pawcatuck River although the site currently does not provide direct access to the river.

East Beach and Ninigret Conservation Area:

This 231-acre conservation area consisting of undeveloped barrier beach with access to both Block Island Sound and Ninigret Pond, adjoins land owned by US Fish and Wildlife Service (part of the Ninigret National Wildlife Refuge described below). This 3-mile stretch of barrier beach is the longest in Rhode Island. East Beach is home to piping plovers and other birds; during piping plover nesting season, the nest areas close to the dune grass are roped off to protect the eggs.

Great Swamp Wildlife Management Area:

While the great majority of the 3,000± acre Great Swamp Wildlife Management Area is in South Kingstown, a portion, 55 acres, lies in Charlestown. As described above, it is listed in the RI Natural Heritage Program as a valuable habitat area; the Great Swamp comprises the largest wetland complex in the state, and contains a multitude of unique habitat types. The land is managed for both wildlife protection and hunting. There is a trailhead at Biscuit City Road.

Kimball Wildlife Refuge:

This 29-acre refuge, owned by Rhode Island Audubon until 2015, abuts Burlingame State Park and is now part of Burlingame, although it remains a separate entity. The property is located on the south shore of Watchaug Pond. It is accessed by car from Sanctuary Road, or by foot from inside Burlingame State Park and from the US Fish and Wildlife Kettle Pond Visitor Center.

US Fish and Wildlife – Ninigret National Wildlife Refuge

The US Fish and Wildlife Service owns four critical parcels in Charlestown as part of its Ninigret National Wildlife Refuge: the Kettle Pond Unit, the Lewis Trail Unit, the Salt Pond Unit and the Barrier Beach Unit. All were acquired with federal funds.

Kettle Pond Unit:

This parcel, 115 acres on the north side of Route 1 where the Kettle Pond Visitor Center is located, is referred to as the headquarters unit. The forested uplands are home to pitch and white pines, black and white oaks, blueberry shrubs, sweet fern and princess pine club moss. Hiking along the trails offers a chance to see visual reminders of the great ice sheet and seasonal changes in a vernal pool, and appreciate views of Watchaug Pond.

Lewis Trail Unit:

This parcel, acquired in two parcels in 2000 and 2003 with funding also from The Nature Conservancy and town open space bond funds, is 365 acres and is accessed from Lewis Trail, off

Route 2. The large irregularly shaped parcel extends as far south as Route 1. The forested uplands are home to pitch and white pines, black and white oaks, blueberry shrubs, sweet fern and princess pine club moss. This parcel is contiguous along Lewis Trail with the 96-acre Richard Trails property owned by the town, and forms part of a nearly 500-acre parcel of land protected for conservation, wildlife protection and passive recreation.

Salt Pond Unit:

The Salt Pond Unit, 380 acres that abut the town owned Ninigret Park off Route 1, has been a wildlife refuge since 1979. It consists of diverse upland and wetland habitats including grasslands, shrub lands, wooded swamps and freshwater ponds, as well as approximately 2 miles along the shoreline on Ninigret Pond, and associated coastal wetlands which support a large diversity of marine life such as blue crab, bay scallop and winter flounder.

Once part of a WW II-era naval air training base, the land that is now the national wildlife refuge is unique ecologically and important for migratory songbirds and nesting shorebirds. The refuge protects federally threatened and state endangered species and is part of the Mid-Atlantic Flyway, a major migratory bird pathway.

Barrier Beach Unit:

This unit consists of 27 acres of undeveloped barrier beach, acquired in 1942. It lies between the state-owned East Beach and Ninigret Conservation Area and private land holdings along the long expanse of undeveloped barrier beach on the west side of the Charlestown Breachway, with direct access to both Ninigret Pond and the ocean. The barrier beach is home to piping plovers and other birds.



Frances Topping Migratory Shorebirds

Narragansett Settlement Lands in Conservation

As described in detail in the Land Use chapter, the Narragansett Settlement Lands comprise 1,800 acres of land within Charlestown. As the result of a 1978 out-of-court settlement of a tribal land claim suit, half of this area was acquired from public lands, and the other half from privately owned parcels. The 900 acres of public settlement lands came from the state-owned land of the Indian Cedar Swamp Management Area, the Indian Burial Hill and the Deep Pond area and is to remain permanently as conservation land. Of the 900 acres of private settlement land, 675 acres are to remain conservation, with certain limited activities such as agriculture permitted, and 225 acres can be developed. The location of the developable acres is not specifically identified, but would be based on the land capability analysis contained in the *Land Use Plan for the Narragansett Indian Land Claim Settlement Area for the Narragansett Indian Tribe* prepared in 1986 by the RI Office of State Planning in cooperation with the Narragansett Indian Tribe.

The state has reserved access to Deep Pond and the Pawcatuck River, while the tribe retains a 45-foot wide right of way through state land in order to access Watchaug Pond from Kings Factory Road. As a result of the settlement, 1,575 acres of tribal land are to remain in conservation or limited conservation.

The Nature Conservancy

Francis C. Carter Memorial Preserve:

The Francis C. Carter Memorial Preserve is a 1,112 acre preserve, almost all of which (1,032.5 acres) are in Charlestown, which includes the rocky uplands of the moraine and a portion of the sandy floodplain of the Pawcatuck River. Acquired in two different segments in 2001 and 2014, the preserve protects a variety of natural features including rare pitch pine/scrub oak barrens, vernal pools and a grassland of approximately 70 acres, as well as some unique plants and animals. The Nature Conservancy is restoring and maintaining wildlife habitat at the preserve, to help reverse the decline in the number of grassland- and shrub-nesting birds. The preserve joins several thousand acres of near contiguous forest, and contributes to an 11-mile corridor of open space extending from the Ninigret National Wildlife Refuge to the RI DEM Carolina Management Area in Richmond.

Pasquiset Pond Preserve:

This parcel, now totaling 255 acres, was acquired by The Nature Conservancy in two phases, 200 acres in 2000, with some funding from the town, and an adjoining 55 acres in 2018 with half of the purchase price from town open space bond funds. The preserve is located along Old Coach Road and lies opposite the town-owned South Farm Preserve. To the south it also connects with the open space set aside for a residential cluster development (private). The land includes wetlands

that support the rare ringed boghaunter dragonfly and an Atlantic white cedar swamp. The Narragansett Trail, an old Native American trail, runs through the property passing by numerous wetlands, mountain laurel and a field. Together with the South Farm Preserve, nearly 350 acres are protected for conservation.



Jane Weidman

Carter Preserve in Autumn

Multiple Ownership

Maple Lake Conservation Area:

The Maple Lake Conservation Area consists of private land surrounding Maple Lake (60 acres) and two other adjoining privately owned parcels (totaling 114 acres) which have conservation easements held by The Nature Conservancy, Charlestown Land Trust or the town. Together with a nearly 24 acre parcel owned by the land trust, which also has frontage on Shannock Road, this conservation area encompasses almost 200 acres of protected land in the northeast corner of Charlestown. Maple Lake is an important habitat for dragonflies and damselflies.

Summary

There are now several thousand acres of contiguous forest that contributes to an 11-mile corridor of open space running from the Francis C. Carter Preserve south to the Ninigret National Wildlife Refuge Salt Pond Unit. This area has become a focus of land acquisitions by The Nature Conservancy, RI DEM, the Charlestown Land Trust and others. The purpose of these acquisitions is to build an ever-larger unfragmented area of wildlife habitat, to make open space connections to the Pawcatuck River, and to create an ever-richer experience for the public who use these lands

for passive recreation. The Town of Charlestown highlights this forested corridor in its promotion of ecotourism.

As of 2020, a total of 10,647 acres or approximately 45% of the land area within the borders of Charlestown, are identified as conservation or open space land. The ownership of this land, indicated on Map NR-5, is shown in Table NR-1.

**Table NR-1
Conservation and Open Space Land Ownership in Charlestown**

Ownership Entity	Approx. Acreage
Town of Charlestown	709 acres
State: Department of Environmental Management and Department of Transportation	4,461 acres
Federal: US Fish and Wildlife	875 acres
Narragansett Indian Tribe: protected settlement lands	1,575 acres
Private conservation organizations: Charlestown Land Trust, The Nature Conservancy, Audubon Society of Rhode Island, and others	1,708 acres
Private lands in conservation easement: individually granted easements and common open space of cluster subdivisions	1,319 acres
Total	10,647 acres

Note: The Town of Charlestown has approximately 23,552 acres of land area, excluding water bodies

Great Thicket National Wildlife Refuge

In response to a decline in habitat for wildlife species dependent on young forests and shrublands, in 2016 the US Fish and Wildlife Service established a new refuge, the Great Thicket National Wildlife Refuge. Portions of the refuge are located within the States of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut and New York; it encompasses up to 15,000 acres, including approximately 3,200 acres in southern Rhode Island (see Figure NR-4). The new refuge is a system of focus areas dedicated to managing shrubland habitat for wildlife and enjoyment by

visitors wherever possible. The locations of the focus areas were based on a detailed conservation assessment for the New England cottontail, a species that was recently considered for listing under the Endangered Species Act. Establishment of the new refuge also benefits over 64 other species, including the high density of migratory songbirds that occupy southern Rhode Island in the fall.

Within the focus area in Rhode Island the refuge establishes a boundary within which the US Fish and Wildlife Service will be allowed, based on funding availability and willing sellers, to acquire lands in fee title, through conservation easements, or in some cases, under leases. It builds upon the refuge lands in Charlestown and South Kingstown, specifically the Ninigret National Wildlife Refuge, and the Trustom Pond Wildlife Refuge, respectively.

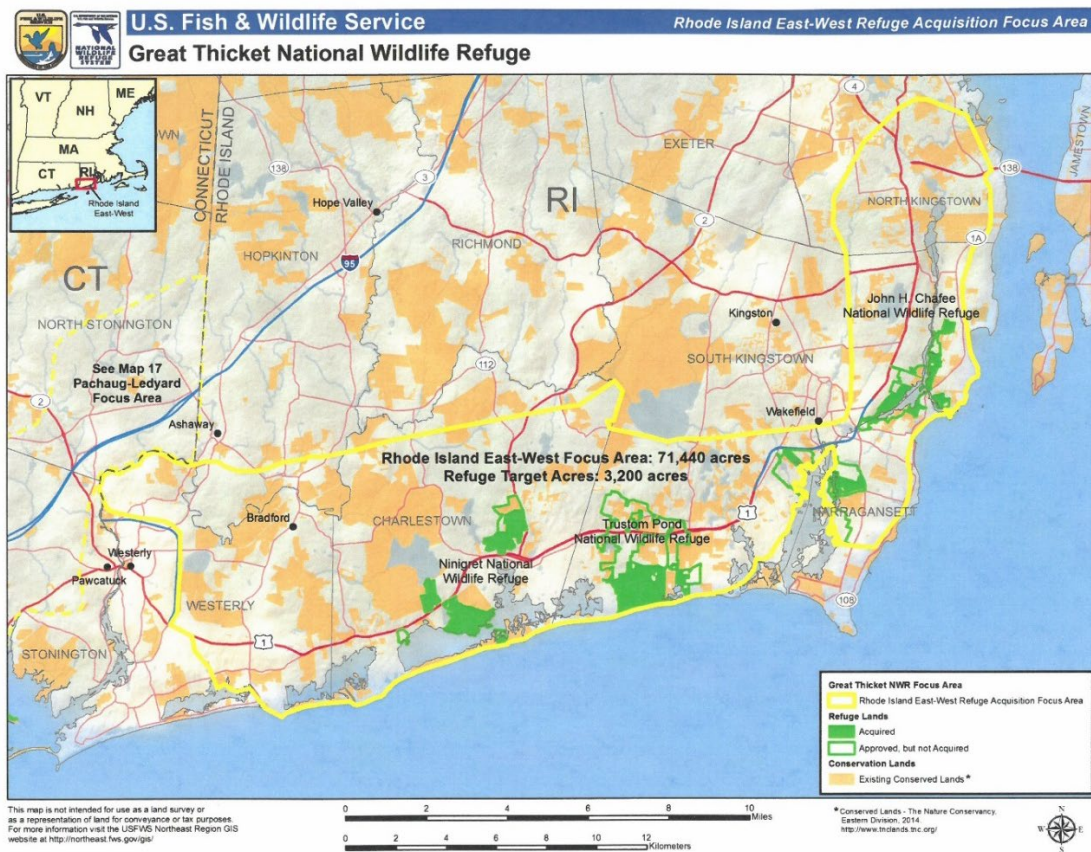


Figure NR-4 Great Thicket RI East-West Focus Area Source: US Fish & Wildlife

NATURAL RESOURCES: ISSUES AND OPPORTUNITIES

Much of Charlestown’s land area – its forested tracts, freshwater ponds, streams, wetlands, salt ponds and barrier beach system, and natural habitats – is conservation, protected open space or recreation land. Whether the land is owned by a federal or state agency, the town, a private conservation organization or is part of the Narragansett Settlement Lands, the large portions of

Charlestown that are protected through ownership and/or use is a cause for celebration. However, there remain challenges in terms of managing the development that does occur, ensuring proper stewardship of the natural resources that are under public control or regulation, and being prepared to address unexpected events that can happen due to outside forces. These challenges fall under the following issue areas:

- **Mitigation of Negative Environmental Impacts**
- **Proper Management of Natural Resources**
- **Regulation of New Development**
- **Prevention of Inappropriate Development**

Mitigation of Negative Environmental Impacts

As with many rural communities, Charlestown works to manage growth and to control the impacts of development and change in a way that protects the town's most precious natural resources. Charlestown has identified a number of ongoing environmental issues, described below.

Groundwater Quality

In Charlestown, the quality of groundwater is generally good except where it is influenced by discharge from septic systems or the use of fertilizer, road salt and the like. Groundwater in the coastal areas is also impacted by saltwater intrusion.

As described in more detail in the Service and Facilities chapter, all households and businesses in Charlestown rely solely on local soils for treatment and dispersal of wastewater through the use of On Site Wastewater Systems (OWTS). Properly functioning OWTS are very effective at eliminating pathogens from wastewater, but not as effective at removing chemicals such as nitrates and phosphates or pharmaceuticals. In areas of town where housing densities are greater than 1 house per acre, nitrate levels in the groundwater are known to be elevated, greater than 5 ppm. Depending upon actual housing density and levels of occupancy, these groundwater nitrate levels can sometimes exceed the EPA drinking water limit of 10 ppm. The elimination of cesspools and substandard OWTS, and the progressive upgrade of conventional OWTS to denitrification systems over time will reduce nitrate loadings if housing occupancy levels do not increase.

In Charlestown, OWTS are the largest contributor of nitrogen to the groundwater, particularly in the salt ponds watershed, which is the limiting nutrient in coastal environments and which has significant water quality and health implications. Models developed by the University of Rhode Island (URI) indicate that in the densely developed areas of Charlestown, approximately 80% of groundwater nitrogen is attributable to OWTS discharge. As a result, RI DEM mandates the use of nitrogen (N)-reducing septic systems in the salt ponds watershed for all new OWTS installations

or for systems that require an upgrade. N-reducing OWTS are designed to lower the wastewater effluent total nitrogen concentration by 50%.

Similar to the nitrogen from septic systems, nitrogen and other nutrients from fertilizers and other chemicals enter the groundwater, surface water bodies and the salt ponds. This can occur by both stormwater runoff directly into surface water bodies, and by infiltration into the groundwater.

Near the shore, fresh groundwater often occurs as a lens riding over the denser saltwater. Wells along the coast tap into this freshwater lens. Excessive withdrawal of freshwater from the lens can result in saltwater intrusion and degrade the quality of coastal groundwater, a situation which will only be exacerbated by sea level rise. As a result, seawater intrusion is a problem for many of the homes on the barrier beaches, as well as some homes around the perimeter of the salt ponds. These homes generally use cisterns to supplement their water supply.

Development Impacting the Salt Ponds

The watershed of the salt ponds as mapped has been used for policy development and regulation by the Rhode Island Coastal Resources Management Council (CRMC) as the Salt Ponds Region Special Area Management Plan (SAMP), and by the RI DEM as the South Shore Salt Ponds Critical Resource Area. Within the watershed are three CRMC land use classifications, as shown in Figure NR-5 and described in the 2004 SAMP.

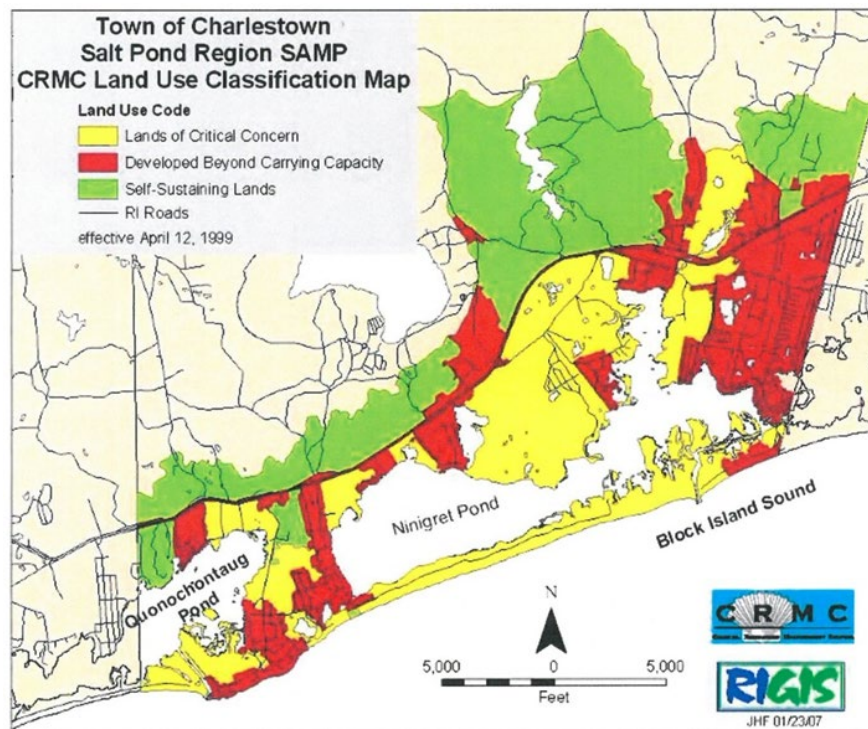


Figure NR-5 SAMP Land Use Classifications

Source: CRMC, RIGIS

- Self-Sustaining Lands (green) – lands that were undeveloped or developed at a density of not more than 1 residential unit per 2 acres. This low density is expected to keep nutrients released to the groundwater sufficiently diluted to maintain potable drinking water.
- Lands of Critical Concern (yellow) – lands that were undeveloped or developed at a density of not more than 1 residential unit per 2 acres and abut sensitive salt pond areas or aquifer recharge areas and are susceptible to impacts of pollution (eutrophication or contamination)
- Lands Developed Beyond Carrying Capacity (red) – lands that are developed at densities above carrying capacity, typically at 1 residential or commercial unit per 1/8 to ½ acre. These densely developed areas are the major source of contamination to groundwater and the salt ponds.

Although the salt ponds watershed comprises only 28% of Charlestown’s land area, it contains over 63% of all developed parcels, and includes the town’s most densely developed areas. There are 3.7 square miles of lands classified as Developed Beyond Carrying Capacity in Charlestown, most of which are south of Route 1. The largest such area is the Charlestown Beach area along the border with South Kingstown and adjoining Green Hill Pond and the easterly portion of Ninigret Pond.

Development within the salt ponds watershed can have a long-term impact on the ponds’ water quality and habitat value. Water quality is impacted by nutrients and other pollutants entering the salt ponds through both groundwater and surface water runoff; these pollutants originate from a variety of sources associated with development and use of land around the ponds, including on-site wastewater treatment systems, fertilizer use, stormwater runoff and animal waste.

Stormwater runoff from large areas of impervious cover, including roadways, parking lots, driveways, rooftops and similar surfaces within the densely developed areas surrounding the salt ponds and in the watershed, discharges to the salt ponds either by direct runoff (nonpoint source) or storm drains (point sources). This runoff can be the source of a variety of contaminants including nutrients, pathogens, organic matter, road salt, oil and even heavy metals. Excess nutrients promote algae and plant growth, which in turn depletes the water of oxygen when they decay, a condition known as eutrophication, and which can eventually lead to fish kills.

Development also has an impact on habitats. Within the pond buffer zones, succession from open field habitat to shrub habitat, or conversion of open fields to other land uses, reduces the available nesting, migratory resting and refueling habitat for some bird species, threatening these species’ populations.

The Salt Ponds Coalition, a private non-profit advocacy group whose purpose is to protect and enhance the health of the coastal ponds from Watch Hill in Westerly to Point Judith in Narragansett, has monitored water quality in the coastal ponds since the late 1980s. It monitors various indicators of pond health including dissolved oxygen, nutrients, bacteria concentration, water clarity and temperature. During this time the water quality in Ninigret Pond has declined. The eastern portion of the pond is closed to shellfish harvesting due to excessive bacteria. High nutrient concentrations, primarily from nitrates have increased eutrophication. Areas away from the breachway are the most impacted. Tidal flushing through the breachway dilutes the nutrient levels, clears the water and supports healthy eelgrass beds within a half-mile of the channel.

Development Impacting Freshwater Ponds and Lakes

As with the salt ponds, Charlestown's freshwater bodies are at risk from runoff from nearby development that affects water quality, and stimulates algal blooms and contributes to eutrophication. Invasive species also impact the waters and shore areas.

The delicate balance of the coastal plain pond habitat of Deep Pond and Schoolhouse Pond makes it particularly vulnerable to degradation of water quality from nutrient overloading and household chemicals. Erosion of the shoreline, and consequently siltation, are also destructive to this type of habitat. Removal of native vegetation, either through hand collection or by extensive impact to the shoreline from walking or recreational vehicles, significantly reduces the populations of rare plant species in these ponds. Additionally, manipulation of the water levels of the ponds eliminates the fluctuating conditions necessary to the life cycle of the plant species. Protection of these areas as open space would help prevent these potential problems.

Ecological Risks to Forested Lands

Forest greenway corridors provide the large territories needed by many species, and allow for the exchange of genetic material. Predation and invasive species can be introduced from linear disturbances such as powerlines. Noxious pests (e.g. gypsy moths) and diseases that affect trees are also liable to increase with climate warming and spread from adjacent states. Increased storms and insect damage are felling mature trees. After several years of gypsy moth infestation and other stresses, large swaths of oaks have died in 2018. This changes the make-up of the forest as well as creating safety issues relating to fire and falling trees along roadways and trails. Removal costs may be an unanticipated burden on both public and private finances.

Overpopulations of deer destroy some of the herbaceous layer depleting the biodiversity of the area; over browsing prevents new sapling trees from growing, and deer are also a vector for the transport of disease-causing ticks from mice to people and other animals. The Great Thicket National Wildlife Reserve may affect the forest density by creating successional scrubland.

Sea Level Rise and Climate Change

A more complete discussion of climate change and its potential impacts on Charlestown is contained in the Natural Hazards chapter. In general, the Northeast can expect warmer temperatures, more extreme weather events, shorter winters and longer summers, less snowfall and more rainfall, and accelerated rates of sea level rise, as well as a more acidic ocean.

Rhode Island's coastal ecosystems have already been impacted by a change in fish species due to warming waters, and other ecological changes. Future impacts include erosion, inundation, or migration of coastal habitats such as beaches and salt marshes. Of particular concern to Charlestown is that accelerated sea level rise and increased intensity of storms will likely lead to increased erosion of the south shore coastal barriers and headlands. As the beach dunes recede, the marsh borders will also move back which will affect both habitat and housing. The salt ponds are currently being affected by sea level rise, with increasing salt content and saltwater intrusion into potable drinking water sources. Dune preservation is necessary to protect the salt ponds and marshes.

Proper Management of Natural Resources

Conservation Lands

For lands that are set aside for conservation purposes, or are protected by means of a conservation or open space easement, monitoring by the responsible agency, owner or easement holder is necessary to ensure that the lands are managed properly and remain in good ecological health. As described in the Existing Conditions section of this chapter, the town owns a number of valuable conservation and open space parcels. The town also holds conservation easements on numerous parcels that are privately owned that consist of open space areas set aside as part of cluster subdivisions. A natural resources manager, working in conjunction with the Conservation Commission, who undertake trail maintenance activities on town property now, would ensure that these valuable natural resources are well maintained. Such a person could also assist the Conservation Commission in maintaining an inventory of Charlestown's natural resources that would enable better decisions to be made when purchasing land or reviewing developments.

Communication and cooperation between the town and other agencies and organizations with conservation land in Charlestown is also needed, to ensure compatible land use goals and a means to address common problems, whether it be invasive species or inappropriate uses.

Groundwater

As stated in the Existing Conditions section of this chapter, Charlestown has deep aquifer deposits that are capable of yielding large volumes of groundwater for water supply use. In 2015 the RI

Water Resources Board purchased land in the Cross Mills section of Charlestown with state bond money to “land bank” it as a possible future water supply source. If developed, this public water supply could potentially be used for other towns in Washington County. In 2017, the Town of Charlestown was also confronted with the possibility that groundwater from one of the aquifer deposits could be removed, trucked out of town and sold as a commodity. This possibility resulted from an agreement that members of the Narragansett Indian Tribe made with a company proposing to build a natural gas power plant in the Town of Burrillville to supply cooling water in the event that the agreement with the principal water supplier could not be executed.

Protecting land from development that may or may not someday become a source for public water is supported by the town, with conditions. One condition is that any such water drawn from the aquifer be returned to the groundwater (by means of on-site septic systems) and not transferred out of Charlestown and the watershed. This condition should be applied town-wide to prevent any property owner, public or private, from utilizing the groundwater as a commodity.

Another concern with the availability of public water is that it allows for greater densities than that with private wells; the presence of public water lines puts development pressure on the land areas that could connect to the water supply.

Wildlife and Plant Protection

Areas from the moraine to the beaches are also important nesting, feeding and resting areas for migratory songbirds, especially juveniles in the fall which require stopover areas before moving on. Migration of the barrier beaches impacts endangered nesting birds such as the piping plover and the least tern, as well as the shorebirds that feed there, especially during migration. Loud noise, bright lights and other intrusions can inhibit birds, and other species, from migrating, feeding, nesting and reproducing.

Fragmentation of habitat affects wildlife movement, reproduction and feeding. Wildlife corridors help to ameliorate this. Planning for such corridors is needed as future development removes or threatens habitat areas.

Invasive plants and diseases affect biodiversity and health. Planting native species that are more resilient and better adapted to local climate and soils helps to maintain food, shelter and habitat for wildlife. Monitoring of invasives is necessary to combat outbreaks.



Frances Topping Bird's Foot Violet

Narragansett Settlement Lands

The large majority of the Narragansett Settlement Lands is undeveloped or sparsely developed and includes the large wetland systems associated with Indian Cedar Swamp, Schoolhouse Pond and Deep Pond. Although 1,575 acres is to remain in conservation, the location of the 225 acres (25% of the private settlement area) that could potentially be developed has not been identified.

The land use plan developed in 1986 by what is now the RI Division of Planning was based upon an analysis of the environmental and infrastructure characteristics of the land and its suitability for development, including both residential and commercial, and for agriculture and conservation. The plan did not delineate actual development areas, only those areas suitable for development based on the land capability analysis. Implementation of the plan would require that the development area boundaries be specifically determined with site design and development standards developed, based on the objectives and preferences of the tribe, with the consent of the town. Cooperation and communication is needed between the town and the tribe to ensure that uses are compatible between both jurisdictions.

Regulation of New Development

Buffers for Wetlands and Water Bodies

In 2016, the Rhode Island Legislature approved a bill, signed by the governor, which required that municipalities include wetland buffers (the perimeter wetland) in the calculation of minimum lot area and in the area of a parcel when calculating the maximum number of lots (overall density) for the parcel. This means that municipalities which require that new lots have an area of suitable land, or land free from constraints, equivalent to the minimum lot area under zoning, can no longer require that wetland buffers be excluded from that minimum lot area. This bill was strongly opposed by Charlestown and a number of other towns that consider wetland buffers to be constrained land which should not be counted towards minimum lot area and density. The practical effect of the legislation is to allow additional development on certain parcels of land, specifically those parcels that have large areas of wetland. It also removed an aspect of local autonomy in determining residential density.

While development within a wetland buffer, or perimeter wetland, is still prohibited without state permit approval, this legislation draws attention to the need to continue to be vigilant in protecting natural features from development (see Land Use chapter). Buffers are needed to prevent runoff from entering streams and rivers, and to maintain water temperatures required by native aquatic species. Setbacks and buffers around vernal pools, in particular, are required to ensure survival of wetland species, ensuring longevity and viability when migration takes place.

Protection of the Dark Skies

Charlestown is protective of its dark skies, which are a special kind of natural resource, a rare spot of darkness along the New England coast. Its Dark Sky Lighting ordinance that regulates the installation of commercial outdoor lighting is intended to protect Charlestown's unique dark skies for astronomy purposes, and to protect residents, wildlife and the surrounding environment from the effects of light pollution. New lighting fixtures and installations compliant with the standards of the International Dark Sky Association are required.

Charlestown must continue to be sensitive to its dark skies; this includes staying abreast of the best lighting types that minimize light pollution and monitoring different wavelengths for their impacts on wildlife and people. It is also important to educate homeowners about the use of Dark Sky compliant fixtures and luminaires.

Regulation of Extractive Industries

Extraction operations can encompass a number of activities, including mining, quarrying, and the commercial extraction of loam, sand, gravel, stone or other earth materials, as well as the storage, stockpiling and sale of extracted earth material. It can involve use of equipment for crushing and processing procedures such as screening, sorting, washing, conveyance and loading.

New extractive industries are a prohibited use in the Town of Charlestown but there are a number of grandfathered sites in town that could have potentially negative impacts on the surrounding areas. Impacts that can affect people and wildlife and groundwater quality include truck traffic, dust and noise and stormwater runoff. There is a desire on the part of the town to mitigate the impact of active extraction sites on the environment and the quality of life of the neighbors, and to ensure proper restoration of the sites upon the completion of operations. In 2017 the town adopted an updated soil and earth removal ordinance, which applies to construction activities as well as sand and gravel extraction operations, and which addresses soil erosion control and stormwater management on these sites. The Town Council had also requested enabling legislation from the state legislature that would allow the town to regulate some activities at active extraction sites without adversely affecting current operations.

Conservation Design and Protections

Subdivision design that incorporates protection of open space and ensures maintenance of rural character is vital. Development plans should also take into account the constraints of available water, effluent disposal and natural resource protection, in addition to the constraints of the land itself with respect to blasting, clearing, slopes, wetland proximity and cultural and historic aspects. As development pressures increase, existing regulations may need to be re-evaluated, or new

regulations requiring alternate development techniques considered, so as to protect the environment and retain rural character.

Incorporating conservation design in the zoning and subdivision regulations that set standards for the protection of important site features and natural resources, and that contribute to an interconnected network of open space linking resource areas in adjoining subdivisions and/or providing vegetative buffers between new development and sensitive lands or developed neighborhoods, is needed. Natural resource protection should be a primary concern.



Frances Topping

Charlestown Farm with Land in Conservation Easement

Conservation easements are a method of maintaining land in open space or agricultural use by obtaining the rights to development. A land trust, conservation organization or municipality holds the development rights with future development prohibited by deed restriction. The organization that holds the conservation easement monitors the property and, in some cases, manages it as wildlife habitat, as farmland, for wood lots, etc. Conservation easements should identify all restrictions and address the placement of structures related to permitted uses, such as signage, nature blinds, accessory farm buildings, and even alternative energy facilities like wind turbines and solar panels.

Transfer of development rights (TDR) allows higher densities on receiving properties in compensation for lower densities (or no development at all) on donor sites. Transfer of development rights must be applied cautiously in Charlestown to avoid creating densities on receiving sites that exceed the carrying capacity of the land. These techniques are discussed in more detail in the Land Use chapter.

Prevention of Inappropriate Development

The environmental impacts of subdivisions and other developments allowed by zoning or state law are cumulative and can be measured town-wide only on a timescale of decades. Those impacts may go unnoticed in the short term unless one is an abutter to the development. Charlestown has experienced other, much more dramatic development proposals, where the potential negative environmental and social impacts have been easy for citizens to visualize. Three examples have come out of federal laws or actions: a nuclear power plant proposed for the shore of Ninigret Pond in the 1970's on surplus Navy land; a gambling casino proposed by the Narragansett Indian Tribal government in the 1990's; and most recently, a rail bypass proposed through the northern part of Charlestown by the Federal Railroad Administration in 2016. Each of these proposals have been about twenty years apart, but the threats to the environment has affirmed for each new generation that Charlestown is a town rich in natural and cultural resources and its citizens care very deeply about their protection.

Northeast Corridor Rail Improvement Project

In late 2016, the Town of Charlestown was made aware of a proposed long-range plan to upgrade the Northeast Corridor rail line by the Federal Railroad Administration. Within this corridor from Washington DC to Boston, the upgrades would have included an “Old Saybrook to Kenyon Bypass” consisting of new track that would realign and straighten the route from Old Saybrook, Connecticut, to the Kenyon area of Charlestown, with the stated goal of saving intercity commuter travel time.

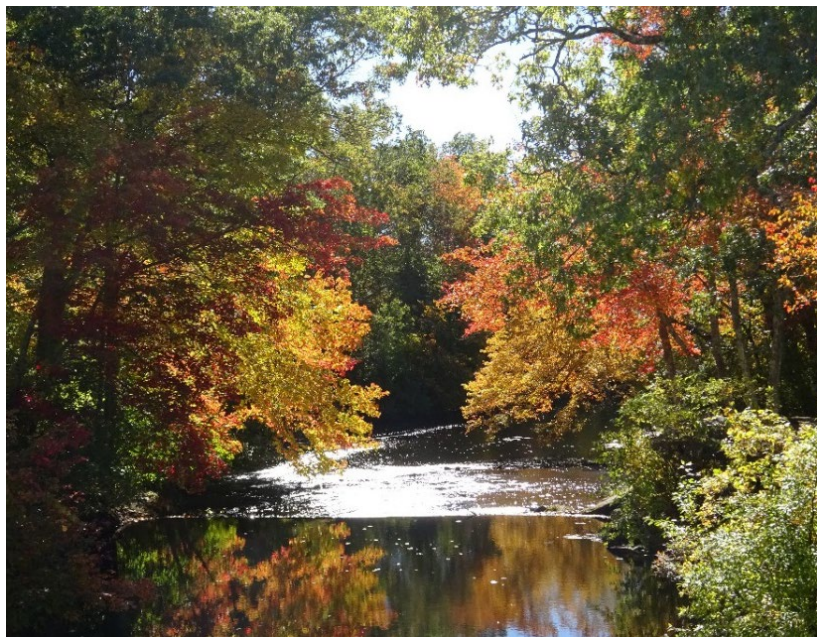
While maintaining the existing track, the bypass would have required 5.6 miles of new railroad track in Charlestown. Within this proposed rail corridor in Charlestown are the following: dozens of homes; three historic mill villages, including Burdickville (in Hopkinton), Columbia Heights and Kenyon; active and historic farms, including the Amos Greene Farm and Stoney Hill Farm; Narragansett Settlement Lands; 17 private open space properties; the Francis C. Carter Memorial Preserve owned by The Nature Conservancy; and an archived Superfund site which was once the location of a nuclear processing facility.

The proposed rail bypass would pass through an east-west corridor of open space that spans nearly the width of Charlestown. This section is part of an 11 mile north-south corridor of open space that extends from the Ninigret National Wildlife Refuge at the ocean, north through the state-owned Burlingame Management Area and Narragansett Settlement Lands, through the Francis C. Carter Memorial Preserve, and then connecting with the Carolina Wildlife Management Area in Richmond, RI. The east-west corridor also provides more wildlife and potential recreation access to the Pawcatuck River. The proposed bypass would impact the wildlife corridor from the Atlantic Ocean to Richmond and beyond.

In addition, the bypass would cross the Pawcatuck River, designated by Congress as a Wild and Scenic River, and lie entirely within the land management area of the recently established US Fish and Wildlife Great Thicket National Wildlife Refuge and the EPA designated Wood-Pawcatuck Sole Source Aquifer.

Opposition to the bypass was overwhelming in both Connecticut and Rhode Island. Opposition in Rhode Island included the governor, the entire congressional delegation, the Narragansett Indian Tribe, officials in all neighboring towns and others in a number of towns throughout the state, numerous conservation and cultural organizations, and hundreds of individual property owners and citizens. As a result, the Federal Railroad Administration released a Record of Decision in July 2017 withdrawing the proposed bypass project. However, the original proposal shows the willingness of some federal agencies to transform the community in direct conflict with the goals and policies of the comprehensive plan, in particular those related to protection of natural resources.

To protect farms, forests and open spaces from future proposals such as the rail bypass and other actions, Charlestown needs to make its open space and conservation information more public and place it more prominently. Parcels such as the Francis C. Carter Memorial Preserve, and all state- and town-protected lands should appear on state maps where they can be indexed by search engines such as Google and Bing. The Wild and Scenic River designation for the Pawcatuck River should also be identified as such on state maps. As the town creates maps of open space, river and shoreline access points, and historic buildings and sites, it should work to get this same data included in other public databases such as those maintained by Google and others.



Frances Topping Wild and Scenic Pawcatuck River

NATURAL RESOURCES: GOALS, POLICIES AND ACTIONS

GOALS

- Goal 1** Permanently protect critical natural resources.
- Goal 2** Ensure that Charlestown’s natural resources will sustain the community for the foreseeable future.
- Goal 3** Create a network of corridors and greenways that will preserve natural resources, protect scenic landscapes and shape growth.

POLICES AND ACTIONS

The following policies and actions have been developed to implement the goals and objectives of this chapter.

- Goal 1** Permanently protect critical natural resources.

Charlestown desires to protect the natural resources that define its character and way of life. These include wetlands, rivers, streams, lakes and ponds, forested lands, aquifers, wildlife habitats, native plant communities, dark skies, scenic vistas and the salt ponds.

- Policy 1.1** Continue to acquire and protect open space areas that preserve important natural resources.

- Action 1** Identify and rank open space land that provides for critical resource and habitat protection.
- Action 2** Assess the value of municipal property and tax sale parcels as permanent open space or conservation areas.
- Action 3** Continue to collaborate/partner with various agencies and organizations such as US Fish and Wildlife Service, RI Department of Environmental Management, The Nature Conservancy, Rhode Island Audubon Society and private developers (through the land development process) regarding open space acquisition and conservation.

- Policy 1.2:** Protect natural resources through zoning and subdivision regulations and the development review process.

Action 1 Make use of flexible land use management tools to provide alternatives to conventional development in a manner that protects important natural resources such as water bodies, significant vegetation and wildlife habitats, from potentially negative development impacts:

- a. Allow for conservation design and development as an alternative to, or in addition to, mandatory cluster;
- b. Revise the zoning and subdivision regulations to ensure that impractical lots are not created, and that impacts on wetlands and other natural features are avoided or minimized by reviewing and strengthening lot design standards; and
- c. Require the installation or preservation of vegetative buffers or increased setbacks.

Action 2 Provide for the permanent protection of wetlands as part of the land development and subdivision review process:

- a. Require peer review for all major developments, particularly those involving new road construction, on parcels with significant areas of wetlands;
- b. Require minimum areas of contiguous upland when creating new lots on parcels with significant areas of wetlands or other severe constraints;
- c. Require wetland and buffer areas to be within protected open space areas to the extent possible;
- d. Demarcate wetland edges with permanent markers to protect the wetland resource area from alteration/use and incremental deterioration; and
- e. Require that restrictions on use of wetland resource areas be included on the deeds to the new or impacted parcels.

Action 3 Preserve the Pawcatuck River corridor as both a scenic resource and wildlife habitat area through the establishment of zoning regulations to control the placement and scale of development along the river.

The Pawcatuck River is now designated as a Wild and Scenic River. However, federal designation does not prohibit development or otherwise control private property along the river. Following the completion of a management plan by the

National Park Service, the town should establish development controls, in the form of a zoning overlay district.

Action 4 Periodically review all town regulations that are in place to protect natural resources in order to ensure effectiveness and that all standards are up to date. These include but are not limited to:

- a. Dark sky ordinance;
- b. On-Site Wastewater Management System (OWTS) regulations;
- c. Groundwater protection district;
- d. Soil erosion and sedimentation control ordinance;
- e. Energy siting regulations; and
- f. Noise ordinance, particularly as it relates to protecting wildlife

In particular the Dark Sky Lighting ordinance should be reviewed to ensure that it reflects current scientific understanding of the impacts of blue light on both humans and wildlife, and includes recommended lighting standards to mitigate these impacts.

Action 5 Consider adoption of a transfer of development rights (TDR) ordinance to provide for the conservation of land in rural and undeveloped areas of town while encouraging appropriate density of development in village centers, including Cross Mills, Carolina, and Shannock.

Goal 2 **Ensure that Charlestown’s natural resources will sustain the community for the foreseeable future.**

Policy 2.1 **Provide long-term preservation and conservation of natural resources through proper management by town administration.**

Action 1 Consider establishing a position in town to monitor and manage protected open space, either as an employee or person or entity under contract.

A Charlestown Land Steward or Natural Resources Manager could assist in the long-term protection of natural resources by undertaking the following duties, in conjunction with appropriate town departments, state agencies and land owners:

- a. Developing and updating management plans for town open space and conservation areas;
- b. Regular monitoring of publicly owned natural resource sites;

- c. Regular review and inspection of private areas on which the town has easements for the purposes of protecting open space, managing habitat and maintaining stormwater systems;
- d. Developing a system to monitor DEM and CRMC permits, both wetland and stormwater permits, so as to identify areas of wetland disturbance and stormwater impacts, and to provide awareness regarding compliance with local and state approvals and conditions; and
- e. Keeping up to date on state regulations regarding land development and constraints, and advocating for the preservation of local land use control.

Action 2 Maintain a current database of all critical natural resource areas, including a listing of parcels and GIS maps of the following:

- a. All conservation lands and protected open space areas;
- b. Critical habitats of federal- and state-listed rare, threatened and endangered species, both plant and animal;
- c. Wetland areas, including forested, shrub and emergent; and
- d. Any other significant natural resource areas.

Action 3 Review state maps and other databases to ensure that all publicly owned protected lands, river and shoreline access points, and historic buildings and sites appear on the maps and in databases.

Action 4 Consider the establishment of a water source protection ordinance which requires that water drawn from aquifers within Charlestown remain within the watershed and prohibits the withdrawal and sale of groundwater as a commodity.

Policy 2.2: **Work with state and federal agencies, and private conservation organizations, and with neighboring communities and the Narragansett Indian Tribe to protect shared natural resources and achieve compatibility in open space acquisitions and land use decisions.**

Action 1 Support efforts by other agencies and organizations to monitor, evaluate and implement programs to improve water quality and habitat in the freshwater bodies and salt ponds of the town. These include:

- a. The University of Rhode Island Watershed Watch Program in monitoring phosphate/potassium contamination from septic systems;
- b. The Wood-Pawcatuck Watershed Association water quality monitoring at freshwater sites in the watershed;
- c. The Salt Ponds Coalition surface water quality sampling from the salt ponds;
- d. The US Army Corps of Engineers, RI DEM and RI CRMC to oversee and fund dredging of the breachways to ensure adequate flushing of the salt ponds; and
- e. US Fish and Wildlife Service, US Army Corps of Engineers, and RI DEM to restore habitats and water quality of the salt ponds.

Action 2 Coordinate land acquisition efforts, including identifying priorities and sharing information and resources, and funding, with the Charlestown Land Trust, RI DEM and The Nature Conservancy.

Action 3 Work with the Narragansett Indian Tribe and the neighboring communities to protect shared natural resources.

These resources include not only open spaces and forests, but the aquifers that provide potable water to both the tribe and the residents of Charlestown. Use of these common resources should be based on open communication and mutual understanding.

Policy 2.3 Promote appreciation for and proper use of natural resources by residents and visitors through public education.

Action 1 Educate those who enjoy the town’s abundant open space areas on appropriate use in order to protect natural resources and habitats by developing and distributing public informational brochures.

Action 2 Publicize forested and natural areas in town that are available for passive recreation and nature study through various organizations and media, including the Chamber of Commerce and the town website.

Action 3 Maintain and update town efforts, specifically under its Stormwater and Wastewater Management Programs, to educate homeowners on the following:

- a. Proper septic system maintenance;

- b. Proper use of fertilizers in general, to lessen impact on water bodies throughout town, but particularly in the salt ponds watershed;
- c. Ecologically sensitive landscaping; and
- d. Managing pet waste

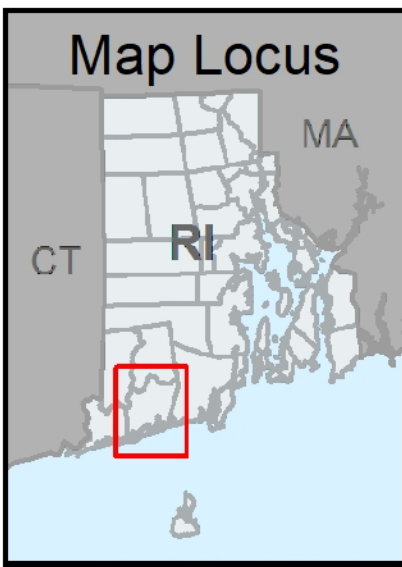
Goal 3 **Create a network of corridors and greenways that will preserve natural resources, protect scenic landscapes and shape growth.**

Policy 3.1 **Integrate efforts related to acquisition of land, allocation of funds and review of land developments to achieve this network of open space and conservation areas.**

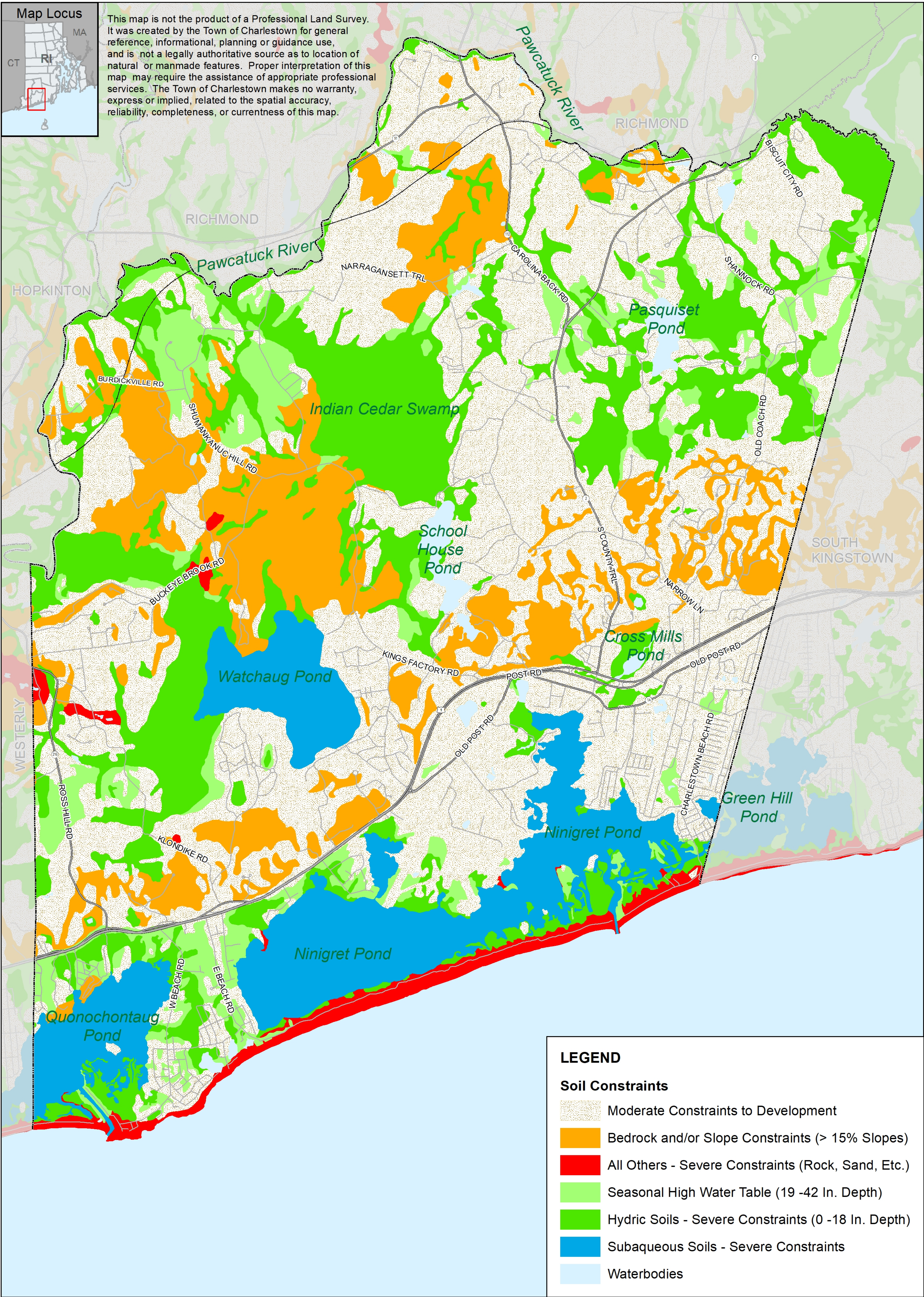
Action 1 Make an interconnected network of conservation land a priority in protection and conservation of open space.

Action 2 Apply for grants from potential federal, state and private sources to acquire, promote access to and educate the public regarding Charlestown's natural resources and habitat areas.

Action 3 Maintain a natural resources map, develop plans and undertake site visits to identify resources that should be permanently protected from development.



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LEGEND

Soil Constraints

- Moderate Constraints to Development
- Bedrock and/or Slope Constraints (> 15% Slopes)
- All Others - Severe Constraints (Rock, Sand, Etc.)
- Seasonal High Water Table (19 -42 In. Depth)
- Hydric Soils - Severe Constraints (0 -18 In. Depth)
- Subaqueous Soils - Severe Constraints
- Waterbodies

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



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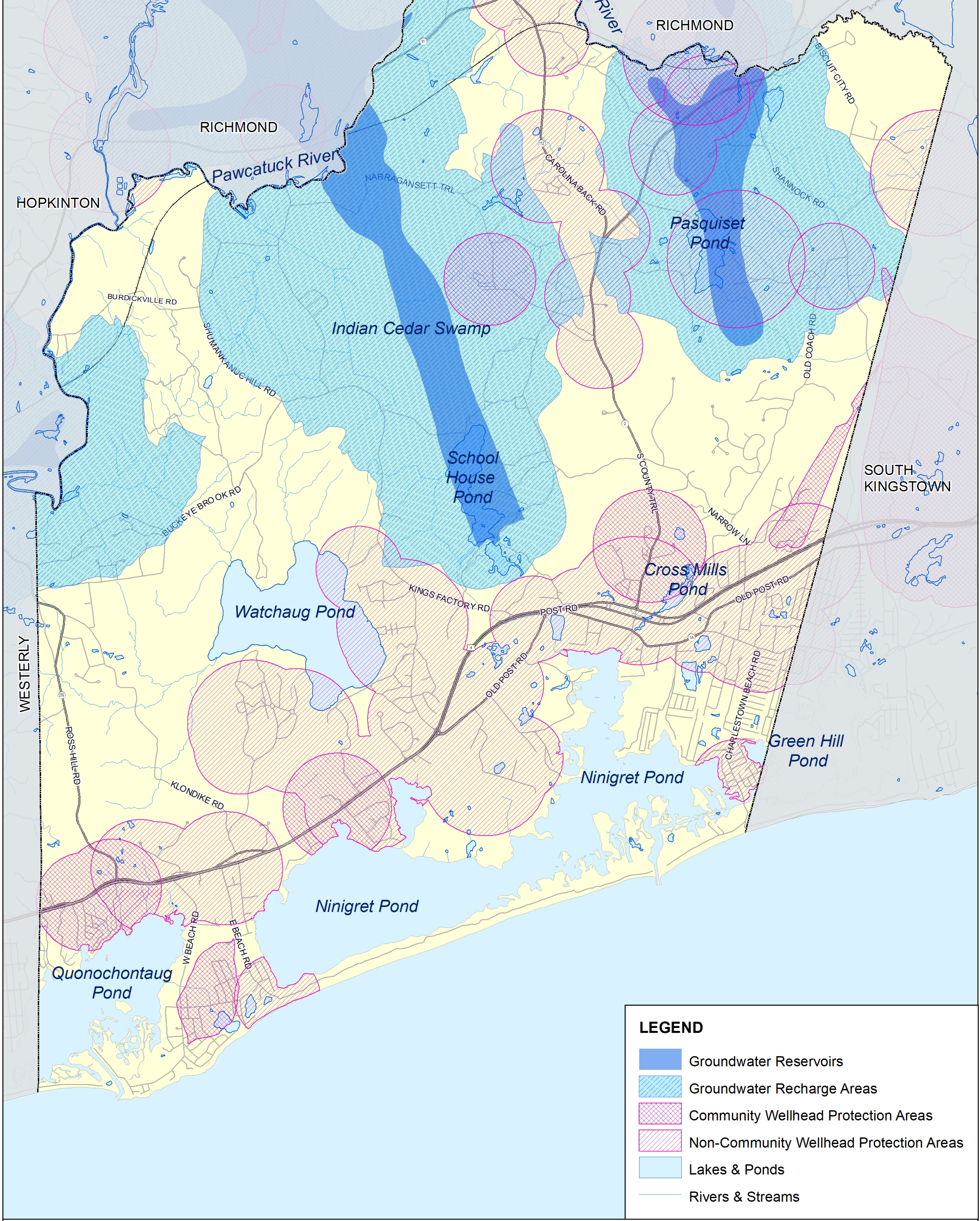
COMPREHENSIVE PLAN, 2020

**SOIL CONSTRAINTS
TO DEVELOPMENT**

MAP NR-1



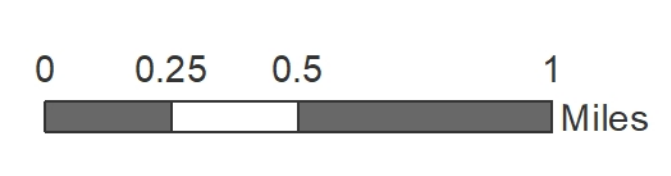
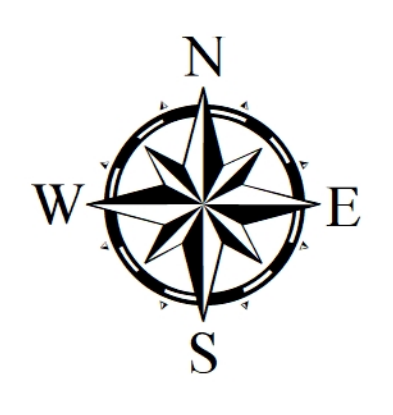
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LEGEND

- Groundwater Reservoirs
- Groundwater Recharge Areas
- Community Wellhead Protection Areas
- Non-Community Wellhead Protection Areas
- Lakes & Ponds
- Rivers & Streams

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



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GROUNDWATER



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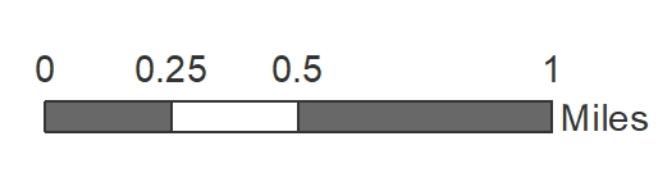
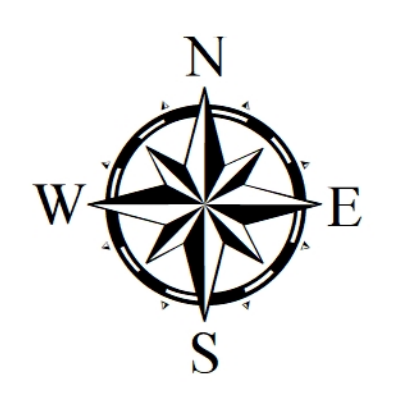
LEGEND

- Major Watershed Boundary
- Light Blue Box: Lakes & Ponds (A, B = Water Quality Class)
- Blue Line: Rivers & Streams (A, B = Water Quality Class)
- Light Blue Shaded Area: Wetlands

Coastal Resources Management Council (CRMC)
Water Use Types:

- 1 Conservation Area
- 2 Low Intensity Use
- 4 Multi-Purpose Water

Map Sources:



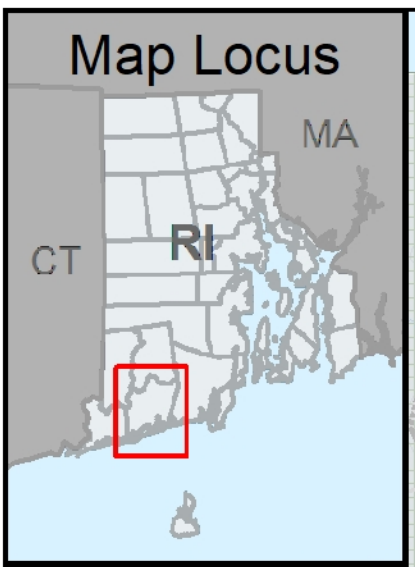
TOWN OF CHARLESTOWN
RHODE ISLAND



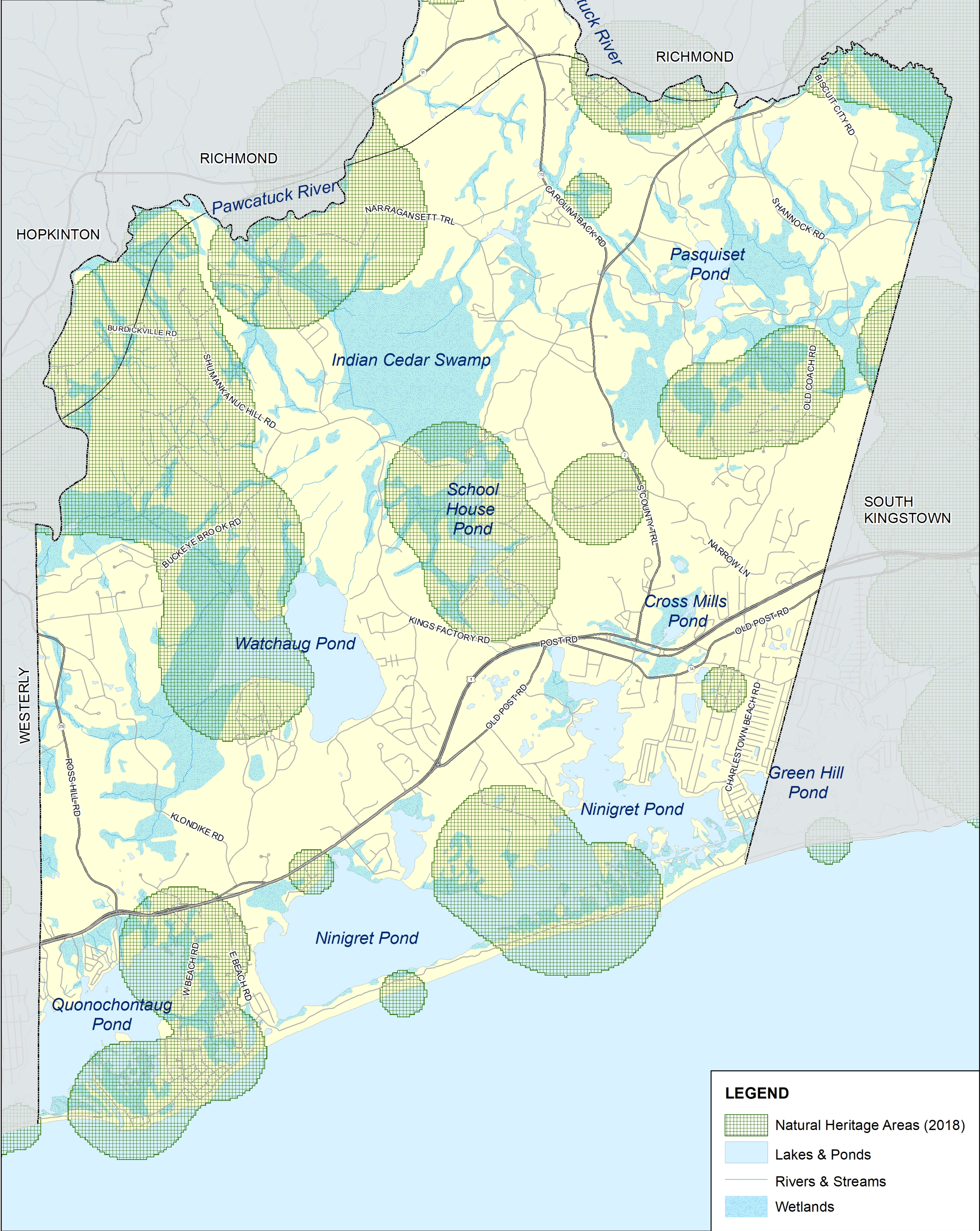
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COMPREHENSIVE PLAN, 2020

**SURFACE WATER
AND WETLANDS**



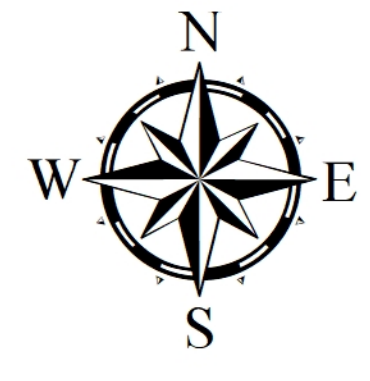
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LEGEND

- Natural Heritage Areas (2018)
- Lakes & Ponds
- Rivers & Streams
- Wetlands

Map Sources:



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RHODE ISLAND



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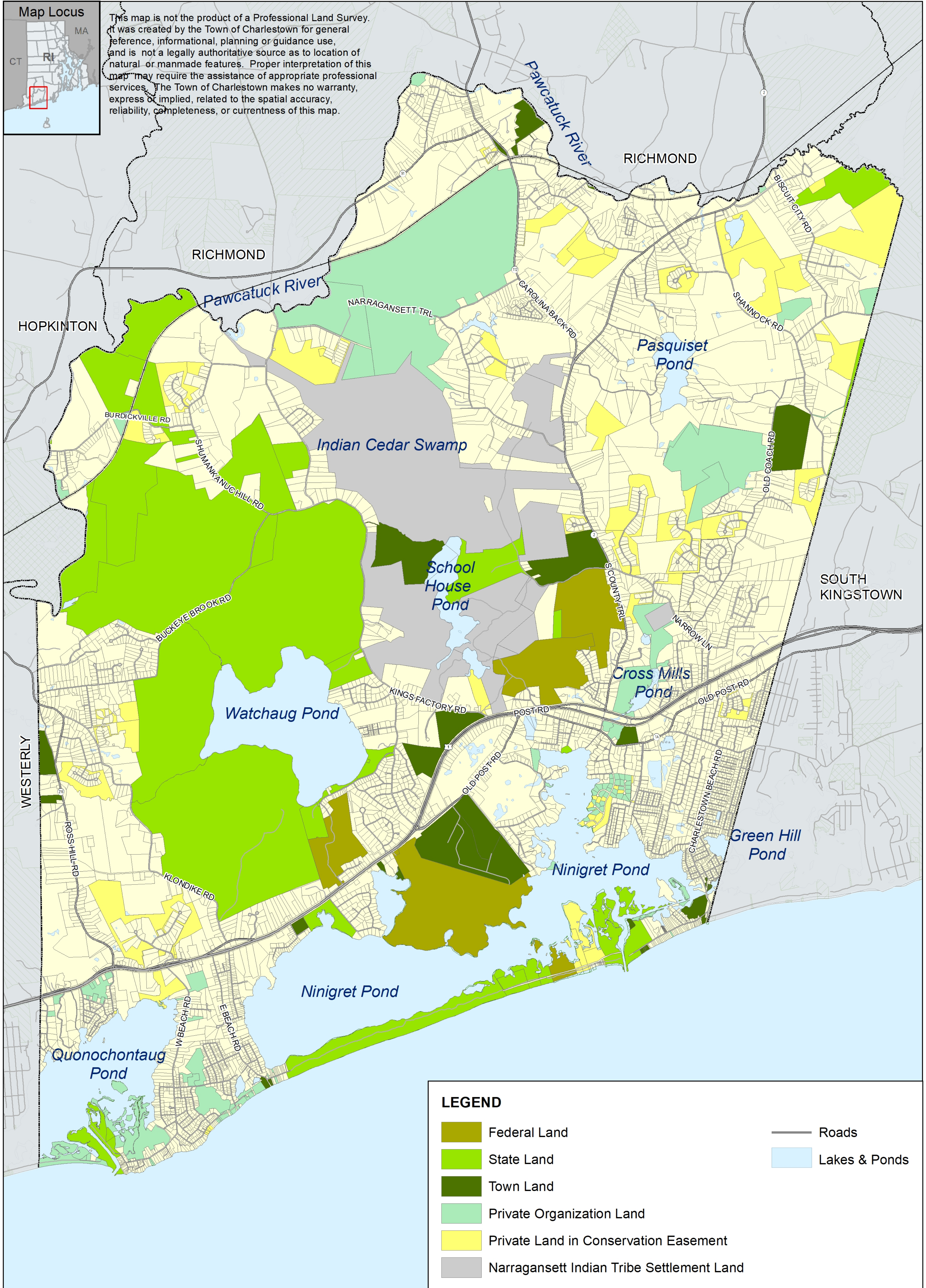
COMPREHENSIVE PLAN, 2020

**NATURAL HERITAGE
AREAS**

MAP NR-4



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Map Sources:



0 0.25 0.5 1 Miles

TOWN OF CHARLESTOWN
RHODE ISLAND



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COMPREHENSIVE PLAN, 2020
**CONSERVATION
AND
OPEN SPACE AREAS**

MAP NR - 5



RECREATION

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's recreational programming and facilities, issues and opportunities related to the accessibility of year-round recreation for all users, and recommendations to achieve a range of outdoor recreation opportunities while balancing recreation with conservation.

Map

REC-1 Recreation Sites

Cover Photo: Salt Ponds Coalition

RECREATION CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN
CHAPTER 3. RECREATION

INTRODUCTION

With its miles of barrier beaches, large salt ponds, open bodies of fresh water and a boundary along a major river; hundreds of acres of conservation land available for passive recreation; and its active recreation lands and extensive recreational programming, Charlestown has many outdoor recreational opportunities. Many activities are available all year long; the beaches are accessible year round for fishing and walking, the dark skies afford stargazing at any time of the year, and in the winter, snow shoeing, skiing and bird watching are possible on a number of trails.

These significant recreational resources – the conservation lands, passive recreation open space areas, active recreation sites and dark skies – affect the quality of life in Charlestown in a number of positive ways:

- **Rural Character:** Maintaining a large percent of open space and recreation land ensures that much of Charlestown will remain undeveloped and identified as rural.
- **Protection of Natural Resources:** Open space for conservation purposes is critical for the protection of significant natural resources while still providing access to these spaces.
- **Economy:** The beaches, parks and hiking areas, and dark skies support the town’s largest economic sector – tourism.
- **Community Cohesion:** Open space set aside for either passive or active recreation provides a community focus for residents and becomes the setting for organized programs and activities.
- **Health Attributes:** Public parks and recreational opportunities improve the overall health and wellness of a community. They are essential in combating physical inactivity and obesity, and are important for mental health.

This chapter describes the existing recreational assets in Charlestown. These include active recreation, which typically involves organized activities and requires structures or other built amenities, and passive recreation, which involves use of existing natural resources with minimal site alteration or impact. Recreational programming is also described.

Following a discussion of issues and opportunities, the goals, policies and implementation actions of this chapter are intended to promote appreciation and appropriate use of Charlestown’s recreational resources, focus on healthy community activity, and provide a wide range of recreational opportunities for Charlestown residents and visitors.

RELATIONSHIP TO OTHER CHAPTERS

This chapter complements a number of others:

Natural Resources Chapter

In the Natural Resources chapter, the ecological significance of Charlestown's natural resources and the way in which people and the natural features and landscapes interact are described. The protection of open space is critical to maintaining the natural resources on which the economy and the lifestyles of residents depend. The Town of Charlestown continues to collaborate with state and federal agencies and with private and non-profit organizations in its conservation efforts to both protect significant natural resources and provide additional outdoor recreational activities.

Services and Facilities Chapter

The town's recreational programs and assets are described in this chapter; most other town services and facilities are described in the Services and Facilities chapter, including many which support recreational activities. Because Charlestown depends upon groundwater for its drinking water, the protection or acquisition of open space for outdoor recreation has an additional benefit in terms of ensuring clean and adequate drinking water by reducing development potential and protecting watersheds.

Economic Opportunity Chapter

Recreation relates directly to economic opportunity in Charlestown as the abundant outdoor recreational activities support tourism, the main source of economic activity, and enhance the quality of life for both residents and visitors. Activities like swimming, beach combing, boating, fishing, bicycling, hiking, sightseeing, stargazing and bird watching make the community attractive to visitors and tourists, support businesses, and attract new residents, some of whom retire in Charlestown. The tourist economy is described in detail in the Economic Opportunity chapter.

EXISTING CONDITIONS

Parks and Recreation Department

For a town of its size, Charlestown has a very active Parks and Recreation Department which provides many activities and programs, much in response to a high seasonal demand. The department plays an important role in creating a high quality of life in Charlestown.

The Parks and Recreation Department coordinates all activities and programs at town active recreation sites. The maintenance of these facilities is done by the Department of Public Works. The Parks and Recreation Department staff consists of one full time director, a full-time assistant director for programs and a secretary shared with the Wastewater Management Office. During the summer the department employs an additional 32 full time and 6 part time staff. The department uses volunteer services for special events and for help with year-round activities. Activity and user fees offset some of the department's costs. The responsibilities of the Parks and Recreation Department include:

- Managing the town's salt and freshwater beaches, including providing lifeguards, hiring staff, coordinating concessions and parking lot use, and handling fees.
- Managing parks and playgrounds, athletic fields and other community recreation facilities, including coordinating and managing organized sporting events that use town facilities; overseeing special events in Ninigret Park; managing a summer camp for children; conducting and promoting special events such as trips, movie nights and concerts; and developing activities at the Charlestown Senior/Community Center.
- Coordinating activities with the school department, including a number of Chariho school programs (football, softball, basketball, lacrosse, volleyball and the youth soccer league) and with outside agencies, such as the Boy Scouts and Girl Scouts, and outside athletic groups.
- Coordinating all facility maintenance and improvement activities with the Department of Public Works; and
- Preparing and administering budgets and writing grant proposals.

The department is advised by a Parks and Recreation Commission, consisting of nine residents of Charlestown appointed by the Town Council. The commission discusses and advises on recreational and cultural programming, acquisition and maintenance of facilities, and setting of budgets and fees for recreational programs and facilities.

Conservation Commission

The Charlestown Conservation Commission, a seven-member volunteer board also appointed by the Town Council, maintains and promotes the town's natural resources, including open space used for passive recreation. Some of the duties of the Conservation Commission are as follows:

- Conduct research into local natural resource areas and coordinate the activities of other groups organized for similar purposes;

- Produce and distribute books, maps, charts, plans and pamphlets related to the management and promotion of natural resource and conservation areas;
- Maintain an index of all open spaces within the town, both publicly and privately owned;
- Prepare management plans, develop trail systems and maintain them with the assistance of the Department of Public Works; and
- Make recommendations to the Town Council, and any board, commission or town department on programs for the better promotion, development, utilization or preservation of open space and other natural resources.

Recreational Programs and Events

The Parks and Recreation Department runs a variety of seasonal and year-round programs which are available to the entire community. These programs are listed on the Town of Charlestown website; highlights include summer movies and a concert series, a summer day camp, teen programming at the Charlestown Senior/Community Center, and family holiday programming including the Valentine’s Day dance, Easter Egg hunt, “Trunk or Treat” at Halloween, a Town Hall Christmas event with Santa and a New Year’s Eve bonfire.

Of the recreational assets available for recreational programming and events, one of the major facilities is Ninigret Park, which provides the following amenities:

- Basketball and tennis courts
- Athletic fields and open fields
- Disc golf course and dog park
- A 0.9 mile criterion bicycle course, a 1.3 mile paved multi-purpose trail, and walking trails
- Senior/Community Center and garden
- Playground (handicapped accessible) and a swimming pond
- Three pavilions with picnic tables and barbecues
- The Frosty Drew Observatory and Science Center
- Direct access to the adjoining Ninigret National Wildlife Refuge and Ninigret Pond

In addition to the school programming and that provided by private youth groups such as the Boy Scouts and Girl Scouts, recreational programming is provided by the RI Department of Environmental Management, the US Fish and Wildlife Service, and non-profits at their respective properties. A comprehensive list of recreational programming available in Charlestown is found in Appendix Rec-1; the programs described are typical and are subject to change over time.

Outdoor Recreation Resources

Charlestown is fortunate to have large areas of open space available for passive recreational activities such as hiking, horseback riding and cross-country skiing, camping and picnicking, bird watching and nature study, swimming and boating, and fishing and hunting. From Ninigret Park and Ninigret National Wildlife Refuge and the salt ponds and barrier beaches, to Burlingame State Park and Management Area and Francis C. Carter Memorial Preserve, and with the myriad of smaller parks and preserves, Charlestown provides its residents and visitors with a rich array of outdoor recreation opportunities.

Table Rec-1 lists these resources, owned by the town, the State of RI (DEM) and the US Fish and Wildlife Service, as well by private conservation organizations. Detailed descriptions of these resources are contained in Appendix Rec-2. Map REC-1 *Recreation* shows the locations of outdoor and community recreation facilities in Charlestown.

Accessibility and Usage of Recreational Land and Facilities

The accessibility of the town's recreation areas for various outdoor activities is described below.

Swimming and Beach Activities

Charlestown has over three linear miles of beach front on Block Island Sound that provides opportunities for ocean swimming and beach combing. The Ninigret Pond barrier beach is the longest uninterrupted barrier beach between New York and Cape Cod, and most of this is part of the East Beach Conservation Area, owned by RI DEM. The town also owns approximately six acres of beach front land, half of which is used as a public beach. Lifeguards are available at the two town owned beaches – Blue Shutters Beach and Charlestown Town Beach – as well as at the RI DEM Charlestown Breachway State Park.



Vic G. Dvorak

Charlestown Breachway and Barrier Beaches

One can walk for miles along the beach, swim, fish, or take part in other recreation activities along the shore. Article 17 of the RI Constitution states, in part, *“The people shall continue to enjoy and freely exercise all the rights of fishery, and the privileges of the shore, to which they have been heretofore entitled under the charter and usages of this state, including but not limited to fishing from the shore, the gathering of seaweed, leaving the shore to swim in the sea and passage along the shore.”*

Ninigret and Quonochontaug Ponds offer quiet waters suitable for children to wade in, but they are too shallow for much swimming and their shores are too narrow to accommodate many visitors. The beaches and most areas along the salt pond margins are available for passive recreation such as walking and bird watching.

Freshwater swimming is available at Watchaug Pond in Burlingame State Park and Little Nini Pond in Ninigret Park. The Parks and Recreation Department organizes swimming lessons at Little Nini Pond.



Frances Topping

Little Nini Pond

Boating

Despite shallow water depths, Ninigret and Quonochontaug Ponds provide excellent motorized boating opportunities, fishing and anchoring to access the barrier beaches. There is also access to the ocean through the breachways of both ponds. However, boaters face the difficulties of strong currents in the breachway channels, along with consistent ocean swells that can make navigation in and out of the breachways challenging.

**Table Rec-1
Outdoor and Community Recreation Resources in Charlestown**

TOWN		
Site	Location	Acreage
Blue Shutters Town Beach	469 East Beach Road	3.2
Charlestown Elementary School	363 Carolina Back Road	15.5 *
Charlestown Moraine Preserve	Kings Factory Road	78
Charlestown Senior Community Center	Ninigret Park, 100 Park Lane	—
Charlestown Town Beach	Charlestown Beach Road	14.5
Clark Memorial Field	Columbia Heights Road	5.3
Ninigret Park	Old Post Road and Park Lane	230
Patricia Sprague Forest Preserve	Railroad Avenue	27.8
Pawaget Park	Sportsman Road	7.2
Puchalski Field Town Hall	4540 South County Trail	16.8*
Richard Trails	South County Trail	95.7
School House Pond Preserve	Kings Factory Road	93.5
South Farm Preserve	Old Coach Road	86.7
Wicklund Field	Route 112 next to Elementary School	6.1

PRIVATE		
Site	Location	Acreage
Cross Mills Library Open Space	4417 Old Post Road	7 *
Frosty Drew Observatory and Science Center	61-62 Park Lane, Ninigret Park	—
Quonochontaug Grange	5662 Post Road	2

* Acreage of entire parcel

STATE		
Site	Location	Acreage
Burlingame State Park and Management Area	1 Burlingame Park Road	3100+
Charlestown Breachway State Park	Charlestown Beach Road and East Beach Road	79
East Beach and Ninigret Conservation Area	(Both sides of the Breachway) Off East Beach Road	231.5
Fort Ninigret	Fort Neck Road (Off Old Post Road)	2.6
Great Swamp Wildlife Management Area (Charlestown)	277 Great Neck Road, West Kingston	54.8
Kimball Wildlife Refuge	Southern shore of Watchaug Pond	29.3
Quonochontaug Breachway State Park	End of West Beach Road	27

FEDERAL		
Site	Location	Acreage
Ninigret National Wildlife Barrier Beach Unit	Off East Beach Road	27
Ninigret National Wildlife Kettle Pond Unit	50 Bend Road	115
Ninigret National Wildlife Lewis Trail Unit	Off Lewis Trail and Route 2/112	365
Ninigret National Wildlife Salt Pond Unit	Ninigret Park, 100 Park Lane	380

THE NATURE CONSERVANCY		
Site	Location	Acreage
Francis C. Carter Memorial Preserve	Route 2, Route 112	1032
Pasquisset Preserve	Old Coach Road	255

CHARLESTOWN LAND TRUST		
Site	Location	Acreage
Mill Pond	Route 2	76.3

The salt ponds are also used for shallow draft sailing and windsurfing, and are very popular for kayaking, canoeing and paddle boarding. There are four public boat launches serving the ponds:

- The town boat launch located on Charlestown Beach Road, adjacent to the Town Beach parking lot. This launch is primarily used for launching of kayaks, canoes, row boats and other non-motorized vessels into Ninigret Pond.
- The Ninigret boat launch located in Ninigret National Wildlife Refuge, with access from Park Lane in Ninigret Park. This launch is available for kayaks and canoes only.
- The Charlestown Breachway boat ramp, located in the state recreational vehicle camping area at the north end of the breachway. This launch is a developed concrete ramp for use by both motorized and non-motorized vessels.
- The Quonochontaug Breachway boat ramp, located off the parking area at the north end of the breachway. This launch is a developed concrete launch ramp for use by both motorized and non-motorized vessels.



Cody Clarkin

Paddle Boarding on the Salt Pond at Sunset

Boat launching is also available at the three private marinas on Ninigret Pond for a fee.

There are canoe/kayak put ins along the Wood Pawcatuck River and at some freshwater ponds within and surrounding Charlestown. There are also private canoe/kayak rental facilities in town. See Map REC-1 for the locations of all boat launch ramps in Charlestown.

Fishing and Shellfishing

Access for fishing is readily available in Charlestown. Fishermen can cast from the beaches and from the breachway channel walls. The margins of the salt ponds, including Ninigret National Wildlife Refuge, provide access for shellfishing and crabbing, which are popular summer activities. Boaters may fish in either the salt ponds or the ocean. Fishing is also available in the rivers and freshwater ponds. An annual fishing derby for children is held at Little Nini Pond.

Hiking and Winter Trail Sports

The opportunities for hiking in Charlestown are considerable. The most significant sites are the Ninigret National Wildlife Lewis Trail Unit and Kettle Pond Unit (north of Route 1) owned by the US Fish and Wildlife Service; Burlingame State Park and Management Area, the adjoining Kimball Wildlife Refuge and the Great Swamp Management Area owned by RI DEM; the two preserves owned by The Nature Conservancy, Francis C. Carter Preserve and Pasquiset Preserve; the Charlestown Moraine Preserve, Richard Trails and South Farm Preserve, all owned by the town; and the Mill Pond Preserve owned by the Charlestown Land Trust. Together these areas represent over 5,300 acres of land, with many miles of trails for hiking, birdwatching, snow shoeing and cross country skiing in Charlestown. All of these sites have public parking.

Also of regional significance is the North–South Trail, a 77 mile hiking trail that runs the length of the state which begins at the Blue Shutters Beach in Charlestown and ends at the Massachusetts border in Burrillville, Rhode Island. The trail is remarkably rural and scenic. From the beach at the south end, features include lakes and wetlands, hills and rock outcrops, farmland and dense woodland. It can be used for walking, horseback riding and mountain biking. The North–South Trail is the logical extension of the Midstate Trail in Massachusetts and the Wapack Trail in New Hampshire; together these trails make up a 191 mile system.

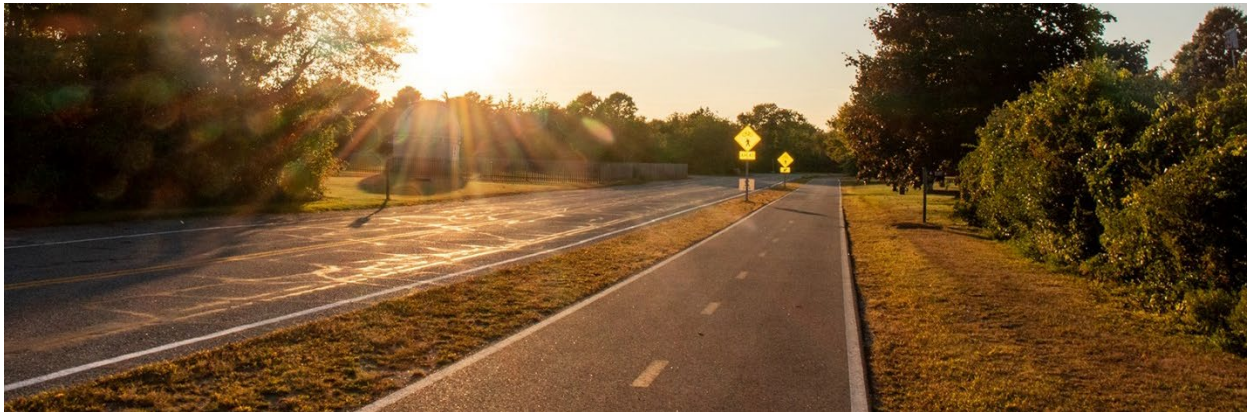


Figure Rec-1 Rhode Island's North-South Trail

Bicycling

The narrow country roads of Charlestown require caution when bicycling, although it is a very popular activity. The RI Department of Transportation has designated a number of roadways in Charlestown as “most suitable” and “suitable” for bicycle travel, including the major collector routes – Route 2, Route 112 and Route 91, as well as the country roads of Buckeye Brook, Shumankanuc Hill, Kings Factory, Old Shannock and Old Coach Roads.

For separate bicycle facilities, there is a criterion bicycle course in Ninigret Park, and a ten-foot wide 1.3 mile paved multi-purpose trail designed and constructed in the park in 2016. The town is also working with the adjoining communities of Westerly and South Kingstown on a coastal bike route that will be part of the statewide bicycle system. Bicycling as a mode of transportation is discussed in detail in the Transportation chapter.



Cody Clarkin

Multi-Use Path in Ninigret Park

Camping

Camping is available at Burlingame State Park, with 700 sites in a large campground near the southern shore of Watchaug Pond, with access off Route 1. There are sites for tents only, for small trailers, and for large trailers and motor homes. There are also 20 cabins available. The campground is serviced by water, restrooms with showers, portable toilets, fireplaces and waste disposal facilities. It is very popular and fills up on summer weekends.

Recreational vehicle camping is also available at the Charlestown Breachway State Park at the end of Charlestown Beach Road (east side of the breachway), and at East Beach State Park at the end of East Beach Road (west end of the barrier beach). The Charlestown Breachway area fronts the ocean, the breachway channel and the tidal delta area of Ninigret Pond, and has about 75 sites for self-contained vehicles and includes composting toilets. The East Beach area, which also lies between the ocean and the salt pond, has 20 sites and includes composting toilets. Both areas are popular vehicular camping sites in the summer.

Birdwatching

The beaches, salt ponds and conservation areas, particularly the Ninigret National Wildlife Refuge (the Lewis Trail, Kettle Pond and Salt Pond Units) in Charlestown provide abundant opportunities for birdwatching. They serve as important areas for nesting, migratory stopping and overwintering for a variety of birds. The “Coastal Birding Trail” of the Rhode Island Coastal Adventure Trails, a joint effort of the Charlestown Chamber of Commerce and the US Fish and Wildlife Service is an on-line resource that identifies all of the bird species that can be seen at the salt ponds, Burlingame State Park and Management Area, and all of the national wildlife refuges in Charlestown, South Kingstown and Richmond¹. Its purpose is to encourage participation in bird watching, hiking and biking through the integrated networks of ten outstanding birding sites along the south coast, and to extend the tourist season to the spring and fall periods which coincide with peak bird migration along the Atlantic Flyway, the major north-south flyway for migratory birds in North America.

Astronomy and Science Education

Charlestown is well-known for its dark skies, the darkest between New York and Boston, and as one of the most accessible locations in New England to clearly see the Milky Way. Charlestown’s dark skies attract people from a wide area to view the night sky and study the cosmos at the nationally recognized Frosty Drew Observatory in Ninigret Park.

Frosty Drew has conducted science programs in Ninigret Park since 1982. Its observatory was constructed in 1988 for observational astronomy and research. It is open to the public year-round. Visitors come to observe and learn about the planets, lunar geography, solar dynamics, star clusters, nebulae, galaxies and thousands of astronomical objects. Additionally, numerous students visit to explore the viability of a career in astronomy, physics or engineering.

As Frosty Drew’s programs, popularity and engagement increase, so too will the need for facility expansion. The current facilities are continuously evolving to meet current demand, and to accommodate technological advances in observational astronomy and science communication. Meeting long term growth projections, which are based on increased demand for observational and educational capabilities, may require expansion of existing facilities or the introduction of additional facilities.

¹

https://www.fws.gov/uploadedFiles/Region_5/NWRS/North_Zone/Rhode_Island_Complex/Trustom_Pond/CoastalBirdingTrail.pdf

Nature Education

The US Fish & Wildlife Service and the Salt Ponds Coalition both provide educational programs for children and adults (see Appendix Rec-1). This includes field study programs in life and earth sciences for Rhode Island and Connecticut school students and families which makes use of the wildlife refuge, the salt ponds and the barrier beaches as their “outdoor classroom”.



Vic G. Dvorak

Seining at a Salt Pond Safari

The Kettle Pond Visitor Center includes a natural history museum and natural history lectures. The outdoor programming that is part of the wildlife refuge includes a salt ponds exploration with use of a large seining net, guided walks in the refuge, volunteer training in invasive plant identification and treatment methods, and a piping plover program where volunteers are trained to protect nesting territories, monitor beaches, document activity at nesting sites and educate the public on plover biology and local laws. A native plant garden is also used to educate visitors. The Salt Ponds Coalition provides programming on dredging and marsh restoration, sea level rise and aquaculture, as well as field trips for children to Ninigret Pond, called the Salt Pond Safari.

Visual Access

The ability to see the water is an important part of Charlestown’s scenic coastal and rural character. Visual access to the salt ponds and the ocean is provided at sites such as Fort Ninigret, Pawaget Park, Town Dock, an observation platform in the Ninigret National Wildlife Refuge, the private marinas and of course, the salt pond breachways and the state and town beaches. Visual access from a distance is also available from the Ocean View Trail at Kettle Pond and from the Charlestown Moraine Preserve. Portions of certain roads provide visual access to the water, such as US Route 1 and Charlestown Beach Road. However, the water or shore is not easily visible from a number of sites where it would otherwise be expected, including from within Ninigret Park and much of the Ninigret National Wildlife Refuge. Providing and protecting views of Watchaug Pond and Mill Pond, as well as the Pawcatuck River, are also important.



Frances Topping

View from Kettle Pond Overlook

Adjoining Communities

Close to Charlestown and easily accessible to residents is the Trustom Pond National Wildlife Refuge in South Kingstown; this US Fish and Wildlife Service property adjoining a coastal pond and including a small barrier beach, has mixed habitats and concentrations of migrating waterfowl, particularly in the winter. It is supported with a small visitor center. The 3,350 acre Great Swamp Management Area lies mostly in South Kingstown; about two thirds is comprised of forested freshwater wetlands dominated by red maple swamp and some cedar swamp. The 2,360 acre Carolina State Wildlife Management Area in Richmond is almost entirely wooded, with an extensive trail system. Both abut Charlestown along the Pawcatuck River, and provide easy access to hiking, birdwatching and hunting.

The 550 acre Grills Preserve owned by the Westerly Land Trust has diverse habitats including streams and ponds, freshwater marsh, wetland and upland forest, and sandy pitch pines and oaks being managed for the New England cottontail rabbit. It has 3 miles of trails including more than a mile along the Pawcatuck River, and a granite outcrop with extensive views. It connects by a pedestrian bridge to adjoining Hopkinton Grills Sanctuary, which has 4 miles of trails.

RECREATION: ISSUES AND OPPORTUNITIES

Balance of Use

The major recreational features in Charlestown, including Burlingame State Park and Management Area, Ninigret Park and Ninigret National Wildlife Refuge, the Francis C. Carter Memorial Preserve, the public beaches, and Ninigret and Quonochontaug Ponds, are major regional attractions. Residents, both year-round and seasonal, must often compete with visitors for the limited space at beaches or parking areas.

In addition, Charlestown’s seasonal influx of visitors drawn to the town precisely because of these recreational amenities, places a heavy demand on its recreation sites and natural resources, requiring significant resources and planning for their proper maintenance and protection.

In general, the rural nature of the town and the need to protect its natural resources requires an appropriate balance between developed active recreational areas, such as playing fields and events, and undeveloped passive recreational areas, such as fishing sites and hiking trails. This balance is not one of equivalent acreage but rather one that accounts for all the benefits provided by open space – rural character, protection of natural resources, the economy, community cohesion and public health.

Year-Round Access to Recreation

Charlestown has long been known as a place for summer recreation because of its beaches, salt ponds and freshwater ponds. However, the numerous and large areas of open space and conservation lands with diverse habitats north of Route 1 provide ample opportunities for fall, winter and spring activities such as hiking, foliage tours, horseback riding, bicycling, hunting and fishing, cross country skiing, ice skating, bird watching and stargazing. Year-round recreational activities are also provided by making use of indoor facilities.

Expanding recreational opportunities year-round is important to the quality of life for Charlestown residents and to the town’s economy through extension of the tourist season.

Outdoor Recreational Activities

Rhode Island’s climate does allow for year-round hiking except for a few weeks of most years. Hunting and fishing are also popular year-round, as is stargazing. Winter hiking, snow shoeing and cross-country skiing, and bird watching, are possible, but cleared access to trailheads is needed. Ice skating is another viable winter sport. Expanding these winter activities requires plowing parking areas and on-going trail or facility maintenance, an issue of staffing for both publicly and privately owned areas.



Frances Topping

X-Country Skier

Indoor Recreational Facilities

Year-round recreation also involves access to indoor activities during the winter. Indoor accommodations for field sports like baseball, soccer, lacrosse and track, as well as court sports such as basketball, volleyball and tennis, not only extend the season for these popular sports but can provide space for activities such as cheerleading, marching band exercises and fitness training.

Opportunities to provide indoor recreation can be found by making uses of facilities already in place in Charlestown and surrounding communities. These include the public schools, the Cross Mills Public Library, the Senior/Community Center, the Quonochontaug Grange (owned by the Dunn's Corner Fire District), area YMCAs and even facilities at the University of Rhode Island.

However, indoor recreational space at the public schools is often booked for after school use or school-related activities and not available for the Parks and Recreation Department athletic programs. There is also an ongoing demand for additional arts and exercise programming and the sites to host them, as the Senior/Community Center has insufficient space to accommodate many of these activities. The long-term recreational and community programming needs of residents of all ages in Charlestown should be determined, and the capacity and appropriate location of an indoor recreational facility/community center that best meets these needs should be identified.

Geographic Distribution of Active Recreational Resources

Charlestown's year-round population is relatively small compared to other Rhode Island coastal communities, and is scattered among the coast and inland areas. Seasonal residents primarily occupy the coastal areas and the neighborhoods just north of Route 1. Most open space for active recreation is currently located in the area surrounding Route 1 and south along the coast. While considerable areas of open space for passive recreation (hiking, nature study, bird watching, camping) is found north of Route 1 and east of Route 2, there are few town owned active recreational sites (athletic fields and playgrounds) west of Routes 2 and 112.

The year-round community is accustomed to and well served by Ninigret Park, which is a centralized facility for active recreation where the majority of the community comes together. However, some open space for active recreation and recreational opportunities should be conveniently located in other areas of the town to serve distinctly local needs.

Management and Use of Ninigret Park

Ninigret Park, with access from Old Post Road (Route 1A), is Charlestown's largest town-owned outdoor recreational facility. It is on land that was part of a WW II-era naval air training base, remnants of which are still in place – pavement from runways, service areas and access roads. The base closed in the early 1970's and by 1982 the property had been transferred to the US Fish and

Wildlife Service (Department of Interior) and the Town of Charlestown. Approximately 380 acres became the US Fish and Wildlife’s Ninigret National Wildlife Refuge and the remaining 230 acres became Ninigret Park, owned by the town.

Ninigret Park consists of two parcels. One is a 175 acre lot owned by the town but subject to restrictions by the National Park Service (NPS) that it be used “*exclusively for public park or public recreation purposes in perpetuity by the Town of Charlestown*” included in the deed and outlined in a Program of Utilization, or “utilization plan”, submitted by the town to the NPS. This land use must complement that of the Ninigret National Wildlife Refuge abutting the property to the southwest. The other is a 55 acre lot owned by the town and not subject to the administrative restrictions of the NPS. However, records indicate that the transfer of the entire 230 acres was predicated on using it in a manner consistent with the Ninigret National Wildlife Refuge (see Appendix REC-3, which contains documentation sent from the Refuge Manager to the Charlestown Town Council in 2012).

Master Planning

The development of Ninigret Park has been guided by three utilization/master plans: the 1980 Utilization Plan and the 1994 Utilization Plan, both approved by the NPS, and the 2008 Ninigret Park Master Plan. The 2008 plan proposed separating the concert venue from the recreational uses. Recommendations included entrance improvements, relocation of Park Lane, treed parking and camping areas, introduction of design techniques to reduce paved surfaces and other Low Impact Development (LID) principles, and invasive species management. A naval air museum and a new community center were proposed, as well as expansions that would allow additional athletic and public events.

In 2014, an update to the 2008 Ninigret Park Master Plan was prepared by a design firm for the Parks and Recreation Commission. New concept plans were submitted, and revisions suggested to the text of the 2008 plan. The proposed 2014 master plan update was not adopted by the Town Council. The 2008 adopted plan and the proposed update can be found on the town website.



Steve McCandless

Aerial View of Ninigret Park

Park Facility and Improvement Needs

Ninigret Park has hosted over thirty years of music, circus, sporting and other types of events. These special events require basic facilities such as restrooms, potable water access, electricity, fencing and other functional elements that assist in working effectively with large crowds. These are currently provided by the event promoters. The town must balance any expansion of facilities for accommodation of large public events with such concerns as daily public access to the park, spring and fall bird migrations and the nesting season at the adjoining Ninigret National Wildlife Refuge. Permanent lighting in the park is of particular concern because of potential effects on the refuge and its mission to protect birds and other wildlife, and interference with the dark sky activities at the Frosty Drew Observatory and Science Center. Noise pollution affecting wildlife, residents and visitors is another concern.

Improvements and enhancements have taken place over the years, most recently using funds from a \$1 million bond approved by voters in 2015 and from the Ninigret Park Fund, which is dedicated to the development, operation and maintenance of the park. Wayfaring signs and an entry area/welcome kiosk have been in place since 2020. Ninigret Park is in need of additional physical improvements, some of which depend on remediation of areas in the park by the US Army Corps of Engineers. Aside from the ongoing maintenance needs of the various recreational facilities, these include:

- More areas with shade, and tables and benches for people to congregate, relax or take in a scenic view
- Additional walking and multi-purpose trails
- Removal of the aging macadam (original service areas, runways and roads of the naval air station)
- Removal of invasive plant species coordinated with transplanting or planting of native and hardy vegetation to enhance open and stark areas within the park, create wind barriers and serve to direct people through natural means.

Future Use

Under the terms of the original land transfer from the General Services Administration to the Town of Charlestown (see Appendix REC-3) the town has the obligation to manage the entire park area in a manner consistent with the adjacent Ninigret National Wildlife Refuge. This obligation not only arises out of the historical record, but is based on the critical importance of the refuge as a stopover habitat during bird migration. Bird banding station data collected at the Ninigret National Wildlife Refuge indicates that the number of birds using Charlestown as a stopover in the Atlantic Flyway is higher than any other refuge in New England, and birds that are displaced from the refuge are much less likely to survive. An understanding of the sensitivities of the wildlife refuge is needed to ensure that future improvements at the park are consistent with this obligation, which

includes avoidance of activities, noise or lighting that would cause birds to avoid the refuge, particularly during spring and fall migration.

Surveys have indicated that the majority of residents in Charlestown want Ninigret Park to be available for year-round use, but to stay relatively undeveloped with more walking and biking trails. There is support for public events of a moderate scale. There is also support for community-oriented events such as arts and craft festivals and antique shows, or even a once-a-year community yard sale.

Public Access to the Shore

Much of the waterfront property in Rhode Island is privately owned. Despite this, there are a wide variety of access sites along the coast and salt ponds available to the public, including beaches and parks, municipal waterfront areas, bike paths, fishing areas, boat launches, marinas and mooring areas. There are also specific pathways, or rights-of-ways to the shore, although to be legally open to the public they must be publicly owned, maintained and/ or used in some manner openly by the public, as opposed to being owned by members of a private association or the owners of a subdivision plat.

As the state agency responsible for the management of the coast, the RI Coastal Resources Management Council (CRMC) identifies and designates public rights-of-ways to the shore. A CRMC public right-of-way (ROW) is one that the agency has determined already exists and on which they have placed an official designation. Once a ROW has been so designated, the CRMC prohibits any activities that would interfere with or obstruct the public's use. A CRMC ROW, including a municipally owned street, also cannot be abandoned without prior approval by the CRMC (see discussion on "Public Access" in Chapter III of the Charlestown Harbor Management Plan, approved July 2018)².

The CRMC has just two designated rights-of-ways to the shore (Atlantic Ocean) in Charlestown. One is part of the 79 acre Charlestown Breachway parcel owned by the RI DEM on Charlestown Beach Road. It consists of a 40 foot wide ROW extending from the west end of Charlestown Beach Road, south to the Atlantic Ocean, but is indistinguishable from the rest of the beach in this area. The other is part of the 13 acre town-owned Blue Shutters beach parcel, which consists of a 33 foot wide ROW extending from East Beach Road where it takes a 90 degree turn, south to the ocean. It is also indistinguishable from the remainder of the town recreation and beach area.

There are many public rights of ways to the shore which are not designated as such by the CRMC. This means that their legal status as a public resource may be uncertain and/or their preservation

² https://www.charlestownri.org/vertical/Sites/%7BDF68A5B8-A4F3-47A1-AE87-B411E21C6E1C%7D/uploads/Charlestown_Harbor_Managment_Plan.pdf

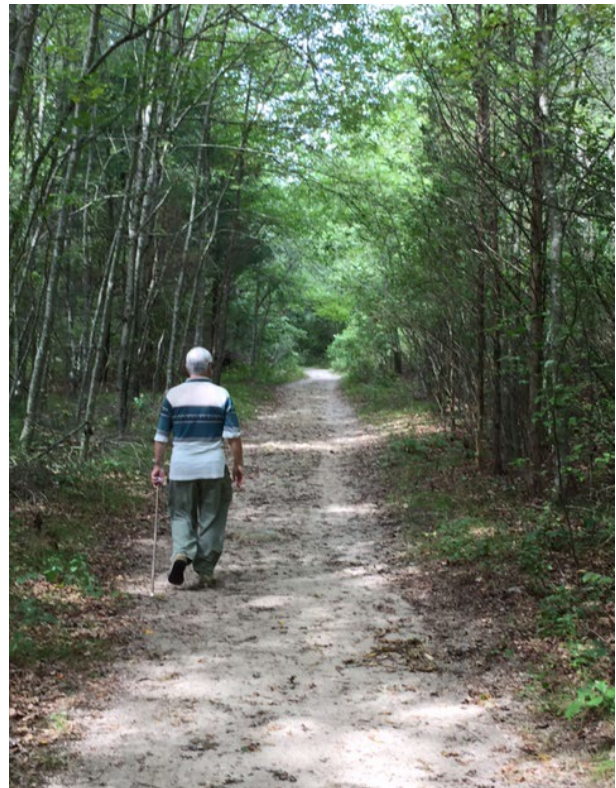
for public use may not be ensured in perpetuity. There are opportunities for some public access points to the salt ponds to be upgraded to CRMC designated ROWs. Upgrading a public access site to a CRMC designated ROW involves submitting evidence to the CRMC to document and affirm that legal public access to the shore for all citizens already exists at that location. It is a legal process which culminates in a public hearing by the full Coastal Resources Management Council.

Population Changes

Charlestown, like much of the state, has an aging population. Demand for senior services has been steadily increasing and is projected to continue as baby boomers age in place and people choose Charlestown as a retirement community. As the town's proportion of older population grows, so will the need to possibly require access accommodations and other amenities at recreational areas. There are also many recreational opportunities for older people that can be expanded in Charlestown. In particular, the nationwide increase in bicycling responds to the recreational needs of a population no longer running, playing basketball or other more demanding athletic activities. Bicycling, like moderate hiking and swimming, can be enjoyed well into later years, helping to maintain a healthy lifestyle.

Health Attributes

Public parks, open space preserves and recreational facilities improve the overall health and wellness of a community. They are needed to combat poor nutrition, physical inactivity and obesity, as well as stress and other mental health issues. Charlestown is fortunate to have abundant opportunities in its open space lands, parks and programs to incorporate exercise into a healthy lifestyle. Efforts should be made to promote these attributes, make them widely available to both residents and visitors, and keep them well maintained and staffed. This is necessary for the provision of long-term health benefits, as well as for a high quality of life and a strong economy.



Frances Topping Hiking at Kettle Pond Preserve

RECREATION: GOALS, POLICIES AND ACTIONS

GOALS

- GOAL 1** Provide Charlestown residents and visitors with a wide range of recreation opportunities to meet both current and future needs.
- GOAL 2** Maintain the balance between open space set aside for conservation purposes with that for recreation in a manner that protects natural resources while meeting the demand for active and passive recreation.
- GOAL 3** Ensure that public open space, parks and recreation facilities are accessible, well managed and maintained, and remain viable so as to protect Charlestown's economy, environment and quality of life.

POLICIES AND ACTIONS

- GOAL 1** Provide Charlestown residents and visitors with a wide range of recreation opportunities that meet both current and future demand.

Charlestown is committed to building upon its considerable recreational assets so as to meet the long-term recreational and programming needs of residents of all ages, as well as its seasonal visitors. The demand for more leisure programming and the space to locate these programs, the need for more indoor active space, and the opportunities for year-round activities have all been identified in this chapter. A number of policies and actions address these issues.

Policy 1.1 Continue to provide active recreational programming for all ages.

Recreational programs and sports should continue to be made available for all ages in Charlestown. Organized activities such as field trips and family programming that reinforce intergenerational connections in the community should be expanded if possible. Recreational opportunities can also be enhanced by coordinating with other programs and facilities in the region. These include recreational activities provided by other towns and organizations such as the YMCA, as well as the University of Rhode Island.

- Action 1** Annually review the variety and accessibility of recreational programming in Charlestown to determine adequacy in meeting the needs of all residents.
- Action 2** Continue to coordinate recreational programming with that of other organizations and recreational facilities in the region.

Policy 1.2 Maintain and expand opportunities for outdoor active recreation.

The Parks and Recreation Department continuously works to provide active recreational opportunities in response to demand. Much can be done by making use of and improving existing facilities and resources, and by promoting individual activities such as biking and outdoor skating by making places for these activities to occur.

Action 1 Undertake a facilities study to evaluate the condition and use level of all active recreational facilities, and to identify the need for additional facilities, particularly in areas of town which are underserved.

Action 2 Review the previous plans developed for Ninigret Park to determine the best utilization of the park.

Any plan for Ninigret Park must take into consideration the impact of park activities and facilities on the adjoining wildlife refuge, on other recreational uses in the park, and on residential areas and streets, including the need for traffic control and emergency management. Implementation of the agreed upon design solutions should occur as funding is available.

Action 3 Develop a schedule for acquisition and development of additional playing fields and active recreation facilities in town, based on need and availability of funding.

Policy 1.3 Provide opportunities for year-round recreation.

In addition to the field trips and programming scheduled by the Parks and Recreation Department, and the use of indoor facilities for active recreation, year-round recreation can include outdoor activities such as hiking, bicycling, birdwatching and stargazing, as well as cross-country skiing in the winter.

Action 1 Develop and expand programs for early spring, fall and winter activities for both passive and active recreation.

Action 2 Publicize forested and natural areas as available for year-round passive recreational activities, and make use of such areas in recreational programming.

Action 3 Continue to partner with the public schools, neighboring municipalities and other organizations for use of indoor recreational facilities.

Action 4 Consider the development of a new indoor recreational facility/community center and determine its needed capacity and appropriate location.

GOAL 2 Maintain the balance between open space set aside for conservation purposes with that for recreation in a manner that protects natural resources while meeting the needs for active and passive recreation.

Access to recreation in natural surroundings fosters appreciation of nature. The use of Charlestown's abundant natural and open space areas for outdoor recreation is fully supported, but in a manner compatible with the ecosystems and habitats of these areas.

Policy 2.1 Continue to acquire, protect and manage open space areas that can be utilized for passive recreation open to the public.

Action 1 Identify and rank open space land that provides both resource and habitat protection and recreational opportunities.

Action 2 Provide trailhead facilities and well-marked trails to facilitate use of natural areas, while notifying users of any restrictions due to natural resource protection.

Action 3 Develop (jointly with Carolina and Kenyon in Richmond) a Heritage Trail along the Pawcatuck River that would link the Carolina Management Area and the Great Swamp Management Area.

Action 4 Collaborate with conservation groups such as The Nature Conservancy, the RI Wild Plant Society and the Audubon Society to expand recreational programming focusing on Charlestown's natural resources, and to educate the public on their ecological importance and need for sensitive management.

GOAL 3 Ensure that public open space, parks and recreation facilities are accessible, well managed and maintained, and remain viable so as to protect Charlestown's economy, environment and quality of life.

Policy 3.1 Maintain the varied recreation opportunities on Ninigret and Quonochontaug Ponds, on the freshwater ponds and the Pawcatuck River, for boating, swimming shellfishing and fishing, while protecting the resources from the adverse impacts of overuse.

Action 1 Continue to develop small-scale access ways to the shore, the freshwater ponds and the river, to allow a few visitors, such as anglers, hikers or people who wish to sit and look at the water at these areas. Provide limited parking at or near shore access points where appropriate.

Action 2 Investigate the potential for additional boat ramps or small boat put ins to increase access to the salt ponds and the Pawcatuck River.

Action 3 Identify coastal areas subject to the conditions of climate change, such as storm surges and sea level rise, for public acquisition as a means to provide additional shoreline access, while preventing inappropriate development.

Action 4 Identify public ROWs to be upgraded to CRMC ROW designation, and assist the process by undertaking preliminary research involving town records, historical records and physical evidence of the proposed sites.

Policy 3.2 Educate the public on the availability and proper use of Charlestown's significant areas of open space.

Action 1 Educate recreational users and others who enjoy open space on appropriate use to protect natural resources and habitat by developing and distributing public informational brochures.

Action 2 Publicize the wide array of available recreational opportunities through various organizations and media, including the town website and social media.

Policy 3.3 Ensure that the facilities required to support recreational uses are adequate.

Action 1 Annually review figures for use of all facilities and activities in order to assess the adequacy of staff, facility and maintenance needs. Compare these with projected population demographics on a periodic basis.

Action 2 Conduct a utility assessment of parking, sanitary facilities, shelter and trash disposal associated with all recreational facilities.

Action 3 Continue to apply for recreation and open space grants to meet facility needs.

Appendix REC-1 Recreational Programming

There is indoor and outdoor recreation programming in Charlestown for all ages, every day and evening, year-round except for major holidays. The following is a listing of recreation programming and events offered by the Town of Charlestown, the US Fish and Wildlife Service, the RI DEM and non-profits. Programs are typical and subject to change over time.

Ninigret Park

Programs

The park provides recreational programming for all ages including many sports activities such as:

- Youth and adult tennis, baseball, softball, football, T-ball and basketball leagues
- Softball camp, volleyball camp, golf camp, Camp Ninigret summer day camp
- Ten-speed bicycle racing, swimming lessons, pickle ball and soccer

Events

The park hosts many events such as:

- Bicycle races
- Disc golf
- 5Ks to support non-profits
- Seafood Festival, Rhythm and Roots Festival, Harvest Festival
- Special Olympics
- Easter egg hunt, Halloween program and New Year's Eve bonfire
- Summer concert and movie series

Frosty Drew Observatory and Science Center

- Open weekly for star gazing year-round to the public free of charge
- Presentations in the sky theatre and tours of the observatory by astronomers during cloud, rain, or snow conditions
- Open for seasonal programs, such as its Milky Way series, and for special celestial events such as meteor showers and eclipses
- Educational offerings with a specific focus on astronomy, physics, engineering and ecology
- Summer internship programming for middle school through college-aged students in science and engineering
- Public outreach to regional schools, conferences and expos

Senior/Community Center in Ninigret Park

Indoor programming for all ages:

- Classes in cooking, painting, guitar, piano and other skills
- Teen programming such as babysitting courses, teen dances and more
- Aerobics, yoga, Tai Chi, Zumba, Pilates, and others
- Card and board games, knitting and walking groups
- Senior tax services, visiting nurses, flu clinic, hot meals, etc.
- Rentals for community meetings

Town Hall Athletic Field

- Chariho Cowboys football and cheerleading August through mid-November

Elementary School Gymnasium

- Indoor tennis and recreational basketball from November to March

Ninigret National Wildlife Refuge Kettle Pond Visitor Center

The Visitor's Center has indoor nature-based programming every day for all ages:

- Natural History Museum with interactive exhibits and displays is open to all
- Community Artists Program – displays nature inspired artwork, each month a different local artist is showcased
- Programs for children including nature-based reading, crafts and wildlife investigations
- Weekly family-friendly films loosely based on wildlife and nature documentaries
- Natural history lectures

Ninigret National Wildlife Refuge Outdoor Programming

A few examples are:

- Saltwater fishing – fishing poles, waders and bait/lures are provided
- Salt pond exploration – a large 20 foot net is dragged through the pond and all of the amazing creatures that inhabit the area are identified
- Instructions in surfcasting, archery, canoeing, kayaking, and navigation using map and compass or GPS
- Guided walks in Ninigret and Trustom Pond National Wildlife Refuges
- Cinder Worm workshop (yearly) – two weekday evening classes in fly tying instruction on cinder worm patterns and one weekend evening of fly fishing
- Volunteer training in invasive plant identification and treatment methods
- Piping Plovers program – volunteers are trained to protect nesting territories, educate the public on plover biology and local laws, monitor beaches and document activity at nesting sites
- Hunting opportunities involving White-tailed deer hunting and hunter education courses

Burlingame State Park and Wildlife Management Area

- The North South Trail Council organizes a trek of the North South Trail from Blue Shutters Beach to the Massachusetts line over six weekends each spring
- There are organized trail races in Burlingame by different groups
- Supervised swimming and other activities at the beach on Watchaug Pond

Free Programs of The Salt Pond Coalition – <http://www.saltpondscoalition.org/>

- Kayak/canoe paddles – two or more organized paddles in the summer months in the different salt ponds, paddlers provide their own equipment
- Lecture series and workshops – topics include marsh restoration and dredging projects, sea level rise, aquaculture and lots more
- Salt Pond Safaris – introduces children to the wonders of the coastal lagoons

Free Charlestown Land Trust Programs - <http://www.charlestownlandtrust.org/>

- Turkey Trot – the annual Friday after Thanksgiving guided trail walk of CLT properties or other preserves in Charlestown
- Hiking for All! – short hikes that cater to individuals (and their caregivers) with intellectual and/or developmental disabilities
- Farmer’s Market – open weekly, spring and summer in Cross Mills
- Annual winter bonfire – held at the protected historic Amos Greene Farm, a walk of the farm and soup around the hot bonfire on a February day

Charlestown Programs of Audubon Society

- Organized weekly morning bird walks of the wildlife refuges which are free
- Kayaking and birding along the Charlestown Breachway, for a fee which includes equipment and guide

Free Charlestown Programs of Rhode Island Chapter of The Nature Conservancy

- TNC staff lead several organized hikes each year of the Francis C Carter Memorial Preserve and explain the natural history of this 1,100+ acre preserve
- Other organizations such as the Providence Hiking Club or Charlestown Land Trust lead public hikes at the Carter Preserve

Free Programs at Cross Mills Library

Indoor recreation programming every day and evening for all ages such as:

- Weekly recently released and critically acclaimed films for adults
- Weekly recently released films for children and the whole family
- Summer and winter concert series – live music such as a classical string ensemble, folk, jazz and Celtic
- Weekly bridge, Mah Jong, quilting, knitting, beading and more
- Art programs and craft workshops for both adults and children
- Workshops on food canning, plant propagation, pruning
- Yoga
- Children’s programs such as traveling/petting zoo, magic shows, juggler, URI Master Gardeners seed-planting workshop, raptor presentation by Born to Be Wild Nature Center, visit with the Casey Farm baby chicks

Charlestown Historical Society

- Lectures
- Revolutionary War Re-enactment (Amos Greene Farm)
- Schoolhouse and museum tours

Appendix REC-2 Outdoor and Community Recreation Resources

Town Owned Properties

Blue Shutters Beach

Size: 3.16 acres.

Date Acquired: 1990.

Funding/Acquisition: Town open space bond funds and a RIDEM open space grant. Recreation easement held by RI DEM.

Access: Public parking lot off of East Beach Road.

Trails: Ocean beach in both directions – about 3 miles east to the Charlestown Breachway or 1.5 miles west to the Quonochontaug Breachway.

Recreation: Walking, swimming and other beach activities. Lifeguards are present during daytime hours in the summer. Fishing from the beach allowed off hours and off season.

Description: The property includes parking for 120 vehicles and is open to the public for a seasonal or daily fee. There is an attractive public restroom building with composting toilets, accessed by an outside stairway and ramp, with an open porch facing the ocean, which was built in 2012. Blue Shutters Beach is the beginning (west end) of a long stretch of barrier beach that includes the state-owned East Beach Conservation Area, one of the least developed of the state beaches.

Condition: The restroom building and parking lot are in excellent condition. The beach is subject to coastal erosion.

Maintenance: Maintained by the Charlestown Parks and Recreation Department and Public Works Department.

Charlestown Town Beach

Size: 13.76 acres.

Date Acquired: 1957 and 1976.

Funding/Acquisition: Town purchase.

Access: Parking lot off of Charlestown Beach Road.

Trails: Ocean beach.

Recreation: Walking, swimming and other beach activities. Lifeguards are present during daytime hours in the summer. Fishing from the beach allowed off hours and off season.

Description: The town beach is comprised of two parcels in Charlestown totaling 13.76 acres, a 13 acre lot with a parking area for 300 vehicles and a restroom building of similar design to that at Blue Shutters Beach, also constructed in 2012, and a noncontiguous 0.76 acre lot on the beach itself. It also includes 1.17 acres of beachfront property owned by Charlestown in the Town of South Kingstown. The public restroom building includes composting toilets. The larger parcel directly fronts Ninigret Pond and includes a small parking and launch area for non-motorized boats.

Condition: The restroom building and parking lot are in excellent condition. The beach is subject to coastal erosion.

Maintenance: Maintained by the Charlestown Parks and Recreation Department and Public Works Department.

Charlestown Moraine Preserve

Size: 77.9 acres.

Date Acquired: 2013.

Funding/Acquisition: Town open space bond funds.

Access: Small parking lot off of Kings Factory Road at the trail head.

Trails: Constructed in 2017.

Recreation: Year-round activities including hiking, snow shoeing and wildlife observation.

Description: This property represents nearly a mile of scenic road frontage on Rt. 1 (Post Road) between Kings Factory Road and Prosser Trail. The Charlestown Moraine serves as an important forested wildlife corridor between the two RI Natural Heritage Areas of Watchaug Pond and School House Pond/Deep Pond complex, enabling some species to disperse into or through the area. The School House Pond complex is connected to other lands of US Fish and Wildlife Service and Narragansett Settlement Lands so the wildlife corridor is quite extensive. Vernal pools on the moraine property and surrounding uplands are important to amphibians, some of which are state species of concern. The unfragmented forest of this parcel, the stream draining School House Pond, and the rapidly draining soils work together to protect the water quality of the coastal ponds.

The preserve also provides Charlestown with the opportunity to educate the public on the importance of the town's underlying geography and the unique landforms upon which all local activity and its tourist economy depends.

Condition: With the assistance of volunteers including the Charlestown Conservation Commission and The Nature Conservancy, a hiking trail and parking lot have been added to the site. A second trail is planned.

Maintenance: Maintained by the Charlestown Conservation Commission with occasional help from the Public Works Department.

Ninigret Park

Size: 230 acres.

Date Acquired: 1979.

Funding/Acquisition: Transferred from the US General Services Administration.

Access: Park Lane off of Old Post Road.

Trails: Multi-use bike trail, criterion bicycle course, roads and other paved areas.

Recreation: George F. Bliven Jr. Playground; soccer and ball fields; basketball and tennis courts; picnic areas and pavilions; Little Nini Pond, a freshwater swimming pond and public beach and associated bath house with lifeguards on duty seasonally; a disc golf course and dog park; open fields for informal use; and access to the Ninigret National Wildlife Refuge and kayak launch.

Description: South of US Rt. 1 and adjacent to the salt ponds lies Ninigret Park, an important recreational resource, serving a broad range of residents and visitors. Once part of a WW II-era naval air training base, the 230 acre park consists of two parcels, a 55 acre parcel owned and managed directly by the Town of Charlestown and a 175 acre parcel owned by the town but subject to deed restrictions by the US Secretary of the Interior through the National Park Service (NPS) to be used "*exclusively for public park or public recreation purposes in perpetuity by the Town of Charlestown*" as outlined in the utilization plan submitted by the town and approved by the NPS. The land use must compliment the US Fish and Wildlife Ninigret National Wildlife Refuge abutting the property to the southwest.

Site features include a large area of pavement central to the developed portion of the site which is utilized for event parking, a summer recreation office, maintenance and storage building, restrooms,

the Charlestown Naval Auxiliary Landing Field Memorial, the Frosty Drew Observatory and Science Center, and the Senior/Community Center and community garden. The park is open during daylight hours, except for observatory use and special events licensed by the town.

See Appendix REC-1 for a list of activities and programs in Ninigret Park or contact the Charlestown Parks and Recreation Department for the most up to date list.

Condition: Ninigret Park is in good condition overall. It has many features which have been added at varying times throughout the park's history and are in conditions ranging from good to excellent.

Maintenance: Maintained by the Charlestown Parks and Recreation Department and Public Works Department. Ninigret Park has a "friends" group that raises money and advocates for the park.

Patricia Sprague Forest Preserve

Size: 27.81 acres.

Date Acquired: 2016.

Funding/Acquisition: State grant (RI Natural Heritage grant) and town open space bond funds. Conservation easement held by RIDEM and Charlestown Land Trust.

Access: Small parking area off of Railroad Avenue leads to the trail.

Trails: Hiking trails that lead to and along the river, where one can walk to the water's edge or to bluffs overlooking the river, and which pass through two fields and a forested area.

Recreation: Year-round activities including hiking, snow shoeing and wildlife observation, access to Pawcatuck River.

Description: This nearly 28 acre parcel in the Village of Carolina along the Pawcatuck River contains vernal pools, fertile meadows, open fields, forest and spectacular views from 1,700 feet of riverfront. This property contains a three-acre meadow near the river and a one-acre hay field bordered by several old apple trees. The land was managed organically for over 80 years.

Condition: Excellent.

Maintenance: Maintained by the Charlestown Conservation Commission with some help from the Public Works Department.

Pawaget Park

Size: 7.15 acres.

Date Acquired: In sections from the 1960s to 2003.

Funding/Acquisition: Town bond funds, federal funds, state gift. Conservation easement held by RIDEM.

Access: Parking area off of Rt. 1 on Sportsman Road.

Trails: A quarter mile of handicapped accessible trail leading to a boardwalk with a view of Ninigret Pond, and mowed trails in a grass field (which are not handicapped accessible).

Recreation: Walking, including handicapped-accessible boardwalk and a viewing stand on Ninigret Pond, picnicking.

Description: Formerly a driving range, the property was first acquired in the 1960s as a scenic overlook using federal highway funds under the Ladybird Johnson Beautification Act. In 2003, the land was transferred from the RI Department of Transportation to the RI Department of Environmental Management, who then signed an agreement with the town.

A portion of the trail, boardwalk and viewing area is located on a larger parcel (20 acres) of adjoining state land. RI DEM worked in collaboration with the town to develop Pawaget Park, which has been open since the summer of 2014 and includes picnic facilities.

Condition: Excellent.

Maintenance: Maintained by the Charlestown Parks and Recreation Department and Public Works Department.

Richard Trails

Size: 95.74 acres.

Date Acquired: 2002.

Funding/Acquisition: Purchased with funding from the Rhode Island chapter of The Nature Conservancy.

Access: Small parking lot off of Rt. 2 (South County Trail) leads to the hiking trail.

Trails: A hiking trail which follows an old Indian trail constructed by Conservation Commission members.

Recreation: Year-round activities including hiking, snow shoeing, geo-caching and wildlife observation.

Description: The property is contiguous with part of the Ninigret National Wildlife Refuge on the north side of Rt. 1, and forms part of a nearly 500 acre parcel of land protected for conservation, wildlife protection and passive recreation. The area is a popular geo-cache location. Bushwhacking is common, especially in the winter.

Condition: Excellent.

Maintenance: Maintained by the Charlestown Conservation Commission with some help from the Public Works Department.

School House Pond Preserve

Size: 93.5 acres.

Date Acquired: 1991.

Funding/Acquisition: Purchased with funding from The Nature Conservancy, RI DEM and town open space bond funds. Conservation easement is held by RI DEM.

Access: Two small parking areas are available off of Kings Factory Road.

Trails: 2.5 miles of hiking trails through hardwood and pine forest, which connect to a trail in Burlingame that in turn connects to the Vin Gormley Trail. A trail map is available on the Charlestown Conservation Commission website.

Recreation: Year-round activities including hiking, snow shoeing, swimming and wildlife observation.

Description: The property consists of undeveloped frontage on pristine School House Pond plus hiking trails. Limited access for a view of the pond is available for passive recreational opportunities. The pond is also an important historical and cultural resource for the Narragansett Indian Tribe and access to the pond is carefully observed.

Condition: Good.

Maintenance: Maintained by the Charlestown Conservation Commission with some help from the Public Works Department.

South Farm Preserve

Size: 86.7 acres.

Date Acquired: 2002.

Funding/Acquisition: RI DEM open space grant and town open space bond funds. A conservation easement is held by RI DEM.

Access: Parking lot off of Old Coach Road.

Trails: Hiking and equestrian trails, a trail map is available on the Charlestown Conservation Commission website.

Recreation: Year-round activities including hiking, horseback riding, snow shoeing and wildlife observation.

Description: Located across Old Coach Road from The Nature Conservancy's Pasquisset Pond Preserve. These two preserves provide a nearly 350 acre complex for conservation, wildlife and passive recreation. The property consists of approximately 2,700 feet of undeveloped frontage on Old Coach Road and together with The Nature Conservancy land on the opposite side, it protects a long section of the scenic and undeveloped north end of Old Coach Road. The property is mainly forested, but also contains two large fields that are hayed, a small pond and other wetlands, and a renovated sheep barn and historical cemetery.

Condition: The property has stone walls and buildings in very good condition. The fields have had problems with invasive plants species.

Maintenance: Maintained by the Charlestown Conservation Commission with some help from the Public Works Department.

Other Town Owned Recreation Areas

Charlestown Elementary School

Size: 15.5 acres.

Date Acquired: 1950.

Funding/Acquisition: Land purchased by Town of Charlestown.

Access: Parking lot located at 363 Carolina Back Road (Rte. 112).

Trails: A half mile walking trail located behind the school.

Recreation: Playfields, playgrounds and half mile walking trail. The school also has a gymnasium with basketball courts and a cafeteria for community use.

Condition: Good.

Maintenance: Maintained by the CHARIHO School District.

Charlestown Senior/Community Center in Ninigret Park

Size: 5,454 SF on a 175 acre lot within the 230 acre park.

Date Built: 1975.

Funding/Acquisition: Town and state funding.

Access: 100 Park Lane in Ninigret Park.

Recreation: Classes, activities, lunch program, room rentals and special programs, year-round.

Description: What began as the Charlestown Senior Center in the early 1980s is now the Charlestown Senior/Community Center. Located in Ninigret Park, the Senior/Community Center provides a gathering place for leisure programs, activities, meetings and social events for seniors and persons of

all ages. A senior information specialist and a community visiting nurse are available monthly to help with health and social service needs.

The Senior/Community Center is also the home of the Charlestown Senior Citizens Association which has been providing services and programs for seniors since 1981. Member benefits include many health, social and recreational programs and activities (trips, classes) conducted by the association and its volunteers at discounted fees. The Senior/Community Center is open Monday through Thursday 8:30 am to 4:00 pm, Fridays until 1:30 pm and on weekends and evenings as needed. It also serves as a daytime warming/cooling center and as an evacuation center during emergencies.

Condition: Good.

Maintenance: Maintained by the Charlestown Parks and Recreation Department and Public Works Department.

Clark Memorial Field - Columbia Heights Park

Size: 5.26 acres.

Date Acquired: 1989.

Funding/Acquisition: Donated for recreational use in honor of the George P. Clark family in 1989.

Access: Parking lot off of Columbia Heights Road. Open to all as a public park, sunrise to sunset.

Trails: Large mowed field which could accommodate walking around the perimeter. There are no organized or defined trails.

Recreation: New playground installed in 2017 which includes a large field for play and picnicking, playground equipment, a basketball hoop, parking lot and two acres for playing fields.

Description: A public park with playground and open field.

Condition: Excellent.

Maintenance: Maintained by the Charlestown Public Works Department.

Town Hall – Puchalski Field

Size: 16.86 acres (includes Town Hall building site and parking, town salt shed and adjoining woods).
Date Acquired: 1961 (13.3 acres) and 2018 (3.56 acres of adjoining lot previously in private ownership).

Funding/Acquisition: Lots purchased by Town of Charlestown (2018 purchase made use of town open space bond funds).

Access: Parking lot behind the Charlestown Town Hall.

Trails: Playfields which can accommodate walking around it. There are no defined trails.

Recreation: A playing field behind the Town Hall that is used for football and has a backstop for kickball, softball or baseball.

Description: Football field with bleachers and a baseball backstop. The Town Hall parcel containing the athletic field consists of two separate lots. The original parcel has been in public ownership since the 1890's, while the adjoining long and narrow lot was acquired by the town in June 2018 and will be used to protect access to the field, and connect with the wooded area behind the field, which has informal trails.

Condition: Good.

Maintenance: The fields are maintained by a local football organization and the Charlestown Public Works Department.

Wicklund Field

Size: 6.1 acres.

Date Acquired: 1964.

Funding/Acquisition: Lot purchased by Town of Charlestown.

Access: Parking lot off Carolina Back Road (Rte. 112). The field is adjacent to the Charlestown Elementary School.

Trails: Playfields which can accommodate walking around it. There are no defined trails.

Recreation: A softball field with backstop and benches, and two tennis courts towards the rear of the property.

Condition: Both the tennis courts and softball field are slated for improvements from 2017 to 2019.

Maintenance: Maintained by the Charlestown Public Works Department.

State of Rhode Island (RI DEM) Owned Properties

Burlingame State Park and Management Area

Size: 3,100+ acres.

Date Acquired: 1935 – 2009.

Funding/Acquisition: State funds.

Access: Multiple public road entrances to access the trails in Burlingame, including off of Prosser Trail, Klondike Road, Kings Factory Road and Buckeye Brook Road.

Trails: Includes the southerly end of the North South Trail, a 77 mile hiking trail that runs the length of the state along its western border. There is a 9.5 loop trail, the Vin Gormley Trail, which goes around Watchaug Pond, and various other connecting trails in the management area.

Recreation: Year-round activities including hiking, snow shoeing, cross country skiing, biking, horseback riding, swimming, fishing, boating, camping, hunting, observing wildlife and more.

Description: The largest amount of open space land for recreation north of US Rt. 1 in Charlestown is found in the state-owned Burlingame State Park and Management Area. This state park resulted from the acquisition of woodland around Watchaug Pond and adjacent parcels, either by direct purchase or through condemnation. Burlingame, which consists of 3,100 acres of rocky woodland, opened in 1934.

Activities at the park include all the opportunities listed above and over 700 state maintained camp sites including 50 fireplaces, toilets, drinking water, a swimming beach and a nearby RI DEM boat launch for boating and fishing. The area north of Buckeye Brook Road, abutting the Pawcatuck River, is primarily a hunting/hiking area.

RI DEM has developed a hiking trail that originates at Blue Shutters Beach at the shore, extends through Burlingame State Park, and then continues northward through the western portion of the state. The North-South Trail continues on to the Massachusetts border where it connects with the Midstate Trail that proceeds into New Hampshire on the Wapuck Trail. Part of the Management Area also extends to the Pawcatuck River although the site currently does not provide direct access to the river. Future river access within the Management Area may provide boating and fishing opportunities.

Condition: Excellent.

Maintenance: Maintained by RI DEM staff. Some maintenance and improvement work is also performed by scout troops and other volunteers.

Charlestown Breachway State Park

Size: 79 acres (adjoined by 2.66 acres of town owned beachfront).

Date Acquired: 1952 (town parcels acquired between 1987 and 2004).

Funding/Acquisition: State funds.

Access: Parking area at the end of Charlestown Beach Road.

Trails: Ocean beach between the Charlestown Town Beach and the Charlestown Breachway (paralleling Charlestown Beach Road).

Recreation: Fishing, boating, swimming and RV camping.

Description: This property includes an ocean beach along Block Island Sound, a camping area for recreational vehicles, access to fishing from the stone jetties, a boat launch and parking for 150 vehicles. There are eight composting toilets. Considered a prime fishing area, Charlestown Breachway attracts people from nearby states. It is owned by RI DEM, but the parking lot and adjacent RV campground is privately operated. The boat launch provides access to both Ninigret Pond and the ocean.

Condition: The breachway is in good condition, the parking area and boat ramp are in need of repair.

Maintenance: Maintained by RIDEM staff.

East Beach and Ninigret Conservation Area

Size: 231.5 acres including miles of undeveloped barrier beach.

Date Acquired: 1967 and various times since.

Funding/Acquisition: State funds.

Access: Parking lot off of East Beach Road.

Trails: Ocean beach and sand trails between Blue Shutters Beach and the Charlestown Breachway.

Recreation: Walking, swimming and other beach activities, hunting.

Description: This state conservation area includes a large parking area with seasonal port-o-johns at the beginning of a long expanse of undeveloped barrier beach with direct access to both Ninigret Pond and the ocean. Off-season vehicle access is allowed. Blue Shutters, East Beach Conservation Area, and land owned by US Fish and Wildlife Service (part of the Ninigret National Wildlife Refuge) share and provide access to this 3 mile stretch of barrier beach, the longest in Rhode Island. East Beach is home to piping plovers and other birds. During piping plover nesting season, the nest areas close to the dune grass are roped off to protect the eggs.

Condition: Good.

Maintenance: Maintained by RI DEM staff.

Fort Ninigret

Size: 2.6 acres.

Date Acquired: 1880s (after the state conferred citizenship rights to the Narragansett Indian Tribe and transformed the remnants of the fort into a monument).

Funding/Acquisition: Acquired by the State of RI, ownership and management granted to RI DEM.

Access: Small parking area at the end of Fort Ninigret Road off of Rt. 1A.

Trails: Walking can be done around the perimeter of the remnants of an old trading post, enclosed by an iron fence.

Recreation: Viewing of a principal historic site in town, walking, picnicking and passive uses.

Description: A fortified trading post used by the Narrangansett and Niantic Indians and the Dutch located on a high bluff on the north shore of Ninigret Pond. The fort was likely built by the Dutch on the site of a Native American settlement. The property offers some local history education and views of Ninigret Pond. It was added to the National Register of Historic Places in 1970.

Condition: The parking area and grounds are in good condition, as are the remnants of the fort.

Maintenance: Maintained by RIDEM and the Charlestown Historical Society.

Great Swamp Wildlife Management Area

Size: 54.83 acres.

Date Acquired: 1999.

Funding/Acquisition: Funds from the Champlin Foundation, RI Chapter of The Nature Conservancy, and RIDEM.

Access: Trail head at Biscuit City Road.

Trails: Between Biscuit City Road and the Pawcatuck River along the power line easement.

Recreation: Year-round activities including hiking, snow shoeing, cross country skiing, horseback riding, hunting and observing wildlife.

Description: A portion of the Great Swamp Wildlife Management Area lies in Charlestown. The rest of the 3000± acre property lies in South Kingstown. The land is managed for both wildlife protection and hunting. At one time there was a bridge over the river that connected Charlestown to the larger Management Area. If that were to be replaced by RIDEM, it would provide access from Charlestown to the trails, wetlands, forest and meadows of the Great Swamp Management Area and Worden's Pond, and to the William C. O'Neill Bike Path in South Kingstown.

Condition: Trail is eroded due to motorized trail bike use, which is prohibited.

Maintenance: Maintained by RI DEM staff.

Kimball Wildlife Refuge

Size: 29.3 acres.

Date Acquired: Acquired by RI DEM in 2015, but previously owned by Rhode Island Audubon.

Funding/Acquisition: Purchased by RI DEM.

Access: By car from Sanctuary Road, or by foot from inside Burlingame State Park.

Trails: Hiking trails on the property and connecting trails to the rest of the state land, and to the US FWS Kettle Pond area.

Recreation: Same activities as other areas in Burlingame, with the exception of camping.

Description: Kimball Wildlife Refuge abuts Burlingame State Park and is now part of the park, although it remains a separate entity. The property is located on the south shore of Watchaug Pond and includes a small swimming beach. There is an historic house on the property.

Condition: The property was well cared for by RI Audubon and is in good condition.

Maintenance: Maintained by RI DEM staff.

Quonochontaug Breachway State Park

Size: 31 acres.

Date Acquired: 1890s (west side parcel) and 1970s and 1980s (east side parcels).

Funding/Acquisition: State funds.

Access: Parking area at the end of West Beach Road.

Trails: N/A.

Recreation: Fishing, boating and swimming.

Description: This property includes land on both sides of the breachway, access to fishing from the stone jetties, a boat launch and parking for 100 vehicles. It is a very popular summer recreational area and provides the only public access site in Charlestown to Quonochontaug Pond. The boat launch provides access to both the pond and the ocean.

Condition: The parking area and breachway are in good condition, the boat ramp is in need of repair.

Maintenance: Maintained by RI DEM staff.

US Fish and Wildlife Properties – Ninigret National Wildlife Refuge Units

Ninigret National Wildlife Refuge - Lewis Trail Unit

Size: 364.8 acres.

Date Acquired: 2000 and 2003.

Funding/Acquisition: Federal funds, Charlestown open space bond funds, and funding from The Nature Conservancy.

Access: Off of Lewis Trail.

Trails: Unmarked trails are in place throughout the property.

Recreation: Hiking, hunting and wildlife observation.

Description: This large irregularly shaped parcel of 365 acres is made up of two lots and extends as far south as Route 1. The forested uplands are home to pitch and white pines, black and white oaks, blueberry shrubs, sweet fern and princess pine club moss. Hiking along the trails offers a chance to see visual reminders of the great ice sheet. This parcel is contiguous along Lewis Trail with the 96 acre Richard Trails property owned by the town, and forms part of a nearly 500 acre parcel of land protected for conservation, wildlife protection and passive recreation such as hiking, snow shoeing and cross country skiing.

Deer hunting with a permit, including bow hunting, is allowed at all four units and includes the special youth hunt, the only one offered in the state.

Condition: Good.

Maintenance: Maintained by US FWS staff.

Ninigret National Wildlife Refuge - Kettle Pond Unit

Size: 114.8 acres.

Date Acquired: 2001.

Funding/Acquisition: Federal funds.

Access: Bend Road off of north side of Rt. 1.

Trails: 1.75 miles of interpretive trails and handicap accessible trails. A trail map is available from US FWS website.

Recreation: Hiking, hunting and wildlife observation, snow shoeing and cross-country skiing. There is also indoor programming at the visitor center.

Description: This parcel, where the Kettle Pond Visitor Center is located, is referred to as the headquarters unit. The forested uplands are home to pitch and white pines, black and white oaks, blueberry shrubs, sweet fern, and princess pine club moss. Hiking along the trails offers a chance to see visual reminders of the great ice sheet and seasonal changes in a vernal pool, and appreciate views of Watchaug Pond.

The Kettle Pond Visitor Center contains a natural history museum and meeting rooms where many programs are offered for all ages. The scientific staff at the refuge leads both indoor and outdoor programs. See Appendix REC-1 for a list of current programs at the Kettle Pond Visitor Center and at the four refuge units.

Condition: The visitor center is 14,088 square feet and is in excellent condition. The trails are well maintained. The staff and volunteers actively manage invasive species.

Maintenance: Maintained by USFWS staff and volunteers.

Ninigret National Wildlife Refuge - Salt Pond Unit

Size: 379.7 acres.

Date Acquired: 1979.

Funding/Acquisition: Transferred from the US General Services Administration.

Access: From both Rt. 1 and Rt. 1A.

Trails: 4.3 miles of trails. A trail map is available from US FWS website.

Recreation: Hiking, hunting, bird watching, swimming, fishing, kayaking, snow shoeing and cross-country skiing.

Description: The salt pond unit consists of diverse upland and wetland habitats including grasslands, shrub lands, wooded swamps and freshwater ponds, as well as approximately 2 miles of shoreline on Ninigret Pond and associated coastal wetlands. Once part of a WW II-era naval air training base, the land that is now the wildlife refuge is unique ecologically and important for migratory waterfowl nesting and stopover. The refuge protects federally threatened and state endangered species and is part of the Atlantic Flyway, a major migratory bird pathway. For the birding enthusiasts, over 250 species of birds have been recorded at the refuge.

There is a view of Ninigret Pond, the largest salt pond in Rhode Island, from the observation platform at Grassy Point. The salt pond shores support a large diversity of marine life such as blue crab, bay scallop and winter flounder.

Condition: The trails are well maintained. The staff and volunteers actively manage invasive species.

Maintenance: Maintained by USFWS staff and volunteers.

Ninigret National Wildlife Refuge - Barrier Beach Unit

Size: 27 acres with undeveloped barrier beach

Date Acquired: 1942.

Funding/Acquisition: Transferred from the US General Services Administration.

Access: State parking lot off of East Beach Road.

Trails: Ocean beach and sand trails.

Recreation: Walking, swimming and other beach activities, hunting.

Description: The wildlife refuge lies between the state East Beach Conservation Area and private land holdings along the long expanse of undeveloped barrier beach on the west side of the Charlestown Breachway with direct access to both Ninigret Pond and the ocean. The barrier beach is home to piping plovers and other birds.

Condition: Good.

Maintenance: Maintained by US FWS staff and volunteers.

Rhode Island Chapter of The Nature Conservancy Properties

Francis C. Carter Memorial Preserve

Size: 1,112 acres (1,032.5) in Charlestown).

Date Acquired: 2001 and 2014.

Funding/Acquisition: The Champlin Foundation, Doris Duke Charitable Foundation and Cove Point Foundation.

Access: Small parking lots off of Rt. 112 and Old Mill Road at trail heads.

Trails: 7 miles of trails.

Recreation: Hiking, snow shoeing, cross country skiing, hunting, wildlife observation and horseback riding on specified trails. The 2014 addition to the preserve allows for access to the Pawcatuck River.

Description: The Carter Preserve includes the rocky uplands of the Charlestown Moraine and a portion of the sandy floodplain of the Pawcatuck River. The preserve joins several thousand acres of contiguous forest and contributes to an 11 mile corridor of open space from the Ninigret National Wildlife Refuge to the RIDEM Carolina Management Area in Richmond. The preserve protects a variety of natural features including rare pitch pine and scrub oak barrens, vernal pools and an approximately 70-acre grassland, as well as some unique plants and animals. Seasonal bow hunting for deer is permitted at the preserve.

The Nature Conservancy staff lead nature walks at the preserve, and school and scout programs use the property as an outdoor classroom. TNC is restoring and maintaining wildlife habitat at the preserve, to help reverse the decline in the number of grassland and shrub-nesting birds. Trailhead kiosks greet visitors with an introduction to the preserve and its natural features. There, visitors can pick up a trail map, a self-guided hike and a bird checklist. Visitors have a choice of hiking the wide Narragansett Trail that leads to the grassland or hike on the narrower woodland trails that meander through the heart of the property.

Condition: Excellent.

Maintenance: The Carter Preserve has its own volunteer group called the “Friends of the Carter Preserve” who assist TNC staff with ongoing stewardship projects including trail maintenance, preserve monitoring, litter cleanups and management of invasive plants.

Pasquiset Pond Preserve

Size: 254.68 Acres.

Date Acquired: 2000 (original 199.7 acre parcel) and 2018 (55 acre adjoining lot).

Funding/Acquisition: Purchased with private funds and some financial support from the Town of Charlestown, one half of the 2018 purchase made use of town open space bond funds.

Access: Parking along Old Coach Road provides access to the trail head.

Trails: A short loop trail. The property is also bisected by the Narragansett Trail, an old Indian trail. A trail map is available from TNC website.

Recreation: Year-round activities including hiking, snow shoeing, cross country skiing and wildlife observation.

Description: This property includes wetlands that support the rare ringed boghaunter dragonfly and an Atlantic white cedar swamp. Parking along Old Coach Road provides access to a short loop trail through mature white pines, while further south on Old Coach Road the Narragansett Trail runs through the property passing by numerous wetlands, mountain laurel and a field. It is located across Old Coach Road from the town owned South Farm Preserve. These two preserves provide a nearly 350 acre complex for conservation, wildlife and passive recreation.

Condition: Excellent.

Maintenance: Maintained by The Nature Conservancy staff.

Charlestown Land Trust Property

Mill Pond

Size: 76.29 acres.

Date acquired: 1995 (by The Nature Conservancy).

Funding/Acquisition: Gift of Oliver Hazard and the American Fish Culture.

Access: Driveway off of Rt. 2, just north of the Rt. 1 intersection.

Trails: Various trails throughout the property.

Recreation: Year-round activities including hiking, snow shoeing, cross country skiing and wildlife observation.

Description: Mill Pond is a special part of the area's history as well as a place for quiet walks set in woodland on the edge of a pond. Cross Mills drew water from Mill Pond which has springs that are up to forty feet deep and ten feet wide. These springs produce 200 gallons per minute at a steady temperature of 48 degrees year-round. The remnants of a once thriving trout hatchery are also present. The parcel was originally donated to The Nature Conservancy who transferred title to the South County Conservancy (2002) who transferred it to the Charlestown Land Trust in 2011. The Charlestown Land Trust has built a trail system on the property that was opened to the public on Earth Day 2005.

Condition: Good.

Maintenance: Maintained by Charlestown Land Trust members and other volunteers who care for the property.

Private Organization Properties and Facilities

Cross Mills Public Library

Size: 5,757 SF on a 7 acre lot.

Date built: 1950.

Funding/Acquisition: Private funding with support from the Town of Charlestown.

Access: Parking lot off of Old Post Road in Cross Mills.

Trails: Trails are in place in the undeveloped section of the parcel behind the library.

Recreation: The Cross Mills Library offers yoga, concerts, movies, quilting, painting, photography, bridge, mahjong, gardening and much more. See Appendix REC-1 for a full list of current recreation activities or contact Cross Mills Library directly for the most up to date list.

Description: Besides providing traditional library services, Cross Mills Library provides daily recreation opportunities. Most of the parcel is undeveloped and the area behind the library, accessed from a lower parking area, contains a small loop trail.

Condition: Good.

Maintenance: Maintained by the library board with support from volunteers and donors.

Frosty Drew Observatory and Science Center

Size: The Frosty Drew “campus” in Ninigret Park comprises 3.65 acres.

Date Acquired: 1981.

Funding/Acquisition: Private funds and grants.

Access: Park Lane in Ninigret Park.

Trails: N/A.

Recreation: Educational programs and events throughout the year, including Friday night stargazing.

Description: This facility is a memorial to Edwin “Frosty” Drew whose efforts contributed to the preservation of Ninigret Pond and its surrounding areas. The Frosty Drew Science Center is a renovated naval officer’s house and includes a sky theater, added later. The Frosty Drew Observatory was constructed separately. The work was done with the assistance of volunteers and financed with grants and private funds.

The Frosty Drew Observatory, located across the road from the Frosty Drew Science Center, is set in an open lawn area free of obstructions to nighttime viewing. It is open to the public free of charge every Friday year-round and Wednesdays in summer. The sky theatre is used for educational purposes and live views for groups of people, including for handicapped individuals for whom the stairs to the telescope are an issue. The observatory enjoys dark night skies, the darkest between New York and Boston, because of its location near the undeveloped lands of Ninigret Park and the Ninigret National Wildlife Refuge, as well as the barrier beach and Block Island Sound to the south. It is a popular regional attraction that allows for excellent astronomical viewing, including events such as meteor showers.

Condition: The Frosty Drew Observatory and Science Center and overall site are all in good condition. For additional programming to meet demand, the facility may require expansion.

Maintenance: Maintained by the Frosty Drew Memorial Fund.

Quonochontaug Grange

Size: 5,543 SF on a 2 acre lot.

Date acquired: 1948.

Funding/Acquisition: Dunn’s Corner Fire District and the Friends of the Quonochontaug Grange.

Access: Parking lot off of Rt. 1

Trails: N/A.

Recreation: The grange is used for aerobics and yoga classes, community theater, dance parties and other recreational uses in addition to being a meeting place.

Description: After the end of WW II, grange members (known as the “Patrons of Husbandry”) from the Charlestown area embarked on the design, construction and opening of the Quonnie Grange. Dedicated in 1948, the grange continues as a community resource, meeting place and centerpiece of local history and community camaraderie.

Condition: Good.

Maintenance: Managed by the Friends of the Quonochontaug Grange, Inc.

Recreation Features with Multiple Ownership

Pawcatuck River

Designated by Congress as a “Wild and Scenic River,” the Pawcatuck River forms the entire northern border of Charlestown and serves as Charlestown’s primary blue trail. From the border with South Kingstown in the Great Swamp, through the industrial-age villages of Shannock and Carolina shared with Richmond, and eventually to Hopkinton, the river offers a major recreational resource as it passes along both public and private land.

There are points along the river on both sides that provide public access for fishing or to launch a canoe. The Wood Pawcatuck Watershed Association organizes canoe trips as well as educational programs and serves as the major advocate for protection of the river and its wildlife. See Map REC-1 for access points to the river.

Salt Ponds

Charlestown’s salt ponds, the easterly portion of Quonochontaug Pond, all of Ninigret Pond and the Allen Cove area of Green Hill Pond, are local and regional attractions, with great recreational value.

The ponds are used for recreational boating – power boating and sailing, waterskiing and wind surfing, and paddle boating such as canoeing, kayaking and stand up paddle boarding. Power boaters face the difficulties of extremely shallow water in the salt ponds and strong currents in the breachways, along with consistent ocean swells that make navigation in and out of the breachways difficult. However, the salt ponds offer the only realistic boat access, as launching into the surf of Block Island Sound would be quite difficult.

The ponds are also used for fishing and shellfish harvesting, aquaculture and swimming and wading. The shallow salt ponds offer quiet waters suitable for small children to wade in. Most areas along the salt pond margins are available for passive recreation such as walking, bird watching, clamming, crabbing and fishing.

Public boat access to Ninigret Pond is available at the Ninigret National Wildlife Reserve, the Town Dock in Cross Mills, the boat launch area at Charlestown Town Beach and the state boat ramp at the Charlestown Breachway. Boat access to Quonochontaug is provided at the Quonochontaug Breachway boat ramp. The ponds are bordered by a mix of public and private land. The Salt Pond Coalition, a private non-profit group whose purpose is to protect and enhance the health of all of the salt ponds from Watch Hill in Westerly to Point Judith in Narragansett provide programming and events for the public. The coalition organizes kayak and canoe paddles, the children’s Salt Pond safaris and other activities to promote and protect the ponds. See Map REC-1 for public access points.

Appendix REC-3

Ninigret Park Management Obligations by US Fish and Wildlife Service

The following is a summary attached to a letter dated February 23, 2012 to the Charlestown Town Council from Charles E. Vandomoer, Refuge Manager of the RI National Wildlife Complex:

Introduction

In 1973 the U. S. Navy announced a realignment of Naval bases in Rhode Island, and found that the Charlestown Naval Auxiliary Landing Field (CNALF) was excess to their needs. Consequently, the U. S. General Services Administration (GSA) initiated the process of determining the disposition of this federal property.

This effort culminated with the Town of Charlestown (Town) and the U.S. Fish and Wildlife Service (Service) now owning portions of the CNALF (Figure 1). Town property was acquired in two parcels, one 182 acre (approx.) parcel transferred directly to the Town from GSA, and another 55 acre parcel purchased from GSA. Collectively, the two parcels are now referred to as Ninigret Town Park (Park).

The Service manages remaining portions of the former CNALF as part of the National Wildlife Refuge System, Ninigret National Wildlife Refuge (Refuge), and includes lands originally intended for the Environmental Protection Agency (EPA) by GSA. GSA made transfer of lands to the Town subject to an obligation that subsequent uses on Town property be consistent with management of the Refuge.

Disposal of Surplus Federal Lands to the Town

With declaration that CNALF was excess GSA acted under authority of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377, as amended; “FPAS”) to determine the disposition of property. GSA completed an Environmental Impact Statement (GSA 1979a) to evaluate various alternative actions, and issued a Decision Paper which documented the decision and rationale for transfer of CNALF lands, including statements of how these lands were to be managed (GSA 1979b, see Appendix A). This process was completed consistent with the National Environmental Policy Act (42 U.S.C. 4321 et seq.).

The Decision Paper issued by then Acting GSA Administrator Paul E. Goulding allowed for transferring portions of CNALF to (a) EPA for purposes of environmental research (60 acres), (b) the United States Department of the Interior for management of lands as a part of the National Wildlife Refuge System (307 acres) under the Fish and Wildlife Coordination Act (16 U.S.C. 667b), and (c) 237 acres to the Town for “passive” recreation purposes (GSA 1979b).

Acting Administrator Goulding stated his decision thusly:

“ACCORDINGLY, after analyzing the record on this matter and pursuant to my authority under the circumstance, for the reasons set forth in this decision document, I hereby approve the transfer of 307 acres to the Department of the Interior for the benefit of wildlife and waterfowl to be managed in its natural state and to be administered as a portion of the National Wildlife Refuge System; 60 acres to the Environmental Protection Agency for its Environmental Research Laboratory in the interest of furthering research related to the waters of Foster Cove and Ninigret Pond, such use not to be inconsistent with the use of the 307 acres by the Fish and Wildlife Service; and the remaining 237 acres to be disposed of, if possible, to the Town of Charlestown to be used substantially in accordance with its proposal as set forth in the FEIS as alternative 5. Such use is not to be inconsistent with the use of the other 367 acres transferred to the Department of the Interior and the Environmental Protection Agency.”

This decision by GSA was subsequently challenged in United States District Court by the New England Power Company, who desired to construct a Nuclear Power Plant on the property (New England Power Co. v Goulding, No. 79-1889; No 79-1953; GPO 2012), with the Town entering as an intervener in support of GSA. In the Court Opinion regarding this challenge (see Appendix B), Judge Green discussed the legality of transferring lands to the Town, and found that the Acting Administrator’s decision was appropriate since the Town’s proposal “further effectuated the federal uses “ of the remaining portions of CNALF as a wildlife preserve and for environmental research. Judge Green cited 40 U.S.C. 484 (k) (2), which states that the Secretary may transfer surplus property “when it will promote the most effective use of the property consistent with the purposes of this part or if having a lease is otherwise in the best interest of the United States, as determined by the Secretary”.

The interpretation that lands transferred to the Town should be managed consistent with adjoining federal lands was cited by Koslowski (1982) in the May 1982 Law Review which states that “the remainder of the lands [referring to the Town land] was to be used in a manner consistent with the conservation purposes of the federal tracts”.

Recognition by Town of Obligation to Manage Park Consistent with the National Wildlife Refuge

Following the court decision, the obligation of the Town to manage lands consistent with the refuge was reiterated on several occasions. In February of 1980 the Town had been in discussions with GSA regarding alternative uses of the property, including light commercial activity. In a letter from J.W. O’Connell, Director of the Real Property Division for GSA to the Town of Charlestown, GSA stated that GSA would entertain any uses for the Town Park – as long as they were compatible with the adjacent National Wildlife Refuge (Sun 1980). In an interview given to the Chariho Times, Mr. James Buckley, Assistant Commissioner with GSA, indicated that some commercial or industrial uses may be found compatible with the refuge (Chariho Times 1980).

In a meeting held on August 29, 1979 at the Charlestown Town Hall, several representatives, including Town staff, discussed how the former CNALF would be managed. In that meeting, Town officials recognized that any common boundary with the Refuge would have to be kept in passive recreation (USFWS files 1979).

In a letter to Deputy Regional Director Ashe of the Service from Town Council members dated February 7, 1980 (see Appendix C), the Town indicates that, based on consultation with the Attorneys whom represented the town throughout the litigation and Town staff who had developed the proposal wrote:

“...that the integrity of Mr. Gouldings decision must be upheld”, and that “...we intend to act in accordance with the obligations outlined in the Goulding decision, which clearly states that the 172 acres is to provide a buffer for the Fish and Wildlife Refuge, and is to be used for recreational uses”.

In another letter dated February 7, 1980 Town Council members to John W. McCormack of GSA referenced their intent to follow original plans for the 55 acre tract since otherwise proposed uses would conflict with uses on Fish and Wildlife Service lands (Appendix C). The Service reviewed the proposed plans submitted by the Town in 1980 to the Heritage Conservation and Recreation Service and found them to be compatible with the Refuge (USFWS files). This plan developed by the Town included areas of site seeding and re-vegetation with the purpose of speeding up plant succession “especially in the area adjacent to the U.S. Fish and Wildlife Service, to act as a buffer for conservation” (Town 1980).

Submission of Park plans was made a requirement as per the deed transferring these lands to the Town (Appendix D).

In 1981 and 1982, the Town was discussing alternative uses of the Park. Local media reported federal agency workshops were to be held with the Town, and included statements that any uses must be compatible with the Refuge (Sun 1981). In discussing what concession activities could take place in the Park, the Town evaluated some proposed uses which were discarded because they were not compatible with Refuge needs (Sun 1982).

Other federal agencies have recognized that there was an obligation to manage the Park consistent with the Refuge. In 1983 the Town entered into partnership with the U.S. Department of Agriculture, Soil Conservation Service (SCS) to improve a small pond (now referred to as Little Nini pond) in the Park for swimming and other recreational uses. In the Environmental Assessment and Finding of No Significant Impact completed by SCS related to creating improvements on the Town lands (USDA 1983), the agency states:

“According to the Agreement which transferred Ninigret Park to the Town of Charlestown, future use of the area must be compatible with the abutting 376 acres Ninigret National Wildlife Refuge managed by the U.S. Department of the Interior, Fish and Wildlife Service. The town has reviewed several alternatives with the U.S. Department of the Interior-Fish & Wildlife Service and has selected a management and development plan agreeable to both.”

A record of coordination with the Town to insure that activities on the Park remained compatible with the Refuge exists. In a letter dated August 5 1985 from Refuge Manager Blair to Town Park Commissioner Bliven, Mr. Blair makes it clear that while it is the goal of the Service to “accommodate all compatible activities on the park” that action had to be taken by the Town to eliminate incompatible uses. In a formal letter on Town letterhead dated May 1, 1985 to a model airplane group who had been using the Park, Mr. George Bliven, Park Commissioner, reiterated the fact that any activity on the property of the Town of Charlestown must not impact the federal wildlife refuge. Related to this activity, Service records indicate that the Town and the Service conducted joint law enforcement actions relative to this obligation when Town Police and a Refuge Law Enforcement Officer ordered the cessation of model airplane flights (USFWS Refuge files 1985).

In 2000 a decision was made by the Town to provide a vegetative buffer along the Refuge boundary for purposes of buffering the refuge and a historical cemetery from recreational uses on the Park (Andres personal communication, USFWS files 2000). Until recently Town proposed actions on the Park have been generally consistent with the obligation that Park uses are compatible with the Refuge, including requesting permission for fireworks (granted), effectuating land exchanges for the benefit of Park activities, sharing of event calendars, and agreement to provide buffers adjacent to the refuge on Park property (USFWS Files).

Summary

The records indicate that requiring the Town to manage the Park consistent with uses of the adjacent federal parcels was very much a part of the rationale for allowing the transfer of land to the Town, in order to meet Federal requirements to emphasize the use of federal lands in FPAS. This expectation was specifically stated in the decision to allow the transfer of property, and this requirement had been cited in the courts opinion upholding the land transfer and determining the legality of transferring lands to the Town. The Town had recognized and accepted this obligation, and there has been a long history of interactions with the Town which demonstrates intent and general adherence to this requirement.

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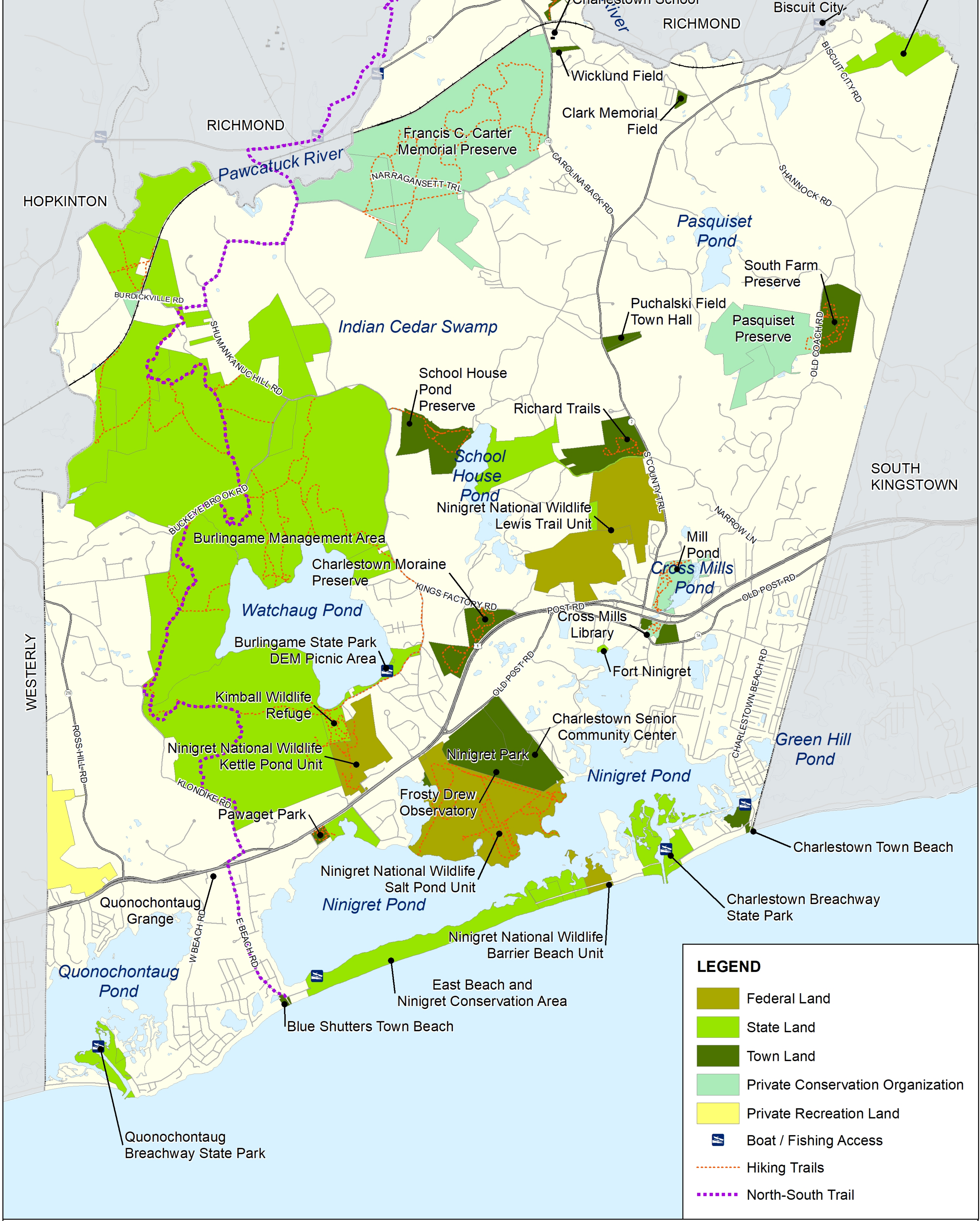
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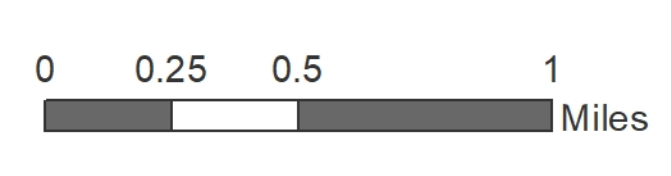
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LEGEND

- Federal Land
- State Land
- Town Land
- Private Conservation Organization
- Private Recreation Land
- Boat / Fishing Access
- Hiking Trails
- North-South Trail

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



Prepared by:
Town of Charlestown

COMPREHENSIVE PLAN, 2020

RECREATION SITES



HISTORIC AND CULTURAL RESOURCES

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's historic buildings, cultural sites and scenic landscapes, and recommendations to manage these resources to preserve the town's heritage and tourism-based economy.

Map
**HC-1 Historic and Cultural
Features**

Cover Photo: Frances Topping

HISTORIC AND CULTURAL RESOURCES CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 4. HISTORIC AND CULTURAL RESOURCES

INTRODUCTION

As described in the Land Use chapter, Charlestown is a rural community without an identifiable town center, but with a landscape which is still defined by its history of fishing, farming and textile manufacturing. Its beaches and salt ponds remain the critical resources that they have been for Charlestown's inhabitants since pre-colonial times. Its farms and narrow winding country roads still reflect its agrarian past. The historic villages of Carolina, Shannock and Kenyon retain the architecture and development patterns of a classic New England mill village. And no town in Rhode Island is more associated with the state's Native American history than Charlestown.

The town will always be about maintaining its rural character and sense of place, and along with protecting its natural resources this requires the preservation and enhancement of its cultural features and scenic landscapes. Charlestown's rich inventory of historic buildings, cultural sites and scenic corridors is the focus of this chapter, and the policies and goals for future land use, for the management and protection of its natural and recreational resources, and for economic opportunity based on tourism, all complement those that are needed to also preserve Charlestown's heritage.

As stated in the Statewide Planning Program's guidance handbook for historic and cultural resources planning:

An understanding of where a community came from – its heritage – is essential to plan for what it will become. The physical remnants that represent this heritage tell us a story about the way that people lived, their values, and how the built environment changed over time. These resources help foster a connection to the past and help to show our interconnectedness with other human beings, both past and present, and the environment. They also contribute to the character of a specific place and help determine its quality of life.

RELATIONSHIP TO OTHER CHAPTERS

Natural Resources Chapter

Historic and cultural resources are inextricably linked with natural resources, especially as they relate to scenic areas and view corridors. The town recognizes that the efforts to protect natural resources need to be complemented by the same efforts to preserve historic and cultural resources.

Economic Opportunity Chapter

Charlestown's cultural history and wealth of historic resources are essential to its economy. Tourism, which is the main source of economic activity, is enhanced not just by the abundant recreational activities, but by cultural resources and landscapes which directly draw tourists. Adaptive reuse of older buildings and sensitive use of natural and scenic landscapes support the local economy.

Land Use Chapter

The Land Use chapter describes Charlestown's land uses and development patterns. It includes a proposed Future Land Use Map which reflects the need to protect both the town's rural density and its historic villages. An important land use policy is to preserve the visual qualities of the villages, historic areas and scenic roadways.

EXISTING CONDITIONS

History of Charlestown

A brief history of Charlestown, by era, is described below. It includes descriptions on how the Native Americans, now the Narragansett and Niantic Indian Tribes, and the European settlers interacted throughout their shared history.

Prehistory

Charlestown's land form pre-history begins with the retreat of the Ice Age over the period some 20,000 to 11,000 years ago. Sea level was much lower, and the coastline was located many miles further south from current conditions. Any evidence of habitation is likely destroyed or not yet discovered. As the glaciers retreated vegetation slowly regrew and people, the Native Americans, moved into the area in more recent eras. Glacial remnants remain valuable scenic resources in the region.

Early Native Occupation and Settlement

The first inhabitants of the area now known as Charlestown were the ancestors of today's Narragansett and Niantic Tribes. Their history precedes all written documentaries but can be found on the faces of rock formations and has been carried forward through oral history. They developed a subsistence economy based on agriculture and the rich natural resources of the area. To the Native American, land productivity might have meant encouraging berry crops near their camps to draw in game or collecting nuts from trees. This was a different view of land utilization from

the incoming Europeans and became a cause of conflict between the Narragansett and other Native Americans and the Europeans.

Later, Native American sites in what is now Charlestown included permanent villages, seasonal and temporary campsites, fortified places and burial grounds. The Narragansett people were considered warriors within the region. They customarily offered protection to smaller tribes in the area. Certain Nipmuck bands, the Niantic, Wampanoag and Manissean all paid tribute to the Narragansetts. The first documented European contact with the Native Americans of Rhode Island took place in 1524 when Giovanni de Verrazano visited Narragansett Bay and described a large Indian population, living by agriculture and hunting, and organized under powerful "kings".

The Seventeenth Century

The seventeenth century saw the discovery of the area by Dutch explorers and traders and its settlement by English colonists. Although the seventeenth century was a period of development along the coastal plain, few European features still survive from this period. The English were frequently at war with other European interests and, although initially on good terms, eventually became belligerent with the tribes as well. In 1675, the Narragansetts allied themselves with King Philip, the Wampanoag Sachem, to support the Wampanoag Tribe's efforts to reclaim land in Massachusetts from the English. In the Great Swamp Massacre, a military force of Puritans from Plymouth, Massachusetts Bay and Connecticut massacred a group of Narragansetts, mostly women, children and elderly men, living at an Indian winter camp in the Great Swamp in present day South Kingstown.

After the massacre Ninigret, Sachem of the Niantic, was given large Narragansett land holdings in return for remaining neutral during the King Philip's War. Narragansett people who refused to be subjected to the authority of the United Colonies left the area or were hunted down and killed. Some were sold into slavery in the Caribbean, while others migrated away. Those who remained retreated deep into the forest and swamp lands of what is now Charlestown, remaining in the area that today makes up the Settlement Lands of the Narragansett Indian Tribe. Historic and archaeological remains from this period are located throughout the town.

The Eighteenth Century

Development of Charlestown in this period focused on agriculture and related activities. Farms sprang up along the coastal plain and inland, with those along the coast primarily developed on large tracts of lands as plantation-style farms similar to those in the south of the country. Inland farms tended to be smaller and were sited on hillier, rockier terrain. These were typically subsistence farms owned and operated by a single family. There are a few examples of eighteenth-century farmhouses that still survive in the town, including Burdick Farm and the J.P. Green House on Biscuit City Road. Sheep farming was introduced at that location.

During the eighteenth century a road network developed to link the farms together, much of which was based on trails developed by Native Americans. This network formed the basis of the town's current day road pattern. Old Post Road, which was laid out in the area in 1703, became the region's most important highway, and remained as Charlestown's key transportation link until parts of it were bypassed by Route 95 in the twentieth century. Houses, stores, inns, schools and mills were all developed along the Old Post Road.

Development was also centered on water-powered mills which were being built at that time. The earliest mill, a grist mill, was owned and possibly built by Joseph Davill, as early as the late 1600s. In 1709, this mill was purchased by Joseph Cross (Cross' Mill). A grist and shingle mill was built on Narragansett land on the edge of Indian Cedar Swamp. Other mills were developed on the Pawcatuck River in the vicinity of present day Shannock, Kenyon and Carolina villages. In 1669 Charlestown, Westerly, Richmond and Hopkinton were incorporated as one town. In 1738, Charlestown broke away, and was incorporated and named for the English King, Charles II. Richmond became an independent incorporated town in 1747.

For the Narragansett, eighteenth century life was very harsh. The state abolished the position of the sachem, the traditional tribal leader, and set up a five-man council in 1792. The Narragansett people nonetheless continued to recognize the sachems and maintain their traditional leadership. As the number of colonists increased, the Narragansett's hunting and farming grounds were greatly diminished. Colonists also introduced hogs to the area and their feral hogs ravaged the shellfish beds that had been a traditional food source. In 1705, the Rhode Island government recorded 135,000 acres of land as belonging to Ninigret, the tribal sachem of the Narragansett. His grandson, Thomas, built King Tom Farm around 1750. However, land was frequently forfeited to offset debts incurred when Native Americans dealt with the European settlers. By the end of the 18th century, the area owned by the Narragansetts had been reduced to 15,000 acres. In 1790, the US Congress passed the Non-Intercourse Act (since amended several times) which prohibits the conveyance of any Native American land unless ratified by Congress, thereby precluding the taking of Narragansett land as payment for debts incurred.

The Nineteenth Century

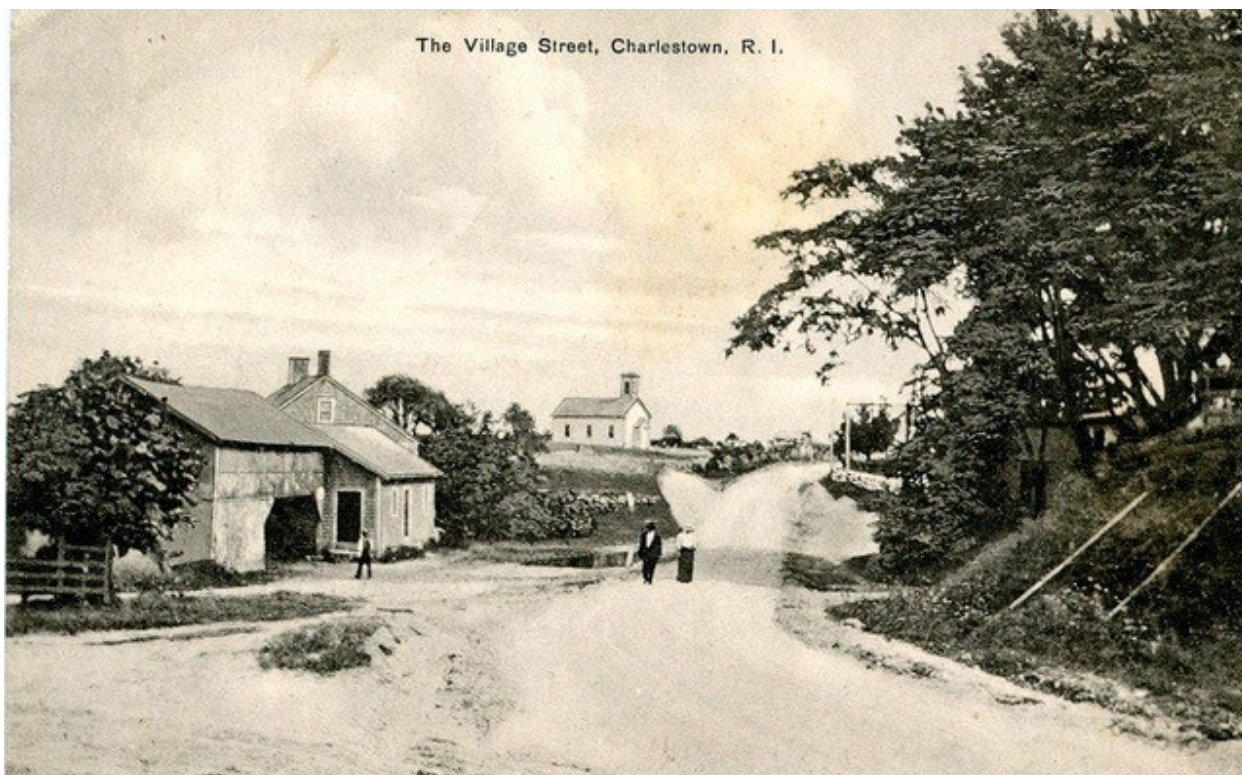
In the early part of the nineteenth century, the economy of the town was primarily agrarian. This declined and limited industrial and commercial development took its place. The stone walls speak to the European settlers' use of an agrarian model that cleared the land for what they saw as "productive" crops of vegetable or animals. Old cellar holes show where people lived in what is now full forested areas intersected by stone wall remnants.

Local inns provided resting points for travelers who seldom stayed long in the town. Eight public schools were built in the town, and mill and village development continued. Industrial villages grew up around four mills on the Pawcatuck River (Shannock, Carolina, Kenyon in Charlestown

and Burdickville in Hopkinton) and industrialization peaked in the 1840s. The Narragansetts continued to lose land as it was auctioned off in response to indebtedness, despite the requirements of the Non-Intercourse Act. This was during the period of “allotment” which gave ownership rights to individual Narragansett Indians rather than to the overall tribe. Beginning in 1799, a group of Narragansetts purchased land from the Oneida in northern New York (Stockbridge Indians). Many tracts of Narragansett lands were sold off between the 1830s and 1840s, and a group of Narragansetts moved to the Green Bay, Wisconsin area (Brotherton) where they lived with the Winnebago peoples.

The 1880s and 1890s brought the beginning of resort development, attracting tourists to the town’s coastal areas, from Quonochontaug to Cross’ Mill, where summer settlements sprang up. The first town meeting hall, Ward’s Hall, and later called Ocean House on Town Dock Road, was built in 1848, and regattas were held on Ninigret (Charlestown) Pond. Although day trip activities from surrounding towns were popular, development of homes was slow due to the lack of public transportation. This period saw the beginning of the seasonal population swell which characterizes the town today.

Historic resources from this era include buildings in the villages of Carolina and Shannock, as well as other residences scattered throughout the town as described later in this chapter.



Twentieth Century

The population of the town fluctuated greatly in this century. The population declined between 1910 and 1920, but in the 1920s, it increased 47% (from 759 residents in 1920 to 1,118 in 1930). Growth then moderated substantially after the crash of 1929 and stayed low until the 1960s, when the population increased by 42%. By the end of the 1970s, the population had grown to around 4,800 people. With the increased use of the automobile, the town became more accessible, and access spurred recreational development. Forest camps and shore communities sprang up, and new businesses opened on Route 1 to serve the needs of tourists.

Development of seasonal homes began in earnest in the town in the early part of the century. Shortly after the turn of the century, Arnolda, a development of seasonal homes, was created along Ninigret Pond by Thomas Arnold. This encouraged the development of other summer homes on larger lots. The barrier beaches and the area just behind them (Charlestown Beach) were heavily developed along with other waterfront communities. Many of these homes along the shore were destroyed or damaged during the 1938 Hurricane and Hurricane Carol in 1954, and after Super Storm Sandy in 2012. After World War II, many of the remaining seasonal homes were winterized and used for year-round residences.

Charlestown also attracted residents to its inland hills and freshwater ponds. In 1915, Walter Kimball, a bird lover, purchased land on Watchaug Pond. After his death, the property was deeded to the Rhode Island Audubon Society and became the Kimball Wildlife Refuge, later transferred to the RI Department of Environmental Management. Several lodges, including Ninigret Lodge, were built on inland ponds. Ninigret Lodge, built in 1815 on Quacumpaug Pond (now Schoolhouse Pond), was the former Narragansett Indian schoolhouse. The original schoolhouse on this site was built by King Tom Ninigret, circa 1750. Three other sport lodges, of which one is in Camp Davis, were also built. A later (twentieth century) lodge, Nordic Lodge, and the nearby area that is South Farm Preserve, where an old sauna chimney remains, and Maple Lake cabins were owned by a contingent of families of Scandinavian heritage. South Farm was earlier farmed by the Card family, as is attested to by the historical cemetery on the farm property.

During the Great Depression of the 1930s, the Civilian Conservation Corps were active in the area now known as Burlingame State Park, and through its efforts, developed camping facilities, shelters and recreation buildings.

Around 1942, the US government purchased 600 acres consisting of farmland and summer homes along the shore of Ninigret Pond for a naval air station where pilots were trained for night flights in World War II. The base later became the Charlestown Naval Auxiliary Landing Field, an adjunct to the Quonset Point Naval Air Station. In 1974 the field was closed and declared surplus property by the federal government. The site was considered for development as a nuclear power

plant, but this proposal was dropped after many years of significant local opposition and litigation. By 1979, following the completion of an Environmental Impact Statement, the General Services Administration (GSA) announced it would distribute the property to the Department of Interior, to be utilized by the US Fish and Wildlife Service as part of the national wildlife refuge system; and to the Environmental Protection Agency (who subsequently transferred title) for purposes of environmental research with holdings around Foster Cove. The remainder was awarded to the Town of Charlestown, for recreation and uses compatible with the wildlife refuge.

Villages centered on mills became primarily residential in character after the mills ceased to function. Only Kenyon remains a functioning industrial village clustered around what is now Kenyon Industries. Land use trends in the later part of the century have seen subdivision development with year-round homes being built in the Charlestown woods, along the main roads, and adjacent to inland ponds. New subdivisions such as Watchaug Heights off Prosser Trail which was built in the 1970s indicated a departure from historic residential development patterns. Low density residential areas have replaced farms and forested areas.

In 1983 the Narragansett Indian Tribe was recognized by the US Department of the Interior as a sovereign entity, which provided the tribe with the equivalent of a government-to-government relationship with the United States (see Appendix LU-1).

Present Day

In the early 2000s a trend of seasonal residents retiring to Charlestown year-round and the conversion of small cottages to larger houses became increasingly evident. Development pressure continues to challenge the rural character of Charlestown, as it has with the neighboring communities. Locally some family farms are still operational, but the majority of residents have non-agrarian occupations frequently located in neighboring communities, upstate or in Connecticut.

In recent years efforts to correct past land abuses have been made by the town in cooperation with state and federal entities. Examples include removal of non-essential dams to restore migratory fish runs, the ending of the discharge of dye in the rivers from the mills, reduction in river siltation from plowed or overgrazed land, and the remediation of toxic dumps or their conversion to open space such as The Nature Conservancy's Francis C. Carter Preserve. These actions help to encourage respect for the land and its natural and historic and cultural resources.

The Francis C. Carter Preserve is on land formerly owned by United Nuclear Corporation, the operator of a nuclear fuels recovery plant, which in 1964 was the site of the only industrial death in the US from a nuclear accident. United Nuclear had owned 1,114 acres of which 12 acres were used for the recovery facility, but chemicals used to extract uranium from fuel rods contaminated

the groundwater through leakage from ponds and trenches used to hold liquid waste, with contaminants also reaching the Pawcatuck River. After closing in 1980, and following a years-long decontamination process, the Nuclear Regulatory Commission declared the site safe in 1995. In 2001 The Nature Conservancy (TNC) acquired 841 acres of the property. By 2011, based on long-term monitoring, it was determined that no further clean-up was required, and in 2014 TNC acquired the remaining acreage. TNC describes the preserve as follows: “*It is a special place in terms of its biodiversity and it is one of the largest and most beautiful protected areas in South County.*” It is the second largest TNC property in Rhode Island. At one point, the land had been proposed for a large research and development complex with residences and golf course. Historically it is believed that the flat areas, now managed as grasslands, had been potato fields.

There have been other threats to the character of Charlestown over the years – the nuclear power plant proposed for the shore of Ninigret Pond on Navy surplus land; the threat of a casino on Narragansett Settlement Lands that would have impacted traffic, social services and police protection; and a potential rail bypass through the northern part of Charlestown for high speed rail lines which would cut across protected lands, dozens of homes, three historic mill villages and active and historic farms (see Natural Resources chapter). Fortunately, Charlestown officials and residents have strongly and effectively resisted these, but the future might hold similar challenges.

Historic Resource Preservation Efforts

The Town of Charlestown has made a number of efforts over the past few decades to protect its historic resources and cultural identity as described below.

Planning and Zoning

- A Historic Village Overlay District was implemented in 1999 as part of the zoning ordinance to protect, preserve and maintain the quality of the town’s villages; to preserve the town’s heritage, cultural and architectural qualities; to foster civic beauty; to strengthen the local economy; and to promote the use of such districts for the education, pleasure and welfare of the citizens of Charlestown.
- A mixed use / village zoning study for Shannock Village was completed in 2010 which included the development of design guidelines for building in the village. This project involved the villages on both the Charlestown and Richmond sides of the Pawcatuck River.
- A Mixed-Use Overlay Zone was implemented in 2004 to encourage small-scale business and residential uses consistent with the historic and pedestrian-scale characteristics that existed in the Cross Mills area to preserve this part of the town’s heritage (the area is now mostly included in the Traditional Village District).

The Historic Village Overlay (see Land Use chapter) encompasses the village areas of Carolina and Shannock, and south of Old Post Road between Ninigret Park (and including all of Ninigret Park) east to the South Kingstown town line. It includes some prohibited uses, general building standards, and the application of stricter sign standards than other commercial areas of town. The Mixed Use Overlay has many of the same purposes as those of the Historic Village Overlay, but only applies to a few commercial parcels along Old Post Road and includes provisions for allowing residential and commercial uses in a single building or on one parcel.

Community

The working farms in town are complemented by a seasonal farmers' market sponsored by the Charlestown Land Trust which makes the products of these farms available to the public on a weekly basis, and increases awareness of the importance of local agriculture.

Preservation activities in the town are pursued by the Charlestown Historical Society, an independent non-profit organization, and the Citizens for the Preservation of Shannock Village. The Historical Society opened its building in 2013 adjacent to the Cross Mills Library, where it houses local artifacts and historic documents on display for public viewing and a research library. Also located on the property, moved there in 1972, is the 1838 District No. 2 Schoolhouse, one of eight of Charlestown's public schoolhouses built in the 1800s.



Jane Weidman Charlestown Historical Society Buildings in Cross Mills

Historic Resources

The Town of Charlestown is rich in resources from many historic periods. Historic resources are located throughout the town but a number are located in the southern area of Charlestown, along Old Post Road, and along the coast. These historic resources provide part of the rich cultural fabric of the town and could potentially be impacted by current and future development activities.

This section of the chapter includes the inventory of historic resources conducted and documented by the Rhode Island Historical Preservation and Heritage Commission (RI HPHC) in 1981¹. For detailed information on local historic resources see the report of the HPHC referenced in the footnote below. Table HC-1 identifies all properties in Charlestown listed in the National Register of Historic Places (a national program administered by the National Park Service). The locations of these properties are also shown in Map HC-1, *Historic and Cultural Features*.

Table HC-1
National Register of Historic Places in Charlestown

National Register Property or Place	Date of Listing
<u>Carolina Village Historic District</u> , following Route 112 from its intersection with Shannock Hill Road on the north (Richmond) to its intersection with Route 91 on the south (Charlestown)	5/2/74
<u>Historic Village of the Narragansett Indians</u> , contained within the area bounded by Route 91 on the north, Routes 2 and 112 on the east, Route 1 on the south and Kings Factory Road on the west	5/7/73
<u>Shannock Village Historic District</u> , village area on both sides of the Pawcatuck River, connected by North Shannock Road (Richmond) and Shannock Road (Charlestown) and including a portion of the Amtrak main line	8/4/83
<u>Kenyon Arch Bridge</u> , Sherman Avenue over the Pawcatuck River (Richmond and Charlestown)	1/10/89
<u>Joseph Jeffrey House</u> , Old Mill Road, off Route 112	3/8/78
<u>Indian Burial Ground</u> , Narrow Lane	4/28/70
<u>District Schoolhouse #2</u> , Old Post Road (Cross Mills)	1/4/80
<u>Fort Ninigret/The Niantic Fort</u> , Fort Ninigret Road	4/28/70
<u>Joseph Stanton House/Wilcox Tavern and General Stanton Monument</u> , Old Post Road / Post Road	1/11/80
<u>Babcock House</u> , Sunset Drive (Quonochontaug)	1/1/76
<u>Sheffield House</u> , West Beach Road (Quonochontaug)	1/1/76
<u>Foster Cove Archaeological Site (RI-CH-2)</u> , vicinity of Route 1	5/6/80

¹ *Historic and Architectural Resources of Charlestown, Rhode Island: A Preliminary Report*, RI Historical Preservation Commission, June 1981.

In addition to the districts, structures and sites that have already been placed on the National Register, the 1981 RI HPHC Report identified several additional resources which deserve consideration for entry in the National Register. Over time this list has been altered and is summarized in Table HC-2; the locations of these properties are also shown on Map HC-1.

**Table HC-2
Potentially Register-Eligible Historic Properties in Charlestown**

Columbia Heights Historic District, Shannock Road and Columbia Heights Road ***
Arnolda Historic District, Arnolda Round and South Arnolda Roads, off Old Post Road **
First Baptist Church of Cross Mills, Old Post Road **
Coronation Rock (King Tom Farm), Old Post Road ***
Wilcox Farm, Post Road / Old Post Road ***
S.B. Hoxie House, Old Post Road / Klondike Road **

*** Review of preliminary materials by the State Review Board suggests property may be eligible for National Register

** Recommended for National Register consideration in the HPHC inventory

Cultural Resources

Cultural resources provide Charlestown residents and visitors with evidence of the past; the preservation of these resources allows current generations to learn from the past and appreciate nature and the work and accomplishments of earlier generations. Cultural resources include prehistoric and historic archaeological sites, historic standing structures, bridges, cemeteries, monuments and other important resources. Some other examples include:

- Native American graves and cultural items
- Shipwrecks and plane wrecks
- Museum collections
- Historical documents
- Religious sites and religious practices
- Cultural use of natural resources
- Folklife, tradition and other social institutions
- Theater and music groups, and other community cultural amenities
- Older properties with cultural value, not necessarily eligible for the National Register

The preservation and continuation of cultural resources and activities is based on the recognition of their social and economic importance. Tourism based on cultural activities, i.e. visiting any culture or community unlike one's own, is an important part of many economies, including Charlestown's. Cultural tourism can include farmers' markets, town fairs and festivals. Unique to Charlestown are the Charlestown Seafood Festival and the Rhythm and Roots Festival held annually at Ninigret Park; the Revolutionary War Encampment at the historic Amos Greene Farm sponsored by the Charlestown Historical Society; the Narragansett Indian Tribe's Pow Wow held every August on Settlement Lands; and art walks and outlets to showcase local artisans.



Jane Weidman

Grand Entry Parade, Narragansett Indian Tribe Pow Wow

Historic Cemeteries

As inventoried by the Charlestown Historical Society and a state database, there are over one hundred historical cemeteries in Charlestown². Locations of most of these cemeteries are also shown on Map HC-1.

The Narragansett Indian Tribe

The richness and continuity of Charlestown's Native American heritage is unique in Rhode Island. The presence of the Narragansetts and their many cultural sites gives Charlestown a special and important place in the history and culture of the state. Over centuries the Narragansett people have maintained their traditional culture. Narragansett cultural values and traditions increase the

² <http://rihistoriccemeteries.org/webdatabase.aspx>

cultural diversity of Charlestown and offer an important alternative to the traditions and values of later immigrants. The tribe and the town share many common goals, including the protection of natural resources and the identification and protection of important cultural properties.

Scenic Resources

Charlestown is characterized by historic villages, scenic roads, coastal areas, inland ponds and woodlands. Stone walls, fields and historic cemeteries dot the landscape of much of the town, especially north of Route 1. This scenic rural character is one of the reasons why many people, both residents and visitors, are attracted to the town. It provides a sense of place which is unique to Charlestown. Glacial remnants such as the moraine and erratic boulders enhance the trails of some of the preserved areas such as the Francis C. Carter Memorial Preserve and the Moraine Preserve. Farm views reinforce the rural nature of the area. Historic Native American and early settlement trails are also found.



Frances Topping

Field and Old Stone Wall

Surveys over the years have identified a number of scenic landscapes and areas in Charlestown. The original work of modern times was “*The Rhode Island Landscape Inventory*”³ which was undertaken by the RI Department of Environmental Management nearly 30 years ago. The objective of this statewide inventory was to identify and evaluate landscapes of high scenic, historic and cultural value. Three categories of landscape were reviewed: the “physiogeographic” landscape characterized by natural scenic beauty; the created landscape; and the visual landscape.

One primary area in Charlestown included in the inventory is the Quonochontaug and Ninigret Ponds, described as scenic views across coastal ponds and barrier beach. Other sites on the inventory are Shannock and Carolina villages, both of which straddle the border with Richmond. These village areas are rated for their rolling topography, historic rural mill village character, and for views.

Earlier iterations of the comprehensive plan have identified the following areas as having high scenic, historic and cultural value, as listed in Table HC-3.

³ *The Rhode Island Landscape Inventory: A Survey of the State’s Scenic Areas*, R.I. Department of Environmental Management, Division of Planning and Development, January 1990.

Table HC-3
Major Scenic and Historic Resources of Charlestown

Historic Areas

Carolina Village
 Shannock Village and Vicinity
 Narragansett Tribal Land
 Fort Ninigret
 Cross Mills
 Farms – Fenner, Luchka, Amos Greene, Holloway

Important Structures

Westerly Boundary Marker
 Wilcox Tavern & General Stanton Monument
 Babcock House
 Sheffield House
 S.B Hoxie House
 Quonochontaug Grange
 Cross Mills
 Ocean House on Dock Rd
 Hathaway Cottages
 Grist Mill
 General Store
 Old District School House
 Library
 Baptist Church
 General Stanton Inn
 4061 Old Post Road (1680)
 4029 Old Post Road (1856)
 Randall Realty Office
 St James Chapel
 Joseph Jeffrey House /Sawmill
 Charlestown Town Hall

Tribal Areas

Narragansett Indian Church
 Indian Longhouse
 Royal Indian Burial Ground
 Fort Ninigret
 Indian Cedar Swamp
 Curation Building
 Health Center

Scenic Roads

Post Road
 Old Post Road (Rt 1A) past Ninigret Park and King
 Tom Road
 Old Post Road (Rt 1A) through Cross Mills
 Arnolda Rd / South Arnolda Rd
 Kings Factory Road
 Shumankanuc Road
 Burdickville Road
 Alton-Carolina Road (Rt 91)
 Carolina Back Road (Rt 112)
 Shannock Road
 Biscuit City Road, (formerly Zachary Bridge Road)
 Old Coach Road

Scenic Views

Views of Block Island Sound from Quonochontaug,
 East Beach and Charlestown Beach
 Quonochontaug Pond and Breachway
 Pawaget Park (Mud Cove)
 Ninigret National Wildlife Refuge
 Fort Ninigret
 Charlestown Breachway
 Ninigret Pond (Charlestown Town Beach boat
 launch)
 Kettle Pond Ocean View Trail
 Watchaug Pond (Sanctuary Rd)
 Charlestown Moraine Preserve
 Cross Mills Pond
 Schoolhouse Pond
 Horse farms and other farms
 Stone walls
 Shannock Falls (Horseshoe Falls)
 Shannock Fishing Falls (Richmond access)

Unique Areas

Foster Cove Archeological Site
 Former Naval Auxiliary Landing Field at Ninigret
 Park
 Frosty Drew Observatory at Ninigret Park
 Fort Neck/Fort Ninigret
 Summer Residence Areas:
 East, West and Central Beach
 Charlestown-by-the-Sea
 Sea Lea Colony and Ocean Ridge
 Arnolda Colony
 Springs at Mill Pond Preserve (former trout hatchery)
 Former Klondike Stone Quarries
 Waterholes on Kings Factory and Burdickville Roads
 Glacial Remains / Cairns (Frances Carter Preserve)
 Scandinavian History at South Farm, Maple Lake,
 and Nordic Lodge
 Historic Trails e.g. Narragansett Trail
 Historic Cemeteries
 Summer Camps e.g. Camp Davis

Scenic Roadways

Charlestown and neighboring Richmond have the distinction of sharing a road that was designated the first state scenic roadway in Rhode Island. In 1990, the two towns jointly applied to the Rhode Island Department of Transportation (RI DOT) for the designation of Shannock Road as a scenic roadway. The application was motivated in part by DOT's intended reconstruction of Shannock Road which proposed the removal of old trees and stone walls, road widening and the straightening of an S-curve. In 1991, the Rhode Island Scenic Roadway Board designated Shannock Road, a 1.7 mile stretch of rural road which runs between Route 112 and Route 2 in Charlestown, and crosses the Pawcatuck River into Richmond for a short distance, as a scenic road (see Transportation chapter).

The application was based on both the physical characteristics and the aesthetic qualities of the roadway. Criteria identified in support of this application included rolling terrain with marshes, woodlands, farms and historic homes, stone walls, and unique vistas of fields, kettle holes, historic bridges and dams, and natural views of the river.

In August of 2002, the 7-mile stretch of Route 1 (Post Road) in Charlestown between South Kingstown and Westerly was designated as a state scenic roadway. The application emphasized both the natural resources along Route 1 such as the Charlestown Moraine, and the historic buildings and cultural sites that developed along this historic transportation corridor. In May of 2008, the 11.8 mile stretch of Route 1 in neighboring South Kingstown was added, completing a long effort to assist in the preservation of the beauty and natural and cultural aspects of the Route 1 corridor.

HISTORIC AND CULTURAL RESOURCES: ISSUES AND OPPORTUNITIES

National Register Designation

Certain resources in the town are recognized as significant through listing on the National Register of Historic Places, a record maintained by the United States Department of the Interior, which includes structures, sites, areas and objects significant in local, state or national history. The register constitutes an official inventory of historic resources that are considered worthy of preservation. The Rhode Island Historical Preservation and Heritage Commission nominates properties for inclusion on the register for review and approval by the Department of the Interior prior to their entry on the register. Resources that are listed on the National Register are also listed on the State Register of Historic Places.

At present there is no permanent protection in the town's local regulations for historic buildings, districts or scenic areas. National Register listing only regulates federal and state agency activities

or funding that may affect the integrity of these resources. There is no control over private property owners who may alter or even demolish historic structures or may disrupt unique landscapes with insensitive development.

Cultural Resources Protection

Buildings, objects, structures, districts and contributing elements with architectural, aesthetic, historic and cultural value are all non-renewable resources that once destroyed cannot be returned to their original state. Therefore, the activity of preserving and protecting historic cultural resources is critical to maintaining the character of the community.

Threats to cultural resources could include new development of a scale or style that is not compatible with the existing landscape. Development of agricultural land will inevitably change the rural character of town. Large-lot subdivisions in the vicinity of historic villages would change the nature and scale of the residential development pattern.

Cultural resource management refers to the processes and procedures used to manage, preserve, protect and conserve cultural resources. Archaeology provides a means of verifying and elaborating the past. An archeological site may be documented to prevent the loss of information in the event of a natural catastrophe. Other types of documentation can be used to preserve the information provided by architecture, landscapes, documents, photographs and even unique land formations.



Jane Weidman

Mill Pond Trout Hatchery Remains

Land Development Regulations

The zoning and subdivision regulations of the town determine the type and character of land use and development patterns. At present, frontage lots are easiest to develop since the approval process is simple. However, this type of development impacts the scenic quality of the rural landscape and creates the impression that the town is more densely developed than in reality.

Town agencies, boards and commissions should, and generally do, recognize the contribution of historic and cultural resources to the landscape and the effect development has on the value of these resources. A stronger regulatory model to provide protection to these resources should be considered. This includes the enhancement of the Historic Village Overlay District as it applies to Carolina, Shannock and Cross Mills to better govern the scale and design of new development in the villages and surrounding areas, and/or the adoption of an historic zoning district with specific standards applied to historic buildings and cemeteries, to be administered by a historic district commission. Such a commission could also provide a resource for education of property owners on appropriate techniques and methods of preservation of properties and sites and potentially assist with grant funding or other resources.

Scenic and Rural Roadways and Historic Trails

As stated in the Transportation chapter, scenic quality is not limited to the state designated scenic roadways of Shannock Road and Post Road. The management of existing roads and the protection of the qualities that make them scenic – views, stone walls and vegetation – is necessary to ensure an important part of the town’s cultural heritage. In 2004 a Stewardship Plan for Route 1 was prepared by the Charlestown Conservation Commission who relied on considerable public outreach and field studies. The objectives and goals of this plan (*Route 1 Scenic Roadway Stewardship Plan*) are still relevant and can be applied generally to Charlestown’s scenic roads.

Infrastructure improvement or maintenance on state roads in the town can also threaten historic and cultural resources. It is important that the town stay involved in the process for the state’s Transportation Improvement Program (TIP) to ensure that planning and engineering properly take local historic and cultural resources into account. As mentioned above, the state proposed improvement of Shannock Road would have adversely impacted the historic character of Shannock Village.

Historic trails go through many public and private areas, many of which are currently unprotected. Narragansett Trail, extending east-west across Charlestown, appears and reappears in several sections of town. Parts of the trail pass through preserved land or through private land; other parts are not found on available maps. To protect the historic integrity of known parts of the trail, there is a need to document the locations and conditions of the trail. Also of interest is identifying the original names of many local roadways, now known by other names.

HISTORIC AND CULTURAL RESOURCES: GOALS, POLICIES AND ACTIONS

GOALS

- Goal 1** Preserve and enhance Charlestown’s historic and cultural resources, including historic villages and landscapes, historic buildings and cemeteries, and scenic views and corridors.
- Goal 2** Establish and maintain a collaboration with the Narragansett Indian Tribe to tell the Native American history of Charlestown and to protect artifacts and sites.

POLICIES AND ACTIONS

- Goal 1** Preserve and enhance Charlestown’s historic and cultural resources, including historic villages and landscapes, historic buildings and cemeteries, and scenic views and corridors.
- Policy 1.1** Protect historic and cultural resources through zoning and subdivision regulations and the development review process, using innovative techniques as they become available or feasible.

As demand for new houses and commercial development takes place in Charlestown, as it invariably will, the town must work hard to ensure that future development does not diminish or detract from its architectural heritage and cultural landscape.

- Action 1** Recognize the contribution of historic and cultural resources and structures when reviewing land developments, subdivisions and other applications to ensure the preservation of important resources and the appropriate re-use of historic structures.

As a means to encourage the preservation or rehabilitation of historic buildings, the zoning ordinance must allow for flexibility of uses in those areas where there is a concentration of historic structures. This includes an emphasis on mixed uses.

- Action 2** Develop a database of significant historical and cultural resources to be used as a “red flag” in reviewing developments.
- Action 3** Review the zoning regulations for the mill villages and adopt standards governing building and parking placement, building form and design, and signage and site amenities, so as to protect and enhance traditional uses and development patterns, and the historic nature of the villages.

As stated in the Land Use chapter, Carolina, Shannock and the center of Cross Mills are designated as mixed-use village centers, and design guidelines developed for Shannock in 2010 should be used as a template for the other mill villages. A village center overlay district to govern the scale and design of new development and redevelopment in the village centers is proposed.

Action 4 Consider the adoption of historic district zoning with review of building changes and new development in designated historic districts under the purview of a new historic district commission.

Under RIGL 45-24.1, Historical Area Zoning, municipalities have the authority to adopt historic districts. The town could initiate this by establishing an “historic and cultural commission” whose duties could include:

- Review the inventory of historic buildings and sites and identify individual buildings or structures and/or historic areas that are deemed to be of historic or cultural significance.
- Coordinate with the Town Council and the Planning Commission to ensure that local regulations are drafted, adopted and enforced.

Policy 1.2 Preserve the visual qualities of Charlestown’s historic areas and scenic roadways.

The visual qualities of a cultural nature that particularly deserve protection include the summer cottages south of Route 1 that were developed during the period after World War II and which are a unique housing type important to Charlestown’s history and heritage. They also include the state and local scenic roadways in town.

Action 1 Develop context sensitive design guidelines for summer colonies to ensure that new construction, renovations and additions are compatible with the neighborhood.

Action 2 Amend the zoning ordinance to facilitate the re-use of motels for low to moderate income housing, so that the summer colony character of these properties can be retained.

Action 3 Continue Implementation of the *Route 1 Scenic Roadway Stewardship Plan*.

Implementation efforts of the plan include the establishment of scenic roadway design standards for new development and building improvements along Route 1, including signage, lighting and buffers between the roadway and structures, with consideration given to preservation of important views. These standards would be incorporated in the town zoning and subdivision regulations, to be applied when reviewing development proposals along the Route 1 corridor.

Charlestown's rural quality is reflected by views of woods and fields along its many miles of local roadways, particularly north of Route 1. Efforts are needed to preserve their scenic qualities as development pressures increase; the action items below are mirrored in the Transportation chapter:

Action 4 Continue to implement the following policies when reviewing subdivisions and land developments along local and minor roadways, with amendments to land development regulations enacted as needed:

- Retention of stone walls.
- Maintenance of undisturbed natural landscape buffers, particularly significant trees and shrubs, to shield view of new construction from the road where the character of the roadway would be adversely changed by clearing.
- Locate new "curb cuts" (driveways) to town roadways so as to preserve existing stonewalls, natural buffers and the scenic qualities of these corridors. Encourage shared driveways to service new development unless there are safety or functional factors that preclude them.

Action 5 Develop and implement a right of way vegetation management program for local roadways that uses low impact but effective methods to manage trees and other vegetation that is consistent with roadway safety standards.

Policy 1.3 Maintain and expand public understanding of Charlestown's cultural and development history through research, public education and public events.

Action 1 Educate the public on Charlestown's history by developing and distributing informational brochures.

Action 2 Support the activities of, and work in conjunction with, the Charlestown Historical Society to continue educational efforts and group activities that raise awareness of the significance of historical and cultural resources to both the community and the seasonal tourist economy.

Action 3 Undertake field research to locate, and map, all historic trails and old road names.

Action 4 Partner with the University of Rhode Island, Roger Williams University and other educational institutions on programs and projects documenting the historical and cultural assets of the community.

Action 5 Educate residents on the benefits of National Register designation, including use of state and federal investment tax credits for restoration of historic structures.

Action 6 Develop and distribute guidelines for restoration of historic properties for use by homeowners.

Goal 2 **Establish and maintain a collaboration with the Narragansett Indian Tribe to tell the Native American history of Charlestown and to protect artifacts and sites.**

Policy 2.1 **Work with the Narragansett Indian Tribe to delineate and protect shared historic and cultural resources.**

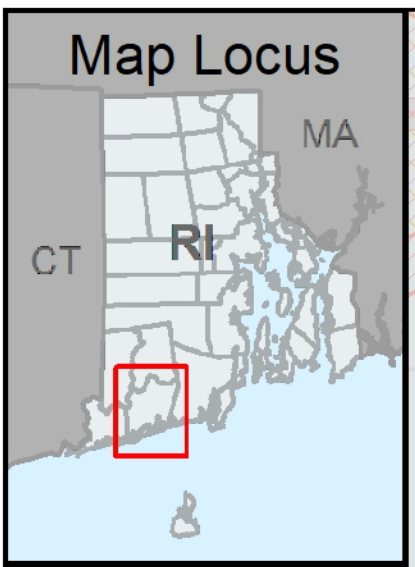
Action 1 Establish an inventory of Native American heritage resources located outside of the Narragansett Settlement Lands.

Action 2 Establish procedures that encourage review and input by the Narragansett Indian Tribe of proposed subdivisions and developments that may impact tribal resources.

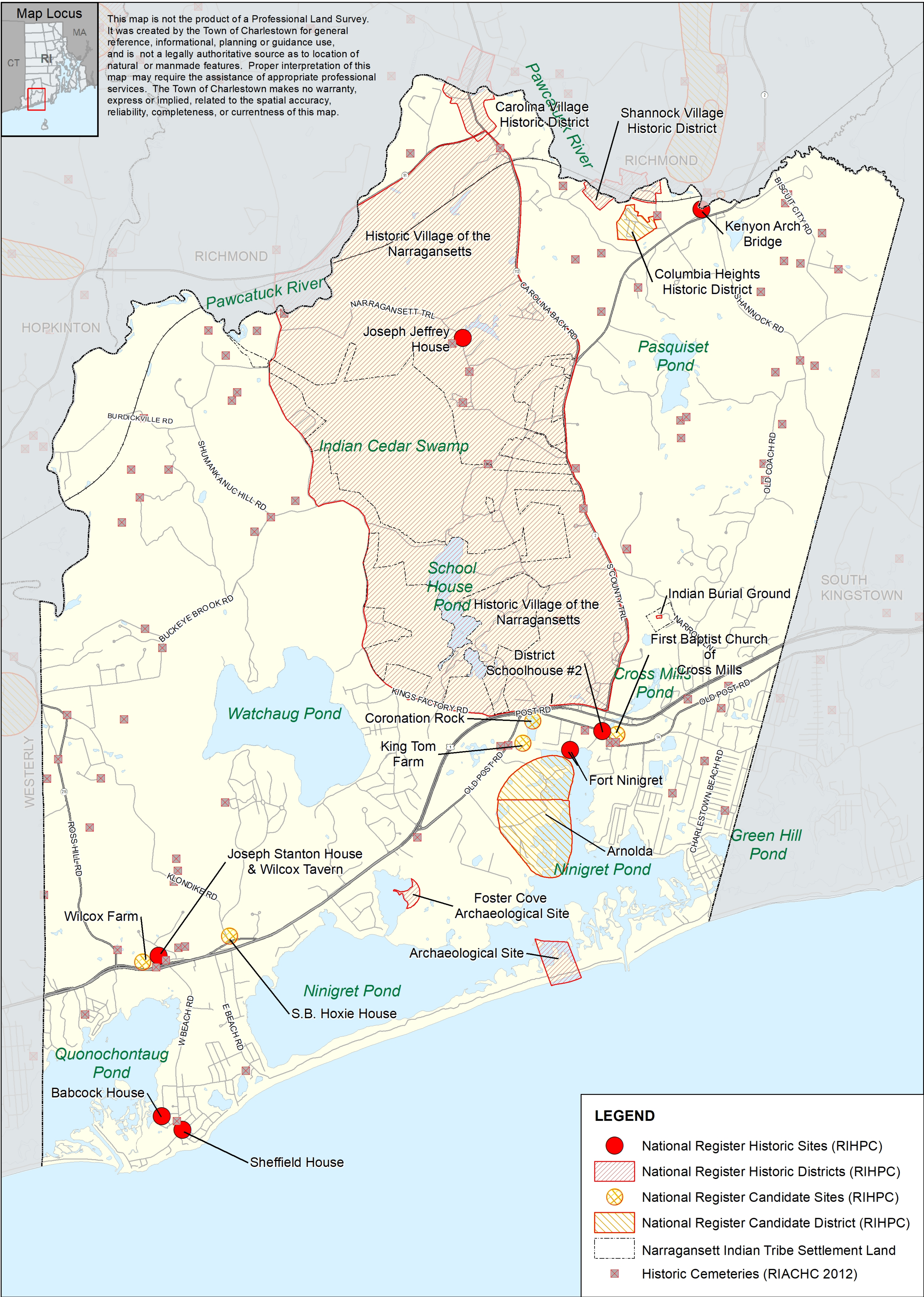
Policy 2.2 **Support the prehistoric and historic heritage of the Narragansett people.**

Action 1 Include land that provides for the protection or enhancement of Native American cultural assets as an additional important criterion in consideration of parcels for open space acquisition.

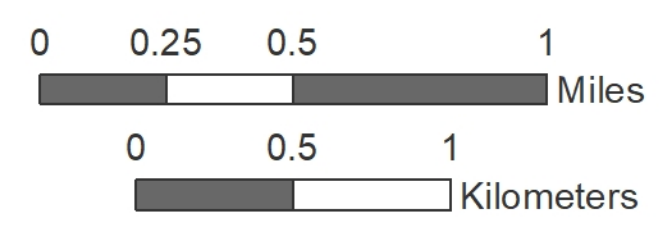
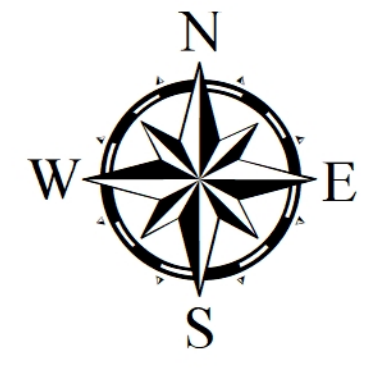
Action 2 Work with tribal representatives to educate the public on the history of the Narragansett, and to provide access to significant cultural resources, as determined by the tribe.



This map is not the product of a Professional Land Survey. It was created by the Town of Charlestown for general reference, informational, planning or guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. The Town of Charlestown makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.



Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



Prepared by:
Town of Charlestown

COMPREHENSIVE PLAN, 2020

HISTORIC AND CULTURAL FEATURES

MAP HC-1



SERVICES AND FACILITIES

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's infrastructure and public services and facilities, issues and opportunities related to its public buildings and major services, and recommendations to achieve services that maintain the quality of life, and sustainability, particularly related to water supply.

Map
SF-1 Public Facilities

Cover Photo: Jane Weidman

SERVICES AND FACILITIES CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 5. SERVICES AND FACILITIES

INTRODUCTION

As a rural community with limited infrastructure, the types of services and facilities provided in Charlestown are less extensive as compared with more urban communities in the state. In addition to several municipal departments, a regional school model and a police department, the town is serviced by quasi-municipal fire districts supported by volunteers, and a small community center and library. With limited public services, the town avoids the need for expensive public facilities and associated high tax rates.

Residential far outweighs commercial and industrial uses in Charlestown; it provides the bulk of the town's tax base and the greatest demand for public services. According to the Tax Assessor, residential property contributes about 98% of the town's property tax income, with the commercial and industrial sectors together contributing approximately 2%.

All residences and businesses rely entirely on groundwater for their supply of potable water, which is delivered through wells, both individual and community. There is no sewer service in Charlestown, and none proposed.

The capacity and condition of the public facilities and infrastructure supporting services in Charlestown are considered adequate, with a few exceptions. The Department of Public Works garage at Town Hall has limited space, and a location that provides better access to the western part of town to store the equipment and vehicles would be preferable. The accessibility of the Senior/Community Center in Ninigret Park, and its capacity to provide long-term recreational and community programming for all ages needs to be evaluated.

It is anticipated that other than roadways in the coastal areas, facilities and infrastructure in Charlestown are not likely to be impacted by natural hazards over the 20-year planning horizon of the comprehensive plan (see Natural Hazards chapter).

RELATIONSHIP TO OTHER CHAPTERS

Natural Resources Chapter

In Charlestown, where all water supplied to the community is from wells (groundwater), natural resource preservation is key to protecting the availability and quality of potable water. Policies to protect groundwater, wetlands and freshwater bodies, and the salt ponds are discussed in the Natural Resources chapter.

Recreation Chapter

The Department of Public Works (DPW) is responsible for maintaining municipal buildings and grounds, including the town's parks and recreation facilities. Recreational programs and assets are described in detail in the Recreation chapter.

Energy Chapter

The Energy chapter discusses various means that the town might take to increase energy efficiency, both in municipal operations and throughout the town, as well as other issues specific to energy generation.

Natural Hazards Chapter

Natural hazards and projected climate change provide a lens through which the location of the community's existing and proposed facilities and infrastructure are viewed. Issues such as storms and sea level rise are addressed further in the Natural Hazards chapter, as well as in the Charlestown Natural Hazard Mitigation Plan, 2017.

Transportation Chapter

Transportation facilities, specifically the road network and related standards including road design and stormwater management, as well as the maintenance services provided by the town, are discussed in further detail in the Transportation chapter.

Land Use Chapter

The community's current and future needs for services, facilities and infrastructure are a function of its land use – the types of uses, their locations and densities. These are described in detail in the Land Use chapter, which also includes a proposed Future Land Use Map.

EXISTING CONDITIONS

Major Public Facilities and Infrastructure

Shown on Map SF-1 *Public Facilities* are the locations of Charlestown's major public facilities.

The town owns several buildings and infrastructure, while other buildings are owned by quasi-municipal and nonprofit organizations providing services to the town, as shown on the map and detailed below.

Elementary School

Charlestown is a partner with the adjacent towns of Richmond and Hopkinton in a regional school system known as the Chariho Regional School District. Within the town boundaries is only one of the district's elementary schools, the Charlestown Elementary School, located on Carolina Back Road (Route 112). With the exception of two elementary schools located in Hopkinton, all other regional educational facilities are located within the Town of Richmond.

Town Hall

Charlestown's Town Hall is an historic building, built in 1893. It is set on a slight hill above the road at 4540 South County Trail (Route 2). Two wings have been added on either side of the original building, and various projects have been undertaken since 2006 to upgrade the building, which is in good condition and is viewed as generally adequate for the 20-year planning horizon of the comprehensive plan. Various administrative offices are located in the building. It also houses the Department of Public Works (DPW) garage where equipment and materials are stored.

Police Station

Constructed in 2006, the police station is a 1,400-square-foot modern facility that replaced an out-of-date facility located within the town hall building. It is located at 4901 Old Post Road (Route 1A), adjacent to Route 1 and directly across from Ninigret Park. It is also the location of the town's Emergency Operations Center activated during natural disasters and other emergencies. The facility has hurricane shutters to harden the structure against extreme weather.

Fire Stations

There are three fire stations located in Charlestown. The Charlestown Fire District owns two stations. The Charlestown-Richmond Fire Station, built in 2004, is located at 4377 South County Trail (at the junction of Routes 2 and 112) in the northern part of town. The Cross Mills Fire Station, completed in 2012, is located at 4258 Old Post Road in the southern part of town. The Dunn's Corner Fire District Station 2, built in 2004 and owned by the Dunn's Corner Fire District in Westerly is located at 5664 Post Road (Route 1). Dunn's Corner Fire District also owns the Quonochontaug Grange, located at 5662 Post Road next door to the fire station; it is a 1930s era grange available for community activities and meetings.

Emergency Medical Station

The Charlestown Ambulance Rescue Service building, built in 1983, is located at 4891 Old Post Road, next to the Police Station and is owned by a non-profit organization.

Solid Waste Transfer Station

The Charlestown Residential Collection Center, the drop-off facility owned by the town, is located at 50 Sand Hill Road on the eastern edge of town. The property includes a closed landfill.

Animal Shelter

The town-owned animal shelter is located at the end of Sand Hill Road adjacent to the Charlestown Residential Collection Center. It has ten runs for dogs and sixteen cages for cats, and a portable generator. An addition and upgrades to the present building are needed for storage, for quarantine and overflow of animals, and for the temporary shelter of evacuated pets.

Senior/Community Center

The Senior/Community Center, owned by the town, is located at the southern end of Ninigret Park at 100 Park Lane (accessed off of old Post Road). The facility, the main portion of which was the residence of the commanding officer of the US Naval Auxiliary Landing Field, has been upgraded and expanded over the years. It provides services, meals and programs for seniors. It also provides an area for recreational programming and community gatherings, and serves as an emergency cooling/warming shelter.

Library

The Cross Mills Library is located at 4417 Old Post Road in the southern section of town. Operated by a local nonprofit organization, it provides library services and reading programs, and offers a wide array of cultural and informational programs to the public. These include concerts, films, weekly card games and crafts, art programs and yoga. There is also a meeting room in one wing that is available for public use.



Jane Weidman

Cross Mills Library

Public Infrastructure

Other infrastructure systems located in town include:

- AMTRAK, the railway that is part of the Federal Railroad Administration’s Northeast Corridor, crosses through the northerly portions of the community, although there are no passenger or commercial train stops in Charlestown.
- Fiber optic cables and legacy transatlantic cables that connect to telecommunication hubs for landline and microwave distribution.
- High-tension electrical lines, and a natural gas transmission line are also located within Charlestown.
- Cellular and other communication towers and associated infrastructure at various locations in town.

The built environment also includes health care facilities and the existing infrastructure – roadways, onsite water treatment systems (OWTS), potable water treatment and distribution systems, and other communications infrastructure.

Public Administration

The philosophy of the Town of the Charlestown, as reflected by the actions and decisions of its administration, is to provide services and facilities that protect the health, safety and welfare of the public; that foster economic well-being; that preserve and enhance environmental quality; and that reinforce the distinction between urban and rural areas at an affordable tax rate. To that end:

- The town manages its facilities and services in an efficient manner assisted by equipment and technologies as appropriate.
- The town contracts for other services, such as fire protection, emergency medical services, and library services, from local quasi-municipal or nonprofit organizations.
- The town relies on natural resources for its water supply, which is provided by groundwater wells and pumps owned and operated by landowners and private water districts.
- The town relies on natural resources for its wastewater management, which is provided by onsite wastewater treatment systems (OWTS) installed for and operated by landowners.

This approach is consistent with and embodies the state’s goals and policies for services and facilities as found in the State Guide Plan (*Land Use 2025: Rhode Island’s State Land Use Policies and Plan*) and with the laws of the state.

Approximately 28 full-time and part-time employees provide municipal services, which are provided from offices in the Town Hall. Reporting to the five-member Town Council, which sets policy, is the Town Administrator, Town Clerk, Treasurer, Building Official, Zoning/Code Enforcement Officer, Town Planner, Public Works Director, Parks and Recreation Director, Parks and Recreation Program Manager, Tax Assessor, Tax Collector, GIS Coordinator, and Stormwater and Wastewater Program Manager. An Information Technology (IT) position was created in 2019. Sessions of Municipal Court are held in the Town Council Chambers.

Assisting are volunteers who serve on the many boards and commissions: Planning Commission (elected), the Zoning Board of Review, Board of Canvassers and the Affordable Housing, Agricultural Preservation, Budget, Building, Coastal Pond Management, Conservation, Economic Improvement, Parks and Recreation, Senior Citizens, Tax Assessment Review and Wastewater Management Commissions.

Public Education

Public education in Charlestown is provided through a regional school district shared with the adjacent towns of Richmond and Hopkinton. The name, Chariho, is derived by combining the first syllables from each town name. The Chariho Regional School District was authorized by state statute in 1958.

There are four elementary schools – two of which are located in Hopkinton, one located in Charlestown, and one in Richmond. Other educational facilities – the middle school, the high school, the career and technical training school, Chariho Tech, and the Chariho Alternative Learning Academy, a school for students with special needs, are located on Switch Road in Richmond, in the Village of Wood River. District administrative offices are also in Richmond on Switch Road.



Jane Weidman Charlestown Elementary

For students enrolled in Chariho Tech, the offerings of a career and technical training are coupled with a comprehensive high school program. In addition to several technical programs, services include guidance and career counseling, and job development and internship placements. Also offered independently depending on enrollment, are a number of fee-based adult education programs including general literacy (GED preparation, computer use) and specific vocations (i.e. HVAC technician, electrical apprenticeship, certified nursing assistant, teaching assistant).

The condition of the schools and supporting facilities are generally considered to be good. The high school and middle school were renovated and updated in 2010. A new building to house the Alternative Learning Academy was completed in 2018 allowing the program to be moved from dilapidated portable trailers. Ongoing updates to Chariho Tech were also completed in 2018. Charlestown Elementary has developed an outdoor learning program which utilizes an all-weather area, outdoor learning centers, a nature trail and a rain garden that can be utilized for education as well as absorbing runoff from surrounding asphalt. The district maintains an ongoing program for building and system upgrades and for renovations in cooperation with the RI Department of Education.

Enrollment in the Chariho School District, and that of students residing in Charlestown and their percentage of the total student body, over a recent ten year period is shown below in Table SF-1.

**Table SF-1
Chariho Regional School District Enrollment 2009-2018**

School Year	Total	Charlestown
2009-2010	3609	1,024 (28.4%)
2010-2011	3577	1,017 (28.4%)
2011-2012	3538	1,022 (28.9%)
2012-2013	3451	980 (28.4%)
2013-2014	3422	960 (28.1%)
2014-2015	3290	932 (28.3%)
2015-2016	3184	883 (27.7%)
2016-2017	3254	884 (27.2%)
2017-2018	3168	856 (27.0%)
2018-2019	3133	795 (25.4%)

Source: Chariho Regional School District

Overall, school enrollment declined steadily in the Chariho School District in the period between the 2009-10 and the 2018-19 school years, dropping by 476 students, a decrease of about 13%. At the same time, the percentage of Charlestown students among the total enrollment in Chariho also dropped slightly (Charlestown enrollment dropped by 229 students, a decrease of about 22%). Barring major demographic shifts in the district, enrollments are projected to be generally flat or modestly decline over the 20-year planning horizon of the comprehensive plan. As a result, the school district does not anticipate the need for additional educational facilities within this period. However, enrollment numbers could rise if significant additional residential development occurs within any of the three towns.

As required under the Chariho Act, each town contributes to the district proportionally on the basis of student enrollment; that is, each town pays into the district on a per-pupil basis. For the 2018-19 academic year, the total Chariho operating budget was \$52,487,969. Charlestown's share of this budget was \$14,216,622.

Public Safety

Police Department

The Charlestown Police Department is a 24-hour municipal police agency accredited in 2017 by the State of Rhode Island. The department is responsible for law enforcement, the protection of life and property, and emergency communications. Policing of the Narragansett Settlement Lands is provided by the Narragansett Tribal Police, but the department also interacts closely with the tribal police and takes an active role in investigation, apprehension and prosecution when required.

The department has two divisions, the largest being the uniformed Patrol Operations Division, and the other, the Administrative and Criminal Investigations Division. In addition to a chief, the department is staffed by a force of 20 sworn police officers and 5 full-time civilian employees. Staff is supplemented by part-time special police officers, traffic constables and several additional part-time administrative personnel.

The police administration is of the opinion that the modern police station and the current police force and supporting personnel will continue to meet the needs of the community throughout the 20-year planning horizon of the comprehensive plan.

The Police Department also provides administrative support for, and oversight of, the specialized services of the Harbor Master, two Assistant Harbor Masters and the Animal Control Officer. Special programming offered by the department includes a prescription drug drop off and disposal service for town residents.

Fire Districts

Fire protection in Charlestown is provided through quasi-municipal fire districts chartered by the State of Rhode Island. Fire districts collect taxes from property owners to support operations and provide fire protection, either directly or under contract with another fire district. The Dunn's Corners Fire District, Shady Harbor Fire District, Quonochontaug Central Beach Fire District (sometimes simply referred to as the Central Beach Fire District) and Charlestown Fire District are the districts serving Charlestown's residents. The Shady Harbor and Quonochontaug Central Beach Fire Districts have fee-based contracts with the Dunn's Corners Fire District, which is headquartered in Westerly and also provides contract services to two other fire districts in that town.

Town Council in a declared emergency; and acts as liaison with other municipal departments and local public safety agencies and with federal and state agencies, including the Federal Emergency Management Agency (FEMA), the Rhode Island Emergency Management Agency (RIEMA), the RI Department of Health and the RI Chapter of the American Red Cross. The department has adopted an Emergency Operations Plan. Charlestown also participates in the CodeRED Emergency Notification System.

Public Works

The Department of Public Works (DPW) provides a number of public services to the community through its highway, solid waste, wastewater, buildings and grounds, and mosquito abatement divisions.

A full-time director manages the operation of the department's divisions, formulates policy recommendations, identifies priorities relative to the services provided and interacts with the public, town officials, and state authorities on matters ranging from road maintenance priorities to construction bid documents to capital budget programming.

The staff consists of 8 full-time highway workers, 1 full-time and 2 seasonal ground maintenance workers, 2 full-time and 1 seasonal collection center workers and 1 full-time janitor. A full-time secretary is shared between the divisions.

The highway division of DPW maintains approximately 140 lane-miles of town-owned roads, services which include sealing road surfaces, keeping roads clear (including winter plowing) and general maintenance activities (see Transportation chapter for additional details on transportation infrastructure).



Charlestown Police Department

DPW Plows in Ninigret Park

A goal has been to bring all town-owned roads up to minimum standards so that maintenance can be routine. As of the end of 2019, except for one (Old Mill Road) all town-owned roads have been brought up to minimum standards and adequate drainage facilities have been installed. The department uses data entered in a customized database to assess, monitor and project roadway conditions and the costs associated with maintenance and/or capital improvements.

The building and grounds division maintains the Town Hall, Senior/Community Center, the transfer station and animal shelter, and the facilities of the DPW. It also maintains, including minor repairs to, the buildings and facilities in Ninigret Park.

In order to reduce the risk of disease transmission, the mosquito abatement division helps to control mosquito populations primarily through the application of *Bacillus thuringiensis* (Bti), a natural form of biological control. The town also maintains drainage swales and structures to prevent water stagnation that would promote mosquito proliferation.

Solid Waste

Charlestown provides no municipal solid waste pick-up service. Residents may drop off their waste at the Charlestown Residential Collection Center (CRCC), or arrange for one of several commercial waste haulers licensed by the town to collect their solid waste and dispose of it for a fee. Non-residential solid waste must also be collected and disposed of by one of the licensed commercial waste haulers at the property owner's expense. Town regulations prohibit the disposal of solid waste elsewhere in the town. The CRCC is located north of Route 1 at the end of Sand Hill Road (off Old Coach Road) on a larger parcel which also includes the animal shelter and a closed landfill (described below).

Only residential solid waste may be dropped off by Charlestown residents, who must purchase an annual sticker for their vehicle and for each bag of garbage disposed of. The disposal of hazardous material, autos and auto parts, and stumps and boulders are prohibited at the CRCC. Tires and used crankcase oil are accepted with limitations, and white goods, bulky waste and demolition debris are accepted for a fee commensurate with the town's cost for disposal. Leaf and yard waste and brush are also accepted and composted on site.

Municipal solid waste collected at the CRCC is transported to the Rhode Island Resource Recovery Corporation (RI RCC) facilities in Johnston, RI (the Central Landfill), for disposal.

Recycling is mandatory in Charlestown and all residents and business owners, including those who use private commercial waste haulers, are required by local ordinance and state law to separate recyclable materials from the waste stream at the source. Following issuance of an annual permit (\$20 fee) residents are able to dispose of recyclables at the CRCC with no additional charge. The town has adopted a one-bag-at-a-time program, supplying canvas shopping bags to local merchants at cost for sale to customers so as to reduce the use of plastic bags at checkout.

In 2018, according to records maintained by the RI RCC, a total of 1,101 tons of material was transported to the Central Landfill by the Town of Charlestown. This represents about 268 pounds of trash per person, by far the lowest generation of solid waste in the state. Of the total, 290 tons (29.6%) was taken to the Materials Recovery Facility (MRF) at the Central Landfill for recycling purposes. Adding in composted material, scrap metal (white goods), clothing, tires, and other recyclables, RI RRC estimated the overall diversion rate for Charlestown at 37.2%.

There are two former (closed) municipal landfills that are owned by the town:

- Charlestown Sanitary Landfill: located on a larger (68 acre) but mostly wooded parcel which also includes the transfer station and the animal shelter, this landfill was active until 2000. Its closure was monitored by the RI Department of Environmental Management (RI DEM) who entered into a consent agreement with the town to ensure that it was capped and covered with appropriate material in accordance with an approved closure plan. The 7 acre landfill is unlined and a series of monitoring wells test the quality of groundwater on a regular basis.
- Narrow Lane Landfill: located on the westerly side of Narrow Lane, the landfill was closed in 1980. It encompasses most of the 8.6 acre parcel, but is not subject to active monitoring, based on an evaluation by the US Environmental Protection Agency (EPA). It could conceivably be evaluated for re-use in the future.

There are also five CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) or EPA Superfund sites within Charlestown. These sites, all of which are closed, are described below (not shown on Map SF-1).

There are two landfill sites and one fuel depot site on land that was once the US Naval Auxiliary Landing Field in Charlestown, now the town-owned Ninigret Park and the US Fish and Wildlife-owned Ninigret National Wildlife Refuge. Within the park is a small landfill where fuel, solvents, pesticides and bomb casings and ammo containers were left, and small concentrations of petroleum hydrocarbons and metals (munitions debris) remain in the soil. There is also a tank farm where underground fuel storage tanks were placed. The site within the refuge was used as an inland toxic waste dump, again with metals, pesticides and petroleum hydrocarbon, as well as lead and zinc, which are in higher concentrations in the soil and the surface water than surrounding areas. The landfill areas have been remediated but must remain undisturbed. Neither site is readily accessible to the public.

The tank farm site was also remediated – all tanks and contaminated soil have been removed – but because of a concern with lead in the groundwater, the site is governed by a specific Environmental Land Use Restriction (ELUR) agreed to by the Town of Charlestown and the RI Department of Environmental Management. The ELUR prohibits activities that would disturb the residual petroleum, the withdrawal of groundwater or the construction of occupied structures on the site.

A discussion of the environmental sites of concern in the park and refuge are described in the document “*Final Post Remedial Long-Term Groundwater Monitoring Report 20082010, Charlestown Naval Auxiliary Landing Field, Site 8, Charlestown, RI, FUDSD01RI0008*”, prepared by United States Army Corps of Engineers, New England District, Concord, MA, June 2, 2017. (Site 8 refers to the remediated tank farm site).

The other two CERCLIS sites are a landfill on Sand Plain Road of unknown ownership known as the Kenyon Piece Landfill where drums containing chemicals were dumped, and the United Nuclear Corporation Landfill on Narragansett Trail that was remediated following closure, and is currently part of a large nature preserve owned by The Nature Conservancy (see description in the Economic Opportunity chapter). For information on these sites, see the EPA’s Superfund site at <https://www.epa.gov/superfund>.

Stormwater Management

There is not a town-wide storm drainage network in Charlestown and the town does not own or operate a Small Municipal Separate Storm Sewer System (MS4) as defined by the Environmental Protection Agency (EPA). Instead, the town owns and operates a number of small-scale systems that drain localized parts of municipal roads and public parking areas. The DPW works to replace failed catch basins with new pre-cast concrete basins with sumps, and maintains retention ponds within the town owned rights of way.

Areas of Charlestown meet the criteria for a Densely Populated Area (DPA), and as such the town has a permit for the discharge of stormwater from the Rhode Island Pollutant Discharge Elimination System (RIPDES) program, Rhode Island’s version of the National Pollutant Discharge Elimination System (NPDES). In accordance with the RIPDES program, Phase II, the town is required to demonstrate effective protection of Special Resource Protection Waters, Outstanding National Resource Waters, and Impaired Waters.

In 2013 the town developed and adopted a Stormwater Management Plan. The plan establishes policies and actions the town will undertake in relation to its stormwater management system under the RIPDES program. Additionally, the plan addresses compliance with municipal stormwater (MS4) state and federal regulations, which prioritize awareness of non-point and other stormwater pollution sources. The town has been operating in accordance with the plan since its adoption.

Charlestown has embraced the principals of Low Impact Development (LID) in its Subdivision and Land Development Regulations, which require that all new subdivisions be developed as cluster subdivisions (individual house lots with commonly held open space areas) unless there is a compelling reason why a conventional subdivision is more appropriate. The regulations require the use of LID site planning and design elements to mitigate pollution, reduce sedimentation, provide visual amenities and wildlife habitat, and utilize structural and nonstructural best

management practices (BMPs) as per the 2010 *RI Stormwater Design and Installation Standards Manual*, and the *RI Soil Erosion and Sediment Control Handbook* (revised 2014).

Wastewater Management

Like many rural areas of the state, Charlestown relies on onsite wastewater treatment systems (OWTS) as the only means to treat and recycle wastewater back into the ground. Charlestown has no public sewer service, and none is proposed for anywhere in town within the 20-year planning horizon of the comprehensive plan.

The Rhode Island Septic System Maintenance Act of 1987 authorized towns to establish wastewater management districts to operate as alternatives to municipal sewer systems, and to protect groundwater quality and important natural resources from adverse impacts due to failing or poorly maintained OWTS. Charlestown's Wastewater Management District was established in 1994 and encompasses the entire town. It operates under the oversight of the Wastewater Management Commission. A full-time on-site wastewater specialist/environmental scientist serves as the principal wastewater management program administrator, and coordinates activities of the district with the other town departments, particularly Building/Zoning and Planning. Since 1994 the town has:

- Adopted an Onsite Wastewater Management Plan and has a robust municipal onsite wastewater management program in place. The 1999 management plan was updated in 2010 in the *Source Water Protection Plan for the Town of Charlestown, Rhode Island*, developed by the Charlestown Source Water Steering Committee and prepared by the Atlantic States Rural Water and Wastewater Association.
- Revised its wastewater management ordinance to require periodic inspection of OWTS by a town-approved septic service provider. Inspection records for every OWTS in town are maintained in a comprehensive database, which homeowners and realtors can search at <http://septicsearch.com>.
- Participated in the statewide Community Septic System Loan Program. Qualifying homeowners who need to replace cesspools or repair or replace septic systems can access low-interest loans that are processed on a first-come, first-served basis when funding is available.
- Required, since 2004, removal of cesspools and the upgrade of failing or malfunctioning OWTS. Under its cesspool phase-out program, all of the more than one thousand cesspools in Charlestown at the start of the program have been replaced with code-compliant OWTS.
- Solicited data from voluntary well testing performed by residents – data necessary to determine whether groundwater quality and important natural resources are being protected

from adverse impacts due to substandard OWTS. The data has shown significant nitrate levels (4 to 6 parts per million), approaching the alert level of 5 parts per million, considered by the RI Department of Health (RI DOH) to be a warning to either remediate the cause of the high nitrate levels or to look for other sources of drinking water. There are cases in certain parts of Charlestown that exceed 10 parts per million, the level at which water is deemed non-potable by the RI DOH.

- Obtained a grant in late 2017 to monitor the efficiency of installed systems that employ nitrogen-reducing technology. Under the grant, recommended landscaping process policies will be implemented, and six demonstration rain gardens will be installed on town properties to improve stormwater infiltration.

Management of OWTS is cost effective when compared with the costs of operating a municipal wastewater collection, treatment and disposal program. With existing land use controls and proper OWTS management, it is expected that wastewater treatment and disposal using OWTS will continue to meet the wastewater disposal needs in Charlestown.

Water Supply

All drinking water in Charlestown, whether delivered through public or private wells, depends on groundwater. Groundwater and the issues related to its quality are described in detail in the Natural Resources chapter; See Map NR-2 for the locations of groundwater reservoirs and recharge areas, including the major aquifers within the Pawcatuck–Wood River Watershed and wellhead protection areas. Groundwater recharge takes place throughout the town, and the designated wellhead protection areas shown on the map are only those that recharge in relation to the community public wells.

Quality and Adequacy

The quality of the groundwater in Charlestown is very good, with most groundwater being suitable for use as public drinking water without treatment.

The current rate of water usage for year round residents can be estimated by using the assumed 2015 population of 7,772 and water usage, as per state guidance, of 65 gallons per capita per day. That amounts to 505,180 gallons of use per day. With a projected 2040 year round population of 9,329, that would be 606,385 gallons of use per day.

The seasonal influx of summer residents and tourists adds to the town's population. This influx occurs from May through October, when the town's population swells to between 25,000 and 30,000. At peak times, demand for water could be as high as 1.95 million gallons per day (30,000 people x 65 gallons per capita).

However, as long as the groundwater is protected from contamination, it appears that groundwater resources in Charlestown are more than capable of providing enough water to meet both year round and peak season needs for residential and non-residential uses as a whole over the 20-year planning horizon of the comprehensive plan.

Delivery

Water in Charlestown is delivered through private wells, both individual and community. There are limited areas of distribution (water supply lines) associated with private water districts as described below.

There are no major public water supply systems in Charlestown, nor are there plans for such a proposed service area in the 20-year planning horizon of the comprehensive plan. Because no water supplier produces 50 million gallons of water or more per year, a water supply system management plan is not required under state regulations.

Two water districts in the community have been created under state law, the Shannock Water District and the Quonochontaug East Beach Water District. The Shannock Water District provides water to homes in the village of Shannock and Columbia Heights in Charlestown, and to the Kenyon Industries facility in Richmond. The district is also the source of water for Shannock Village Cottages, a low/moderate-income housing development in Charlestown (see Housing chapter).

Throughout 2015 and into early 2016, a Town Council established committee, the Potable Water Working Group, met to discuss issues related to the quality of the drinking water in portions of Charlestown where there are high concentrations of groundwater Nitrogen, particularly the Quonochontaug area. Comprised of representatives of the private water suppliers, the community, and town elected officials and staff, and with input from other experts, the group focused on nitrate levels in the drinking water, salt water intrusion and water supply and demand.



Vic G Divorak

Quonochontaug Peninsula

The areas of most concern were determined to be within the densely developed areas of the coastal ponds watershed and the impacts from nutrients entering the drinking water supply for both private wells and public wells. It is understood based on modeling that groundwater Nitrogen concentrations mainly emanate from OWTS.

The group's efforts concluded with the identification of a coastal groundwater protection overlay district defined by the Coastal Resources Management Commission's Salt Pond Region Special Area Management Plan, to be used as the basis for future regulation; the development of a voluntary program for landscapers to agree to make use of best management practices in lawn care and landscaping; and public outreach in the form of street signage in the drinking water supply areas and informational brochures regarding the protection of drinking water. The group also worked with the Charlestown Wastewater Management Commission to identify a series of innovative policies to reduce nutrient output from OWTS.

Partially due to this work and other efforts by the town to study the correlation of nitrogen in the groundwater with septic system density, Charlestown applied for and received an EPA grant for \$800,000 (awarded in 2018) to undertake a project to reduce nitrogen in the groundwater and salt ponds. The project scope includes monitoring the nutrient output of advanced OWTS through quarterly sampling and analysis; the actual replacement of fifteen substandard systems; and a public education and outreach component.

Also in 2015 the RI Water Resources Board purchased land in the Cross Mills section of Charlestown, using bond money from the state's South County Groundwater Protection and Acquisition Program. The acquisition was for the purposes of "land banking" the parcel as a potential future source of water for properties in this area of Route 1A and the Charlestown Beach peninsula, but also potentially outside of Charlestown.

In 2017, the town was also confronted with the possibility that groundwater from one of the aquifers within its boundaries could be withdrawn, trucked out of town and sold for the purpose of supplying cooling water for a natural gas power plant in Burrillville. This proposal by some members of the Narragansett Indian Tribe, met with considerable public and tribal resistance, especially from Charlestown residents and officials, and was ultimately not pursued.

SERVICES AND FACILITIES: ISSUES AND OPPORTUNITIES

As a predominately rural community Charlestown provides a limited menu of services and facilities to its residences and businesses. As stated in the Existing Condition section, the overall quality of the infrastructure and public facilities is very good in Charlestown. Given the stability of the town's demographic profile and expected trends over the next twenty years, current levels of service are expected to meet the needs of the local populace. Nonetheless, there are issues and areas of opportunity for upgrades and improvements to certain services and facilities.

Municipal and Public Buildings and Services

Town Hall

In recent years considerable attention has been paid to upgrading the Town Hall facility, which is in very good condition. With the exception of space needed for record storage, it has adequate room for service provision and public use.

However, garage space available to house equipment of the Department of Public Works is extremely cramped, and some equipment and town vehicles cannot be stored at the location. In addition, the Town Hall location on South County Trail presents DPW access constraints to the western and northwestern parts of town. In 2006 the town addressed a similar situation with the construction of a new police station on a large parcel of land on Old Post Road, right off Route 1. Relocating the DPW to town land behind the Police Station with easy access to the highway should be considered.

In 2018, the Town Hall was provided with whole facility generator service in the event of power outages in the community. This minimizes disruption to municipal services during such events and also enhances the Town Hall's function as a warming/cooling center and emergency water source during storm emergencies.

Police Station

The Charlestown Police Station is not located within the 500-year flood plain on FEMA maps, and as such will not be impacted by sea level rise during the time frame of this comprehensive plan. The facility was also constructed in accordance with building code requirements for "high wind zones" (winds greater than 120 mph). The facility is viewed as adequate for expected functional and service requirements without the need for major upgrades or improvement.

Fire Stations

The fire stations located in the coastal area, Dunn's Corners Fire District Station 2, and the Cross Mills Fire Station, as well as the Charlestown Ambulance Rescue Service building, would not be impacted by sea level rise, according to the Charlestown Hazard Mitigation Plan. However, these buildings, representing critical public safety infrastructure, are located in a high wind zone and hardening improvements should be considered over the timeframe of this plan.

Public Safety and Emergency Services

Although the town is not immune from issues that affect other Rhode Island communities, its public safety and emergency response capabilities are well positioned to meet existing and

anticipated local needs. However, improved communication and coordination with state and federal entities during emergency events has been suggested in the Charlestown Hazard Mitigation Plan. A dialogue in this regard should be initiated by the town with planning and policy protocols implemented as necessary.

About half of the communication towers and support facilities in Charlestown were established prior to the major revision of the 2000 RI State Building Codes. Whether these structures can withstand wind loads that might be expected should be evaluated.

Senior/Community Center

The Senior/Community Center located within Ninigret Park is used for an array of recreational programming on a year round basis, as well as for senior activities. The Recreation chapter of this plan identifies a need for more year round recreational activities including use of indoor facilities for active sports. Presently there is limited space available in the Charho schools, and other facilities with public access. In addition, the location of senior services in the remote area of the park is not ideal. The building also serves as a warming/cooling center and an evacuation center, and as such, its location below Route 1 and within the 500-year flood plain and a high wind zone has led to much discussion in town that an alternative location should be identified.

A review is required to determine the long-term recreational and community programming needs of residents of all ages in Charlestown, and to identify the capacity and appropriate location of an indoor recreational facility/community center that best meet these needs.

Community Services

Services to assist veterans, disadvantaged individuals and families to satisfy basic needs are provided by the town in partnership/cooperation with local relief organizations. Such supportive partnerships should continue and be flexible to respond to the changing needs of vulnerable elements of the local population.

Beach Pavilions and Salt Ponds

The town's beach pavilions are at risk from flooding and wind damage as a result of sea level rise and more intense storms. Both were built after the major revisions to the state building code in 2000. Hardening projects to improve the resiliency of these facilities should be considered (see Natural Hazards chapter).

As infrastructure critical to both navigation and the health of the salt ponds, the Charlestown and Quonochontaug Breachways and the channels from the ponds to the breachways which connect to Block Island Sound are assets that need to be maintained. The Charlestown Harbor Management

Plan, adopted in 2017 and approved by the Coastal Resources Management Council (CRMC) in 2018 (see town website) identifies the need to monitor and maintain the breachways and channels and to coordinate with the appropriate state and federal agencies. Specifically, the town will keep its dredging permits for Ninigret and Quonochontaug Ponds active on an as-needed basis. The town also maintains a fund for dredging and marsh restoration, which is generally available as a local match for federal and/or state grant money that may become available for these purposes.

Education

Maintaining adequate local and state contributions to the Chariho Regional School District remains a priority of Charlestown and the other participating communities in the district, Hopkinton and Richmond. Because state funding is critical in providing an adequate educational program for the district, the three communities should maintain an active dialogue with the state administration, RI Department of Education and the RI Legislature to ensure that appropriate resources are provided.

There are no capacity and few maintenance issues in any of the schools in the district. It is important that Charlestown maintain active communications with Richmond and Hopkinton over the course of the planning timeframe of this plan so that demographic changes within the district can be adequately planned for and accommodated as necessary.

Road Network

The DPW has worked over time to upgrade all town roads to a minimum standard so that they are maintained more easily and effectively, and costly repairs are avoided. These objectives have been accomplished, with the exception of improvements to Old Mill Road (center-eastern area of town off of Route 2). Old Mill Road is slated to be reconstructed in 2020.

As noted in the Existing Conditions section, the DPW makes use of a customized roadway management program which keeps the department up to date on the overall condition of each local road and accurately provides costs for routine maintenance and for needed improvements. The program is administered in-house.

Roads that intersect with sea level rise scenarios must be upgraded (elevated), redesigned or in some cases, abandoned. With projections from the National Oceanic and Atmospheric Administration (NOAA) of a 3 to 5-foot sea level rise by the year 2050, flooding will occur at locations currently not susceptible. More frequent and intense storms will increase inland flooding as well (see Natural hazards chapter). While most local roads are considered adequate within the 20-year planning horizon of the comprehensive plan, the town's public works policies and capital improvement programs need to consider adaptation in the future.



Charlestown Police Department

Impassable Local Road during the March 2010 Flood

Over 60% of Charlestown’s roads (measured by miles) are private, mostly unpaved and maintained by the residents who own property along them. They can only be accepted as town-owned roads if they are upgraded to town standards at the property owners’ expense. New private roads are permitted in certain circumstances (see Transportation chapter), but they must be constructed of gravel or pervious surface and require the establishment of a homeowners’ association for permanent maintenance.

Solid Waste Management

By state mandate, the town is required to achieve, at a minimum, a solid waste recycling rate of 35% and a solid waste diversion rate of 50% by 2035. Recent data (2018) from the RI RRC indicates that with a recycling rate of 29.6% and a diversion rate of 37.2%, the municipal drop-off program in Charlestown is approaching the state’s targets. Because of the limited capacity of the Central Landfill, the RI RRC is also studying multiple options for handling and disposing of the state’s solid waste. Whatever course is taken, tipping fees are expected to increase significantly in the years ahead. In addition, the recycling industry is undergoing major changes and it is becoming increasingly difficult for RI RRC to find markets for many recyclable materials. For all of these reasons and despite the low production of solid waste as measured by the tonnage sent to the Central Landfill, Charlestown should work to encourage higher rates of diversion and recycling in the community, particularly by the seasonal and transient population. This requires enhanced public education on the environmental and economic importance of reducing solid waste, including information on a comprehensive “reduce-reuse-recycle-rot (compost)” approach.

The strategic placement of recycling containers at key locations, such as beaches and tourist destinations, could all serve to increase the amount of recyclables the town brings to the Central Landfill in Johnston without also increasing the amount of solid waste dropped off, thereby improving the overall recycling and diversion rates for Charlestown.

Even though the town does not get credit for the recyclables picked up in Charlestown by private haulers, as a matter of principle the town should encourage private haulers collecting and disposing of solid waste from the community to continue and improve their recycling and solid waste diversion efforts. Finally, the town could also include expanding the range of materials that it accepts, including those that RI RRC may not take but that other entities will.

The DPW also arranges for local collection days with RI DEM's Eco-Depot; these efforts have been successful and should be continued. Education could be provided on the proper use, storage and disposal of household hazardous materials and other materials such as motor oil. Improvements to the disposal of "e-waste" should be considered as well.

Stormwater Management

As stated in the Existing Conditions section, Charlestown, in accordance with the RIPDES program requirements, has an adopted Stormwater Management Plan. The town will continue to operate in accordance with the plan. In 2017 the town enacted a sedimentation and erosion ordinance, a major component of local efforts for stormwater management improvements under RIPDES.

Local land development and subdivision regulations have been amended to implement Low Impact Development (LID) techniques and standards. LID is a comprehensive approach to site planning utilizing design techniques that store, infiltrate, evaporate and detain runoff as close as possible to the point where precipitation reaches the ground. LID can be used to accommodate growth while reducing the environmental impact of site development, and needs to continue to be an integral part of the design of all future development.

The town should consider other stormwater related policies and programs such as a stormwater reuse program at public buildings, and an educational program to inform the public on the problems associated with impaired stormwater quality, and the actions which can be taken to improve it.

Efforts must also be made to plan for the proper functioning of stormwater systems as a result of sea level rise and increased flooding due to climate change (see Natural Hazards chapter).

Wastewater Management

Under its wastewater management program, the town actively monitors installed OWTS and has been effective in replacing cesspools and other substandard and failing OWTS. Properly installed and maintained conventional OWTS, on adequately sized lots, are very effective at removing contaminants from wastewater and safely returning it to the groundwater. However, conventional OWTS do not remove significant amounts of nitrate or phosphates or many other possible contaminants that should not be disposed of through the wastewater stream. Nitrogen reducing systems (denitrification OWTS) have better capabilities in this regard.

The area of town most impacted by nitrogen from OWTS is the watershed of the salt ponds. The watershed has been mapped and is used for policy development and regulation by the Coastal Resources Management Council (CRMC) under its Salt Ponds Region Special Area Management Plan (SAMP), and by the RI DEM as the South Shore Salt Ponds Critical Resource Area. A discussion on the impacts of development in the watershed on the ponds' water quality and habitat value is contained in the Natural Resources chapter, but it is important to note that OWTS are the largest contributors of nitrogen to the groundwater. In the salt ponds watershed, the DEM mandates the use of denitrification systems for all new OWTS or for those that require an upgrade. A change to this regulation is not anticipated (nor desired).

An increase in new development in the coastal areas south of Route 1, as well as the continued conversion of summer homes to year round residences in these areas is expected (see Housing Choice chapter). One opportunity for the town to respond to this increased coastal development is to apply conditions to new construction in densely developed critical resource areas. While DEM has approval authority over OWTS's, the town can use the limitation of Nitrogen loading on individual sites as a basis for regulating such features as building size and footprint, and lot coverage. This could be applied in the form of an overlay zoning district.



Matt Dowling

New Septic System Installation

For some village districts and shoreline communities, consideration of the use of collective OWTS rather than wastewater being managed on each property by individual systems should also be evaluated. A recommendation of the Hazard Mitigation Plan is that a feasibility study for each proposed village district be undertaken.

Water Supply

State planning guidelines indicate that water supply issues need to be considered when planning for future land uses and that municipalities should encourage land uses with low potential for impacting the quantity and quality of their potable water supply. These guidelines further direct that, when planning for natural resource preservation, communities should incorporate measures that will support/preserve water quality and water supply system goals.

Protecting the Aquifers

Charlestown's abundant water resources have attracted the attention of outside parties interested in exploiting those resources. At present, there are no restrictions on water withdrawals for export from the community. Heavy pumping volumes for withdrawals to provide water supply to other communities, for commercial water bottling and sales, or to be sold as a commodity has the potential to disrupt the natural hydrology and threaten the long-term viability of the local water supply. The review of options for restricting large-scale water withdrawals for export outside the town is an important issue in the 20-year planning horizon of this plan.

The state purchase of property in Charlestown in Cross Mills as a potential future water source provides a protective measure for potable water availability in this densely developed village setting. The yield from the well is projected to be sufficient to supply water to homes and business in Cross Mills and the Charlestown Beach area. However, the well head protection area includes at least two active OWTS and does not meet the minimum RI Health Department standards for a public water supply. Before developing this water supply, a variance would have to be granted by the Health Department. It is also the position of the Town of Charlestown that any water drawn from the aquifer be returned to the groundwater (by means of on-site septic systems) and not transferred out of the watershed, and that any public water supply be carefully considered in terms of its potential to increase development pressure.

The Pawcatuck – Wood River Watershed is shared by other Washington County communities, as well as by the Narragansett Indian Tribe whose Settlement Lands lie within the boundaries of the Charlestown. The attempt by some members of the tribe to sell water from an aquifer accessed on Settlement Lands for cooling water to a proposed power plant in the northern part of the state in 2017 reinforces the need to have improved and continual communication with the tribe, and with the adjoining communities and the applicable state agencies on regional groundwater issues.

Preventing Contamination

In addition to the OWTS, another contributor to Nitrogen above background levels in groundwater is the use of fertilizers for lawn care. In 2016, the town enacted a “Recommended Landscaper Program” a voluntary sign-up program for businesses who agree to conduct and promote best management practices in lawn care, fertilizer use and landscaping. Information is available on the town website. If the program does not achieve the desired results, the town may consider an ordinance to implement appropriate conservation techniques for lawn care management.

Potential sources of contaminants such as leaking heating oil tanks, the handling of hazardous materials, etc., also pose localized risks to groundwater quality. Improved state oversight and regulations in these areas would be useful. While oil spills are rare, their impact can be devastating to local waterways and resources. The Harbor Management Plan recommends the adoption of an updated oil spill contingency plan to coordinate town, state and federal response in this area as it affects the salt ponds.

Groundwater testing, on a voluntary basis, from private wells and community water supplies is a valuable tool for understanding the condition of groundwater across the community, and this solicitation and analysis of data should continue and be encouraged.

Efficient Water Use

The Rhode Island Drought Management Plan (State Guide Plan Element 724) states that all towns should minimize the effects of drought on public health and safety, economic activity, and environmental resources, and to preserve the water supply of the state. This can be assisted by encouraging the efficient use of water resources by residents and local business owners. Public education and awareness of the finite nature and sensitivity of water resources are key elements.

The town can set an example in this regard by monitoring water consumption at town facilities and buildings, encouraging wise use of water resources in bathrooms and kitchens of municipal buildings, and studying whether there are specific pieces of equipment in public facilities that could be replaced or retrofitted to increase water efficiency. The town may want to consider ordinances and regulations to reduce water consumption for new development.

Water conservation is also a critical component in fighting saltwater intrusion into aquifers along the coast. The Recommended Landscaper Program described above includes various means to conserve water and should be considered especially in the salt ponds watershed. There also are currently no withdrawal limits. The RI Water Resources Board is conducting an assessment of safe and sustainable withdrawal rates and its findings and recommendations might be considered for incorporation into the town’s code of ordinances.

SERVICES AND FACILITIES: GOALS, POLICIES AND ACTIONS

The goals, policies and actions described below are intended to maintain and improve the town's high quality program for municipal services and facilities, and to address the few areas where concerns have been identified, notably increasing recycling and protecting water supply and water quality.

GOALS

- Goal 1** **Ensure that Charlestown's public services and facilities support and enhance the quality of life in the community and in a manner compatible with the town's natural and cultural resources and rural traditions.**

- Goal 2** **Protect the community's natural water resources and ensure long term sustainable use of its drinking water supply.**

POLICIES AND ACTIONS

- Goal 1** **Ensure that Charlestown's public services and facilities support and enhance the quality of life in the community and in a manner compatible with the town's natural and cultural resources and rural traditions.**

The following policies and (in some cases) action items have been identified to meet this principal goal relating to public services and facilities:

- Policy 1.1** **Continue collaboration with adjoining towns, particularly Richmond and Hopkinton, on regional issues and resource sharing efforts.**

- Policy 1.2** **Continue to review and meet the town's educational needs in the context of the Chariho Regional School District and the standards, programs and resources of the RI Department of Education.**

- Policy 1.3** **Ensure that the physical facilities are up-to-date and can effectively meet the town's public service needs.**

- Action 1** Evaluate the feasibility of re-locating the Department of Public Works to land on Old Post Road near the Police Station and with easy access to Route 1.

- Action 2** Evaluate all public safety buildings and structures to determine their resilience in storm and emergency events, and make upgrades as needed.

Action 3 Identify all town roads to be impacted by sea level rise or increased flooding due to the impacts of climate change and initiate planning for their modification or abandonment.

Policy 1.4 Work to increase recycling and diversion rates as a means to reduce the amount of solid waste sent to the state Central Landfill.

The town has a goal of a minimum 35% solid waste recycling rate and a minimum 50% solid waste diversion rate by 2035. Some steps that the town can take to achieve this and to work towards a sustainable policy of solid waste management are:

Action 1 Encourage composting by establishing a compost bin program at the Charlestown Residential Collection Center.

Action 2 Explore the placement of recycling bins in various town locations to facilitate recycling by tourists and seasonal residents.

Action 3 Research the economic and logistical feasibility of expanding the range of materials which the town can accept and recycle appropriately.

Action 4 Facilitate electronic and hazardous waste recycling in the community by coordination of special collection opportunities with RI DEM and RI RRC and evaluate the consideration of a dedicated program in the community to permit ongoing disposal of these types of waste.

Policy 1.5 Promote effective health and social service programs and facilities, in cooperation or partnership with other public, private and non-profit agencies and groups.

Action 1 Evaluate the feasibility of re-locating the Senior/Community center and consider options for a location more suitable for emergency shelter purposes.

Action 2 Develop and distribute public information brochures regarding municipal facilities and services that are available to Charlestown residents, particularly those related to emergency situations.

Action 3 Support the emergency management agency in coordinating emergency response services to any health care providers, senior housing facilities or any resident living independently with a health concern during power outages and other natural hazard emergencies.

Policy 1.6 Encourage and recognize volunteerism in the fire, rescue, ambulance service, library, Parks and Recreation Department activities, town boards and commissions, and other volunteer services.

Goal 2 Protect the community’s natural water resources and ensure long term sustainable use of its drinking water supply.

Policy 2.1 Maintain Charlestown’s long-range program of effective stormwater management to reduce risk of flooding, control erosion and sedimentation and protect surface and groundwater quality and quantity.

Action 1 Continue to locate and inventory existing municipal stormwater facilities and work towards correcting problems for existing drainage in a manner which considers the surrounding drainage patterns and natural resources, including:

- a. Digital mapping in the town’s GIS system of the stormwater handling elements and outfalls;
- b. Sampling and analysis of outfall effluent at all stormwater outfall locations; and
- c. Development of conceptual treatment and/or retrofit plans where problems are detected.

Action 2 Continue to apply Low Impact Development site standards in the review and approval of new land developments and subdivisions, including:

- a. Encourage the installation of raingardens and other “green infrastructure” at residential and commercial developments; and
- b. As necessary, contract with independent professional engineering or environmental planning consultants to review stormwater management designs.

Action 3 Develop a stormwater reuse program that includes the use of best management practices, such as the installation of rain barrels, cisterns or other water storage and reuse facilities at public buildings.

Action 4 Continue to undertake public education, participation and outreach in accordance with the Phase II Stormwater Management Program, including educating homeowners on using buffers, vegetation or other measures to increase water retention on site.

Action 5 Develop a database of storm drains in town that are located within the projected sea level rise scenarios and can be monitored during flood events and/or extreme high tides

Action 6 Undertake a comprehensive stormwater management study for areas exposed to flooding and/or sea level rise, developed through state and/or federal funding.

Policy 2.2 Maintain and expand Charlestown’s successful program for on-site wastewater management.

Action 1 Work with property owners who have failed or underperforming OWTS’s to upgrade or replace them to current and acceptable standards.

Action 2 Establish a program to monitor nitrogen reducing OWTS’s to determine effectiveness and facilitate reduction of nutrients to the drinking water.

Action 3 Develop a “Nitrogen Reduction Overlay District” applied to critical resource areas to regulate the size and impact of new development so as to reduce groundwater nitrogen in a scientifically based manner.

Action 4 Undertake feasibility studies for potential collective OWTS’s in higher-density “village” areas of town, including conceptual plans and cost estimates for collective OWTS’s or package mini-treatment plants.

Policy 2.3 Continue and enhance municipal efforts to ensure the protection of groundwater resources in the community.

Action 1 Consider the establishment of a water source protection ordinance which requires that water drawn from aquifers within Charlestown remain within the watershed and prohibits the withdrawal and sale of groundwater as a commodity.

Action 2 Review the local zoning and subdivision regulations relative to groundwater protection, and enact the following regulatory changes as needed, including:

- a. An update of the list of uses prohibited in the groundwater protection section of the zoning ordinance;
- b. Inclusion of groundwater protection methodologies in growth management standards and regulations;

- c. Delineation of common open space within cluster developments so as to protect groundwater recharge areas; and
- d. Use of GIS modeling or updated flood mapping for projected sea level rise and storm surge impacts in the review process for development proposals in coastal and flood prone areas.

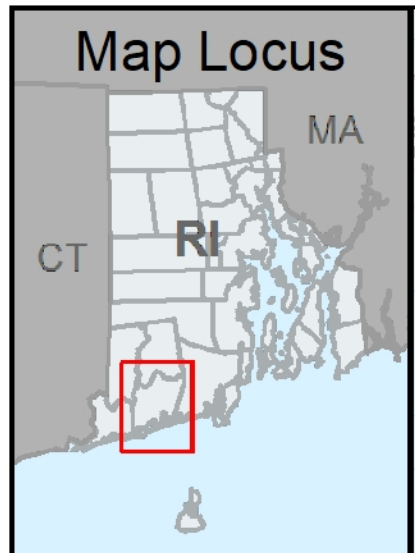
Policy 2.4 Minimize town use of water through conservation and other protective measures.

Action 1 Consider a cooperative program for watering of agricultural fields (odd/even days).

Action 2 Limit water use on athletic fields by using new drought resistant varieties when reseeding fields, and by establishing a policy to prohibit watering of fields during drought emergencies.

Action 3 Establish a signage program encouraging efficient water use in bathrooms and kitchens of municipal buildings and the elementary school.

Action 4 Amend the zoning ordinance and land development regulations as needed to mandate best practices to reduce water consumption.

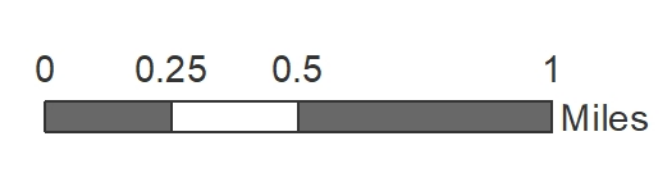
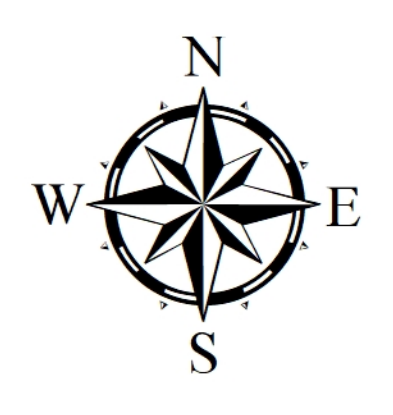


This map is not the product of a Professional Land Survey. It was created by the Town of Charlestown for general reference, informational, planning or guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. The Town of Charlestown makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.



LEGEND	
	Town Hall
	School (Public)
	Police Station
	Fire Station
	Library
	Senior Center
	Animal Control
	Landfill (Closed)
	Parks and Open Space
	Town Owned Parcels
	Water Service Districts

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



Prepared by:
Town of Charlestown

COMPREHENSIVE PLAN, 2020

PUBLIC FACILITIES



ENERGY

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's unique energy history, both conventional and alternative sources, and recommendations to achieve the goal of meeting future energy needs in an efficient and environmentally sustainable manner.

Cover Photo: Frances Topping

ENERGY CHAPTER

PAGE

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EN-2	Recommended Setbacks from Large Scale Wind Turbines	6-23

CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 6. ENERGY

INTRODUCTION

As with every other community in the state, energy production and use in Charlestown is in a period of change, with major implications for the future. Energy use is inextricably linked with the town's environment; climate change is a global problem that all communities, large and small, need to play a role in addressing. In Charlestown where natural resources are important to drinking water, wildlife and the tourism-based economy, alternative energy solutions to climate change must also be consistent with other goals for the protection of the local environment.

Energy in Charlestown has an important history. The forests have been managed for firewood for thousands of years. The Pawcatuck River powered grist and textile mills. In the 20th century, two nuclear power plants were proposed for the edge of Ninigret Pond. In the 21st century, utility scale wind turbines have been proposed close to Ninigret National Wildlife Refuge and utility scale solar facilities have been proposed for Charlestown's farms and forests. All of these have inspired passion in Charlestown's citizens when natural resources appear to be threatened.

Despite a history of controversial energy proposals, both the town government and the citizens of Charlestown have been leaders in energy efficiency and the use of alternative energy. Charlestown's dark sky initiative saves electricity while protecting human and wildlife health as well as the view of the stars. PRISM, the Partnership for Rhode Island Street Light Management, was conceived in Charlestown in 2016 under the leadership of the Charlestown Town Council. Over 300 Charlestown households participated in RI Energy Challenge's "*Find Your Four*" campaign. In 2017, Charlestown had one of the state's most successful local *Solarize RI* campaigns, with over 55 households signing contracts for solar energy systems. Charlestown is also a designated Property Assessed Clean Energy (PACE) community, allowing use of innovative financing for energy system improvements to commercial property through the Rhode Island Infrastructure Bank.

RELATIONSHIP TO OTHER CHAPTERS

This chapter, which describes Charlestown's energy history and proposals for the future, particularly in the area of alternative energy, complements four others:

Natural Resources Chapter

The importance of Charlestown’s forests, wetland systems, and wildlife habitats and corridors are discussed in detail in the Natural Resources chapter. If not managed well, energy production in Charlestown could threaten these resources. The Nature Conservancy has cautioned that “energy sprawl”, which is defined as widespread energy infrastructure development, is one of the most fundamental challenges that nature and humanity face in the coming decades.¹ But energy production may also represent an opportunity to manage growth and protect Charlestown’s natural resources. This chapter will discuss how to use energy production to protect local natural resources, while the Natural Resources chapter catalogs those resources and explains their importance.

Services and Facilities Chapter

Energy production, while principally a private enterprise (although publicly regulated) is most closely aligned with community services and facilities. Many of these services have an energy component. The town also has a role in managing its own buildings and grounds in a manner that conserves energy. Public facilities and infrastructure and related issues are described in the Services and Facilities chapter.

Natural Hazards Chapter

The changing weather patterns brought on by climate change will affect all communities in Rhode Island. As a coastal community, Charlestown is also susceptible to the impacts of sea level rise, and the 20 year horizon of the comprehensive plan must address this eventuality. Climate change is driven by energy use; it is primarily a result of energy production from conventional sources like fossil fuels, although it occurs on a macro rather than micro scale. The impacts of climate change on Charlestown and its coastal areas are discussed in detail in the Natural Hazards chapter.

Transportation Chapter

Transportation accounts for more than 30% of the energy used in Rhode Island. In Charlestown that percentage may be even higher as a community with very limited public transportation. The Transportation chapter discusses plans for bicycle and pedestrian paths for residents and tourists, as well as policies to support ride hailing and ride sharing services. If successful, those efforts will offset some of the energy used for transportation in Charlestown.

¹ <https://www.nature.org/magazine/archives/energy-sprawl.xml>

EXISTING CONDITIONS

Energy use in Charlestown is typical, consisting predominantly of electricity provided by National Grid and propane and fuel oil for space and domestic water heating. As a rural community, Charlestown also has many homes where wood is the primary or secondary heat source.

Municipal Energy Use

Charlestown has made progress to reduce municipal energy use in its buildings and streetlights as described in this section.

Municipal Buildings Energy Audits and Improvements

On behalf of the towns and school districts that make up Washington County, the Washington County Regional Planning Council received funding under the federal Energy Efficiency and Conservation Block Grant program (an energy initiative of the American Recovery and Reinvestment Act of 2009) to undertake a series of energy audits of, and improvements to, municipal buildings through a process called performance contracting.

The energy audit, completed in 2012², identified many opportunities to reduce energy costs within town buildings, which included the Town Hall, Senior/Community Center, Charlestown Animal Shelter and Charlestown Police Station. These included a new boiler and installation of a new “energy management system” in town hall, use of programmable thermostats in the Senior/Community Center and the animal shelter, and a number of capital upgrades to all of the town buildings – lighting retrofits, weatherization, pipe insulations, etc.

After completion of the audit, the energy services company recommended the specific projects and then was responsible for their completion. The costs of the improvements are covered by the savings in energy costs over a 20 year period.

Based on energy audits conducted on an as-needed basis through RISE Engineering, the town has also completed a number of energy efficiency improvements to its municipal and recreational buildings, primarily for energy efficiency lighting. These include conversion of exterior building and parking lot lighting to LED at the Town Hall and Senior/Community Center, the installation of an emergency generator at the Senior/Community Center, and most recently, the conversion of interior building lighting at the Town Hall to LED.

² Town of Charlestown Detailed Energy Audit Report: February 2012, Johnson Controls, Inc.

Partnership for Rhode Island Streetlight Management

The Partnership for Rhode Island Streetlight Management (PRISM)³ was first conceived by members of the Charlestown Town Council in cooperation with the Washington County Regional Planning Council (WCRPC). As of September 2016, it has become a statewide program, lowering energy use and providing significant cost savings. PRISM allows municipalities to purchase and control their own streetlights, remove any unneeded lights, and include energy efficient lamps and dimming controls on existing streetlights. In Charlestown the fixtures are designed to shield the lights to reduce light pollution and protect the dark skies. Charlestown will save an average of \$12,000 in annual maintenance costs and an average of \$27,000 in annual electrical costs by owning and controlling its own streetlights. LED lighting will increase annual energy savings by 60% or more. Charlestown's streetlights now include an "Intelligent Streetlighting" system that dims the lighting by 50% from 11 pm to 5 am, a reduction in energy use that translates to an additional savings of over \$30, 000 each year.

Energy Policies and Programs in Charlestown

Dark Sky Ordinance

The Charlestown Dark Sky Lighting ordinance⁴, which regulates the installation of outdoor commercial and municipal lighting, is intended to protect Charlestown's unique dark sky for astronomy purposes, to protect residents and the surrounding environment from the effects of light pollution, and to also promote energy efficient and sustainable lighting practices. New lighting fixtures and installations compliant with the standards of the International Dark Sky Association are required. This regulation reflects Charlestown's overall sustainability ethic. In addition to the ordinance, a brochure was created to educate the public entitled: "*Good Neighbor Outdoor Lighting - A Guide for Businesses, Homeowners, and Builders*".

Rhode Island Energy Challenge by National Grid

Charlestown citizens are committed to energy efficiency initiatives as demonstrated by the town's successful participation in the "Rhode Island Energy Challenge "*Find Your Four*" campaign (find four simple ways to save energy in your home) promoted by National Grid. The challenge requires that five percent of Charlestown residents sign up for the statewide energy efficiency campaign. As of August 2016, over 300 Charlestown households participated, and as a result, the town received a \$5,000 grant that was earmarked for the purchase of energy efficient lighting.

³ <http://www.prismstreetlights.org/>

⁴ <https://ecode360.com/16099584>

Solarize Charlestown

In 2017 the Rhode Island Office of Energy Resources and Commerce RI selected Charlestown to participate in a “Solarize” program to make solar energy more affordable to residents and small businesses, and to simplify the process of finding a contractor and installing solar panels for personal electric generation. Over 320 households requested solar assessments during the sign-up period. Those leads resulted in 58 rooftop solar contracts which is the highest per capita participation of any municipality in the state solarize program. Charlestown had a very strong marketing program that used popular local social media sites, direct mailing, email, letters to the editor, and neighborhood associations. Most of the contracts received incentive funding under Rhode Island’s Renewable Energy Growth Program (REG).

Community Development Block Grants

Over the years the town has allocated federal Community Development Block Grant (CDBG) funds for weatherization of qualifying low and moderate income housing as approved by the Town Council and managed by the Washington County Community Development Corporation (WCCDC). Since 2011, the CDBG Home Repair program has completed repairs on 56 units in Charlestown, 45 of these were single family homes and 11 were in multifamily dwellings. A total of \$365,000 was spent.

Each building is inspected for code compliance and all “necessary and reasonable” repairs are addressed. Windows and doors are replaced with energy efficient models as needed. All new products installed are specified to meet water saving and energy star requirements. The WCCDC works in conjunction with the Tri County Community Action Weatherization Program. Tri County’s program completes the insulation and heating system upgrades needed if the client qualifies, which they often do.

State Energy Plans, Policies and Programs

These State of Rhode Island efforts on energy influence local energy policy. There are several planning and policy documents which guide energy use and production at the local level.

Energy 2035, Rhode Island State Energy Plan, a State Guide Plan Element

The Rhode Island State Energy Plan, updated in late 2015 with a 20 year planning horizon, has a vision of a secure, cost-effective and sustainable energy system in Rhode Island across all sectors – electricity, heating and transportation. Energy 2035⁵ encourages communities to adopt local

⁵ <http://www.planning.ri.gov/documents/LU/energy/energy15.pdf>

siting standards for renewable energy that best fit their municipal energy needs, capacities and resources. The goals and policies of Energy 2035 are reflected in this chapter.

Rhode Island Renewable Energy Siting Partnership

In 2011 the University of Rhode Island (URI) was asked by the Governor and the state Office of Energy Resources (OER) to provide technical expertise regarding the effects renewable energy may have on the people, wildlife and natural resources of Rhode Island. A resulting stakeholder and public engagement process brought together a diverse group of constituents including representatives from municipalities, relevant government agencies, non-governmental organizations, utilities, land trusts, chambers of commerce, tourism groups and businesses. The purpose of this Rhode Island Renewable Energy Siting Partnership (RESP)⁶ was to provide siting guidance and data to local communities considering renewable energy development, and to inform local deliberation about whether to pursue renewable energy opportunities and what to consider when siting them. It was a collaborative effort with OER and the RI Statewide Planning Program.

In December 2012 the RESP produced a two volume, over thousand page report. The first volume, a summary report, addresses the siting issues of wind energy, landfill solar and hydropower. This was supported by the second volume, a series of technical reports, mostly focusing on the siting of wind energy facilities and their impacts. This work relied on a team of skilled professionals including staff at the Coastal Resources Center, scientists at URI and the Graduate School of Oceanography, Roger Williams Law School, Coastal Resources Management Council, Department of Environmental Management, Economic Development Corporation (now Commerce RI), and others. This chapter relies on science provided in the RESP.

The Rhode Island Greenhouse Gas Emissions Reduction Plan

The Rhode Island Greenhouse Gas Emissions Reduction Plan, adopted in December 2016⁷, includes strategies, programs and actions to meet the targets for greenhouse gas (GHG) emissions reductions as established by the Resilient Rhode Island Act.

The “Land Use Conservation” strategy of the plan states:

Land use conservation strategies preserve natural systems and environments that provide carbon dioxide “sinks,” helping to reduce the state’s net GHG footprint. Strategies include protecting existing forest acreage, reforestation, conservation of riparian buffers, enhanced forest management programs (on both private and public lands), reductions in

⁶ http://www.crc.uri.edu/projects_page/rhode-island-renewable-energy-siting-partnership-resp/

⁷ <http://climatechange.ri.gov/documents/ec4-ghg-emissions-reduction-plan-final-draft-2016-12-29-clean.pdf>

soil erosion to minimize losses in soil carbon storage, coastal wetland protection (e.g. blue carbon), and enhanced urban tree canopies. Scenario modeling results indicate that achieving the Resilient Rhode Island GHG targets could likely require no net future loss of forest or cropland. Policymakers could aim to align future local and state conservation policies with this broader goal, and adoption of a “no net-loss of forests” policy.

As a community outside of the Urban Services Boundary as described in the RI State Land Use Policies and Plan (“Land Use 2025”)⁸, Charlestown is already meeting the above strategies of the GHG emissions plan. Over 35% of the town is protected conservation land that includes forest and farmland. The existing land cover indicates that approximately 70% of the town is forested with many areas in un-fragmented tracks of over 100 acres. Many of these forested areas are managed for firewood production. The town has maintained its traditional development pattern of density in villages and low density residential development outside the villages and commercial areas. Bike paths have been created and more are planned. The dark sky ordinance and policies encourage energy efficient lighting.

In order to achieve the GHG emissions plan goal of no net future loss of forest or cropland, Charlestown will need to continue to acquire land for permanent conservation, direct development away from the remaining undeveloped land, and continue to concentrate development in the villages and existing neighborhoods using tools such as transfer of development rights and neighborhood infill, as well as mandating cluster or conservation development that protects most of the land that is slated for residential subdivisions.

In order to achieve both no net forest/cropland loss and increased energy production, Charlestown will have to find solutions to these two goals that achieve both simultaneously.

RI Infrastructure Bank Programs

Efficient Buildings Fund:

The town has also made application to the Efficient Buildings Fund, a statewide loan program available to municipalities to complete energy efficiency and renewable energy projects. Applications are made to the Office of Energy Resources with funding through the RI Infrastructure Bank.

Property Assessed Clean Energy:

Property Assessed Clean Energy (PACE) is a financing program of the RI Infrastructure Bank that allows commercial and multi-family property owners to receive funding for energy efficiency and

⁸ http://www.planning.ri.gov/documents/guide_plan/landuse2025.pdf

renewable energy improvements that is repaid in conjunction with local property taxes. Owners repay the cost of eligible improvements (energy efficient boilers and furnaces, building retrofits, automated building controls, insulation, solar PV systems, etc.) over a period of up to 25 years through an assessment that is added to the property tax bill. Resulting energy savings typically outweigh the annual assessment payment. Charlestown enrolled in the PACE program in 2016.

Renewable Energy Siting Stakeholder Group

In response to the state’s commitment to the development of clean renewable energy sources while protecting natural resources and the character of its communities, as outlined in *Energy 2035*, and in anticipation of legislation supporting this goal through renewable energy siting regulations, the OER and DEM formed an ad-hoc group of stakeholders to discuss energy siting needs, challenges and issues. This group met in the late summer and fall of 2017, throughout 2018 and into 2019. There was much work and discussion on drafting energy siting legislation with the primary focus on commercial solar installations.

In March 2018, the stakeholders group adopted the “Rhode Island Principles for Renewable Energy Siting” as a holistic framework to integrate competing interests in drafting policies and practices to facilitate the development of renewable energy in the state. This Energy chapter is intended to implement these principles in Charlestown by planning for local energy production that assists in achieving state renewable energy goals while protecting Charlestown’s open spaces, forests and farmland and ensures local control over land use decisions. The principles are listed in Appendix EN-1.

The OER and the Division of Statewide Planning, in coordination with DEM, also hosted a series of community-oriented public meetings around the state in the summer and fall of 2018 with the goal of developing renewable energy siting guidelines and the drafting of model ordinances relating to taxation and zoning.

ENERGY IN CHARLESTOWN: HISTORY, ISSUES AND OPPORTUNITIES

The following section is a history of the types of energy production proposed or developed in Charlestown, and a discussion of the opportunities associated with each. These histories can help to inform future decisions about fuel types and energy production in general.

In producing energy, Charlestown will seek solutions that protect or enhance its natural resources. When proposed energy facilities threaten the local environment, they have been met with stiff opposition from Charlestown’s residents. Two examples of natural resource conflict discussed below are nuclear power and utility scale wind.

When planning for energy production, Charlestown will need to establish regulations that tie energy production to the “Land Use Conservation” strategies of the *Rhode Island Greenhouse Gas Emissions Plan*.

Biomass – Wood Heat

After the glaciers retreated and forests returned to Rhode Island, local inhabitants began using wood for heat and cooking. This practice has continued uninterrupted into the present.

Locally grown firewood lessens dependence on fossil fuels, makes the forests more productive, and creates local jobs through the sustainable management of forest land. As of 2018, over 1,700 acres of land in Charlestown are enrolled in the Farm Forest and Open Space (FFOS) program. Many of these are managed forest lands that produce firewood and lumber. Many other Charlestown land parcels not enrolled in FFOS are also managed as wood lots.



Sue Tremblay

Wood Pile on Parcel Managed as a Wood Lot

In addition to providing fuel, Charlestown’s forests play a critical role in mitigating the effects of climate change on both the natural and human environment. Healthy forest ecosystems sequester carbon. Trees help protect human health by moderating temperatures, especially during summer heat waves, and reducing air pollution that contributes to respiratory problems. Forested buffers keep streams and rivers cool, necessary for fish habitat, and prevent nutrient and sediment runoff from harming water quality. Forests provide recreation and scenic beauty and also serve as wildlife habitat. Charlestown’s forests are part of a corridor of forested open space that extends from the ocean in Charlestown up to the state border with Massachusetts. This forested corridor is critical to helping the state’s wildlife adapt to climate change.

Wood as a fuel source has some drawbacks, including gases, particulate matter and other pollutants. In 2009 Charlestown passed an ordinance to regulate outdoor hydronic heaters⁹. This ordinance requires a permit for such heaters and regulates their location, operation and use, including the types of materials which can be burned. Indoor woodstoves are not regulated beyond inspection for safe installation. Along with promoting firewood from local managed forests and working to connect local producers with consumers of firewood, the town should provide education on new wood burning appliances that provide increased efficiency and lowered emissions, and are safer to operate.

The Rhode Island Woods website¹⁰ provides property owners with information on forest management, and how to connect with forest managers and create markets for firewood and other woodland products. Charlestown should promote this website and similar information resources to make residents aware of sources of local firewood, and to help local forest owners maintain markets for their products.

Hydropower

The Pawcatuck River forms the northern boundary of Charlestown leading from Worden Pond to the confluence with the Wood River at Meadow Brook Pond in Richmond. Many of the dams built along the Pawcatuck were constructed to generate power for the grist and textile mills that grew up along the river's edge. In recent years, work to restore diadromous fish to the Pawcatuck River has resulted in the removal of several dams and construction of fish ladders where some dams will remain. Completion of the project will allow river herring and other migratory fish, such as American shad, American eel, and brook trout, access to spawning and rearing habitat in the upper Pawcatuck, Beaver, and Usquepaug Rivers, as well as the ancient glacial lake that is Worden Pond. As migratory fish are restored, some opportunities for hydropower have been removed. The Pawcatuck will only become a source of power again if that can be achieved without interfering with efforts to restore these fish populations.

Nuclear Power

In 1973 the US Navy announced that the Charlestown Naval Auxiliary Landing Field, a WW II-era naval training base lying along the shores of Ninigret Pond, was excess to their needs. The US General Services Administration then initiated the process of disposing the property. In response, the New England Power Company (now a subsidiary of National Grid) pursued acquisition of the base as the site to build two 1,150 megawatt nuclear power plants. The company planned to cool the power plants with water from Block Island Sound. After nearly six years of studies, passionate debate and litigation, the power plant proposal was dropped in favor of transferring the land to the

⁹ <https://ecode360.com/13939635>

¹⁰ <https://rhodeislandwoods.uri.edu/>

Town of Charlestown and the US Fish and Wildlife Service (by way of the US Department of Interior). These irreplaceable public lands are now the 230 acre Ninigret Park and the 380 acre Ninigret National Wildlife Refuge. Charlestown's opposition was the first successful campaign in the United States to halt the construction of a nuclear power plant. The years of environmental study to oppose the plants also launched a movement to preserve the coastal ponds.

Nuclear power seems highly unlikely to be proposed again for coastal Charlestown as the land and ponds are now protected as federal, state and local parks and refuges. But before the memory and details of this history are lost, the town should support a process to compile these studies and other documents and create a history of the nuclear power proposal. History is more likely to be repeated if it is allowed to be forgotten.

Utility Scale Wind Energy

From 2010 to 2013 two proposals for a total of five industrial scale wind turbines either adjacent to or near the Ninigret National Wildlife Refuge were proposed in Charlestown.

The first proposal for three utility scale turbines in Ninigret Park near Frosty Drew Observatory and Science Center, and adjacent to the National Wildlife Refuge, was initiated in 2010 by the Town Administrator in place at that time. Because the transference of the land to the town by the Department of Interior in 1981/82 came with a restriction that it be used exclusively for public park or recreation purposes, and also that any use be compatible with the adjoining wildlife refuge, the National Park Service formally opposed the placement of the turbines, thereby preventing any further consideration of the project.

A second proposal for two utility scale turbines on what is now the Charlestown Moraine Preserve, a 78 acre parcel with frontage on Route 1, was made by a private developer, also in 2010. These turbines were proposed just at or within the setback limits as recommended by the RESP (in draft form at that time) for National Wildlife Refuge properties, the coastal ponds and habitats for wading/shore birds. The proposal drew tremendous opposition from neighbors north and south of Route 1, with more than 400 residents regularly showing up for multiple public hearings.

Following two years of legal wrangling in the town over the application for the two turbines, (which included consideration of the potential impacts of the turbines on wildlife), the Town Council in place in summer of 2013 made a decision to purchase the property for open space preservation. The Charlestown Moraine Preserve now protects groundwater, the coastal ponds, wildlife habitat and dark skies. It provides public access for passive recreation such as hiking, and visually protects nearly a mile of road frontage on Route 1, a state scenic highway.

In December 2012, the Rhode Island Renewable Energy Siting Partnership (RESP) report was published. Part of the report was the establishment of setbacks for wind turbines for the protection

of bird and bat populations. These setbacks include 1 kilometer (km) setbacks to National Wildlife Refuge properties and the coastal ponds and beaches, and lesser setbacks to any conservation land, contiguous forest, large grasslands, osprey and falcon nests, wetlands and other wildlife areas. Charlestown is so rich in these features that there is little area not inside these setbacks. These setbacks are shown in a table contained in Appendix E-2 which illustrate just some of the constraints to siting large-scale wind turbines in Charlestown.

In addition to concern with bird habitat, it is known that slow turning blades, resulting from low wind speeds, are correlated with higher bat fatality rates. The greatest bat fatality events occur when wind speeds are below 11 miles per hour (6 meters per second). Shutting down wind power generation during periods of slow wind speed, when bats are most prone to collision, has proven effective in reducing bat mortality. The RESP recommends a cut in (start up) speed of 6 meters per second to avoid bat mortality, but outside of the coastal areas the average wind speeds are lower than this. For example, the turbines proposed at the Charlestown Moraine Preserve had a cut in speed of 3 meters per second to take advantage of the lower wind in that location. Siting utility scale turbines in Charlestown in a manner which also protects wildlife would be a challenge.

The State Guide Plan element, Energy 2035, directs municipalities to use the RESP setbacks to guide the siting of large-scale wind turbines. When writing an ordinance for large-scale wind, the entire RESP document should be consulted.

Small Scale Wind Energy

Zoning regulations for small-scale wind turbines (“*Residential Wind Energy Facilities*”) have been in effect since late 2011¹¹. Drafted by the Charlestown Planning Commission, the regulations are intended to balance the right of the applicant to harness wind energy with the right of neighbors to the safety and enjoyment of their property. The Building Official is authorized to issue permits for any turbine that meets the height limits set for a primary structure. Specifications provided by the manufacturer are accepted measures in the application. To save on costs for electrical hook-up, no restriction is placed on proximity of the turbine to the residential structure. Taller turbines are a greater imposition on neighbors, and therefore require a special use permit. Since all of Charlestown must meet code for what is designated as a “High Wind Zone”, structural and electrical work must be certified by an engineer licensed in RI.

Utility Scale Solar Energy

As of late 2018, Charlestown had no regulations governing commercial solar installation in town, effectively prohibiting solar energy as an electric power production source. In 2017, a developer introduced a text amendment to the Charlestown Zoning Ordinance to facilitate a 5 megawatt solar

¹¹ <https://ecode360.com/14619502>

facility on farmland in Charlestown and potentially other parcels. The Town Council turned the text amendment down because of environmental and procedural concerns. Although this particular amendment did not become effective, the Town Council recognized the need for an ordinance to regulate the development of commercial solar energy systems in town.

In Charlestown, many large landowners have been approached by solar developers with unsolicited financial offers. Even in the absence of an ordinance to allow utility scale solar development, the pressure on landowners and the town was and is intense.

Charlestown's large-scale solar ordinance will need to be protective of forest and other natural resources. Charlestown should issue, such as Vermont does, a "certificate of public good" for large-scale solar projects that meet certain criteria. Projects that do not meet such criteria would not be approved. Possible criteria could include:

- Reuse – Landfill, gravel banks, or other degraded land would be prioritized (in concert with appropriate remediation).
- Growth management – Parcels developed for solar rather than housing could be protective of groundwater and might lessen other impacts of residential development. The area allowed for solar would be a function of the number of allowed houses on that parcel and the remaining land would be held in a temporary conservation easement for the life of the project. For any particular parcel, there should be a near equivalency between the area of disturbance expected for a residential subdivision and the area of disturbance for a solar installation. Under RIPDES regulations the town is currently seeing about 0.5 acres of allowed disturbance per single family home. Land is also cleared for road and drainage construction. Clearing for interconnection to the grid would also be counted against the total allowed area of disturbance.
- Land acquisition for conservation – If a modest portion of a parcel can be developed with solar, it could help to finance the permanent protection of the entire parcel including the remaining forested area. Such a scenario would further the goals of the RI Greenhouse Gas Emissions Reduction Plan by both preserving forest and replacing fossil fuels. Solar developers would have to partner with a government or conservation organization, and careful monitoring would have to be done to ensure that advance clearing to allow the solar placement does not occur.
- Government buildings – Federal solar incentives are based on tax credits and tax-exempt governments and organizations cannot take advantage of these. It might make sense for town government and others to lease rooftop space to a solar company.

- Government land – Non-forested areas of town lands which are not used for conservation or recreation could be used for smaller solar installations.

Zoning for large-scale solar projects requires specific development and approval standards, including but not limited to the following: visual buffers and other site standards to protect nearby residents and natural, scenic or historic areas; restrictions against forest clearing in excess of what would be expected by development following the underlying zoning; and a funding mechanism to ensure that removal and site restoration is achieved following the useful life of the solar facility.

Small Scale Solar Energy

In Charlestown the process to install solar panels for residential or small business use is fairly simple. Solar panels require a building permit for the structural portion and an electrical permit for the wiring. They are considered a part of the structure if they are secured to the building or an accessory structure if detached (ground-mounted). If roof mounted, the Building Department needs verification that the existing roof is designed for the added loads. If ground mounted, a site plan is required to verify that the structure meets the property line setbacks and the lot coverage limitations for the zoning district in which it is located. Both systems require a wiring schematic and certification that they are designed to meet the wind loads.

Such systems typically do not meet the entirety of the building’s electricity needs on an annual basis. For eligible customers, credit from National Grid is given during periods of excess energy production through net metering, a process which allows the customer to send unused energy to the grid, and receive credit (during a single billing period) when the energy produced from the solar panels exceeds the energy taken from the grid.

As described under the “Solarize Charlestown” program above (Existing Conditions section of this chapter), the interest in rooftop solar in Charlestown is great. If the incentives matched the demand, solar panels could be put on many hundreds more houses. When available, the current state and federal incentives make solar affordable and a good investment for homeowners.



Frances Topping Charlestown Home with Rooftop Solar Panels

In July 2018, OER, in coordination with the Distributed Generation Board, is proposing an increase in the number of megawatts of capacity available for rooftop solar under the 2019 Renewable Energy Growth Program. Under this proposal, the cap would be raised 27% to nearly 9 megawatts, allowing more homeowners across the state to access the program starting in the spring of 2019.

To facilitate roof-top solar, Charlestown should provide an informational brochure at the Town Hall on adding solar panels when a roof is replaced or including solar roofs in new house design. The town could also consider incentivizing solar roofs by reducing or eliminating building fees, particularly in cases where a new roof may be required to support the solar panels.

Many sites in town are also suitable for ground mounted solar arrays that are sized to serve on-site energy needs. There may also be a greater demand for ground-mounted systems as more automobiles are powered by electricity, and rooftop solar systems cannot produce all the power a family needs. Ground mounted systems as accessory structures can be encouraged by reviewing the applicable dimensional standards in the zoning ordinance, and considering adjusting minimum property line setbacks and maximum lot coverage requirements so as to make the systems easier to site.

Energy Efficiency

Recycling

At current loading rates it is estimated that the Central Landfill in Johnston, where waste is taken from Charlestown, will reach capacity in 2034. Increased recycling would help delay this. The town pays a tipping fee to the Rhode Island Resource Recovery Corporation (RIRRC) for waste taken to the site in Johnston, and those fees will increase significantly as the Central Landfill reaches capacity (see discussion in the Services and Facilities chapter).

Residents who take their own refuse to the Charlestown Residential Collection Center (CRCC) have a strong incentive to recycle. Recycling is free, while there is a fee per bag for solid waste. This incentive results in a high percentage of waste being recycled from the municipal drop-off program in Charlestown, over 30%. The CRCC also takes yard waste, which it composts and distributes back to interested residents.

Many residents contract with private waste haulers rather than make use of the CRCC. These private waste companies are required by state law to recycle, but it is unknown what their compliance is as many empty their trucks at transfer stations outside of Charlestown. Charlestown should work to ensure that these waste haulers are complying with state recycling laws.

Tourists and summer renters are likely not recycling at the same rate as local households and they account for the majority of the population in the summer. Additional publicity, enhanced public

education, and the strategic placement of recycling containers at key locations, such as beaches and tourist destinations, could all serve to increase the amount and type of recyclables the town brings to the state landfill in Johnston.

Composting

Charlestown is the composting center of Rhode Island by virtue of hosting both Earth Care Farm and the Worm Ladies of Charlestown.

Established in 1977, Earth Care Farm¹² is Rhode Island’s oldest operating farm composter. The operation takes in about 10,000 cubic yards annually of organic matter otherwise destined for the state landfill. That material makes about 4,000 cubic yards of nutrient-rich compost. The compost is sold to home gardeners and landscapers to improve soil fertility, create a healthy habitat for microorganisms, and increase drainage, aeration and water holding capacity of soil. These are all factors that help soils better withstand weather extremes and disease associated with climate change. Earth Care Farm is eager to promote composting. They encourage visitors to stop in for a guided walk of the farm and to learn about composting techniques for the home.



Frances Topping

Compost Pile at Earth Care Farm

The Worm Ladies of Charlestown¹³ is a worm composting operation that started as a backyard project in the early 1990s. This business has grown to sell red wiggler worms by the pound, worm castings, indoor and outdoor worm bins, books on worm composting and other accessories. They run workshops and clinics on vermicomposting.

¹² <http://www.earthcarefarm.com/>

¹³ <https://www.wormladies.com/>

There are many homes in Charlestown already occupied by avid composters, but many more who are sending their kitchen waste to the landfill. With two such great leaders in composting in town, Charlestown should take an active role in encouraging and promoting composting by making these farm tours and workshops well known both locally and regionally. The town should consult with these businesses to learn if there are other strategies the town could use to increase composting in Charlestown.

National Grid Efficiency Incentives

National Grid has programs to promote energy efficiency. In 2012 National Grid provided \$158,000.00 in incentives to Charlestown residential, commercial, and industrial customers. Although these promotions are included in energy bills, many customers now use electronic bill payment through their bank accounts and may not be aware of the promotions. The town may want to coordinate with National Grid to help promote these incentives to raise awareness among Charlestown citizens.

Barriers to Efficiency

Charlestown should consider prohibiting developers from adding covenants to subdivisions that encourage energy use or discourage efficiency. These include items such as mandating large house sizes or prohibiting clothes lines or solar panels.

Transportation

Charlestown will continue to work to reduce vehicle miles traveled. It will continue to develop bicycle paths and lanes and connected hiking trails to encourage these forms of transportation where possible in and around town. It will encourage and promote ride hailing and sharing services to help connect Charlestown residents with Amtrak stations in West Kingston and Westerly and public transportation in more densely developed communities. This topic is discussed in depth in the Transportation chapter.

Energy 2035 Strategies

Energy 2035, the statewide energy plan, recommends six strategies for municipalities to consider as energy implementation actions to be included in comprehensive plans. These strategies are listed below, and many have already been achieved or implemented in Charlestown:

1. Conduct a municipal energy use baseline and develop a plan to reduce public sector energy consumption

Energy audits for municipal buildings are on-going, along with energy efficiency improvements.

2. Seek Property Assessed Clean Energy (PACE) designation for the community

Charlestown is open to making use of this financing program in response to interest on the part of commercial and multi-family residential property owners.

3. Adopt zoning and siting standards for renewable energy projects

Charlestown is committed to maintaining and strengthening such standards for both small-scale wind and solar. Zoning regulations for large-scale renewable energy will be written to implement this and related chapters of the comprehensive plan.

4. Use an expedited application and permit process for renewable energy facilities

Charlestown follows all state mandated streamlined solar permitting application processes (see OER regulations establishing the statewide solar energy permit application process covering both building and electrical permit aspects of solar energy systems; 300-RICR-00-00-3).

5. Replace end-of-life municipally owned vehicles with high fuel efficiency and/or electric vehicles

All town vehicles purchased are as high efficiency as the market offers for each type of vehicle. In particular, the trucks and specialized street machines used by the Public Works Department are as efficient as practicable for the purpose intended.

6. Adopt zoning and land use policies that preserve open space and promote compact growth

Charlestown's long-standing land use practices are to preserve open space and promote compact growth. Most businesses and dense development are concentrated in the historic villages. Cluster design is mandated for all major subdivisions, and residential compounds are encouraged as a way to reduce density in rural areas. In addition, regulations for the siting of large scale solar energy systems will be done in a manner consistent with the goal of preserving open space by directing installations to land already disturbed or cleared, or limiting clearing for the installation to that which would otherwise occur under a residential subdivision.

ENERGY: GOAL, POLICIES AND ACTIONS

GOAL: **Ensure that Charlestown’s future energy needs are met in an efficient and environmentally sustainable manner.**

POLICIES AND ACTIONS

Policy 1.1 Promote conservation and energy efficiency.

Charlestown must consider energy efficiency in all municipal projects and purchases, and encourage energy efficiency by residences and businesses, by promoting conservation as a lifestyle and business choice.

Action 1 Complete remaining energy efficiency improvements to all municipal buildings as recommended by the on-going energy audits.

Action 2 Continue the policy of replacing town automobiles with the most fuel-efficient models as feasible.

Action 3 Continue to use CDBG funds to assist low and moderate income households to increase the energy efficiency of their homes.

Action 4 Explore the placement of recycling bins in various town locations to facilitate recycling by tourists and seasonal residents.

Action 5 Establish a composting program of public education and outreach.

It is recommended that the town take advantage of the presence in Charlestown of leaders in composting, such as Earth Care Farm and the Worm Ladies, to educate and encourage composting by more residents in Charlestown and other rural towns of the state.

Policy 1.2 Reduce local dependence on fossil fuels.

Action 1 Promote the Rhode Island Woods website and similar information resources to make residents aware of the sources of local firewood and to help local forest owners maintain markets for their forest products.

Action 2 Produce an informational brochure on the specifics and benefits of adding solar collectors when a new house is constructed, or roof is replaced.

Action 3 Adopt a town ordinance that incentivizes solar roofs on both new and existing structures by reducing or eliminating fees, or providing other economic incentives.

Promoting and educating the public on rooftop solar installation can be done through the Building Department and on the Town of Charlestown website.

Action 4 Consider amending the zoning ordinance to allow reduced setbacks and greater lot coverages for ground mounted solar systems installed to meet on-site energy needs.

Action 5 Reduce or prohibit barriers to energy conservation and use of renewables in subdivision or land development covenants.

This action can be completed by the adoption of a town ordinance by the Town Council which prohibits such covenants from restricting the use of on-site renewables by homeowners' associations, or by the establishment of such a policy by the Planning Commission when reviewing such documents.

Policy 1.3 **Maintain a regulatory environment that encourages alternative energy development while protecting natural and cultural resources.**

Action 1 Establish zoning which allows the installation of renewable energy systems in a manner which also protects the natural and cultural environment.

Any commercial solar zoning ordinance adopted by the town must provide visual buffers to protect nearby residents and natural, scenic or historic areas; must avoid the clearing of forests; is sized to have limits of disturbance that are no greater than what is expected by development following the underlying zoning; and that protects the remaining land with either temporary or permanent conservation easements.

Action 2 Enact zoning which directs commercial solar development to degraded land such as the landfill or gravel banks; or to parking lots or other already developed land.

The use table of the zoning ordinance must be evaluated to ensure that large commercial solar arrays are not just prevented in sensitive natural areas but encourage as a re-use of "compromised" land.

Policy 1.4 Support energy efficient land uses and lifestyles

Action 1 Continue to enact, amend (as needed) and implement zoning and subdivision regulations that preserve open space and promote compact growth.

It remains the policy of the town to conserve land in the rural and undeveloped areas of Charlestown while encouraging appropriate density of development in village centers, including Cross Mills, Carolina, and Shannock (see Land Use chapter), as a means to help reduce energy use, related to transportation in particular.

Action 2 Adopt and implement land use conservation strategies that reduce greenhouse gases.

In order to achieve the “Land Use Conservation” strategy of the Rhode Island Greenhouse Gas Emissions Reduction Plan, Charlestown will continue to acquire land for permanent conservation, including existing forest acreage, support reforestation, and continue to restrict the removal of trees and other vegetation as part of the review and approvals of new development.

Action 3 Continue to plan and develop town-wide biking and hiking routes.

As described in the Transportation chapter, Charlestown will continue its efforts to expand bicycling opportunities, in particular by coordinating with the RI Department of Transportation regarding existing and proposed bike routes, bike lanes and bike paths.

Action 4 Periodically review town ordinances to ensure that there are no local restrictions against ride-sharing or ride-hailing business.

Allowing ride hailing and ride sharing services that connect with public transportation in nearby communities, or that simply provide for travel needs on a case-by-case basis is a necessary component of reducing individual automobiles use.

Policy 1.5 Maintain an awareness of the history of energy proposals in Charlestown, such as the proposed nuclear power plant, and consider the environmental impacts of new energy technologies and proposals.

Given Charlestown’s active energy history, it shall be the policy of the town to document the past and to consider the future in light of the lessons learned.

APPENDIX EN-1

Rhode Island Principles for Renewable Energy Siting Renewable Energy Siting Stakeholder Committee, March 2, 2018

1. Accelerate the pace toward achieving Rhode Island's renewable energy and greenhouse gas reduction goals through thoughtful and strategic development of renewable energy projects of all sizes.
2. Build support for achieving Rhode Island's renewable energy and greenhouse gas reduction goals by increasing public understanding of the multiple benefits of renewable energy including to the economy, the environment, to promote equity and to cultivate climate resiliency.
3. Provide predictability, consistency and fairness in state and local rules, regulations, zoning and ordinances to support development of renewable energy projects.
4. Promote proactive, comprehensive utility distribution system planning.
5. Ensure that regulations governing renewables are applied in a fair and balanced manner with those governing other land uses, while recognizing that local zoning is the authority of communities to establish public health and safety standards.
6. Honor commitments to keep permanently protected land free from development.
7. Encourage renewable energy development on commercial and industrial zoned land, on already developed land, and in other locations with environmental alterations such as closed landfills, brownfields, parking lots, commercial and residential rooftops, sand and gravel pits.
8. Support the economic viability of farms through appropriate renewable energy development as a complementary use in a manner which keeps farms in agricultural production while preserving agricultural soils.
9. Promote policies that recognize ecological services and sensitivity as well as habitat connectivity in the siting of renewable energy projects.
10. Respect landowner rights to realize value from their property within the context of established planning and zoning principles.
11. Ensure equitable access to renewable energy installations for all consumers, and recognize that delaying the transition to renewable energy disproportionately burdens environmental justice communities.
12. Provide local governments with guidance on smart renewable energy siting and to ensure consistency between the state guide plan and local ordinances and policies. Establish a timeline for all municipalities to adopt renewable energy siting ordinances and associated processes.
13. Provide opportunities for state and municipal governments to lead by example and use renewables to exercise more control over their energy use and production in meeting their energy needs.

APPENDIX EN-2
 Recommended Setbacks from Large Scale Wind Turbines
 By Bird Species, Types and Habitats Documented in Charlestown

Species	Distance	Conservation Status	Comments
Piping Plover	1 km	Federally Threatened	Prevent impacts on coastal nesting beaches, foraging sites, and staging areas
Roseate Tern	1 km	Federally Endangered	Prevent impacts on roosting and staging areas
Peregrine Falcon	0.5 km	State Endangered	Avoid known nesting locations and concentration sites
Osprey	0.5 km	State Concern (rare or vulnerable)	Avoid known nesting locations
Least Tern	1 km	State Threatened	Prevent impacts on coastal nesting beaches, foraging sites, and staging areas
Coastal Ponds	1 km	Variety	Key nesting, foraging, and wintering habitat for a broad suite of species
National Wildlife Refuges	1 km	Variety	May contain critical habitats and listed species
State, Local and Private Conservation Areas	0.1 - 1 km	Variety	Buffer distances to be coordinated with manager of conservation land
Forest Birds	0.1 km	Variety	Recommend not constructing within Contiguous forests >100 acres, but turbines can be at edge of large forest patches.

Species	Distance	Conservation Status	Comments
Grassland Birds	0.1 km	Variety	Have buffer when grassland is >5 acres.
Scrub-Shrub Birds	0.1 km	Variety	Have buffer when shrubs are >3 Acres.
Wading-Shore Birds	1 km	Variety	Buffer for key stopover habitat during migration at coastal ponds and mudflats in southern RI.

Source: RESP document Chapter 1 Table 10 “Suggested siting considerations and distances from the nests of sensitive species of birds and sensitive habitats in Rhode Island”.

Note: 1km equals one kilometer or 3280.84 feet.

Note: This list does not include all species of conservation status in Charlestown



NATURAL HAZARDS

CHARLESTOWN COMPREHENSIVE PLAN

A description of the natural hazards facing Charlestown, issues and opportunities related to storms and climate change, and recommendations to achieve the goals of adaptation and sustainability.

Maps

NH-1 Flood Zones and Hazard Areas

NH-2 Sea Level Rise Scenarios

NATURAL HAZARDS CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN
CHAPTER 7. NATURAL HAZARDS AND CLIMATE CHANGE

INTRODUCTION

Due to its location and geographical characteristics, Charlestown is vulnerable to coastal storms including the impacts of high winds and storm surges, coastal and riverine flooding, and severe winter weather. Changing weather patterns due to climate change also require that Charlestown, like other communities, prepare for the impacts of sea level rise and the increased severity of storm events.

This chapter is based on the Town of Charlestown Natural Hazard Mitigation Plan (NHMP) adopted by the Town Council and approved by the Federal Emergency Management Agency (FEMA) in 2017. The NHMP contains significant detail on the natural hazards that Charlestown will likely be confronted with in the future, including climate change and sea level rise. Its approval by FEMA ensures Charlestown’s continued eligibility and participation in the federal National Flood Insurance Program (NFIP). FEMA acceptance of the plan also makes the town eligible for federal and state grant programs to help address natural hazard impacts in vulnerable areas of the community. This chapter presents a summary of the risk analysis included in the NHMP and includes the planning related recommendations and actions, and addresses the requirements detailed in the RI State Guide Plan concerning natural hazards and climate change. Interested parties are encouraged to review the Natural Hazard Mitigation Plan which is available in electronic form on the Town of Charlestown website.

RELATIONSHIP TO OTHER CHAPTERS

The contents of this chapter is related to that in several others.

Natural Resources Chapter

Charlestown’s beaches, salt ponds, water bodies and forests, as described in the Natural Resources chapter, both support resiliency and can be at risk from natural disaster events. Protecting natural resources also means preparing for natural hazards and adapting to climate change.

Services and Facilities Chapter

Natural hazards and climate change impact local infrastructure and the provision of municipal services, as described in the Services and Facilities chapter. The long-term effects of sea level rise and climate change must also be considered in planning for infrastructure and local service efforts, especially for at-risk populations.

Energy Chapter

Climate change is driven by energy use; it is a result of energy production from conventional sources like fossil fuels, although it occurs on a macro rather than micro scale. A discussion on energy use and solutions for greater sustainability is contained in the Energy chapter.

EXISTING CONDITIONS

Overview – Partnerships for Natural Hazard and Climate Change Mitigation

The overall objective of this chapter is to establish goals and recommend policies and actions for the town that minimize the ecological, economic and social impacts resulting from natural hazard events. More than almost any other issue, planning for natural hazard mitigation and adaptation to the impacts of climate change and anticipated sea level rise require the coordinated efforts of all levels of government, and all members of the community. It is a concern of local government, the state government and federal agencies as well as non-profit environmental advocacy organizations. In this regard the town has extensive partnerships and relationships with diverse agencies including the RI Department of Environmental Management (RI DEM), the RI Coastal Resources Management Council (CRMC), the RI Emergency Management Agency (RI EMA) and the Federal Emergency Management Agency (FEMA). In particular, the CRMC Shoreline Change Special Area Management Plan (SAMP) recognizes the need for comprehensive planning to address the impacts of storm surge, flooding, sea level rise and erosion. The Shoreline SAMP is a valuable management tool for municipalities to address challenging coastal issues such as water quality, sea level rise and coastal development patterns.

Charlestown also has an opportunity through the comprehensive plan update to coordinate with the two other major planning documents: The Natural Hazard Mitigation Plan and the Harbor Management Plan, both adopted in 2017. All three documents have consistent language, goals and recommendations relating to overall community resiliency.

Charlestown Efforts to Mitigate the Risks of Natural Hazards

Charlestown has been active in areas relating to mitigating natural hazard risks. Such actions have included:

- Enforcement of the State Building Code
- Participation in the National Flood Insurance Program
- Adoption of revised FEMA Flood Insurance Rate Maps (FIRMS) in 2013
- Implementation of low impact development (LID) techniques consistent with the RI Stormwater Design and Installation Standards Manual
- Amendment of the zoning ordinance to prohibit structural fill in flood hazard areas

The town has also undertaken a number of specific steps to mitigate the impacts of storm events and flooding. It has created a GIS map of the entire drainage system in the community, including an inventory of all major system components. It has worked to remove an outdated stormwater discharge system on Charlestown Beach Road and replace it with a low impact design (LID) and best management practices (BMP) stormwater system. It has identified town roadways vulnerable to wash-out and developed plans to upgrade the infrastructure, including replacing a bridge and elevating a roadway where needed (Kings Factory Road where it crosses Straight Brook). Rain gardens have been installed in the town owned Ninigret Park and there are plans to include installation of more in several paved areas of town to remove impervious surfaces and promote stormwater infiltration.

In 2019 the town amended the flood hazard regulations in its zoning ordinance to prohibit filling in a floodplain for development (only non-structural fill for grading purposes allowed), and to require that all new public safety buildings be located outside of the 500 year floodplain. Both of these were recommended actions of the 2017 Hazard Mitigation Plan.

Community Rating System (CRS) Program

Most significantly however, has been Charlestown's efforts to achieve a high community rating under the National Flood Insurance Program (NFIP). Since 2015 Charlestown has been accepted into the Community Rating System (CRS) Program by FEMA, a voluntary program that recognizes communities for floodplain management activities that exceed the minimum NFIP standards. Upon acceptance into the program, property owners in the Town of Charlestown receive discounts on their Flood Insurance Premiums based on the "Class" rating in the CRS program.

Charlestown has achieved a Class 7 rating, the first in the State of Rhode Island and the second community to receive such a high rating in the entire Northeast. The Class 7 rating qualifies all property owners with a standard flood insurance policy for a 15% discount on their flood insurance premiums. The high rating is based on efforts that the town has taken to go above the minimum requirements for floodplain management. These include the categories of floodplain mapping and regulations, flood damage reduction, flood preparation and public outreach. It is also reflective of the large amount of special flood hazard area which is protected as open space; as of 2019, of the 3,870 acres of special flood hazard area in Charlestown, 2,060 acres is considered open space, protected either through regulation or ownership.

Currently there are nearly 800 NFIP policies in effect in the Town of Charlestown. The Class 7 rating saves property owners in the Town of Charlestown upwards of \$200,000 a year in combined premiums. As more policies are purchased and premiums increase, so will the savings.

Charlestown Risk Profile

Table NH-1 provides a summary of current land usage by general category in Charlestown for the years 2004 and 2015. This data is presented to illustrate the distribution of improved and undeveloped properties that might be impacted by natural disaster events, sea level rise and climate change. It is noteworthy that the town has experienced modest growth over the time increment illustrated in the table, most of which occurred in the residential sector (222 properties added).

**Table NH-1
Summary of Land Use Changes in Charlestown**

Land Use	2004			2015		
	Acres	Parcel Count	Percent	Acres	Parcel Count	Percent
Residential	6,714	4,885	30.94 %	7,066	5,107	32.41 %
Commercial	549	92	2.53 %	512	101	2.35 %
Agricultural	1,877	70	8.65 %	1,782	68	8.17 %
Exempt Properties*	8,923	205	41.12 %	9,378	255	43.02 %
Undeveloped	3,376 (Res) 261 (Com)	962 38	15.56 % 1.20 %	2,893 (Res) 168 (Com)	836 42	13.27 % 0.77 %
Total Land in Town	21,700	6,252	100 %	21,799**	6,409	100 %

* Exempt Properties = Public or non-profit ownership, does not include roads and other infrastructure.

** Total acreage based on updated surveys

Charlestown Hazard Profiles

Tables NH-2 and NH-3 present a description of the types of natural hazards, by broad classification, that Charlestown may expect to experience. A separate section on climate change and accelerated sea level rise is discussed in the Issues and Opportunities section of this chapter.

The hazards are profiled according to location (geographic area affected), maximum probable extent (magnitude/strength on a scientific scale), previous occurrences, severity of impact and probability of future events.

This process has utilized recent events to inform and focus its recommendations and action strategies, including the March 2010 flood events, Tropical Storm Irene (2011), Superstorm Sandy (2012) and the severe winter storm and snowstorms of 2013 and 2015, respectively. All these events caused damage to the town, but none more than Superstorm Sandy's major coastal erosion, and wide-spread flooding which destroyed or damaged homes and businesses along the coast.

**Table NH-2
Charlestown Specific Hazards**

Flood Related Hazards	Wind Related Hazards	Winter Related Hazards	Additional Hazards
Coastal Flooding	Hurricane	Snow	Extreme Heat/ Drought
Heavy Rains and Riverine Flooding	Thunderstorms	Ice	Sea Level Rise (SLR)
Dam Failure/Breach		Extreme Cold	Climate Change

**Table NH-3
Probability of Local Hazards**

Flood Related Hazard	Probability	Potential Effects	Risk Priority
Coastal Flooding	Highly likely	Erosion, flooding, property damage power outages, loss of life	High
Coastal Erosion/Shoreline Change	Highly likely	Loss of coastal features, property damage saltwater intrusion	High
Climate Change/SLR	Highly likely	Accelerated sea-level rise, heat waves landward migration of coastal features flooding, property loss, saltwater intrusion	High
Heavy Rains/Thunderstorms	Highly likely	Flooding, property and infrastructure damage	High
Riverine Flooding	Likely	Infrastructure flooding/damage property damage	High
Wind Related Hazard	Probability	Potential Effects	Risk Priority
Storm Surge	Highly likely	Landward migration of salt marshes and increase inland flooding, loss of public and private property, saltwater intrusion	High
High Winds and Thunderstorms	Highly likely	Coastal erosion, power outages downed trees and limbs, property damage	High
Hurricane	Likely	Coastal erosion, flooding, property damage power outages, loss of life	High
Winter Related Hazard	Probability	Potential Effects	Risk Priority
Snowstorm: snow, ice and/or extreme cold	Highly likely	Power outages, roof collapse, high winds coastal flooding	Medium
Other Hazard Type	Probability	Potential Effects	Risk Priority
Extreme Heat/Drought	Likely	Heat exhaustion, heat stroke, death Potable water impacts during drought	Medium

Table Note: Highly likely = near 100% probability within the next year; Likely = between 10% and 100% probability within the next year or at least one chance in next 10 years; Possible = between 1% and 10% probability within the next year or at least one chance in next 100 years; Unlikely = less than 1% probability in next 100 years

NATURAL HAZARDS IN CHARLESTOWN: ISSUES AND OPPORTUNITIES

Charlestown is vulnerable to diverse events including coastal flooding, riverine flooding, heavy rains, storm surge, and high winds (hurricanes). The town is also subject to anticipated effects of sea level rise (SLR) and climate change. The greatest risk area in Charlestown occurs south of Route 1 along the coast of Rhode Island. This is an area of higher population density and future development pressure.

The following is a summary of the natural hazards impacting Charlestown; for more detail, please see the Hazard Mitigation Plan.

Coastal Flooding

Coastal flooding is typically a result of storm surge and wind-driven waves, which erode the coastline, as well as from intense rainfall. These conditions are produced by hurricanes (tropical storms) during the summer and fall, and nor'easters and other large coastal storms (extra-tropical storms) during the fall, winter, and spring.



Charlestown Police Department

Coastal Flooding during Tropical Storm Irene, August 2011

Coastal flooding occurs south of US Route 1 and the natural moraine in the low-lying areas around the salt ponds, some of which are densely developed. Charlestown has approximately 29 miles of coastline that makes it susceptible to coastal flooding. The coastline is altered most during big storms such as nor'easters and hurricanes. High waves wash away or damage dunes that protect inland property. Narrow barrier beaches, such as the Ninigret Pond barriers (East Beach and

Charlestown Beach) and the Quonochontaug Pond barrier, can dramatically shift position. Low-lying coastal areas in close proximity to the shore or estuaries are then exposed to the threat of flooding from storm surges and rainfall. Areas bordering rivers may also be affected by large discharges caused by heavy rainfall over upstream areas.

The FEMA designated Special Flood Hazard Areas in Charlestown’s coastal area are shown on Figure NH-1 below – the AE and VE Zones and the corresponding flood elevations. See Map NH-1 *Flood Zones and Hazard Areas* which shows the flood zones in the entire town.

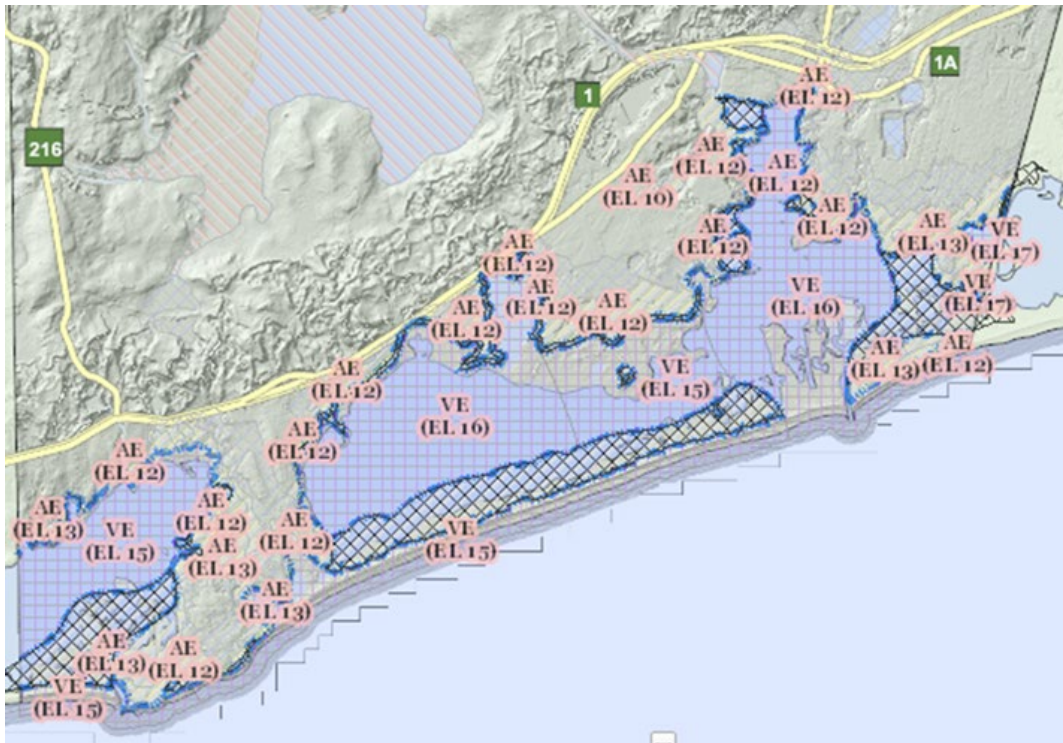


Figure NH-1 Special Flood Hazard Areas in Charlestown Coastal Region
Source: FEMA

The RI CRMC has determined that the headlands and barriers of the south shore from Watch Hill in Westerly to Charlestown to Point Judith in Narragansett are generally eroding at a higher rate than other shorelines along the Rhode Island coast due to their exposure to ocean forces and geologic setting and composition. Furthermore, properties on the east side of the Charlestown Breachway are the most susceptible to erosion. As shown on the ARCGIS RI Shoreline Change Map, some locations are eroding at a rate of up to 3.85 feet per year. This trend has major implications for Charlestown Beach Road and the residents and visitors that live or rent along Charlestown Beach Road in this location.

Another location of significant erosion is the Quonochontaug Headlands. According to the RI CRMC Salt Pond Region Special Area Management Plan (SAMP), these headlands contain small

bedrock outcrops and are fronted by beaches but not backed by a marine environment such as a coastal lagoon. Erosion rates at the Quonochontaug Headlands range from 1.07 feet per year to 1.34 feet per year (see ARCGIS RI Shoreline Change Map).

Sea level rise (SLR) and the expected increased intensity of storm surge due to climate change will contribute to the impacts of flooding in the community. Coastal flooding has a highly likely probability of a future event as shown on the table above. Based on historic coastal flooding events and probability of future events, the degree of coastal flooding can range from minor to catastrophic. See Map NH-2 *Sea level Rise Scenarios*.

Riverine Flooding

Floods are generally the result of excessive precipitation and can be classified under two categories: general floods and flash floods.

Charlestown's coastal orientation and presence of several rivers and brooks make a large portion of the community susceptible to flood events. The Pawcatuck River, for example, causes several roads to be affected during periods of heavy rains and the Charlestown and Quonochontaug Breachways are also prone to flooding on a periodic basis. According to the FEMA, the Zone A flood designation encompasses approximately 17% of the land area in Charlestown, although it is mostly undevelopable wetlands that are protected through the RI DEM.



Frances Topping

Kenyon Mills in the March 2010 Flood

Though there is no distinct flood season in Rhode Island and major river flooding can occur in any month of the year, National Oceanic and Atmospheric Administration (NOAA) has studied a number of past floods from the 1990's to 2000 and has noted three times of the year of particular importance with regard for the potential of flood activity to occur: late winter/spring melt, late summer/early fall, and early winter.

Hurricanes

Tropical storms and hurricanes are low pressure systems that usually form over the tropics. These are characterized by high winds, heavy rain, lightning, tornadoes, and storm surge. As tropical storms move inland, they can cause severe flooding, downed trees and power lines, and structural damage. There are three categories of tropical cyclones:

- Tropical depression: maximum sustained surface wind speed is less than 39 mph
- Tropical storm: maximum sustained surface wind speed from 39-73 mph
- Hurricane: maximum sustained surface wind speed exceeds 73 mph

In the Northern Hemisphere, the most destructive section of the storm is usually in the eyewall area to the right of the eye, known as the right-front quadrant (north/east portion of the storm path). During a hurricane, a storm surge forms on top of normal tide levels and the resulting storm tide can cause extensive coastal inundation. If these currents are in the onshore direction, water begins to pile up as it is impeded by the shoaling continental shelf, causing the water surface to rise. This “dome of water” will increase shoreward until it reaches a maximum height at the shoreline or at some distance inland.

Hurricanes categories range from one (1) through five (5), with Category 5 being the strongest (winds greater than 155 mph). A hurricane watch is issued when hurricane conditions may occur within the next 36 hours. A hurricane warning indicates that sustained winds of at least 74 mph are expected within 24 hours or less.

The probability of future hurricanes affecting Charlestown is likely. Superstorm Sandy which swept up the east coast in October 2012 caused extensive damage across the town and region.

Snow and Ice Storms

Annually, Charlestown experiences a variety of winter conditions including snow and ice storms. A heavy snow is generally defined as having more than eight (8) inches of accumulation in less than 24 hours. A winter storm warning is issued when snowfall is expected to accumulate more than four (4) inches in 12 hours and/or a quarter inch or more of freezing rain accumulation. The term “ice storm” is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations.



Charlestown Police Department

Charlestown Beach after Superstorm Sandy, November 2012

All of Charlestown is equally at risk for snow and ice storms. Based on the data collected from 1981-2010, the average annual snowfall for Rhode Island is 33.8 inches, which exceeds the national average of 22.4 inches. Significant snow events result in hazardous road conditions, power outages, school/business closings and transportation disruptions. Due to its maritime climate, Charlestown generally experiences cooler summers and warmer winters than inland locations. However, snow and ice do occur and can result in more extensive damage than one would expect.

Extreme Cold

Excessively cold temperature varies according to the normal climate of a region. In areas unaccustomed to winter weather, near freezing temperatures are considered "extreme cold." In Rhode Island, extreme cold usually involves temperatures below zero degrees Fahrenheit. Extreme cold events often accompany winter storms, precede severe winter storms or occur without any associated storm activity. The entire town of Charlestown typically experiences extreme cold conditions each year, during the winter and shoulder seasons (spring and fall).

Extreme Heat/Drought

Extreme heat conditions are defined by summertime weather that is substantially hotter and/or more humid than average for a location at that time of year. In Rhode Island, when the outside temperature goes above 90 degrees for three (3) or more days, it is a heat wave.

Except for the immediate coastline, extreme heat affects the entire Town of Charlestown and may have a secondary impact as to the availability of potable water for residential and commercial/industrial use given the town's reliance on groundwater resources for drinking and process water. Water conservation and resource management are critically important during periods of extreme heat and/or drought conditions. The probability of extreme heat and heat waves are likely. Charlestown residents most at risk to extreme heat are the elderly, very young, and people with chronic diseases and/or mental illness.

Climate Change and Accelerated Sea Level Rise

It is accepted science that climate change (global warming) is resulting in environmental impacts and challenges, particularly for coastal locations like Charlestown due to expected sea level rise. Land areas and improved properties abutting marine waters are or will be directly impacted.

Based on prior trends of temperate changes it is expected that global warming and associated sea level rise will continue to occur over a long and gradual time period. However, it is the alarming increase in the recently accelerated rate of global warming and sea level rise that is the greatest cause for concern. Based on CRMC's guidance, predicted sea level rise over current levels will be as follows:

- Year 2030: one (1) foot
- Year 2050: two (2) to three (3) feet
- Year 2100: five (5) to seven (7) feet

It is a matter of consensus within the science community that the acceleration of global warming is a direct result of human practices. Specifically, increased concentrations of greenhouse gasses (carbon dioxide) in the atmosphere resulting from burning of fossil fuels are associated with industrial and transportation related activities.

Risks and Vulnerability

The Charlestown GIS Department has developed sea level rise projections for Charlestown using STORMTOOLS, a simplified flood inundation model developed by University of Rhode Island in conjunction with the CRMC. It is an interactive mapping program using the state GIS (RIGIS) database which illustrates both the extent and depth of flooding from various storm surge and sea level rise scenarios. The projected 1, 3, 5 and 7 foot sea levels for a 100 year storm potentially

impacting Charlestown are shown on a Map NH-2. The map shows that marsh areas inside the breachways to both coastal ponds are already underwater at mean higher high water (average of the higher high water height of each tidal day over the National Tidal Datum Epoch, a 19 year period) and that the barrier beaches, most of both ponds' shore areas, as well as the Ninigret National Wildlife Refuge and much of the Quonochontaug Peninsula, are already potentially impacted by a 100 year storm. This is in the absence of rising sea levels.

Tables NH-4 and NH-5 provide information regarding land areas and related populations affected from a 100-year storm event using the 1, 3 and 5 foot sea level rise scenarios.

**Table NH-4
Parcel and Population Impacts from Sea Level Rise**

SLR Scenario	Total Parcels Impacted (cumulative)	Developed Parcels Impacted (cumulative)	Affected Population (cumulative) *	Affected Population Change (per SLR scenario)
Existing 100 year base	1,648	1,152	2,765	0
Base + 1' SLR	1,746	1,234	2,962	+ 197
Base + 3' SLR	1,910	1,382	3,317	+ 355
Base + 5' SLR	2,066	1,508	3,619	+ 302

* Assume 2.4 persons per dwelling unit per US Bureau of the Census data (2010)

**Table NH-5
Property Values within Predicted Sea Level Rise Areas***

SLR Scenario	Total Land Value (cumulative)	Total Improvement Value (cumulative)	Total Value (cumulative)	Total Value Change (per SLR scenario)
Existing 100 year base flood areas	698,000,000	268,000,000	966,000,000	0
Base + 1' SLR	730,000,000	285,000,000	1,015,000,000	+ 49,000,000
Base + 3' SLR	785,000,000	315,000,000	1,101,000,000	+ 86,000,000
Base + 5' SLR	826,000,000	338,000,000	1,164,000,000	+ 63,000,000

Source: Charlestown GIS (2016)

* In rounded dollars.

Climate Change and the Coast

A comprehensive overview of climate change impacts for areas such as the Charlestown coastal region, is addressed in a URI Coastal Resources Center document, titled “*Climate Change & Rhode Island’s Coast: Past, Present, and Future*”, published in 2012. The report provides a guide to municipalities in understanding climate change and its potential impacts to communities, including on both the natural and manmade environment. These impacts include:

- Increased vulnerability of infrastructure (i.e. drainage systems);
- Reduction in the effectiveness and life of coastal structures;
- Reduced access to roadways, including evacuation routes; and
- Risks to historical and cultural assets.

The town will investigate the potential costs and benefits in implementing a ‘retreat strategy’ that would address relocating residential structures, municipal facilities and infrastructure further inland. In particular, the investigation would initially focus on those structures contiguous to the shoreline. Research to identify potential funding sources to implement mitigation strategies will be undertaken.



Charlestown Police Department
Vulnerable Homes along the Barrier Beach after Superstorm Sandy

Climate Change and Increased Precipitation

Climate change will also result in increased average precipitation and storm events with greater ferocity. In coastal areas of Charlestown, increased precipitation along with rising sea levels will result in rising groundwater levels, which decreases the separation distance between septic systems and the groundwater. This may result in inadequate treatment of wastewater leading to contaminated drinking water. Increased precipitation in addition to dramatic precipitation events will increase the likelihood of flooding events in all parts of town, especially northern Charlestown where the soils are not as well drained. In response to an ever-changing climate, the town will need to regularly review and amend its land use regulations to provide resiliency against these challenges, as well as to incorporate the latest scientific data when reviewing projects. The town must also coordinate with state regulatory agencies to ensure that they are incorporating changing groundwater levels and other conditions into their own regulations in response to climate change.

Charlestown will evaluate the allowable future land uses in those vulnerable areas that cannot or are not likely to be acquired or permanently protected. In addition to evaluating permitted uses, this should involve working closely with state agency partners to define, evaluate and communicate rebuilding restrictions in such areas.

Policy 1.2 Educate the public on the probabilities and risks associated with natural hazards and climate change, and on methods of community resilience, with technical assistance provided if possible.

Action 1 Develop and disseminate an educational campaign for the public on actions that can be taken to reduce risks to private property and to improve resiliency, particularly in coastal hazard and flood prone areas.

Action 2 Continue to maintain the emergency and disaster preparedness page on the municipal website with information on minimizing risk to private property and on general preparedness.

Action 3 Continue to offer property owners online resources and updates related to changes or amendments to the local Flood Insurance Rate Maps (FIRMs) and the National Flood Insurance Program (NFIP).

Charlestown has a strong public educational program on preparing for natural hazards and building in flood zones, and this will be continued and enhanced as needed. However, there is a need to prepare residents for the longer-term impacts of climate change. It is also important that town staff, particularly the floodplain manager, stay informed of federal and state policy changes related to flooding and floodplain management so that property owners make the best decisions regarding use of their property, particularly over the long-term.

Goal 2 Integrate resiliency from natural hazards into all community actions.

Policy 2.1 Ensure that the local Hazard Mitigation Plan is up-to-date and utilizes the most recent available technical data for natural hazards and climate change.

Action 1 Continue to improve community resilience in order to improve or maintain the town's current Community Rating System score.

Action 2 Ensure that there is adequate funding and administrative support to implement the recommendations of the Charlestown Hazard Mitigation Plan.

Policy 2.2 Incorporate resiliency planning into governmental functions.

Action 1* Develop a municipal review process for developments proposed within the areas projected to be exposed to sea level rise.

Projections of sea level rise are continuously being modified to adjust for new empirical data. Nonetheless the town should identify areas likely to be impacted over a 20 year time frame, and develop a review process for development within these areas. This process should include policies and standards that will provide resilience protection for the developments under review, both public and private.

Action 2 Maintain a separate database of building permits for all properties within the Special Flood Hazard Areas and the projected sea level rise areas.

This database can be used to monitor issues with building and rebuilding in vulnerable areas. At a minimum there should be a mechanism for flagging these properties so that special attention can be applied during the building process.

Action 3* Upgrade existing GIS databases after natural disasters, where applicable.

All GIS databases should be updated to include changing flood elevations, SLR projections, areas that are inundated, and/or properties that are damaged after storm events. Property damage can include both structural damage and inundated septic systems that were inoperable after an event.

Action 4 Evaluate the impact of storm-related structural losses on local municipal tax revenues in the annual budget.

The damage to buildings from severe storm events and SLR has a direct impact on Charlestown's tax base. Using the database above, the loss of the assessed values of damaged or destroyed buildings can also be monitored. The cumulative impact of this eventual loss of tax base can be translated to the town budget. This work requires the expertise of the tax assessor and the finance director.

Policy 2.3 Incorporate resiliency into governmental projects.

Action 1* Identify municipal roads that intersect sea level rise scenarios, determine their long-term viability and initiate the redesign (or relocation) efforts necessary to maintain their transportability for the foreseeable future.

This is a longer-term effort which not only identifies the most vulnerable roads in Charlestown, but considers both the condition of the road and the expected rate of SLR in order to determine the most cost-effective solution. This effort should also address roads impacted by riverine flooding.

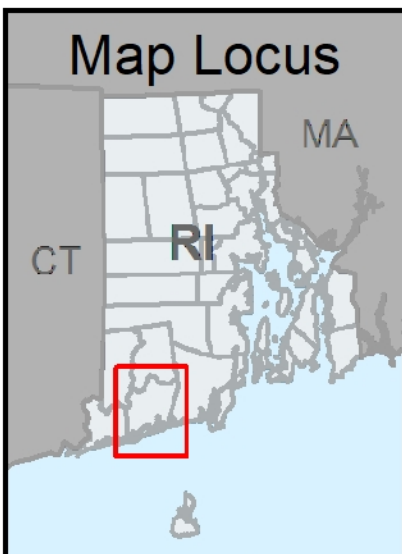
Action 2* Improve the functioning and resiliency of municipal roads through regular maintenance and by identifying and upsizing drainage culverts as needed through the annual capital improvement program.

Action 3* Implement non-structural alternatives to shoreline protection through the reuse of dredged materials, or other emerging best practices.

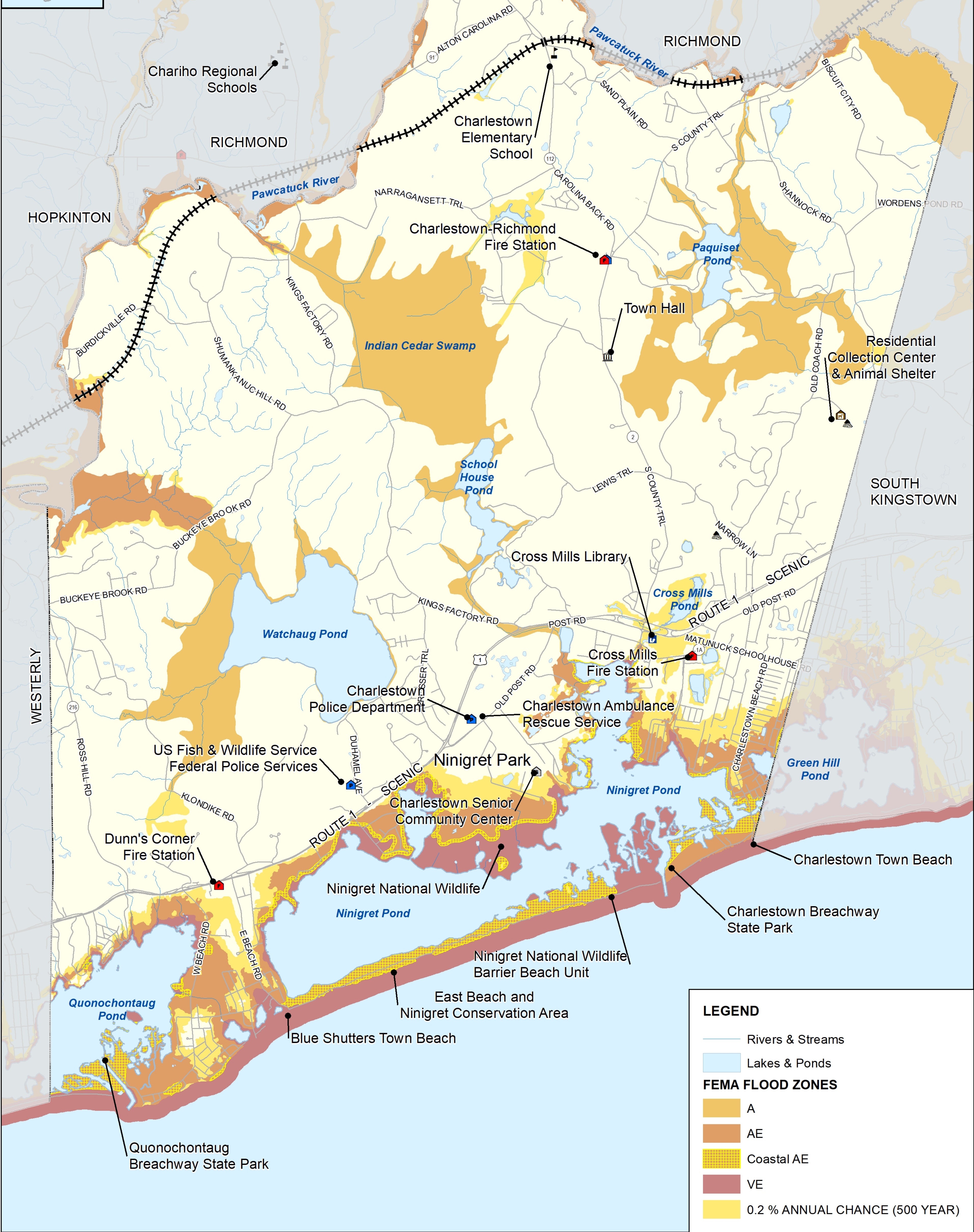
Policy 2.4 Review and amend local development regulations to incorporate sustainability practices.

Action 1* Limit the percentage of allowable impervious surface within developed parcels by amending the zoning ordinance to include total lot coverage standards.

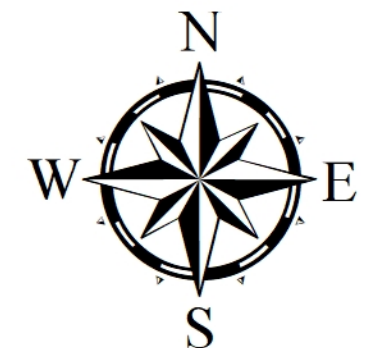
Action 2 Regularly review local regulations as they relate to rising groundwater levels and flooding potential, and maintain close contact with appropriate state agencies in this regard.



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Map Sources:



TOWN OF CHARLESTOWN
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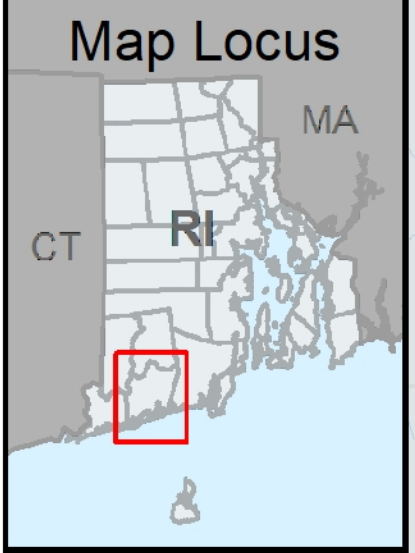


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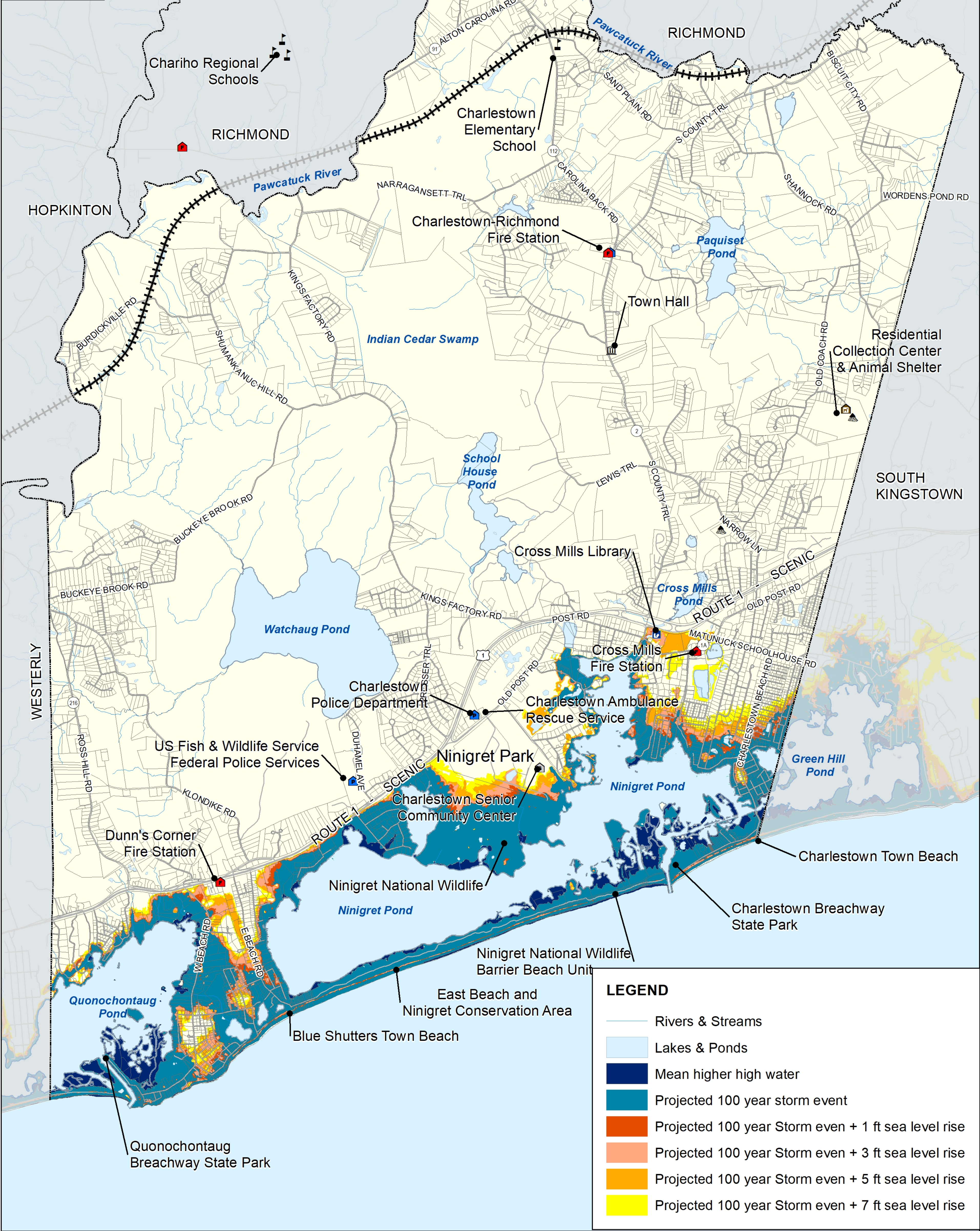
COMPREHENSIVE PLAN, 2020

FLOOD ZONES AND HAZARD AREAS

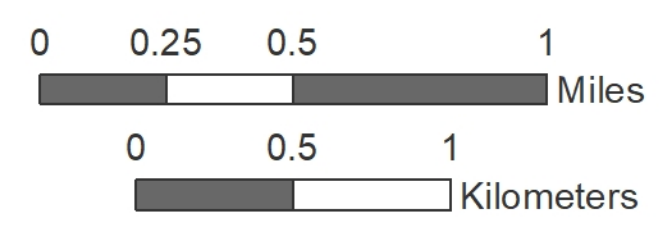
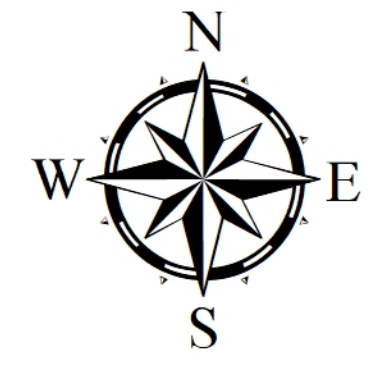
Map NH-1



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Town of Charlestown

COMPREHENSIVE PLAN, 2020

**SEA LEVEL RISE
SCENARIOS**

Map NH-2



TRANSPORTATION

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's roadway systems and its bicycling and pedestrian opportunities, and recommendations to achieve a full range of transportation options while retaining rural character.

Map

TR-1 Transportation Systems

Cover Photo: Frances Topping

TRANSPORTATION CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN
CHAPTER 8. TRANSPORTATION

INTRODUCTION

Charlestown's transportation system is comprised of a network of state, town and private roads. The major state highway is US Route 1 that generally parallels the recessional moraine that divides the town into distinct areas in terms of geology and land use. The area south of Route 1, which consists of the coastal plain, salt ponds and barrier beaches, was the location of historic settlements and is now the most densely developed area of Charlestown. The area north of Route 1, characterized by hills, forests, rivers and large wetland systems, is less densely developed and includes large parcels of protected land and farmland. Route 1 serves as a major connector to the adjoining Washington County communities, Westerly and South Kingstown, and in the summer serves as the principal thoroughfare for vacationers and visitors.

Interstate 95 is located north of Charlestown's borders. Without easy access to the interstate system, the town has not developed as a destination for retail or office development. The other major state roads – Route 91 in the western portion of town and Routes 2 and 112 in the central eastern portion – are north-south arterials that connect the town to its neighboring communities of Richmond and Hopkinton. Partially due to its roadway system, Charlestown has experienced manageable growth without compromising its rural and scenic qualities. Since 2002, the Charlestown section of Route 1 has been designated a Rhode Island Scenic Roadway.

The Amtrak main line, which runs from New York to Boston, crosses the northerly portion of Charlestown. Despite having this major transportation feature within its boundaries, there is no direct connection for Charlestown residents and visitors; the nearest passenger stations are in the Town of South Kingstown to the north, and in the Town of Westerly to the west. There is also no regularly scheduled bus service within the town.

Charlestown does have some bicycle routes and a few areas with sidewalks. Recent efforts of the town boards and committees with an interest in transportation have focused on increasing safe opportunities for bicycling for both travel and recreational purposes. In addition, redevelopment in the commercial corridors and the villages must include plans for sidewalks or other walkways, to facilitate access between businesses and create a community feeling.

While additional accommodations for bicyclists and pedestrians in certain areas of town are likely, it is not anticipated that Charlestown's predominately tourist and recreation economy will require or invite other traditional transportation components such as year-round bus and train service.

RELATIONSHIP TO OTHER CHAPTERS

This chapter, which describes the network of roadways that comprises the town's transportation system, as well as other components of a circulation system, complements a number of others:

Recreation Chapter

Recreation programs and assets are described in the Recreation chapter, with an emphasis on outdoor activities. Because of the importance of recreation to the town's tourist economy, additional bicycling and walking options are desired, which this chapter addresses in the Goals, Policies and Recommendations section.

Services and Facilities Chapter

Maintaining the town owned roads is a major responsibility of the Charlestown Public Works Department, as described in the Services and Facilities chapter. This includes plowing, pavement repair and in particular, managing the stormwater runoff from these roads. All aspects of stormwater management are described in the Services and Facilities chapter.

Energy Chapter

Promoting alternative forms of travel, ride sharing and public transportation as a means to reduce fossil fuel consumption are discussed in the Energy chapter.

Natural Hazards Chapter

There are a number of natural hazards that can impact transportation, including riverine flooding and fallen trees from high winds. As a coastal community, Charlestown is also susceptible to seaborne natural disasters and must plan for eventual sea level rise. The potential effects of natural hazards and sea level rise on Charlestown's road system, including requirements for emergency evacuations, are contained in the Natural Hazards chapter.

Land Use Chapter

The Land Use chapter describes land uses and development patterns in Charlestown, and describes the town's zoning districts and the allowable uses within those districts. It includes a proposed Future Land Use Map with recommendations for areas to be used for commercial and mixed-use developments. These land use patterns are a function of the automobile-centered transportation system, with proposed commercial development (as reflected by the zoning designation) influenced by the type of roadway access.

EXISTING CONDITIONS

Charlestown's transportation system is typical of that of many small and rural communities in Rhode Island. It consists predominantly of local roadways, both municipally and privately owned and maintained, that provide access to and facilitate movement between locations and attractions within the town, as well as a few state-owned collector and arterial roadways that interconnect with the local roadways and provide the means to travel outside of town.

While the existing transportation system in Charlestown is dominated by the automobile, many residents also walk between destinations locally. Walking to the beach and walking to different destinations along the beach are long-standing local traditions. Bicycling is common, particularly along many of the rural collector roads.

Some transportation for seniors and other qualifying persons is available through a state authorized non-emergency medical transportation service provided by a private vendor, and also through the Southern Rhode Island Volunteers, but there is no public transportation system servicing Charlestown as of 2019 (see discussion in Issues and Opportunities section of this chapter).

Regionally, residents can connect to rail at the Westerly Station a few miles away to the west, or the Kingston Station a few miles to the northeast. Rhode Island Public Transit Authority (RIPTA) park and ride lots are also located nearby in Westerly, Hopkinton, Richmond, South Kingstown and North Kingstown.

Roadway Network

Regional Context

In the regional context, Charlestown is less than an hour drive from Providence, Newport, and New London, Connecticut. Because of its beaches, salt ponds, dark skies and large areas of park and conservation land, Charlestown is a major destination, particularly in the summer, for visitors traveling from elsewhere in Rhode Island and from other states. The major thoroughfare bringing traffic into and through Charlestown is its east-west principal arterial, US Route 1 (Post Road). In addition to through and visitor traffic, Route 1 provides a direct link to the neighboring towns of Westerly and South Kingstown, where many Charlestown residents travel for employment and shopping opportunities. It is also a major means of access for motorists traveling west to Connecticut, and those traveling north to other communities in Rhode Island, where Route 1 follows alongside Narragansett Bay. State Route 2 (South County Trail), also a principal arterial, provides Charlestown with its most direct connection north to the towns of Richmond, Exeter, North Kingstown and beyond. See Map TR-1 *Transportation Systems*. Since only about 22% of Charlestown residents who work are employed in the town, these roadways connect residents to work in surrounding towns and throughout the state, as well as eastern Connecticut.

Charlestown’s southern location near the coast and distance from Interstate 95 promotes a rural sense without the town being actually remote like some other far-flung corners of Rhode Island. It is an attractive vacation area because of its accessibility for residents from the remainder of the state and for vacationers and seasonal residents from Massachusetts, Connecticut, New York and New Jersey. This accessibility is critical to Charlestown’s tourist economy.

Major Roads – Arterials and Collectors

Roads are classified according to the amount of through-traffic accommodated versus the access to property provided. Arterials provide the greatest freedom of movement, local roads are designed to provide access to property, and collectors bring traffic from local roads to arterials. The road classification is also used for funding purposes; federal funds are available to maintain all roads classified as arterials or major collectors, whether they are owned by the State of Rhode Island or the Town of Charlestown. Table TR-1 and accompanying Figure TR-1 identify all of the roadways in Charlestown which meet the classification of principal or minor arterial, and major or minor collector, and their total mileage and ownership by either the state or the town.

Route 1, a principal arterial, is a limited access highway east of Prosser Trail. Installation of stop lights in 2005, which replaced some of the turnarounds at the busier intersections, was designed to decrease traffic speeds and increase the safety of motorists changing directions and traveling on the collector roads that intersect with Route 1. Red light cameras, installed in 2014, are intended to support traffic safety on Route 1.



Frances Topping

Route 1 Westbound

Route 2 (South County Trail) is a principal arterial that runs north-south through the center of the town and intersects with Route 138 in South Kingstown, and Route 102 in Exeter, both of which provide direct connections to Route 95. Route 216 (Ross Hill Road) is a minor arterial that runs north-south along the western edge of Charlestown, and also provides a connection to Route 95 via Routes 3 and 91 in Hopkinton. There are no minor arterials or collectors running east-west that connect with Route 216 or Route 2 because the large interior portion of Charlestown is dominated by state owned open space and Narragansett Indian Settlement Lands; this limits east-west roadway access through the middle of town, including that for emergency vehicles.

Principal arterials:

- Route 1 (Post Road), from the South Kingstown town line to the Westerly town line; and
- Route 2 (South County Trail), from its intersection with Route 1 north to the Richmond border (Pawcatuck River).

The major collectors include:

- Route 112 (Carolina Back Road), from its intersection with Route 2 north to the Richmond border;
- Old Shannock Road, from its intersection with Route 112 east to the Richmond border;
- Shannock Road, from the Richmond border south to Route 2, passing through the Village of Shannock;
- Route 91 (Alton Carolina Road), from the Village of Carolina at its intersection with Route 112 west to the Richmond border;
- Kings Factory Road, north-south through Charlestown, from its intersection with Route 1 north to the Richmond border along Burlingame State Park and the Narragansett Indian Settlement Lands;
- Route 1A (Old Post Road), that portion running parallel to Route 1 through Cross Mills, east to the South Kingstown border;
- Matunuck Schoolhouse Road, from its intersection with Route 1A east to the South Kingstown border; and
- Charlestown Beach Road, from its intersection with Matunuck Schoolhouse Road south to its end at the beach.

The minor collectors include:

- West Beach Road and East Beach Roads, from their intersections with Route 1 south to the beaches;
- Klondike Road, from its intersection with Route 1 north to its intersection with Route 216 (Ross Hill Road);

- Prosser Trail, from its intersection with Route 1 north to Kings Factory Road;
- Route 1A, west of Cross Mills, which provides access to Ninigret Park;
- Buckeye Brook, Shumankanuc Hill and Burdickville Roads which connect with Kings Factory Road; and
- Shannock Road from its intersection with Route 2 east to the South Kingstown border, and Maple Lake Road and Old Coach Road.

Local and Private Roads

The remaining roads in Charlestown are local roads. Many of these evolved historically from cart paths and trails and exhibit the characteristics of historic rural lanes: narrow rights-of-way with minimal drainage and a circuitous route over hills and around wetlands. More than half of these local roads are private, many of which are in place in the coastal neighborhoods. Many of the private roads are narrow and some are gravel or incompletely paved. Private roads cannot become town roads unless they are upgraded to meet current town standards for a public road. Unless posted otherwise, roads in Charlestown have a speed limit of 25 mph.



Frances Topping

Arnolda Road (Private)

New private roads are allowed in residential compounds, alternative subdivisions permitted by the Planning Commission in order to maintain rural character and protect open space by reducing the density to half that of a conventional subdivision. Private roads in residential compounds must meet minimum standards for construction, as contained in the Charlestown Land Development and Subdivision Regulations (the Subdivision Regulations), and be constructed with a gravel or pervious surface. A homeowners' association must be established for permanent maintenance of residential compound roads, and the owners and successors waive their rights to have any such road accepted into the highway system of the town.

**Table TR-1
Charlestown Arterial and Collector Roads**

ROADWAY CLASSIFICATION	MILES	OWNERSHIP
Principal Arterials		
Route 1 (Post Road)	14.24	State
Route 2 (South County Trail)	5.03	State
Minor Arterials		
Route 216 (Ross Hill Road)	2.45	State
Major Collectors		
Alton Carolina Road (Route 91)	1.23	State
Carolina Back Road (Route 112)	2.59	State
Charlestown Beach Road	2.12	Town
Cross Mill Drive	.10	State
Falcone Lane	.10	Town
Kings Factory Road	4.72	Town
Matunuck Schoolhouse Road	.76	Town
Narrow Lane (south of Route 1)	.44	Town
Old Post Road	2.41	State
Old Shannock Road (Carolina Back Rd to Pawcatuck River)	.82	State
Shannock Road (Pawcatuck River to Route 2)	.50	State
Minor Collectors		
Burdickville Road	1.34	Town
East Beach Road	1.16	Town
Klondike Road	2.61	Town
Maple Lake Farm Road	.47	Town
Narrow Lane (north of Route 1)	.45	Town
Old Coach Road	2.42	Town
Old Post Road*	2.33	State
Prosser Trail**	1.33	State/Town
Shannock Road (Route 2 to Old Coach Road)	1.82	Town
Sherman Avenue	.08	State
Shumankanuc Hill Road	2.39	Town
West Beach Road	1.94	Town
Wordens Pond Road	.70	Town

* Includes two separate sections of Old Post Road

** State owned from Post Rd to Sanctuary Rd, town owned from Sanctuary Rd to Kings Factory Rd



Figure TR-1 Highway Functional Classifications of Roads in Charlestown
Source: Statewide Planning Program, RI DOT, RI GIS

Scenic Roadways

The Rhode Island Scenic Highways program, established by legislation in 1985, is intended to promote a continuous system of scenic highways and easements through a designation process for roads with rustic and scenic value. A state Scenic Roadways Board was established to review and approve applications, and to provide input and recommendations on improvements and other physical changes proposed to roads that are designated as scenic.

In 1991, Charlestown, in conjunction with the Town of Richmond, became the first in the state to successfully obtain a scenic roadway designation from the RI Department of Transportation (RI DOT), for Shannock Road, 1.7 miles from Route 2 to Route 112 in Charlestown, also crossing the Pawcatuck River into Richmond for a short distance (see Historic and Cultural Resources chapter). This roadway winds through a unique area of rolling terrain and a variety of different landscapes including marshes, woodlands and farm fields bounded by stone walls. Midway along the road is the historic Shannock Village, listed in the National Register of Historic Places.

In 2002, Route 1 in Charlestown, 7 miles between the South Kingstown and Westerly town lines, was also designated as a scenic highway, due to its combination of outstanding natural, historical and cultural characteristics. As stated on the RI DOT website:

There are important natural resources along Post Road that, for the most part, have been well preserved. On the northerly side, being the edge of the glacial Charlestown Moraine, there is thick and beautiful foliage consisting of a variety of species of trees. The median strip, which is very wide for over half of the road, has attractive plantings which block the view of oncoming traffic in many areas. On the southerly side, the vegetation is lower, offering the driver an occasional glimpse of South County's salt ponds.

In addition to the scenic natural beauty, there are interesting historical and cultural resources along the road dating back as far as the 17th century. These include the 1667 Stanton Inn, the Wilcox Tavern, the Joseph Stanton House and monument, and a red saltbox near the Wilcox Tavern. Many exit signs identify nearby historic sites, many of which are on the National Register of Historic Places.

Post Road offers easy access to numerous recreational opportunities, including stretches of undeveloped coastline and large salt ponds connected to the Atlantic Ocean through breachways. Rhode Island's largest campground at Burlingame Park is also along this scenic roadway.

Charlestown is committed to working with RI DOT to preserve the scenic values of these designated roadways, and to evaluate additional roadways for potential future designation as scenic roadways, as a way to acknowledge and protect their scenic resources.

Bridges

Charlestown contains several roadway bridges, owned by the state, as listed below and indicated on Map TR-1 *Transportation Systems*.

Crossing the Pawcatuck River with Richmond (west to east):

- Burdickville Road – Burdickville Road Bridge
- Kings Factory Road – Kings Factory Bridge
- Alton Carolina Road (Route 91) – Kenyons Bridge
- Carolina Back Road (Route 112) – Third Carolina South Bridge
- Old Shannock Road – Pawcatuck Bridge
- Shannock Road – New Pawcatuck River Bridge
- Sherman Avenue (Kenyon Mill) – Kenyon Arch Bridge
- South County Trail (Route 2) – Wawaloam Bridge
- Biscuit City Road – Biscuit City Road Bridge

Crossing the Amtrak rail line (west to east):

- Burdickville Road – Burdickville Road RR Bridge
- Carolina Back Road (Route 112) – Carolina Station RR Bridge
- Shannock Road – Kenyon Shannock RR Bridge

Crossing the inlet (Perry Creek) between Ninigret Pond and Green Hill Pond:

Charlestown Beach Road – Charlestown Beach Road Bridge



Figure TR-2 Shannock Area Bridges near the Richmond Border

Source: Charlestown GIS

Maintenance, repair and replacement of bridges are the responsibility of RI DOT who addresses these through inclusion of bridge projects in the state’s long-term Transportation Improvement Program (see description under the Issues and Opportunities section below).

Bicycling

While bicycling is a popular activity and there are some off-road options in Charlestown, most transportation related bicycle travel takes place on public roads.

Designated Bike Routes

As part of its Statewide Bicycle System, RI DOT has identified not just existing and proposed bike paths, and bike lanes in place along specific heavily traveled roads, but over 100 miles of major roadways with bicycle route signing consisting of signs and in some cases, pavement markings. These roads have been determined by RI DOT, based on the posted speed limit and the traffic volumes, to have shoulders of sufficient width to safely allow bicycle travel. In Charlestown, the South County Bike Route Signing Project includes the following roads, also indicated on Map TR-1 *Transportation Systems*:



Jane Weidman Route 112 Bike Route

- Route 2 (South County Trail) from its intersection with Route 1 north to the Richmond border in Kenyon. The portion from Route 1 to the intersection with Route 112 is designated as “suitable” by the RI DOT, while the portion from the intersection with Route 112 to the Richmond border is designated as “most suitable”. This bike route designation is in place on Route 2 all the way to Route 102 in Exeter.
- Route 112 (Carolina Back Road) from its intersection with Route 2 north to its intersection with Route 91 in Carolina, which is designated as “most suitable”.
- Route 91 (Alton Carolina Road) in Carolina from its intersection with Route 112 west to the Richmond border, which is designated as “most suitable”. This designation is in place on Route 91 all the way to the coastal area of Westerly, passing through Wood River Junction in Richmond, Alton and Burdickville in Richmond and Bradford in Westerly.

- Route 216 from its intersection with Route 1 north to the Westerly border, which is designated as “suitable”. This designation is in place on Route 216 to its connection with Route 91 in Hopkinton, passing through Bradford in Westerly.

These roads are shown on the state bicycle map: “A Guide to Cycling in the Ocean State 2018”¹. Also indicated as “most suitable” or “suitable” on the map in Charlestown are the country roads of Buckeye Brook, Shumankanuc Hill, Burdickville, Kings Factory, Shannock, Biscuit City, Wordens Pond and Old Coach Roads, as well as Old Post Road and Matunuck Schoolhouse Road south of Route 1. Some sections of these country roads are narrow and winding, requiring caution by drivers, bicyclist and walkers.

Recreational Bike Facilities

Other bicycling facilities in Charlestown are provided for recreation purposes. Within Ninigret Park there is a 0.9 mile criterium bicycle course and a ten foot wide 1.3 mile paved multi-purpose trail constructed in 2016.

Within the state-owned Burlingame Park there is an extensive network of hiking and mountain biking trails. The North-South Trail, developed by the RI Department of Environmental Management, is a 77 mile hiking trail that passes through western Charlestown and ends at the Massachusetts border in Burrillville, and also allows mountain biking. The Recreation chapter contains a more complete description of recreational hiking and biking options in Charlestown.

Walking

Charlestown has limited facilities for pedestrians. Sidewalks are in place on state roadway bridges that cross the railroad and the Pawcatuck River, but nearly every road north of Route 1 lacks sidewalks. Aside from neighborhood areas such as Carolina, Columbia Heights and Shannock, sidewalks are neither necessary nor appropriate in this area of town, which is valued for its rural character.

In the more densely developed neighborhoods south of Route 1, Charlestown Beach and Quonochontaug, walking to local business establishments and the beach is much more practical. However, there are no sidewalks along the three major connector roads to the beaches – Charlestown Beach Road, East Beach Road and West Beach Road – as the road rights-of-way are too narrow to add sidewalks.

There is one residential development near the South Kingstown line with a private road system, and a low and moderate income rental housing development in Cross Mills, both off of Old Post Road, which include sidewalks, but otherwise there are none serving the scattered commercial areas alongside Old Post Road and Matunuck Schoolhouse Road. Despite the limited areas of

¹ <http://www.dot.ri.gov/documents/bikeri/maps/BIKEFRONT2018.pdf>

sidewalks, in the expectation of potential future sidewalk construction, in 2005 the town implemented a sidewalk ordinance requiring snow, ice and debris removal by the owner or occupant of any lot of land bordering on a street where there is a sidewalk.

In general, because of the long distances between most of the residential areas and commercial and recreational destinations, it is not practical for most residents to travel by foot along roadways.

TRANSPORTATION: ISSUES AND OPPORTUNITIES

Long Term Transportation Planning

A number of state and federal agencies have jurisdiction over transportation projects within Charlestown. The Transportation Improvement Program (TIP) adopted by the State Planning Council determines how federal transportation dollars are allocated in the state, including which projects in Charlestown receive funding, from study to design to construction. This multi-year program, which is periodically updated, provides funding for the state's major transportation infrastructure, but also allows for the introduction of other projects by municipalities, non-profits and members of the general public. Such projects can include bike paths and bike lanes, sidewalks, roadway drainage and intersection improvements, park and ride lots, bridge repairs, rail crossings and rail stations, recreation trails, safe routes to school, and corridor studies. Municipalities are also asked to prioritize state projects within their borders.

Projects supported with federal dollars are only guaranteed funding after RI DOT or RIPTA, or the US Department of Transportation (US DOT), reviews the design, financing and environmental impacts. In addition, the US DOT requires a valid long range transportation plan in order to adopt a new TIP. The Long Range Transportation Plan (LRTP) is a plan with a 20 year time frame that covers all transportation modes (automobiles, public transit trains and buses, ferries, air travel) and types of travel (commuter, destination, commercial). The goal of the LRTP is to develop an implementable plan of transportation projects with the legislative, policy and funding needs identified. A companion plan is the Bicycle Mobility Plan with a goal to advance bicycle mobility and safety around the state by identifying bicycle facilities and programs. Both plans are prepared by the Statewide Planning Program and depend on active public and stakeholder engagement.

Given the impact on and importance of the state roadway system to Charlestown, the town must continue to work cooperatively with RI DOT on future road and transportation projects, and to actively participate in the planning and design process to the extent possible, so that the town's interests are considered and concerns are addressed. The town is in the position to provide constructive participation where safety issues need to be addressed.

Local Input

In late 2016, the Town of Charlestown was made aware of a proposed long-range upgrade to the Northeast Corridor rail line by the Federal Railroad Administration (FRA). Within this corridor from Washington, D.C. to Boston, the upgrade consisted of a proposed “Old Saybrook to Kenyon Bypass”, a new high-speed track in a re-aligned corridor between Old Saybrook, Connecticut and the Kenyon area of Charlestown. The addition of these tracks was to provide a more direct commuter rail line that would save travel time between urban centers.

The bypass would have required 5.6 miles of new railroad in Charlestown. The land use impacts of this new rail corridor are described thoroughly in the Natural Resources chapter. The project did not include any direct benefits to the Town of Charlestown in terms of transportation access; no railroad stops were proposed, only a faster train traveling through the town’s boundaries. Overwhelming opposition in both states to the bypass resulted in FRA withdrawing the proposed bypass project in July 2017. However, the original proposal shows a willingness by some federal agencies to transform the community in direct conflict with the goals and policies of the comprehensive plan, in particular those related to protection of natural, historic and cultural and agricultural resources, without providing any measurable transportation benefits to the community.

Roadway Design and Stormwater Standards

Public Streets

The municipal roadway system consists of approximately 140 miles of roads, the majority of which are paved, although some are maintained as gravel. These roads vary widely in configuration, width and the presence of associated roadway corridor elements such as curbing, storm drainage features and traffic markings. The operation and maintenance of all municipal roads are the responsibility of the Charlestown Department of Public Works (DPW).



Jane Weidman

Newly Constructed Subdivision Street with 24 Foot Pavement Width

Design standards for new roads are contained in the Subdivision Regulations. New public streets proposed as part of a subdivision or land development require a 24-foot pavement width within a 50-foot wide right-of-way. Reductions in pavement width are often permitted by the Planning Commission for small subdivisions, or when the developer agrees to create a more compact subdivision with smaller lots and shorter roads in order to protect trees and preserve rural quality, and reduce both traffic speeds and road run-off.

Private Roads

Frontage lots may be created along an existing private road only if the ownership of the road is known and there are established arrangements for its long-term maintenance. The road and its maintenance agreement must have been in existence prior to September of 1982 (the date of the establishment of the Charlestown Planning Commission), and the arrangements remain in existence to provide for the permanent maintenance of the road. Each new lot owner must become a party to the private road agreement. Extensions of an existing private road to create lots within a parcel or beyond the parcel it services are not permitted.

New private roads, which are referred to as residential compound common private ways, are permitted for certain subdivisions which are constructed at half the density allowed by zoning for a conventional subdivision on the same parcel, provided that the parcel to be subdivided has a minimum frontage of 50 feet on a public street. These common private roads require a minimum of 12 feet of travel way, constructed of gravel or pervious surface, within a 24 foot right-of-way. Concerns about access for more than one fire engine at a single emergency event have pushed residential compound road widths to 20 feet in some subdivisions. Solutions that maintain the narrower and treed aspect of rural roads, but also provide access for fire safety, such as occasional road turnouts, or limiting the road length to the equivalent of that of the standard fire hose, are needed.

New private roads in Charlestown do require the establishment of a homeowners' association to permanently maintain and repair the road as needed. To address the issue of existing private roads without an active or cooperative homeowners association, a state law enacted in 2018, Chapter 34-9.1², "*Maintenance of Private Easements and Rights-of-way*", requires, in the absence of an enforceable, written agreement to the contrary, that all owners of property that make use of a private road or easement for access to their property must participate in the cost of needed maintenance of the private road or easement.

² <http://webservice.rilin.state.ri.us/Statutes/TITLE34/34-9.1/34-9.1-2.HTM>

Road Design Flexibility

In general, the Planning Commission recognizes the benefits of narrower roads, and the gravel surface of private roads, in maintaining Charlestown's rural character. Flexibility in road design is as important in the design of new subdivisions and compounds as is lot configuration; flexible roadway standards can include the following:

- Allowing reduced roadway widths in low population and low traffic developments, particularly for new subdivision streets that are serviced by rural collector roads with a width of 20 feet.
- Waiving of elements typically associated with suburban developments, particularly concrete sidewalks and streetlights.
- Offsetting the impacts of narrow roadways and/or lack of sidewalks by accommodating pedestrian travel with unpaved walkways within the road rights-of-way.
- Requiring roadside swales, and other low impact drainage systems as opposed to pipes and structural drainage systems. Low impact stormwater control is addressed in the 2010 Rhode Island Stormwater Design and Installation Standards Manual (see Facilities and Services chapter).

The town should periodically review and evaluate the roadway design requirements in the Subdivision Regulations, and modify them as needed to promote applicable elements of the most current "rural by design" and stormwater management standards.

Speeding on Rural Roads

As stated in the Existing Conditions section of this chapter, Charlestown's local roads have a posted speed limit of 25 mph, although at neighborhood request, a road can be posted at 15 mph. Observations by long-time residents indicate that often these speeds are not obeyed and the winding and narrow nature of many of Charlestown's country roads presents a safety concern, for both drivers and residents. Some of this speeding is exacerbated by the lack of actual posted speed limits, which in some cases are missing due to vandalism, and/or lack of warnings for motorists to look out for pedestrians and cyclists.

Trees and other native vegetation along the roadsides give the appearance of a narrower road which encourages lower speeds. Signage in certain areas to alert drivers to share the road with bicyclists and walkers could also serve to slow down traffic.

Management of Scenic Roadways

Charlestown recognizes the scenic and cultural value of its roadways. Most visitors appreciate the rural character of Charlestown when they journey down its local and state roads. A number of factors contribute to making a roadway scenic:

- Characteristics of the road itself, such as turns and hills and valleys, and even changing surfaces, textures, light and shade, sometimes with flaws or deficiencies compared to current road design standards.
- Interesting features along the road, such as historic stone walls, flowering vegetation, shrubs and mature canopy trees.
- The locations/environments through which the road passes, such as along forests, open farm and meadow areas, seaside areas with water views and through historic villages.



Frances Topping

Scenic Old Coach Road

Scenic quality is not limited to the state designated scenic roadways of Shannock Road and Post Road, of course. This means that the town must be sensitive to not only the design of new local roads, but also the management of its existing roads and the protection of those qualities that make a road scenic, such as views, stone walls, trees and native plants. In particular, management of vegetation within the right-of-way is important; while safety is necessary in terms of maintaining line-of-sight distances and preventing falling branches, the DPW should have a policy of protecting specimen trees and other healthy native vegetation within the rights-of-way of its rural roads.

Lack of Public Transportation

Charlestown recognizes that the lack of regularly scheduled bus stops or other form of public transportation in town results in limited travel options for its residents, as well as for those who travel to town for work. In general, the town and its citizens, and workers and visitors, accept that Charlestown's small town and rural character, including its lack of large commercial centers, means that there is not sufficient ridership to justify the establishment of a bus stop or passenger rail station. Residents do have both RIPTA and Amtrak options in Washington County, just not within the town itself. One concern, however, are the travel challenges this places on people without personal automobiles and people who no longer drive. As noted elsewhere in this plan, the median age of Charlestown residents is expected to rise, and as the percentage of older residents increases, so will demands for senior services, including transportation.

Limited non-emergency transportation services are available to eligible seniors (Medicaid beneficiaries), who can access the state authorized (Executive Office of Health & Human Services) network of transportation providers, contracted by a private company, Medical Transportation Management (MTM) for medically necessary trips when the person has no other available or safe means of travel. Assistance is also provided through the Southern Rhode Island Volunteers (SRIV), whose main office is located at the Charlestown Senior/Community Center. For persons 55 years of age and older, SRIV can provide transportation to healthcare appointments, and to the pharmacy and grocery store.

It is expected and encouraged that the transportation delivery or "ride hailing" services operated with private cars through a smart phone application, such as Uber and Lyft, will eventually fill the short-distance travel needs for car-less residents that in another era would have been provided by a local bus service.

Alternative Forms of Travel

Non-motorized means of travel – bicycling and walking – are cost-effective, environmentally friendly and popular among many segments of the population. In addition to providing an alternative to cars and other motorized vehicles, they provide obvious recreational opportunities and health benefits. Charlestown's tourism-based economy could also benefit substantially with additional linear greenways, trails and bikeways as a way to extend the tourist season into spring and fall.

In Charlestown, however, the demand for non-motorized forms of travel as transportation alternatives is limited by the wide distribution of the population, and the scattered and linear nature of the commercial areas.

Proposed Shoreline Bike Route

Under consideration for many years and strongly supported by the Town of Charlestown is a coastal bike route which would parallel Routes 1 and 1A, from Westerly to Narragansett, and which would eventually link with the existing South County Bike Path. This path, also known as the William C. O'Neill Bike Path, connects the Kingston Station in South Kingstown with the pier area of Narragansett, passing alongside the Great Swamp Management Area, through the Village of Peace Dale and downtown Wakefield, and under Route 108 to its end near Route 1A.

The concept of a shoreline bike route was first studied in 1999 when a consultant for RI DOT completed the *Shoreline Bikeway Feasibility Study*. Three alternative bikeway routes through Westerly, Charlestown and South Kingstown were evaluated. The study concluded that none of the route options, all of which relied on use of Route 1, either its shoulders or its right-of-way in the form of a shared use path, were viable in terms of accessibility, safety and cost effectiveness. The study recommended that RI DOT continue to work with the communities to find an alternative route along roadways paralleling Route 1 – this option has been viable in Westerly where most of the route has been signed as a shared route along Route 1A rather than Route 1.

Since then, Charlestown has taken the lead in advocating for a shoreline bike route, including hiring a consultant in 2007 to undertake a corridor study. In 2016 Charlestown formed a tri-town committee in partnership with Westerly and South Kingstown to evaluate alternative routes and to promote the project within the communities and with the state. In 2018 the town hired a consultant to undertake a feasibility study of the Charlestown section of the project, referred to as the Coastal Route Bikeway, to identify the most desirable route connecting Ninigret Park to the village center near the South Kingstown town line, and to determine design and construction costs. The multi-use path completed in Ninigret Park in 2016 serves as a prototype for the shoreline bike route.

The maps produced as part of the statewide Bicycle Mobility Plan also indicate potential future bike routes in the area of the shoreline bike route, including Route 1, Old Post Road, and Matunuck Schoolhouse Road, as well as routes along West Beach, East Beach and Charlestown Beach Roads.

Connecting the Charlestown Shore to the Statewide Bicycle System

Safe crossing of Route 1 for bicyclists and pedestrians would allow a non-auto connection of the south shore area with the rest of the community. This would enable bicyclists and pedestrians to access Ninigret Park, the beaches and the village center from the residential areas and campgrounds north of Route 1. The area of focus would be between the intersections of Route 1 with Narrow Lane and Prosser Trail. A safe Route 1 crossing would also allow the future shoreline bike route to connect with the larger statewide bicycle system.

While Route 1 provides ample shoulder width, motor vehicle speeds are not compatible with bicycling. Use of the turning lanes by bicyclists is dangerous and even use of the existing signalized crossings can be problematic. RI DOT does not identify Route 1 as a route suitable for bicycling and as a result Route 1 becomes more of a barrier rather than a means to link the south shore areas of Rhode Island with other bike routes and bike paths, including the South County Bike Path.

Such crossings can be either at-grade (crosswalks) or separated grade (tunnels or bridges). There are benefits and drawbacks associated with each type of crossing. At-grade crossings are less expensive to construct and can make use of existing signalized intersections, but they require bicyclists and pedestrians to cross a busy divided highway and would cause inconvenience for motorized travelers. Separated grades are much safer and convenient for both motorists and bicyclists but have a very high cost and require significant construction and/or roadway modifications.

Adding Sidewalks and Pathways

The installation of sidewalks along the roads in much of Charlestown would be counter to the goal of preserving rural character. Sidewalks are associated with urban and suburban areas and are not typically an element of rural communities. The rights-of-way of many existing roads in Charlestown are too narrow to accommodate sidewalks, and many have constraints such as stone walls and utility poles making it difficult or costly to add sidewalks. Finally, sidewalks that are constructed of concrete or other impervious surfaces increase stormwater run-off. In areas where moderate volumes of pedestrian traffic are expected, shoulders or pathways of grass, stone dust or other pervious surfaces can be an alternative.

The lack of sidewalks and pathways in Charlestown can best be addressed by focusing on specific locations where they would be most feasible. This includes within village centers and within and between residential subdivisions and nearby attractions. Such pathways should be constructed in a way that:

- Conforms to the existing natural environment by preserving trees and high-value vegetation and avoiding excessive grading or earthwork; and
- Makes use of pervious materials, and/or directs run-off to pervious (grassed or wooded) areas of at least an equivalent width.

In lieu of sidewalks in densely developed areas that have insufficient road right-of-way widths to accommodate sidewalks or pathways, such as the three major connector roads to the beaches, other options could be considered, such as one or more of the following:

- Placement of seasonal speed bumps to force traffic to slow during the summer when traffic is heaviest, but allow unhindered sweeping, plowing and maintenance the remainder of the year.
- Conduct a redesign (alter striping) of the existing paved areas to provide wider shoulders for cyclists and pedestrians either by narrowing the travel lanes or by marking a shared (two-way) center lane for motorists who can make use of “advisory shoulders” designated for bicyclists when these shoulders are not in use by bicyclists or pedestrians³; and
 - Educate the public on regulations governing the sharing of roads with bicyclists.

Any alteration of the existing roadways to provide a safer travel experience for bicyclists and walkers requires an engineering study to evaluate traffic volumes, right-of-way widths and other characteristics (stone walls, pavement conditions).

Future Planning Efforts to Promote Bicycling and Walking

Charlestown has tasked its Parks and Recreation Commission with promoting the development and use of trails, linear greenways and bikeways, and with investigating, initiating and endorsing efforts at both the local and state levels to create and expand designated walking routes and non-motorized paths throughout the community.

In particular, the establishment of bike routes along town roads (to complement the existing designated bike routes along state roads) is an effective way to promote bicycling as an alternative means of travel in Charlestown. Finally, Charlestown’s extensive trail system, described in detail in the Recreation chapter, provides an opportunity for not only hiking and passive recreation use but an alternate means of traveling within town.

³ <http://ruraldesignguide.com/mixed-traffic/advisory-shoulder>

TRANSPORTATION: GOALS, POLICIES AND ACTIONS

GOALS

- Goal 1** Maintain and enhance the existing transportation infrastructure as a means to ensure community livability while protecting Charlestown's rural character.
- Goal 2** Ensure that the full range of alternative and multimodal transportation options are available to Charlestown residents.
- Goal 3** Develop a network for bicyclists and pedestrians in Charlestown.

POLICIES AND ACTIONS

- Goal 1** Maintain and enhance the existing transportation infrastructure as a means to ensure community livability while protecting Charlestown's rural character.

- Policy 1.1** Maintain rural character through flexibility in new roadway design.

Charlestown's local roads are very well maintained and its regulations include rigorous standards for construction. This attention to long-term maintenance is both enhanced and balanced by flexibility in design to ensure rural character and reduced environmental impacts from road runoff. This flexibility includes consistency with current residential street standards supported by both the American Society of Civil Engineers and the American Planning Association. It also includes consistency with the Rhode Island Stormwater Design and Installation Standards Manual, which promotes a low impact approach to stormwater management.

- Action 1** Allow new public subdivision streets to be constructed at a reduced width of 20 feet, depending on the site characteristics and the number of lots.
- Action 2** Review and evaluate roadway design and stormwater standards in the Subdivision Regulations and modify as needed to promote rural and low impact design.
- Action 3** Require, to the degree possible, compact development in the form of cluster or conservation subdivisions, to reduce the length of new roadways.

Policy 1.2 Maintain the scenic quality of existing roadways.

Charlestown’s rural quality is reflected by the views along its many miles of local roadways, particularly those north of Route 1. Efforts are needed to preserve the scenic qualities of these roads – mature vegetation, stone walls, fields, historic structures and landscapes – as development pressures increase.

Action 1 Continue to implement the following policies when reviewing subdivisions and land developments along local and minor roadways, with amendments to land development regulations enacted as needed:

- Retention of stone walls.
- Maintenance of undisturbed natural landscape buffers, particularly significant trees and shrubs, to shield view of new construction from the road where the character of the roadway would be adversely changed by clearing.
- Locate new “curb cuts” (driveways) to town roadways so as to preserve existing stone walls, natural buffers and the scenic qualities of these corridors. Encourage shared driveways to service new development unless there are safety or functional factors that preclude them.

Action 2 Develop and implement a right-of-way vegetation management program for local roadways that uses low impact but effective methods to manage trees and other vegetation that is consistent with roadway safety standards.

Policy 1.3 Actively manage the town’s designated scenic roadways.

Action 1 Establish scenic roadway design standards for new development and building improvements along Route 1, and other designated scenic roadways, including those for signage, lighting and buffers between the roadway and structures, with consideration given to preservation of important views. Incorporate these standards in the town zoning and subdivision regulations, to be applied when reviewing development proposals along the Route 1 corridor.

Action 2 Inventory and evaluate both developed and undeveloped parcels along Route 1 in order to:

- Propose site improvements to preserve, restore or enhance the appearance and scenic quality along the roadway.

Policy 2.2 Support alternative means of travel within Charlestown and the region.

Action 1 Periodically review town ordinances to ensure that ride-sharing or ride-hailing businesses that provide for travel needs on a case-by-case basis are permitted in a safe and equitable manner.

Goal 3 Develop a network for bicyclists and pedestrians in Charlestown.

Policy 3.1 Work locally, regionally and at the state level to expand options for bicycling in Charlestown.

Charlestown will continue its efforts to expand bicycling opportunities, in particular by coordinating with the RI DOT regarding existing and proposed bike routes, bike lanes and bike paths, and implementing the goals of the Bicycle Mobility Plan as it relates to bicycle infrastructure and operations.

Action 1 Communicate with RI DOT to ensure that roadways suitable for bicycle travel are properly signed.

Action 2 Collaborate with RI DOT to expand the designated state bike route network by identifying additional roadways suitable for bicycle travel.

Action 3 Work towards the development of the shoreline bike route, including collaboration with the Towns of Westerly, South Kingstown and Narragansett.

Action 4 Work with RI DOT to develop safe crossings of Route 1 for bicyclists, with a focus on the area between Narrow Lane and Prosser Trail.

Policy 3.2 Support pedestrian improvements throughout town to encourage walking as an alternative to the automobile.

Action 1 Undertake an engineering study of the three main town-owned roads leading to the beaches to consider options for increasing the safety of bicycle and pedestrian travel, while working within the existing road rights-of-way.

Action 2 Require sidewalks within new commercial developments, and pathways within residential subdivisions and between residential developments and walkable destinations.

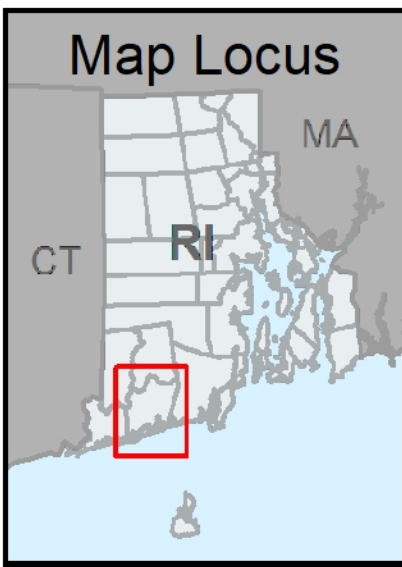
Action 3 Identify existing trail systems within Charlestown that can be used as alternative travelways and publicize this connectivity along with information of a recreation nature.

Policy 3.3 Collaborate with other agencies and communities

Action 1 Regularly discuss upcoming state projects and their impact on the town and the town's needs with Statewide Planning Program, RI DOT and RIPTA.

Action 2 Review all phases of RI DOT plans, and submit formal comments to the State to ensure that RI DOT road and bridge improvements are in keeping with the town's character, and with local safety concerns.

Action 3 Participate in the planning and development of RI DOT road and transportation projects involving the state roads within the town, including those that seek to manage traffic safety, particularly during the summer.



This map is not the product of a Professional Land Survey. It was created by the Town of Charlestown for general reference, informational, planning or guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. The Town of Charlestown makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

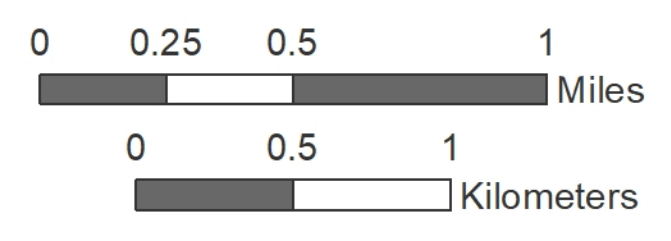
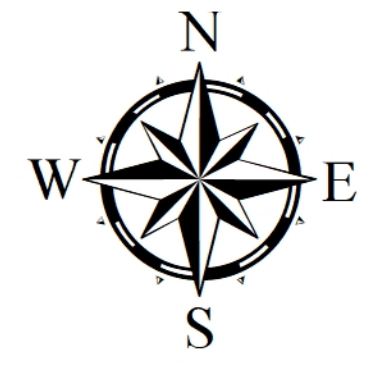


Note: There are no commercial bus stops, rail stations, airports or ferry terminals in Charlestown.

LEGEND

- Roads
- State Scenic Roads (RIDOT Designated)
- ||||| Signed Bike Routes (RIDOT Designated)
- ||||| Roads Suitable for Biking (RIDOT Designated)
- ++++ Railroad - Amtrak
- Lakes & Ponds
- Rivers & Streams
- Wetlands

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



Prepared by:
Town of Charlestown

COMPREHENSIVE PLAN, 2020

TRANSPORTATION SYSTEMS



ECONOMIC OPPORTUNITY

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's tourism and agricultural based economy, and opportunities and recommendations to provide for economic growth in a sustainable and integrated manner.

Map EO-1 Important Farm Soils

ECONOMIC OPPORTUNITY CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 9. ECONOMIC OPPORTUNITY

INTRODUCTION

Economic activity in Charlestown is largely based on tourism. Charlestown's beaches, salt ponds, scenery and open space have attracted tourists since before the 1900's and continue to be the town's greatest economic assets. In 2015, the year round population of the town was 7,773; the Charlestown Chamber of Commerce estimates that the daily summer population of the town swells to more than three times that number. The town's seasonal population is characterized not only by day visitors, but by summer vacationers who rent by the week or month, and by residents of nearby states who own second homes in Charlestown and have become permanent seasonal residents. The typical tourist season runs from Memorial Day through Labor Day and continues moderately into the fall.

The town recognizes that the year round population is limited in its ability to attract and sustain retail development which meets all the needs of its residents, and that most goods and services are procured in adjacent communities. In fact, the availability of commercial opportunities in neighboring communities, and the town's significant distance from the interstate highway (I-95) have been major factors in the continued preservation of Charlestown's local and rural character.

Economic opportunity in Charlestown is focused on business retention, business expansion in character with the community and tourism. This chapter describes the current economy and employment characteristics. It focuses on Charlestown's tourist economy which relies heavily on the town's natural, scenic and historic amenities, and discusses how, through increased recreation opportunities, the town can expand tourism. The goals, policies and actions for economic opportunity in Charlestown are intended to be complementary with the state's goal that economic development occur in a sustainable and integrated manner. In Charlestown this means economic activity which supports, protects and enhances the town's important resources.

RELATIONSHIP TO OTHER CHAPTERS

This chapter complements a number of others:

Natural Resources, Recreation, and Historic and Cultural Resources Chapters

Charlestown recognizes the economic value of its natural resources, including its beaches and salt ponds, its abundant open space areas available for both active and passive outdoor recreation, and its cultural features and scenic landscapes which are described in detail in the above chapters. Many of the recommendations in this chapter mirror those in the chapters on natural resources, recreation, and historic and cultural resources, Charlestown's most valuable assets, all of which

are critical to the support and expansion of tourism, as well as to the high quality of life enjoyed by Charlestown residents and visitors.

Natural Hazards Chapter

Sea level rise and increasing storm intensity will have an economic impact on the town, including potential loss of tax revenue from damaged properties, the cost of debris cleanup from storms and other natural events, and the negative impact on tourism due to damage to the water quality or integrity of the salt ponds. Actions to prepare for and adapt to these conditions are critical to protecting the town's economy.

Land Use Chapter

The Land Use chapter describes land uses and development patterns, and identifies the town's zoning districts and the allowable uses within those districts. It includes a proposed Future Land Use Map with recommendations for areas to be used for commercial and mixed use developments.

EXISTING CONDITIONS

Current Economy

Charlestown's economy is highly dependent on tourism and associated activities, and as a result is highly seasonal. Tourism provides employment to local residents, revenues to local merchants, and property taxes to the town on seasonally occupied homes. Commercial, and to a lesser extent industrial enterprises, still play an important role, while agriculture and aquaculture are growing parts of the local economy.

Tourism

Charlestown's tourist season produces both direct and indirect revenues for the town. The main revenue source is from residential property taxes, a significant portion of which are paid by seasonal residents. This is a benefit to the town, since these residents place a limited demand on town services and make use of town facilities only for the period during the tourist season. With the exception of fees collected from the use of Ninigret Park which are placed in a restricted fund, beach parking fees and other recreational fees are collected by the town and contribute to the general fund.

Charlestown has several inns, motels and bed and breakfast establishments that provide both seasonal and year round accommodations. Some private homes are also rented seasonally. All accommodations charge a state room tax, a portion of which is returned to the town. Public campgrounds managed by the Department of Environmental Management at Burlingame State

Park, the Charlestown Breachway and East Beach offer over 750 campsites. These and other private camps help to serve the seasonal influx of vacationers. There are several convenience food stores and restaurants, art galleries, gift shops and marinas that serve both residents and the tourist population in the summer.



Frances Topping

Cross Mills Shop

Outdoor recreation is an important part of the tourist economy. Hunting, fishing, swimming, boating, bicycling, hiking, canoeing, kayaking, star gazing, photography and bird watching are all popular outdoor activities that attract people to Charlestown. Agriculture related tourism (agritourism) is an option for improving the incomes and potential economic viability of small farms. Tasting honey, picking vegetables, attending workshops on composting and growing vegetables, and caring for farm animals are activities which agritourists can choose from. Enhancing these opportunities offers the potential to grow the local economy while continuing to protect the town's open spaces and natural resources.

Finally, Charlestown has a number of unique festivals and events which draw tourists. These include the Charlestown Seafood Festival, the Rhythm and Roots Festival, and the South County Seaside Classic Soccer Tournament held each year at Ninigret Park, and the Narragansett Indian Tribe's Pow Wow held every August, as well as a fall art walk and a December holiday ramble.

Tourism in Charlestown is supported by the Charlestown Chamber of Commerce and the South County Tourism Council (also representing ten other towns of southern Rhode Island). The town also has an active Economic Improvement Commission (EIC), appointed by the Town Council, whose mandate is to support and enhance the business environment in Charlestown, with an emphasis on business development in keeping with the rural and coastal character of Charlestown. The EIC, as advisory to the Town Council, is charged with identifying tools and strategies to both support existing businesses and encourage the establishment of new businesses.

Commercial Activity

Charlestown is primarily a residential community with limited commercial activity. Restaurants, construction and retail are the largest commercial sectors in the town; they are the business activities which employ the largest numbers of people in Charlestown (the other major employment sectors being manufacturing, government and health care, as shown in Table EO-1).

Charlestown provides a reasonable level of commercial development with a mix of village, general and highway commercial zoning districts. Mixed use is supported by the Traditional Village District along Old Post Road in the Cross Mills section of town; this district is intended to encourage small scale business development compatible with existing residential uses. Commercial uses, for the most part, are concentrated along Route 1A (Old Post Road), Route 1 (Post Road) and Route 2 (South County Trail). Smaller commercial areas include Carolina and Shannock Villages and the Matunuck Schoolhouse Road / Charlestown Beach Road area (see Land Use chapter).

Charlestown does not have infrastructure to support large commercial development. Because the town has no public water supply or sewer system, the need to rely on wells and on-site septic systems has kept development at a small scale. The southern portion of town is within the Salt Ponds Special Area Management Plan (SAMP) area which has environmental and density constraints. A year round population of less than 8,000 people also does not provide a strong market for retail/commercial goods; while the summer population makes a significant contribution to the town's economy, the market demand that results from this tourist activity is seasonal. The increasing trend of on-line purchasing and the location of chain stores in nearby communities also affects the local demand for certain goods. Overall, large scale commercial development does not fit the rural character of Charlestown or the market needs of its residents.

Industrial Activity

At present, the sole manufacturing industries in Charlestown are Kenyon Industries, located on Route 2 beside the Pawcatuck River, and Gordon Fabricating, Inc. on Kings Factory Road. With over 300,000 square feet of processing space, Kenyon Industries does dyeing, finishing, coating and printing of woven synthetic fabrics operating three continuous shifts. Kenyon also houses research and development facilities to create new, complex fabrics and certified testing laboratories to evaluate fabric, dye, and finishing performance. It employs approximately 250 people.

The only other land in Charlestown that has been used for industrial purposes was the large United Nuclear Corporation parcel in the northern section of town, which was the site of a nuclear processing facility. The plant, which opened in 1964, used chemical processes for the recovery of uranium from spent fuel rods. Following the closure of the plant in 1980 it was considered as a

suitable location for industrial research and development. However, the presence of hazardous material made that impracticable. Following a ten year decontamination effort it was considered safe in 1995 by the Nuclear Regulatory Commission. It is now classified as an archived Superfund site. In 2001, The Nature Conservancy purchased 841 acres of the site and established the Francis C. Carter Memorial Preserve. An additional 271 contiguous acres of the site were purchased by the Nature Conservancy in 2015 and placed under permanent conservation easement, foreclosing the option of future development on this site and allowing public use of the property for passive recreation. The zoning designation of this parcel is Planned Development, but it is identified on the *Future Land Use Map* (see Map LU-4 in the Land Use chapter) as open space.

The other industrial-related use in town is quarrying and sand and gravel extraction, which is currently a prohibited use. Extractive industries are discussed in the Natural Resources chapter.

Agriculture and Aquaculture

Rhode Island is a “right-to-farm” state which means that it is the policy of the state to promote an environment in which agricultural operations are safeguarded against nuisance actions arising from conflicts with other land uses, provided that best management practices are followed. The Town of Charlestown’s website (see Agricultural Preservation Commission page), contains a list of 34 local farms, most of which are small family owned farms. These farms raise horses; chickens for meat and eggs; cows, goats, pigs, sheep and other livestock for meat, dairy and/or fiber; vegetables, corn, potatoes, apples, herbs and flowers; and hay, compost and firewood for sale. Also included on the list are salt pond oyster farmers. Because the farms are predominately family-owned and operated, they are not a significant source of local employment. However, small scale agriculture can still be a contributor to the local economy. A 2010 study, updated in 2015, of the economic contribution of agriculture by the University of Connecticut¹ found that each dollar in sales generated by the agricultural industry creates up to two additional dollars of economic activity.



Frances Topping

Sweet Hollow Sheep Farm

¹ Rigoberto Lopez, “*Economic Impacts of Connecticut’s Agricultural Industry*,” University of Connecticut, 2010

Tree farming is also an important land use and economic activity in Charlestown. As of 2018, over 1,700 acres of land in Charlestown are enrolled in the Farm, Forest and Open Space (FFOS) program. Most of these are managed forestlands that produce firewood and lumber. Many other Charlestown land parcels not enrolled in FFOS are also managed as wood lots. Property owners need better information on forest management, and how to connect with forest managers and create markets for firewood and other woodland products. See the Energy Chapter for more discussion on wood as an energy source.

Organic farming is increasing in popularity locally, as consumers demonstrate a willingness to pay a premium for locally grown organic crops. Many local farmers sell wholesale and several local grocers, restaurants and florists have begun to work with local farmers in “farm to table” and “farm to shop” agreements that benefit both the farms and the retailers.

Local farmers are also increasingly engaged in creative finance arrangements such as community supported agriculture (CSA), farm share programs and pick your own (PYO), as well as farm stand sales, harvest festivals, hay rides, corn mazes, farm tours and related activities that serve to increase revenues for the farmers. The Charlestown Farmers Market, sponsored by the Charlestown Land Trust (see chapter cover page), is a popular attraction for residents and tourists alike, providing ready access to fresh locally grown food during the season, as well as contributing to a rural and village ambience.

Map EO-1 shows important farmland soils in Charlestown. These include prime farmland soils, soils of statewide importance and soils of local importance. Significant concentrations of farmland soils occur on the outwash plain south of the moraine (Route 1) and along the coastal ponds. Much of this area supporting prime soils and those soils of statewide importance is either developed or lies within Ninigret National Wildlife Refuge and Ninigret Park. There are also clusters of important farmland soils in the northeastern part of Charlestown and along the Pawcatuck River in the northwest. Farmland soils are a finite resource, and once lost to development, are irreplaceable. Their use for agriculture contributes to the rural character that enhances the quality of life in Charlestown and attracts tourism.

Shellfish aquaculture is a growing industry in Rhode Island, with the large majority consisting of oysters, which are especially in demand as interest in locally grown and fresh food has surged. While local agriculture has been slowly growing as an economic sector, aquaculture has been growing very rapidly. As of 2018, there were 76 aquaculture farms in Rhode Island, with over 319 acres under cultivation generating \$6 million in product consumption value.² Aquaculture also contributes to employment and local purchases of equipment and supplies. The health of the salt ponds is important to aquaculture and tourism and needs to be protected; see the Natural Resources and Natural Hazards chapters.

² *Aquaculture in Rhode Island 2018 Annual Status Report*, prepared by David Beutel, Aquaculture Coordinator, Coastal Resources Management Council

Ninigret and Quonochontaug Ponds are nearly ideal for shellfish cultivation, due to the protective environment provided by the barrier beaches, the small tidal range and moderate temperatures. As of 2018, there are fourteen active aquaculture leases in Ninigret Pond, encompassing a total of 64.95 acres, and eight active aquaculture leases in Quonochontaug Pond, encompassing a total of 13.86 acres. One marina on Ninigret Pond is also an aquaculture co-operative which includes an oyster hatchery.



Ken Lopardo Oyster Farmers in Ninigret Pond

While aquaculture has a promising future as a sustainable and important local economic activity, it must be balanced with other uses of the salt ponds, which are critical to Charlestown's tourist economy.

Employment Characteristics

In addition to tourism-related employment, Charlestown has a number of small businesses with a few employees. It is a commuter town, with residents who work in surrounding towns and throughout the state as well as in eastern Connecticut, and is a retirement community.

Charlestown's labor force, people who live in town and are either working or are actively looking for work, peaked in 2009 at just above 4,800. In the mid to late 2010's it averaged 4,100 persons.

Charlestown's unemployment figures are generally reflective of both regional and national economic trends. As of July 2019, the unemployment was as low as 4%, down from the much higher figures during the economic downturn and slow recovery that followed. Within any given year, the unemployment rates tend to peak during the winter months. This is reflective of the seasonal nature of work in Charlestown.

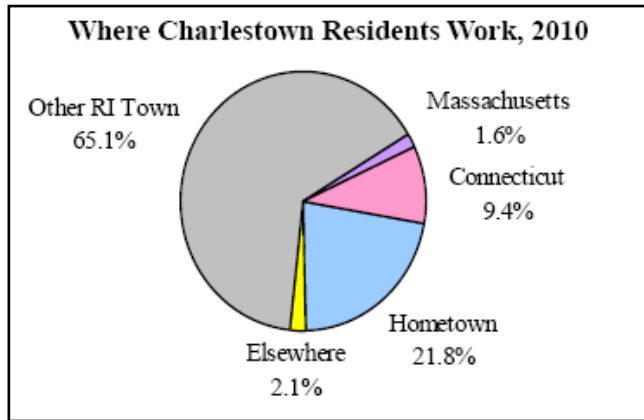


Figure EO-1 Where Residents Work
Source: RI Department of Labor and Training

As Figure EO-1 shows, less than a quarter (21.8%) of working Charlestown residents actually work in town. Roughly two thirds of residents work in other Rhode Island towns; many work in the adjacent communities of South Kingstown and Westerly, both of which have more commercial and industrial employment than does Charlestown. South Kingstown also hosts the University of Rhode Island, one of the region’s major employers.

Table EO-1 shows employment in Charlestown by economic sector³ in 2006, 2009 and 2015. Aside from manufacturing, the largest sector of local employment is in accommodation and food services, followed by government, construction, health care and social assistance, and retail trade. The high level of employment in accommodation and food services is part of the tourist economy, with local employees catering to the needs of vacationers. The large number of government jobs includes those who work in town government and the school system. In addition to municipal employees, there are state and federal employees staffing parks and wildlife refuges.

Construction has historically been a leading source of employment. The availability of construction jobs fluctuates in direct relationship to the economy and stabilization of the housing market. Construction activity includes the conversion of seasonal homes to year round and the upkeep of both year round and seasonal homes, as well as new home construction.

Manufacturing jobs, represented principally by employment at Kenyon Industries were not presented for the last two columns on the table (the years 2009 and 2015) but it is important to note that this textile manufacturing, finishing and research facility is the largest single employer in the town.

According to the data, job growth has occurred in arts, entertainment and recreation, suggesting potential in these areas. Modest growth has also occurred in finance and insurance. The largest decline in employment is in transportation and warehousing. Health care and social assistance, retail trade, professional and technical services and wholesale trade all show a modest drop off. However, not all commercial activity in town is represented by the RI Department of Labor and Training employment data. Activities such as home businesses for instance may be underrepresented.

³ <http://www.dlt.ri.gov/lmi/pdf/stateofstate.pdf>

**Table EO-1
Employment in Charlestown by Sector, 2006, 2009 and 2015**

Establishment Employment	2006	2009	2015
Total Private & Government	1,632	1,460	1,550
Total Private Only	1,459	1,258	1,337
Accommodation & Food Service	207	187	258
Government	173	202	213
Construction	185	145	166
Health Care & Social Assistance	186	177	138
Retail Trade	174	143	135
Administrative Support & Waste Management	78	61	75
Finance & Insurance	28	35	51
Professional & Technical Services	59	45	42
Other Services	32	38	37
Real Estate & Rental & Leasing	20	19	27
Information	17	20	20
Wholesale Trade	36	21	19
Manufacturing	308	*	*
Transportation & Warehousing	117	12	*
Arts, Entertainment, & Recreation	7	20	*
Agriculture, Forestry, Fishing & Hunting	*	*	*
Mining	*	*	*
Educational Services	0	*	*
Management of Companies & Enterprises	0	0	*
Utilities	0	0	0
* Confidential or non-publishable data			

Source: RI Department of Labor and Training

According to the Department of Labor and Training⁴ about 48.4% of the jobs in Charlestown were filled in 2010 by Charlestown residents. And according to a survey conducted for this comprehensive plan, the town generally views itself as a commuter and retirement community and does not see opportunities to significantly expand local employment without impacting the character of the town. The State of Rhode Island Division of Planning estimates that employment in Charlestown will remain stable or decrease slightly over the next several years. This may be reflective of the increasing numbers of retired persons living in Charlestown.

⁴ Source: RIDLT based on American Community Survey Data 2010 <http://www.dlt.ri.gov/lmi/pdf/commute.pdf>

ECONOMIC SUSTAINABILITY: ISSUES AND OPPORTUNITIES

Statewide Issues

Charlestown, like the State of Rhode Island, seeks a more sustainable economy that is less dependent on land development and new housing construction. The state has endorsed this approach to the economy through the adoption of Land Use 2025: RI State Land Use Policies and Plan (LU 2025)⁵. LU 2025, an element of the State Guide Plan adopted in 2006, is Rhode Island's plan for conservation and development in the 21st century. It challenges Rhode Islanders to work collectively to appropriately design, build and redevelop its communities while protecting its traditional neighborhoods and landscapes.

The principal goal of the plan is to reduce suburban “sprawl” development and to concentrate new development in areas where the services necessary to support higher density are already in place. The distinction between Rhode Island's urban and rural areas is defined by an urban services boundary; those areas within the boundary, along with potential growth centers outside of it, are identified as optimum areas for accommodating the bulk of the state's development needs through 2025. Charlestown is outside of the urban services boundary, meaning that state and local policies and investments should not encourage or support growth and development. Charlestown's development patterns and land uses are characterized by the important natural, scenic and cultural centers that the state is seeking to protect; to be consistent with the State Guide Plan, the town's economic opportunities should build on these assets and focus on small scale development and redevelopment in the villages and identified growth centers.

The adopted Economic Development element (2014) of the State Guide Plan sets several goals for the state. They include support for the industries and investments that play to Rhode Island's strengths, and the creation of a stronger and more resilient statewide economy. Charlestown's economic strength and long term sustainability, and its competitive advantage rely heavily on a tourist and recreation economy. The protection and expansion of these sectors, and the natural resources they depend on, are a major component of Charlestown's plan for economic opportunity.

In “*Vision for Rhode Island Agriculture*”, a five-year strategic plan published in 2011, the state expressed its support for growth in the agricultural sector of the economy. The state has adopted a policy of strengthening and supporting Rhode Island's burgeoning food system businesses, which include agriculture, aquaculture and fishing, food processing and production, and marketing and sales. Charlestown considers the growing agricultural economy as an addition to the predominantly tourist and recreation economy. The town recognizes the relationship between the use of open space for agriculture and the protection of the town's rural character, but also the need to balance the expansion of agriculture and agriculture related uses with protection of the environment and the quality of life in predominately residential areas.

⁵ <http://www.planning.ri.gov/documents/121/landuse2025.pdf>

Regional Opportunities

As noted above, most Charlestown residents work outside of Charlestown and many of these work in the adjoining communities of South Kingstown and Westerly. As a result, the economic development policies of these communities can have a significant impact on employment and income in Charlestown.

The comprehensive plans of both South Kingstown and Westerly stress balanced economic growth, providing economic opportunities while protecting sensitive environmental areas. There is a strong emphasis on protecting and enhancing natural resources as fundamental to the local economy, as well as enhancing and expanding the tourist industry as a basic economic activity. Charlestown shares these goals of balanced economic growth, protection of natural resources and expansion of tourism, and looks forward to continuing to cooperate with neighboring communities to achieve these mutual goals.

Expanding the Tourist Economy

Seasonal residents are an important economic force, attracted to Charlestown for its natural beauty and enduring rural character. The seasonal market is currently a major factor in the town's economy. The visitors that come to Charlestown each summer increase the demand for goods and services, providing revenues for area businesses and wages for seasonal employees. These seasonal demands include food-related services of course, but also services such as renovation, remodeling, landscaping and home management; all can be considered mainstays or even growth sectors of the local economy. The accommodation sector is changing in that internet driven businesses such as Airbnb are competing with traditional hotels and bed and breakfasts, just as Uber and Lyft provide transportation alternatives for consumers. It is unknown to what extent this new "sharing" economy will drive economic growth, but it can support a greater diversity of visitors to the area, such as those traveling off season or without transportation.

Creating tourism opportunities beyond the typical summer season should be explored. The town's expansive open space and conservation lands, dark skies, rural character, and cultural and historical heritage provide opportunities beyond swimming, boating and beach-combing. Charlestown has long recognized this possibility; recommendations for supporting and expanding tourism go back to the Town of Charlestown Comprehensive Plan adopted in 1992. Some opportunities are described below.

Nature and Heritage Trails

The development of miles of hiking trails throughout Charlestown's open space and conservation areas have added immeasurably to the town's attractiveness, both as a place to live and to visit. Promotion of cultural and heritage trails would stimulate interest in the cultural as well as natural resources of Charlestown. For example, the Charlestown Parks and Recreation Department

developed a 26-mile trail, named the Deerfoot Trail, after Ellison Myers Brown Sr., of the Narragansett Indian Tribe who was an Olympic marathoner (1936) and two-time winner of the Boston Marathon (1936, 1939). This trail could be a model to develop additional walking and biking trails focusing on mill villages, historic homes and other cultural attractions (see Historic and Cultural Resources chapter). Linking these sites to the hiking trails in the parks and the refuges would add an historic and cultural element to the tourism industry in Charlestown.



Jane Weidman

Trail Head at US Fish and Wildlife Kettle Pond Preserve

Maps that identify any number of nature and heritage trails can be created and made available online, and at the tourist information kiosk run by the Charlestown Chamber of Commerce. Migratory bird-watching activities during the fall and winter months could be part of this effort. Linking recreational opportunities to businesses can be done through synergy in marketing. For instance, maps could be created that link hiking, biking and kayaking trails with nearby restaurants and specialty business stores.

Dark Skies

Charlestown has the darkest night skies between New York and Boston, which draws many thousands of visitors year round to the Frosty Drew Observatory and Science Center in Ninigret Park, where on unclouded nights people can view star clusters, the moon's surface and the planets. In addition to the observatory, a star theater was constructed in 2006 to expand viewing opportunities and provide a space for lectures and a gallery of astrophotography. The town also has a "dark sky" ordinance to regulate the installation of outdoor commercial lighting to protect

Charlestown's unique dark sky for astronomy, enjoyment and health purposes. Tourism based on dark skies has been very successful in many parts of the United States and could be marketed in Charlestown as a year round economic activity.

Programs and Events

Expanding the Parks and Recreation Department programs would encourage people to visit Charlestown during the off season, as well as provide additional activities for residents. Events such as cultural and art festivals and antique fairs, and activities such as children's programs and educational and craft classes, could be developed both during and beyond the summer season. Agencies such as the Cross Mills Library, US Fish and Wildlife Service and the Salt Ponds Coalition also provide programs which could be publicized as attractions (see Recreation chapter).



Scott MacNeill

Milky Way over Frosty Drew Observatory

Additional Businesses Opportunities

Supporting Businesses

Although some retail businesses may not be feasible year-round in Charlestown, there are enough summer visitors to make certain seasonal businesses viable. Examples include boating and fishing supplies, water sports equipment sales and rentals, fish markets, additional restaurants, art galleries and antique shops, and bicycle sales and rentals. Such businesses could be promoted by offering short-term leases to seasonal entrepreneurs, which could be coordinated through the Chamber of Commerce or a business support organization. The presence of the summer festivals in Ninigret Park also provides a secondary economic impact for some local businesses.

There are other options the town can explore to help businesses, including reviewing the zoning ordinance to ensure that appropriate small businesses are allowed by right in Charlestown, establishing funding programs to help with building and site improvements, and making use of state programs to help small business. Supporting local businesses can also be done by ensuring that design standards for new development are in place to protect the character of the town, particularly in the villages of Carolina, Shannock and Cross Mills and in the Traditional Village District and along the Route 1 scenic highway. Local character and the uniqueness of the community is protected by preventing homogenous development in the form of chain store brand-style building design and placement. A thorough discussion of the commercial zoning districts in Charlestown, and the need to define them and undertake a comprehensive review of allowable uses to ensure compatibility of intensity and scale by district is contained in the Land Use chapter.

Home Occupations

The combination of an educated populace and available communications technology suggest that Charlestown will be part of the growing trend of technical and professional services as home occupations. With specific exclusions (for example, vehicle repair, hair salons, exercise studios, medical offices, animal boarding) home occupations are permitted in Charlestown provided they meet general performance standards. The use of private homes for short term rental via the internet (Airbnb) is a home occupation that is growing, one that supports the tourist economy, but can also have a negative impact on neighborhoods. Regulations governing home occupations should be reviewed to ensure that a variety of low-impact home based businesses can thrive in Charlestown in a way that enhances the local economy without compromising neighborhood character.

Cottage Industries

Many cottage industries that produce homemade and handcrafted goods for sale to visitors, tourists and others already exist, and should be encouraged in Charlestown. These goods are generally produced on a small scale by residents in their homes or outbuildings with no negative impact on residential character. Products include locally made art and natural resource based products, reflecting Charlestown's coastal and rural character. These also include light assembly operations such as signs and specialty furniture production or textile products like rugs and blankets. Such operations may otherwise be considered to be manufacturing uses, but can be allowed as long as they are done at a small scale with no deleterious impacts or hazardous wastes produced, and can meet the general performance standards for home occupations.

Meeting the Needs of an Aging Population

As described in the Housing Choice chapter, the median age of Charlestown residents will continue to rise as the baby boomers age and many seasonal home owners retire to, or at least spend more of the year in, Charlestown. Well over a quarter of the year round population is currently over 60 years of age. This continued trend in demographics can provide economic opportunities in the

area of senior support services. These can include recreational activities geared towards young seniors, transportation services, and medical and personal care such as home health aides, cleaning services, senior day care and even assisted living.

Agriculture

Promoting Farmland Acquisition and Agricultural Grant Opportunities

The Rhode Island Department of Environmental Management (RI DEM) has initiated a number of programs to help local farmers and grow the state’s “green economy”. These include the Farm Energy Program, the Local Agriculture and Seafood Act Grants Program and the Specialty Crop Block Grant Program, as well as the Farm Acquisition Program, rolled out in 2017. In this last program, RI DEM will buy agricultural land threatened with development, protect it through a deed restriction and then resell it at a steep discount to young or beginning farmers who would not otherwise be able to afford the land.

Charlestown can encourage farmland protection and acquisition by supporting these programs. The Agricultural Preservation Commission can work to educate farmers on methods to acquire and manage farmland in a sustainable and economically viable manner.

Farm Retail

An important part of supporting local agriculture is encouraging farmers to have farm stands on their properties as well as providing centralized locations for farmers’ markets. These markets bring together residents, families, farmers and artists in a community oriented way. The state’s farmers’ markets, many of which are year round, are well attended community events that sell not only farm raised meat, seafood, home grown produce and baked goods, but art and local crafts. In addition to being an economic activity, locally sourced products reduce carbon footprint, an energy goal, and increase the health of the community.



Frances Topping

Local Farm Stand

ECONOMIC OPPORTUNITY: GOALS, POLICIES AND ACTIONS

GOALS

- Goal 1** Create and maintain an economic and regulatory climate that allows small businesses to establish, grow and thrive.
- Goal 2** Promote economic activities that rely on and protect Charlestown's natural, scenic, and historic amenities.
- Goal 3** Support and expand agriculture as an important and viable economic activity.

POLICIES AND ACTIONS

Through its policies and actions, Charlestown seeks to achieve its economic opportunity goals while preserving its small town and rural character and protecting its cultural, scenic and natural resources.

- Goal 1** Create and maintain an economic and regulatory climate that allows small businesses to establish, grow and thrive.

- Policy 1.1** Attract, retain and support businesses that directly benefit residents, tourists and visitors.

Action 1 Review and amend the zoning ordinance as needed to ensure that a variety of small scale and mixed commercial-residential uses are allowed at appropriate locations, particularly within the villages of Carolina, Shannock and Cross Mills, and within the Traditional Village District along the Old Post Road corridor.

Action 2 Establish a funding mechanism, or tax incentive program, that would allow the town to assist in small business development and/or enhancement, such as building and site improvements, signage and promotion. These could include establishing a revolving fund for building improvement loans, or a tax rebate program that offsets the cost of signage and landscaping improvements.

Action 3 Utilize the resources of the RI Commerce Corporation, including the RI Small Business Center at the University of Rhode Island, to assist in business development, building reuse and tourism support.

Action 4 Allow and encourage cost saving measures such as community wells and shared septic systems, and common signage and shared parking for businesses.

Policy 1.2 **Establish design standards for new development and redevelopment to both protect the character of the town and ensure vibrant successful commercial areas.**

Action 1 Establish specific site and building design standards for Carolina, Shannock and Cross Mills and the Traditional Village District regulating building and parking placement, building form and design, and signage and site amenities so as to protect and enhance traditional uses and development patterns.

Action 2 Provide town-wide standards that protect against homogeneous development represented by chain stores, including “small-box” stores, while allowing the flexibility that encourages local businesses.

Policy 1.3 **Identify and support economic activities with potential for growth and/or which could complement existing activities.**

Action 1 Review and amend the zoning ordinance as needed to ensure compatible manufacturing activities in the industrial zones in town, and to provide additional options for light assembly and small scale production in the commercial zoning districts.

Action 2 Review, and amend if necessary, local regulations that support home-based businesses, including those that provide many of the local services required in a small community and do not impair or negatively impact surrounding properties.

Action 3 Review and amend the zoning ordinance as needed to ensure that opportunities for senior support services are allowed and encouraged in appropriate districts in town.

Goal 2 **Promote economic activities that rely on and protect Charlestown’s natural, scenic, and historic amenities.**

Policy 2.1 **Continue to acquire, protect and manage open space areas for passive and active recreation use.**

Action 1 Identify and rank open space land that provides additional passive recreation opportunities.

Action 2 Provide trailhead facilities and well-marked trails to facilitate use of natural areas.

Policy 2.2 **Utilize Ninigret Park in a manner that is compatible with the adjacent Ninigret National Wildlife Refuge.**

Action 1 Investigate the possibility of establishing public events at the park such as a community yard sale, an arts festival or an antique show.

Action 2 Promote year round tourism based on Charlestown's dark skies and the night sky viewing opportunities at the Frosty Drew Observatory.

Policy 2.3 **Maintain the varied recreational opportunities on Ninigret and Quonochontaug Ponds, on the freshwater ponds and the Pawcatuck River, for boating, swimming, fishing and shellfishing.**

Action 1 Investigate the potential for additional boat ramps or small boat put-ins to increase access to the salt ponds and the Pawcatuck River.

Action 2 Undertake a study to evaluate beach access and parking, and if necessary, develop a plan to meet demand while not encouraging over-use.

Policy 2.4 **Continue to support the Economic Improvement Commission, Charlestown Chamber of Commerce and South County Tourism Council in promoting local events and recreational activities, including year round activities, as an attractive alternative to more distant vacation destinations.**

Action 1 Publicize the wide array of outdoor recreational opportunities available to visitors and tourists through various media and organizations, including the town website.

Action 2 Develop a series of hiking, walking, biking and kayaking/canoeing maps of Charlestown showing locations of all natural areas with trails and access points; locations of mill villages and cultural sites; scenic bike routes; and water trails, along with locations of local businesses that support tourism and outdoor activities.

Action 3 Develop tourism packages focused on visitors of varying ages and interests including ecotourism, heritage tourism, agri-tourism and dark sky tourism.

Policy 2.5 **Develop and support regional recreation and tourist activities.**

Action 1 Provide links to regional tourism routes in Washington County and eastern Connecticut.

Action 2 Develop a scenic and historic driving tour contiguous with and similar to one developed by the Town of South Kingstown (posted on town website).

- Action 3** Develop a coastal bicycle route along the Route 1A corridor in conjunction with Westerly and South Kingstown (see Transportation chapter).
- Action 4** Develop, jointly with Carolina and Kenyon in Richmond, a heritage trail along the Pawcatuck River that would link the Carolina Management Area and the Great Swamp Management Area.
- Action 5** Develop and market an art trail, linking artist studios, galleries, and performance spaces.
- Action 6** Work with the Narragansett Indian Tribe to market information on local Native American heritage.

Working with the Narragansett Indian Tribe to promote this important part of Charlestown’s heritage as a form of cultural tourism is a real opportunity. Such an effort may require coordination with the Tomaquag Museum. Although in nearby Exeter, the Tomaquag Museum focuses on the history of the Narragansett. Founded in the 1950’s, it is one of the oldest tribal museums in the country.

Goal 3 Support and expand agriculture as an important and viable economic activity.

Agriculture is an integral part of the character of Charlestown and a growing sector of the economy. Agriculture should be encouraged and helped to become sustainable, including the allowance of farm related accessory uses of a scale and compatibility with surrounding properties, particularly residential. The growth of agriculture must also be done in an environmentally sensitive manner.

Policy 3.1 Support existing farms and promote the establishment of new farms.

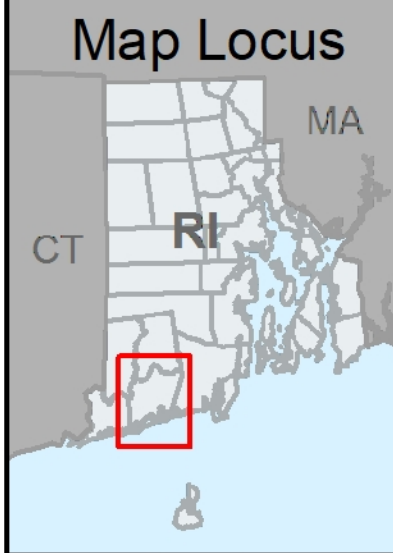
- Action 1** Work with the Charlestown Land Trust and/or other conservation agencies or groups to identify and preserve prime agricultural lands, with funding available from local and state bond money (including from the State Agricultural Preservation Commission).
- Action 2** Partner with active farms and/or community groups to develop an agricultural lease program to assist new farmers.
- Action 3** Collaborate with the RI DEM Division of Agriculture on marketing and promotion, including use of grants opportunities such as the Local Agriculture and Seafood Act program to support the growth, development and marketing of local food and seafood.

Policy 3.2 Promote farms and farming as multi-use operations.

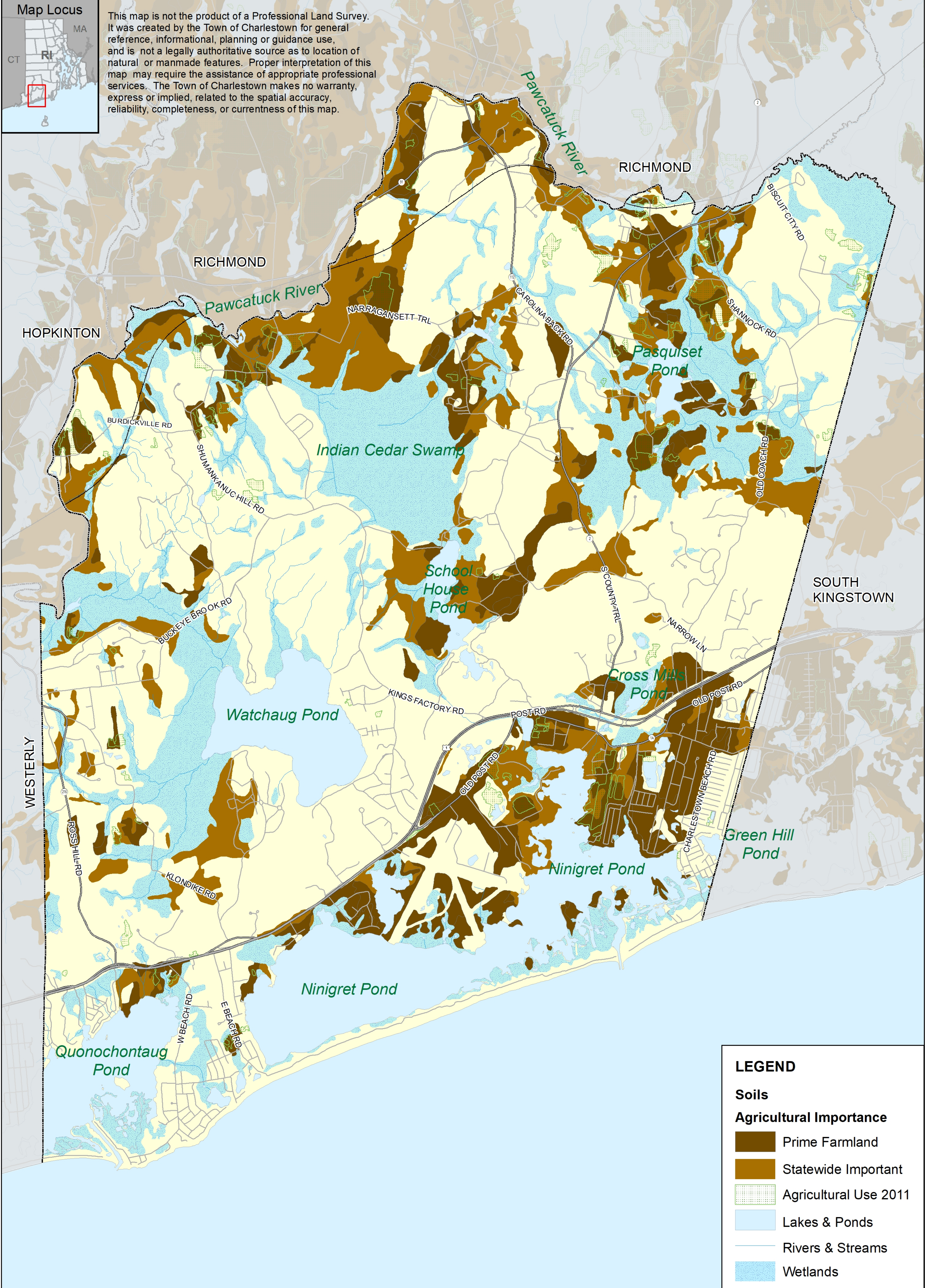
Action 1 Review and amend the zoning ordinance as needed to allow appropriate accessory uses on active farms, such as farmers' markets, retail sales and special events, that are in scale with the size of the farm, are sensitive to environmental and neighborhood impacts, and are linked to the potential for development pressure on the land based on the underlying zoning.

Policy 3.3 Support and manage aquaculture in the salt ponds as a sustainable and important local economic activity.

Action 1 Work cooperatively with aquaculture farmers to educate the public on shellfish cultivation and growing in the salt ponds, to both encourage a balanced and peaceful co-existence with other salt pond users and to provide public support for this growing industry.



This map is not the product of a Professional Land Survey. It was created by the Town of Charlestown for general reference, informational, planning or guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. The Town of Charlestown makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.



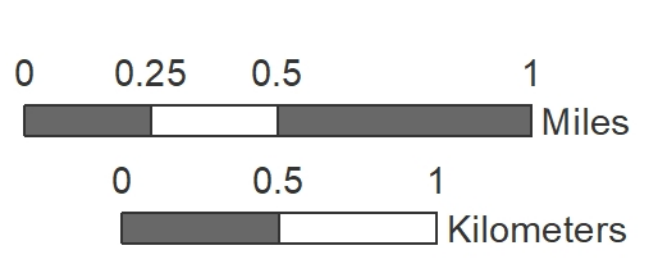
LEGEND

Soils

Agricultural Importance

- Prime Farmland
- Statewide Important
- Agricultural Use 2011
- Lakes & Ponds
- Rivers & Streams
- Wetlands

Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND



Prepared by:
Town of Charlestown
Mason & Associates, Inc.

COMPREHENSIVE PLAN, 2020

IMPORTANT FARM SOILS

MAP EO-1



HOUSING CHOICE

CHARLESTOWN COMPREHENSIVE PLAN

A description of Charlestown's housing stock and needs, issues and opportunities related to affordability and diversity of housing, and recommendations to achieve the goals of providing housing alternatives, protecting existing neighborhoods and meeting state requirements for low and moderate income housing.

HOUSING CHOICE CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN

CHAPTER 10. HOUSING CHOICE

INTRODUCTION

Housing resources in Charlestown have evolved over time in a manner reflective of the town's historic development pattern, unique natural and cultural setting, and growth as a coastal rural community. The variable nature of the housing stock also reflects the demographic character of the town and its legacy as a summer resort community. This is evidenced by a large proportion of homes being seasonally occupied (nearly 32% or 1,635 units of total count of 5,145 in 2016). The town's housing reflects such diverse settings as the coastal plain, historic mill villages, inland forested hills, ponds and wetland complexes and areas with agricultural use or heritage. Another overriding theme woven throughout the town is the Native American heritage which may also present opportunities for subsidized housing going forward.

Planning for a range of housing opportunities for Charlestown residents and newcomers is a priority in the development of this comprehensive plan. This includes preservation and enhancement of the existing housing stock and accommodating new growth consistent with the community's strong desire to maintain its rural character and heritage. This philosophy is a constant throughout this plan and is a result of the recognition of the natural environment and constraints of the community setting, lack of infrastructure (no municipal water or sewer systems) and the need to preserve its community heritage. Future development, including market rate and affordable housing, must be considered in balance with these factors. Development of land that does not align with this balance is not supported by this plan or the regulations that implement the goals and policies of this chapter and others. It is the intent of this plan to support a community housing resource that strengthens neighborhoods and village settings in accord with the needs, desires and aspirations of Charlestown. This includes the provision of a diversity of housing that is safe, sanitary, well-designed for people of all income levels, ages and abilities, located in appropriate settings which promote the everyday life and convenience of the residents. It is also important to note that while the town can shape or promote growth and change in a particular manner or area of the community, many decisions relating to new residential growth or use are made in the private sector or are dependent on financing, programmatic availability or other factors which lie outside the control of the municipality.

RELATIONSHIP TO OTHER CHAPTERS

Housing issues and opportunities in the community are dependent on demographics, natural and cultural factors, considerations of the built environment, and regulatory and other economic determinants. As such, this chapter should be considered in context with other plan chapters, particularly Natural Resources, Services and Facilities and Land Use. Importantly, the Land Use

chapter details the town’s overall land development plan and policy regarding residential densities in different areas of the community.

EXISTING CONDITIONS

Population and Housing Data

The following tables showing demographic and housing data are provided to illustrate current and recent past conditions relating to the demographic base and housing stock of Charlestown. Some projections and forecasts relating to overall population and housing units for the 20-year timeframe of this plan are included. For additional information on economic and employment characteristics, see the Economic Opportunity chapter. In an effort to utilize the most contemporary information to inform this chapter, data from several sources has been included. While there may be minor inconsistencies, overall these resources support and illustrate the trends and projections cited and form the basis of the goals and policies outlined in this chapter.

**Table HC-1
Charlestown Demographic Data**

Total population:	1990 – 6,478; 2000 – 7,859; 2010 – 7,827; 2016 – 7,776
Median age: (2010):	Overall population: 47 years; female: 47.5; male: 46.5
Distribution by sex (2010):	Total: 7,827; female: 50%; male: 50%
Largest population cohort:	45-54 years, 1,363 persons or 17.5% (2016 ACS)
Population under 19 years of age:	1,522 (19.6%)
Population over 60 years of age:	2,265 (29.2%)
Projected population:	2020 – 8,319; 2025 – 8,631; 2030 – 8,915; 2035 – 9,152; 2040 – 9,329

Sources: US Census 2010; American Community Survey 2016; RI Statewide Planning Program, Charlestown Data Points for Comprehensive Planning, 2017

**Table HC-2
Charlestown Housing Data**

Total housing units: 5,145 (2017); increase of 348 units since 2000 (6.76%)
Total households: occupied units: 3,171 (61.7%); vacant units: 1,974 (38.4%) year-round units: 3,571 (68.2%); seasonal units: 1,635 (31.8%)
Average household size: 2.4 (2010 Census); 2.53 persons (2015 ACS)
Unit distribution: 1-family 4,541 units (88.3%); multi-family 425 units, (8.3%); other types 179 units (3.5%)
Owner occupied units: 2,656 (83.8%); rental units 515 (16.2%)
Median age of units: 1979 (37 years in 2016)
New housing starts 2008-2017: 278 units: 148 new units and 130 replacement units. Includes 24 units of the Churchwoods, the only multi-household development
Average new units/year 2008-2017: 27.8 units overall: 14.8 new units; 13.0 replacement units
Median sales prices: 2000 - \$177,950; 2005 - \$389,900; 2010 - \$350,000; 2015- \$335,000
Median price 2016: \$351,000, annual income needed to be affordable: \$88,640 Median price 2017: \$364,500, annual income needed to be affordable \$93,921
Foreclosures: 2012 – 10; 2013 – 6; 2014 – 7; 2015 – 7; 2016 – 10
Median monthly rental price: one-bedroom – \$952 (2014); two-bedroom unit – \$1,258 (2016); three-bedroom – \$1,498 (2017)
Cost burdened households*: 965 (30.5%) of total households; 665 (58.1%) of total low and moderate income households (approximately 1/3 of LMI cost burdened households are rentals) Severely cost burdened households*: 365 (11.6%) of total households; 315 (27.5%) of total low and moderate income households
Low and moderate income housing count, 2019: 142 units, 4.0% of the total year round housing units (3,494 counted by RI Housing based on 2010 Census) 10% threshold required by the RI Low and Moderate Income Housing Act
Forecasted LMI housing needs, 2039: Statewide Planning Program projected total year-round housing units: 3,808; forecasted 10% threshold: 381 units; LMI housing units needed over 2019 count: 239

* Cost burdened households are those that pay more than 30% of gross income for housing expenses. Severely cost burdened are those that pay more than 50% of gross income.

Sources: RI Statewide Planning Program, Charlestown Data Points for Comprehensive Planning, 2016; Housing Works RI 2017 Fact Book; RI Housing 2017 LMI Inventory; HUD CHAS (Comprehensive Housing Affordability Strategy); American Community Survey Data, 2010-2015

Trends in Population and Housing

The Town of Charlestown experienced rapid population growth in the last decade of the 20th century, moving from 6,478 residents in 1990 to 7,859 in 2000, a change of 1,381 residents or 21.3%. Since 2000, however, population growth has declined or been flat, as is shown in the above table showing an estimated town population of 7,772 in 2015 (a decline of 87 residents or 1.1%). Population projections provided by the RI Office of Statewide Planning show a return to a growth trend, with a population of 9,329 by 2040. This represents a 20% increase between 2015 and 2040. However, this level of growth is not likely to be realized given recent trends, the ageing of the local populace and expected modest declines in average household size. While the actual numbers are likely to be considerably less, these projections will be utilized in this chapter for estimating housing growth, and the need for low and moderate-income units relating to the state's 10% threshold (see discussion below).

For the timeframe of this plan it is expected that the overall profile of the Charlestown population will not undergo significant change or modification. While median age will trend upward and the segment of the population over age 60 will continue to grow, other general population characteristics should remain steady or change in modest form. This trend may suggest a greater need for housing designed for and more suited to elderly occupancy and needs, including elderly rental, single-story accessible designs, smaller unit footprints and limits on bedrooms. Location wise such housing should consider issues of service availability, ease of access and walkability. Entry level family housing, both homeownership and rental, will remain a need over the timeframe of this plan.

According to the 2015 American Community Survey (ACS) there were 4,940 housing units in Charlestown. Of these units 1,569 are "seasonal" (summer) homes comprising 31.8% of this total. Conversion of seasonal homes to year-round use has been a trend over the past several years with 130 such conversions occurring between 2008 and 2017. During this period, about 148 new units have also been constructed (an average of about 15 per year). The ACS reports 3,048 households in 2015, with the difference between housing units and households reflecting the large number of seasonal housing units in Charlestown.

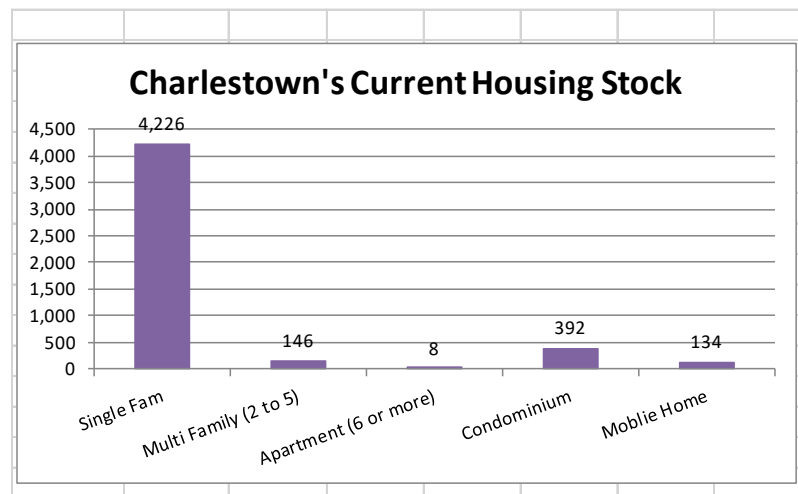
Homelessness in Charlestown is an issue that is not well defined nor fully understood. This issue arises more frequently in the summer season as a result of fall-to-spring rentals which require residents to relocate, use seasonal campgrounds or seek other alternatives. Adjacent communities (South Kingstown, Westerly) do have resources to assist persons in these circumstances or who are in the general category of being homeless. Gaining a better understanding of the extent of this issue could be an outreach led by the Charlestown Affordable Housing Commission, possibly in concert with state and adjacent community agencies. Given the limited capacities of local government to address this complex issue, a regional approach would have the most merit.

Housing Stock

Charlestown is primarily composed of single-family households and homeowners. In 2015, almost 87% of homes were owner occupied, a consistent percentage observable since 2000. Rentals comprise a small component of the local housing stock (404 units or 13.3% of the housing in town). The average household size in Charlestown is 2.53 persons and the median age of housing in town is 38 years (2015 ACS). Table HC-3 depicts the counts of various types of housing units in Charlestown.

Note: The condominium category refers to dwelling units located on jointly owned land, the principal example of which is the Castle Rock and Kingsland development just north of Route 1 adjoining the South Kingstown border, which together comprise 170 units in 42 buildings. The 24 Kingsland units were built in the 60's and 70's, while the 146 Castle Rock units were built in the late 1980's.

Table HC-3
Charlestown Housing Stock, 2018



Source: Charlestown Tax Assessor, 2018

Charlestown remains a solidly middle-class community with a median household income of \$74,826 in 2015, rising from \$70,969 in 2010. According to the Housing Works RI 2018 Fact Book, the median single-family home price in 2017 was \$364,500. The annual household income necessary to afford this median priced home is \$93,921. Average 2-bedroom rent in the town is \$1,498; the annual income needed to afford this rental unit is estimated at \$59,920. Housing Works RI estimates that 28% of local homeowners and 42% of rental households are cost burdened; that is, they spend more than 30% of their income for housing.

In general, the housing stock in Charlestown is in good physical condition and stable from the perspective of ownership (limited foreclosures). Affordable housing units in Charlestown are also in very good condition. Most of these units are relatively new, having been built since the passage of the Rhode Island Low and Moderate-Income Housing (LMIH) Act in 2004 (RIGL 45-53-2).

Housing condition is not expected to change significantly during the next 20 to 25 years except that the trend of conversion of seasonal homes to year-round homes is likely to continue. Most of the seasonal homes that are likely to be converted are located in the coastal zone in areas identified in the Coastal Salt Ponds Special Area Management Plan (SAMP) as “developed beyond carrying capacity”. Most are also located in areas that are highly vulnerable to natural hazards such as hurricanes and coastal flooding and are also vulnerable to the impacts of changing climate conditions and continuing sea level rise. The town is considering mitigating actions for these effects, as described in the Natural Hazards chapter of this plan.

Affordable Housing

Low or moderate income housing (LMI) is commonly known as “affordable housing”. It is defined in the RI General Laws Section 45-53-3 as follows: “*Low or moderate income housing means any housing whether built or operated by any public agency or any nonprofit organization or by any limited equity housing cooperative or any private developer, that is subsidized by a federal, state, or municipal government subsidy under any program to assist the construction or rehabilitation of housing affordable to low or moderate income households, as defined in the applicable federal or state statute, or local ordinance and that will remain affordable through a land lease and/or deed restriction for ninety-nine (99) years or such other period that is either agreed to by the applicant and town or prescribed by the federal, state, or municipal government subsidy program but that is not less than thirty (30) years from initial occupancy.*”

Put more simply, affordable housing under state law is limited to occupancy by households of low or moderate income (up to 120% of the area median income), is the recipient of a federal, state or local subsidy, and must have an affordability term of not less than 30 years. State law also establishes a threshold for communities to have at least 10% of its year-round housing as low and moderate income housing.

The town has made significant progress in terms of affordable housing since the development of the Charlestown Affordable Housing Plan (AHP) in 2004. The AHP provided a solid policy foundation for affordable housing and the town has utilized its recommendations in the ensuing years to make solid, steady progress and recently, to build momentum around this issue. In 2004, the town also established the Affordable Housing Commission, a nine-member board appointed by the Town Council whose mission is to foster the production of affordable housing in Charlestown and to report on the implementation of the AHP.

According to data prepared by RI Housing, along with the recent construction of 11 rental units in Shannock Village, Charlestown’s low and moderate income (LMI) housing inventory for 2019 is 142 units or about 4.0% of the total units in town (minus seasonal units). This is an increase of 40 units over the count in 2015; it includes the Churchwoods rental housing located on Old Post Road (24 1-bedroom units) completed and occupied in 2017, and the 11 units in Shannock Village.



Churchwoods LMI Rental Units, 55 and Older

Since 2004, the town has increased its LMI inventory by nearly 100 units. Village Farms, off Route 1A near the South Kingstown line, is the only private development (a subdivision of 28 lots) to include a mixture of market rate and affordable units, including eight, 4-unit buildings (on two of the lots), as low and moderate income condominiums; as of 2019, with all of its affordable units on-line, Village Farm provides 32 of the total 50 LMI home ownership units.

**Table HC-4
Charlestown LMI Housing Units, 2019**

LMI Units by Population Served	Units	% of Total
Age Restricted – 50 and Older		
Home ownership – Village Farms	32	22.5%
Rental – Churchwoods	24	16.9%
Family		
Home ownership (Edwards Lane and others)	18	12.7%
Rental – Shannock Village Cottages	11	7.8%
Special Needs		
Group home beds	57	40.1%
Total	142	

For a small, rural community this increase is laudable and indicative of the town’s commitment to and acceptance of properly scaled, designed and integrated affordable housing proposals. The town also has provided bonding resources to assist (\$1 million bond approved by voters in 2004). Of these bond funds, \$375,000 were critical to the funding consortium necessary to construct the Churchwoods elderly housing project. Other bonding resources have been committed to the following projects:

- Shannock Village Cottages: \$325,000, totaling 11 rental units, 99-year land trust project combined with “Richmond Ridge” a 32-unit project under construction in Richmond, RI, as a joint venture between the Washington County Community Development Corporation and the Women’s Development Corporation. This project represents a regional approach to affordable housing for Charlestown and Richmond.
- Edwards Lane: \$250,000 to complete previously approved project, totaling 7 low and very low-income ownership single family units, 99-year land trust.

Charlestown’s zoning requirements have been modified or revised to remove impediments to and/or encourage the production of new or rehabilitated affordable housing. The bullet list below includes some of these initiatives:

- Adoption of an Income Restricted Accessory Dwelling Unit Ordinance; this zoning regulation allows the creation of an accessory dwelling unit as either part of a single family house or as an accessory structure provided it is deed restricted as an affordable unit.
- Adoption of the Traditional Village District; this mixed-use zoning district specifically provides for the addition of residential units attached to commercial buildings provided they are deed restricted as affordable units.
- Comprehensive Permit Ordinance; these zoning regulations provide the requirements and procedures for submitting affordable housing developments as a comprehensive permit application, a procedure allowed under the RI Low and Moderate Income Housing Act for consolidated local review and approval of qualifying LMI housing projects.



Edwards Lane Home

For perspective it is noteworthy that, based on 2018 statistics provided by RI Housing, only six (of thirty-nine) Rhode Island communities (Burrillville, Central Falls, New Shoreham, Newport,

Providence and Woonsocket) currently meet the 10% threshold for LMI housing. The statewide percentage of LMI units in 2018 is 8.35% (or 37,225 units as calculated by RI Housing).

It is also worth noting that the town's housing resource is in many ways characterized by "practical affordability", which are housing units available that are affordable in terms of price or rent, but do not meet the strict definitions and threshold requirements of the RI Low and Moderate Income Housing Act. A review by the Charlestown Planning Commission in 2011 compared "assessed valuations" in the community with the housing price upper threshold for households earning 80% of the area median income (AMI). The review found that some 1,219 dwellings in the community (37.5% of the year-round units) were assessed below the 80% AMI limit of \$240,775. While the state definition for affordability and official inventory would not include these units, it is important to recognize practical affordability as playing a role in meeting housing needs in Charlestown.

Rental Housing

Rental housing opportunities in Charlestown are seriously affected by the market for vacation homes. As noted, over 30% of all housing units in town are seasonal or vacation homes. Apartment and home rentals in vacation communities are often leased for nine-month periods during the fall and winter, and on a weekly basis during the summer. Partial-year leases are disruptive to families and others who must search for temporary housing during the summer, or commute long distances to work in the community. Vacation homes, in some respects, are best understood as standing apart from the regular stock of rental housing in a community. The average rental price of vacation homes (on an annual basis) is well above average rents, and the dislocation of tenants from the units during the summer prevents the apartments from fully functioning as family housing. This latter trend also may lead to homelessness or sub-optimal housing choices for "renters" during the tourism season.

The supply of year-round rental housing in Charlestown is limited, with only 10% of the housing units, or approximately 35 units, identified as such. According to Housing Works RI, average rent for a 2-bedroom apartment in 2014 was \$1,307, and the income needed to afford this rent was \$52,280, or roughly 65% of Charlestown's median household income of \$80,318. This situation is complicated by the large number of seasonal housing units that are available at low rental rates in the off-season, but at very high rates in the summer months. Many seasonal units rent per week in the summer season for as much or more than they rent per month in the off season.

The conversion of seasonal housing to full-time occupancy via a tear-down (or large rebuild) is also a trend observable over the past ten years, with an average of 13 "replacement" units each year. These conversions may result in decreasing rental opportunities in Charlestown. Policies and programs to increase the year-round rental inventory while maintaining community context are needed.



Seasonal Housing at Risk for Tear-Down

HOUSING: ISSUES AND OPPORTUNITIES

Housing issues and opportunities in Charlestown are typical of a small and rural community that nonetheless faces ongoing development pressures. Managing residential growth and responding to the need for more affordable year-round units must be done in a manner that preserves the qualities that define the community, as described below.

- Maintenance of village and rural character: Maintenance of community character has been a consistent philosophy governing Charlestown’s planning and policy efforts over time and will continue to be into the future. Protecting and reinforcing the identities of the historic villages of Carolina, Cross Mills, Kenyon and Shannock by maintaining their context, density and design qualities will keep these areas vibrant while protecting cultural resources that cannot be duplicated or replaced. Ensuring that the areas outside of the villages, particularly north of Route 1, retain their rural character is equally important. The concept of “density in context” is important to Charlestown, as only rural and village density and scale are compatible with community character and community support – as well as the fact that the town relies on wells and on-site septic systems to sustain development.
- Preservation and enhancement of existing housing stock: Given the town’s stated desires toward preservation of heritage and sense of place, it is important to maintain the quality of the existing housing stock. General code enforcement, support of rehabilitation programs and resources for local homeowners, and prompt addressing of minimum housing violations are general avenues toward keeping the existing housing stock resource in a good condition, particularly those from the historic and pre-World War II era.



Mill Houses in Shannock Village

- Growth profile of the community: A trend of slow although steady growth in Charlestown is likely to continue over the near term as well as the 20-year planning horizon of this comprehensive plan. This is due to the natural constraints of the community setting (carrying capacity of the land), lack of infrastructure to support higher densities, the local philosophy of “growth management” and the regulatory climate of the town and state with regard to coastal zone areas and wetlands.
- Partnerships to achieve local affordable housing needs: Charlestown’s experiences with affordable housing projects demonstrates that progress is best achieved by creative partnerships with local non-profit and institutional entities, state and federal agencies, and/or private entities, including the development community. The successful Churchwoods and Shannock Village Cottages LMI rental housing projects provide a template for this type of approach. Going forward, this cooperative effort should also extend to potential coordination with the Narragansett Indian Tribe who may have access to other programs and resources for affordable housing development.
- Practical affordability: Regulatory modification at the state level concerning the definition of affordability and efforts to expand programming and funding to support projects that fit with the community identity and context should be considered. Housing that is “practically affordable” without subsidy or restriction should be recognized in the overall context of the community housing resource base.

- Need for housing diversity: Underserved populations in the town include the elderly, young families, renters and small households of low or moderate income. Starter and “empty nester” homes, “workforce” housing and broadened (year-round) rental opportunities are particular need areas in Charlestown. The conventional subdivision of single family homes has not, on a consistent basis, met the diverse housing needs in town; other options should be considered to better serve the housing needs of these underserved groups. Conversion of seasonal motel units to year-round cottages, starter home regulations and construction of or improvements to mobile or manufactured homes under a leased land model might all be considered. Programs and policies to enable elderly residents to remain in their homes should be identified. Permissible styles and scale of housing development – including but not limited to “tiny houses”, efficiency units and accessory apartments for small households – should result from the matching of changing community demographics and housing needs with design innovations.
- Homelessness: Anecdotally, the town’s seasonal rental tradition often results in 9-month leases for residents. It has been noted that some of these resident renters struggle to find suitable summer month housing in the community and must seek temporary shelter out of necessity. This is an issue that should be further researched to determine if the policy program of this chapter and the comprehensive plan broadly might better address this “hidden” issue in Charlestown.
- Balancing housing needs and tourism heritage: The town has long benefitted from tourism and its legacy as a seasonal and second home destination. The tourism influx in the warm months adds to the local economy but also may strain the availability of housing resources for certain segments of the local population. Conversion of second homes to year-round occupancy adds to this tension and is a component of population increase and resultant service requirements. Maintaining seasonality of the local market is important to the heritage and economy of the town; any policies or programs seeking to provide additional housing opportunities in Charlestown need to factor in these considerations.

Effectiveness of Affordable Housing Strategies (2004 Affordable Housing Plan)

In 2004 Charlestown adopted an affordable housing plan (AHP), which was included in the 2006 five-year update to the Charlestown Comprehensive Plan. This affordable housing plan was required by state law for each of the communities in Rhode Island. The following is a description of the strategies proposed in the 2004 AHP to increase the count of low and moderate income housing units, how successful they have been and changes in strategy or policy the town may consider going forward.

2004 Strategy 1: Adopt a Land Trust Model

The first strategy was consideration of a land trust model for affordable housing production. Under the model the town would partner with non-profit or for-profit entities, who would hold land in trust and construct affordable units for sale or rental on the trust property. The model could be funded by real estate transfer taxes, charitable donations, a bond referendum or other methods. The model would be adopted as an ordinance and qualify as a local government subsidy.

Status: The town conducted initial reviews on the process and logistics of adopting a land trust model. This review identified obstacles including a lack of staff and budgetary resources. As a result, the town chose to focus its resources for affordable housing support in other directions.

Next Steps: In the future, the town will investigate the feasibility of such a program in partnership with existing land trust housing organizations, such as Habitat for Humanity, whose business model has utilized this type of approach. This may be an effective means for producing affordable year-round rental units, which is one of the most significant need areas in Charlestown. A regional approach in partnership with other Washington County communities could be considered as well. Research will be conducted outside of the state to determine if other models, such as the Vermont Housing and Conservation Board, may inform and assist local efforts.

The town may consider the creation of an ad-hoc committee to evaluate the potential for Charlestown to establish an “affordable housing trust fund” which may include a land trust model but be more broadly construed. Such a fund could receive dedicated funding (grants or gifts), acquire and hold land, accept easements or otherwise function to support affordable housing production and rehabilitation in the community.

2004 Strategy 2: Adopt Inclusionary Zoning

Charlestown proposed to adopt mandatory inclusionary zoning as a mechanism to incorporate LMI housing within new developments of market rates homes.

Status: Charlestown drafted an inclusionary zoning ordinance that would require each major subdivision or land development project set aside at least 20 percent of the new lots or units for LMI housing, with a comparable density bonus. The ordinance was drafted as part of a grant from Rhode Island Housing distributed to communities to assist in implementing strategies from their affordable housing plans. The ordinance did not proceed to adoption because of concerns that it would lead to density proposals in conflict with CRMC Salt Pond SAMP regulations and/or increased pollutant loading on aquifers. In general, increasing density for a community like Charlestown that is not within the Urban Services Boundary of the Rhode Island “Land Use 2025” (state land use guide plan) is problematic, particularly due to the lack of public water and sewer infrastructure in the community. There was also a concern that state legislative changes to the definition of LMI units (up to 120% of area median income) and provisions for a payment of a “fee in lieu of” diminishes the focus and effectiveness of this type of regulatory approach.

Next Steps: In the future, the town may consider a draft ordinance to require a fee-in-lieu-of (as opposed to actual construction of affordable housing) or an affordable housing impact fee applied on a per lot basis to all land developments and subdivisions. Funds generated in this manner would be placed in a dedicated fund for support of affordable housing in the community (see discussion above regarding the affordable housing trust fund).

2004 Strategy 3: Adopt Housing Overlay District and/or Amend Mixed-Use Zoning

This strategy proposed that the town adopt mixed-use zoning and allow additional dwelling units to be constructed in such districts, provided that more than one-half of the units qualify as affordable under state regulations. The strategy was directed at the principal commercial area, which encompasses most of the parcels along Route 1A from Town Dock Road to the South Kingstown line. The plan also recommended consideration of this type of zoning for other village areas within town.

Status: In October of 2004 the town amended the zoning ordinance to establish the Traditional Village District (TVD) in the commercial and mixed-use area described above. It allowed residential units to be placed above commercial space, with every other unit deed restricted as an LMI unit. As of 2018, this mixed-use strategy had not resulted in any additional LMI units, although it may prove useful in doing so over the longer term.

Next Steps: The town could consider a means to better inform property owners about the opportunities and flexibility that the TVD allows in terms of housing. Amendments to the ordinance could also be considered to increase the incentives for providing additional housing in the TVD, units that are affordable in both the practical sense and as defined by state law. Expansion of the mixed-use concept to other village settings in the community can also be done to add affordable units in a way that also protects and enhances the historical development pattern of the villages (see Land Use chapter).

Strategy 4: Implement a Developer Request for Proposal (RFP) Process

The AHP proposed a program to acquire and assemble parcels for subsequent development under a master development concept (defined use mix, density etc.). A developer RFP would then be issued that defines the overall development concept for the resulting parcel but would allow a certain amount of flexibility in the final design.

This mechanism is intended to support existing village settings in the community and encourage mixed-uses that would also provide for “workforce” housing (rental or ownership), and/or cottage style development for seniors or residents looking to downsize their living arrangements.

This strategy included the possibility of developing an RFP for an assisted living or congregate care facility in land presently zoned PDD (Planned Development District), both of which are needed types of facilities in the community.

Status: As of 2018, the developer RFP process has not been utilized, and the two parcels in town zoned PDD are unavailable for development. One is a 77-acre parcel owned by South County Sand and Gravel and is still an active gravel bank, and the other is a 1,112-acre parcel that was purchased by The Nature Conservancy as the Francis C. Carter Preserve and will not be developed; it is proposed for rezoning to an appropriate district (see Land Use chapter).

Next steps: The town could exercise an option for a developer RFP if there was success in acquiring and assembling parcels in the TVD or in the villages that could support the appropriate density and mixture of uses.

Strategy 5: Accessory Apartments

This strategy recommended restructuring the existing accessory family dwelling unit ordinance to promote LMI rental housing.

Status: The town chose to keep the existing accessory family dwelling unit ordinance, modifying it to make it less restrictive as to lot size, and then adopted an additional provision for Income Restricted Accessory Dwelling Unit (IRADU). The town allows the IRADU to be up to 850 square feet in size (an increase over the 650 square feet allowed in non-income restricted units) and the IRADU is allowed to be detached from the main house, whereas non-income restricted units must be contained as part of the principal structure. These allowances are intended to incentivize the IRADU and additionally provide a property tax subsidy. As of 2018 this ordinance has not been utilized in Charlestown.

Next Steps: The town will consider a program to better market the program to local property owners and inform them as to its flexible benefits. The IRADU program remains a component of the necessary “tool kit” for promoting housing choice and affordability in the community and may prove valuable over the longer term.

Strategy 6: Adaptive Re-Use/Location Specific Projects

In this strategy the AHP identified specific sites – buildings and locations – and the mechanisms that could be used to potentially convert these sites to year-round affordable housing units.

Status (adaptive re-use generally): As with any strategy involving specific sites, the success of this concept is dependent on the completion of negotiations with individual property owners, and there is always the possibility that a deal cannot be struck, financing is not available, or for other reasons the parties separate.

Next Steps: Adaptive re-use, such as the conversion of an empty mill or an underutilized motel to year-round units, or simply the conversion of an existing single family home through the use of a subsidy for improvements, remains a viable option for the creation of LMI housing. This does take some effort to identify the suitable locations and to undertake the creative work necessary to make the conversion happen. Some of the sites identified in the 2004 AHP are described below.

Ninigret Inn

The town identified the Ninigret Inn motel as having the potential for conversion to affordable units. At the time the plan was drafted, the town was in discussion with the owner about doing so.

Status: The owner opted not to proceed.

Next Steps: This option should be kept in mind as a potential for other motels and cottage rentals in town. Use of this strategy of converting seasonal rentals (commercial use) to year-round rentals (residential use) may also be assisted by an ordinance to specifically allow reuse and conversion of these legal non-conforming uses of land.

Lakeview Neurological Rehabilitation Center

The AHP identified a proposal by Lakeview Neurological Rehabilitation Center to create a group home complex on a 7-acre parcel off Route 2. The first phase of this project (total of 8 beds) was a permitted use, including the conversion of the detached garage for on-site rehabilitative therapies. It is now fully operational.

Status: Lakeview brought an application to the town to complete a second phase of their project by adding another building on the site with an additional 8 beds. The town approved the comprehensive permit, but the second phase did not proceed. Lakeview instead acquired an existing multi-unit property a short distance away for supervised transitional housing for its clients. These units are also included in the LMI inventory as group home beds.

Next Steps: The town will continue to support appropriately scaled projects of this type of specialized housing as the need in the community remains.

Edwards Lane

The AHP identified a proposal by the non-profit Narragansett Affordable Housing Corporation for the rehabilitation of an existing home and the creation of seven additional single-family homes on a nearly 8-acre parcel on Edwards Lane. A second phase of the project was identified in the plan as having the potential for additional 30 units of LMI housing.

Status: The homes have all been constructed and are occupied by qualifying residents. The second phase was abandoned by the property owner.

Next Steps: Conversion of existing homes to LMI qualifying units remains a viable strategy for the town.

Post Road Parcel

The AHP identified an 8-acre undeveloped parcel right off Route 1 in Cross Mills (Plat 12, Lot 135) that, in discussions with a non-profit affordable housing developer, was considered for the creation of 32 LMI units.

Status: This project never moved forward. The parcel lies within the SAMP “lands of critical concern” which assumes a density of not more than one residential unit per 3 acres, and also includes about an acre of wetland and pond.

Next Steps: Reuse potential remains for this parcel as it is located in Cross Mills within the Traditional Village District, provided that it could be developed with a sensitivity to the environment and at an appropriate density that is also financially viable.

Trust for Public Land

The AHP indicates that the town was at that time working with the Trust for Public Land to identify and secure a parcel suitable for both provision of open space and development of an affordable housing project.

Status: No specific proposals resulted from these discussions.

Next Steps: The town remains open to potential partnerships with non-profits which may result in a mixed model of land preservation and appropriately scaled affordable housing development.

2004 Strategy 7: Pursue Regional Strategies

This strategy was identified in the AHP as an essential element in the development of affordable housing in Charlestown. While each community has its own unique possibilities, there is strength and opportunity in regional collaboration.

Status: Since the 2004 AHP was adopted, regional entities have worked to develop affordable housing in Charlestown. These include the Narragansett Affordable Housing Corporation, the Washington County Community Development Consortium (North Kingstown) and the Women’s Development Corporation (Providence). These entities have undertaken specific projects in Charlestown in cooperation with the town to rehabilitate existing homes and construct new affordable units.

Next Steps: Regional approaches to the complexities of affordable housing are necessary for smaller communities, in terms of needed expertise and the leveraging of local resources. Charlestown will continue to rely on and work closely with non-profit affordable housing corporations to provide additional LMI units in town.

2004 Strategy 8: Employ Creatively Structured Subsidies for both Homeownership and Rental Opportunities

This strategy of the AHP noted that mobile homes have the potential for conversion to qualifying affordable units that meet the state thresholds. The town has three mobile home parks totaling about 134 units. These parks represent a significant resource of units which have practical affordability, if not state defined affordability under current conditions. Such conversion would entail tenant buyout through the establishment of a housing cooperative. The town could support this initiative by applying for CDBG funds, as well as other federal and state grants, to be used for the purchase of these parks, the repair/replacement of existing units, and improvements to infrastructure such as roads and on-site wastewater treatment.



Charlestown Manufactured Home Complex

Status: As of 2018, this strategy has only provided for two affordable trailer rehabilitation conversion units (Foxtrot Drive) via a partnership with the Washington County Community Development Corporation.

The town also proactively moved to support affordable housing initiatives in the community through a \$1 million-dollar bond approved by the voters in 2006. At that time Charlestown was the only community in Rhode Island to pass such a financing mechanism. Subsequently the town issued an open-ended RFP to solicit developers of LMI housing to apply for the bond money to partially fund specific projects in town. The bond was segmented for grants to support rental development (\$200,000 in \$50,000 increments to non-profit community development organizations) and \$800,000 for land acquisition. As of 2018 all but one of the \$50,000 initiative grants, and all of the acquisition funding has been allocated.

The bond was highly successful in providing the impetus and support for three projects in the community: the Edwards Lane project (7 home-ownership units), Churchwoods (24 age-restricted rental units) and Shannock Village Cottages (11 rental units).

Next Steps: Meeting the future needs for affordable housing in Charlestown requires that this creative approach continue. Conversion of manufactured homes or trailers has significant potential and the town should endeavor to undertake this on a larger scale, rather than converting individual units one at a time. Another approach under consideration by the town's Affordable Housing Commission is to create a voluntary program, loosely modeled after the existing RI Farm-Forest-Open Space program. This would provide some degree of tax abatement in exchange for existing units meeting state income and length of term affordability requirements. Such a program would require enabling legislation (state level) to proceed. Other creative partnerships, ordinance vehicles and financing mechanisms should also be considered going forward. Last, given the success of the 2006 affordable housing bond, the town will consider the placement of another bond issue for affordable housing production before the voters.

Conclusions

Addressing affordable housing issues in any community is complex and challenging. Charlestown has made a significant commitment by establishing policies and programs and providing administrative and financial support for affordable housing production in the community. It is also clear that a community acting alone will not be as successful as one partnering with and leveraging the resources of other public entities and non-profits. However, it is recognized that the regulatory environment, both locally and on the state level, needs to be periodically reviewed and adjusted to better address this compelling need. Charlestown is also constrained by the lack of public infrastructure, the rural traditions of the community, and the fragile coastal environment and state regulations that limit (appropriately) density of development in the SAMP region. Nonetheless the town is committed to maintaining progress in affordable housing in a manner that balances growth with its rural and coastal location and historic development patterns. Promoting housing choice in Charlestown will remain a priority for the town's planning and programmatic efforts in the future. It is an issue that is addressable in part but will likely never be fully resolved.



Columbia Heights Bungalow, Circa 1910

HOUSING CHOICE: GOALS, OBJECTIVES, POLICIES AND ACTIONS

GOALS

Charlestown's efforts to address its housing needs will be done in a manner that is consistent with the town's traditions, aspirations, natural environment and community resources. While facilitation of affordable housing in Charlestown is a priority in local planning, maintaining its good quality housing stock and providing a diversity of choices is a larger, long term goal. The goals, policies and actions listed below seek to address housing resources in Charlestown to meet the needs of all its residents.

- Goal 1** **Achieve and maintain a range of housing options in keeping with Charlestown's tradition of being home to people at different times of life, family circumstances, and levels of income.**

- Goal 2** **Ensure that new housing development and neighborhood design offers a good quality of life while preserving and reinforcing Charlestown's rural heritage, small village character and environmental setting.**

- Goal 3** **Provide and sustain affordable housing resources for persons and households of low and moderate income.**

POLICIES AND ACTIONS

The following policies and actions have been developed to implement the goals and objectives of this chapter.

- Goal 1** **Achieve and maintain a range of housing options in keeping with Charlestown's tradition of being home to people at different times of life, family circumstances, and levels of income.**

- Policy 1.1** **Help residents with limited income to be able to stay in their homes.**
 - Action 1** Continue partnerships using grant funding (CDBG) to provide rehabilitation and maintenance services for qualified income residents.

 - Action 2** Encourage the purchase, rehabilitation and management of existing housing resources by non-profit community development organizations to expand rental and ownership opportunities.

 - Action 3** Identify distressed homeowners and work with them to meet their particular housing needs.

 - Action 4** Review and define the extent and context of homelessness in Charlestown. This review could be led by the Charlestown Affordable Housing Commission, in concert with state and adjacent community agencies (regional approach).

Policy 1.2: Utilize creative local approaches to achieve a variety of housing options in Charlestown.

- Action 1** Amend the zoning requirements for multifamily units to encourage construction of one- and two-bedroom units and to allow use of “bedroom equivalencies¹” to be considered in determining density allowances.
- Action 2** Consider ordinance amendments to allow and/or encourage smaller housing units (i.e. “tiny houses”, efficiency units, accessory apartments) to provide affordable housing for one and two person households.
- Action 3** Pursue programs, regulatory efforts and strategies that will encourage the conversion of trailer park residences to qualifying, affordable status.

Policy 1.3 Utilize regional efforts to meet housing needs.

- Action 1** Routinely meet with neighboring towns to compare housing needs and identify ways to combine and coordinate efforts. Utilize the Washington County Regional Planning Council to address regional housing issues.
- Action 2** Coordinate with Richmond officials on the village planning efforts for Carolina and Shannock, and continue partnership with Richmond to utilize CDBG funding to improve neighborhoods and community facilities.
- Action 3** Participate actively in regional strategies, including establishing a regional HOME consortium, an affordable housing regional land trust and/or a housing and redevelopment agency that will leverage state and federal funds and draw on the strengths of each town.
- Action 4** Continue efforts with the federal government and the Narragansett Indian Tribe to encourage affordable housing opportunities for tribal members in the community.

Goal 2 Ensure that new housing development and neighborhood design offers a good quality of life while preserving and reinforcing Charlestown’s rural heritage, small village character and environmental setting.

Policy 2.1 Encourage a mix of housing unit types and price ranges in new residential development and adaptive reuse of property.

- Action 1** Implement conservation design development that allows a mixture of dwelling unit types, including single and two-family dwellings according to an overall plan of development that respects the density requirements of the underlying zoning district, while protecting important site features.

¹ Bedroom Equivalencies: i.e. a technique where smaller homes with limited bedrooms are considered to count as less than 1 traditional family household for density calculation purposes.

Action 2 Utilize transfer of development rights (TDR) to conserve land in rural areas of town while allowing construction of traditional neighborhood designs on small lots in designated village areas, including multifamily and affordable housing, without increasing the overall buildout of the town.

Action 3 Establish options for housing reserved for seniors in response to projections that the percentage of the population over the age of 60 will continue to grow.

Policy 2.2 Continue to promote housing that protects the town’s natural and cultural resources and rural character and reflects the natural constraints of the land.

Action 1 Consider the suitability of municipal land purchased in the future for affordable housing construction, along with open space and recreation uses.

Action 2 Regulate housing location and density to avoid adversely impacting natural resources, habitat corridors, and groundwater, specifically including the terminal moraine area and the CRMC SAMP region.

Action 3 Encourage preservation of existing homes, particularly historic homes and summer cottages, to protect both existing housing stock and the town’s heritage.

Goal 3 Provide and sustain affordable housing resources for persons and households of low and moderate income.

Policy 3.1 Promote production strategies for units that qualify as affordable under the Rhode Island Low and Moderate-Income Housing Act.

Action 1 Continue to pursue regional strategies with the Washington County Community Development Corporation, the Women’s Development Corporation and other agencies involved in affordable housing.

Action 2 Pursue the use of land trust models to produce affordable housing, in cooperation with South County Habitat for Humanity and other state-wide or regional land trusts.

Action 3 Consider amendments to the Traditional Village District to better promote the production of affordable housing and mixed-uses within this district, and consider the extension of mixed-use zoning to other village areas.

Action 4 Review the Income-Restricted Accessory Dwelling Unit provisions of the zoning ordinance to identify ways to encourage its utilization, through marketing to local property owners and/or amendments to improve its functionality.

Action 5 Pursue discussions with the owners of adaptive re-use and site-specific properties as identified in the Town’s 2004 Affordable Housing Plan.

- Action 6** Review distressed properties (potential tax title properties) before proceeding with tax sale to determine if such can be converted to affordable status via partnership with non-profit development entities or other means.
- Action 7** Propose a new bond issue specifically for the acquisition and repurposing of existing housing for permanent use as affordable housing or for the construction of new LMI housing.
- Action 8** Evaluate the potential for development of a dedicated funding source for supporting affordable housing proposals. This may take the form of an impact fee applicable to all subdivisions and land development projects.
- Action 9** Consider seeking enabling legislation to permit the use of the “real estate transfer tax” to support and facilitate affordable housing production in Charlestown.

Low and Moderate Income (Affordable) Housing Production Strategy

Based upon the policies and action items described above, the table on the following page provides a summary of the affordable units that are estimated to be created by each of the broad categories of strategies cited in this chapter. However, success under these categories requires the hoped-for confluence of many factors. These would include but not be limited to funding (public and/or private), availability of subsidies or programmatic support, suitability of the site(s), quality of design, environmental permitting, regulatory compliance, economic viability and community acceptance.

Charlestown’s experience has demonstrated that good projects will be supported locally, but patience is required as the time needed to go from concept to completion is typically of considerable length. In addition, over the course of this plan timeframe other opportunities, programs and resources (federal, state and local) may become available. Economic conditions and changing demographics (including updated census data and population projections) will also need to be factored into the town’s efforts on an ongoing basis. The town will evaluate this changing landscape on a continual basis and seek to utilize opportunities that are compatible with local needs, the goals and policies of this comprehensive plan and the town’s land use philosophy.

Overall, the table shows a continuation of the progress in providing affordable housing that the town has experienced in recent years. While it assumes a steady, reasonable growth of affordable units over time resulting in slightly over 10% of the total year-round housing units in Charlestown meeting the definition of low and moderate income by the year 2039, actual production of units is more likely to occur in chunks – peaks and valleys – as that is the nature of the housing economy and local market.

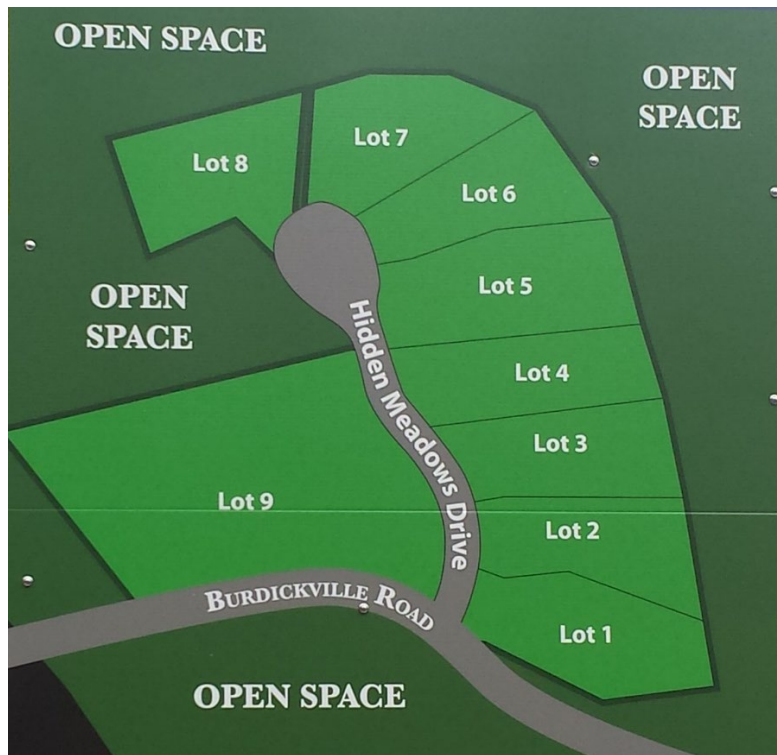
**Table HC-5
Charlestown LMI Units Estimate by Strategy, 2019-2039**

LMI Units by Strategy	2019	Additional each year	5 yrs 2024	10 yrs 2029	15 yrs 2034	20 yrs 2039
Beginning number of LMI units	142 ²	--	142	142	142	142
Regional strategies		2	10	20	30	40
Mixed-use and infill in village districts		2	10	20	30	40
Accessory dwelling units		2	10	20	30	40
Adaptive re-use/location specific projects		2	10	20	30	40
Creative subsidies and regulations		2	10	20	30	40
Collaboration with Narragansett Indian Tribe		1	5	10	15	20
Special needs housing		1	5	10	15	20
Subtotal of estimated affordable units	142	12	202	262	322	382
Estimated number of non-seasonal units ³	3,510		3,511	3,630	3,707	3,808
Percent affordability	4.0%		5.75%	7.22%	8.69%	10.03%
Units needed to meet 10% threshold	209		149	101	49	--

The town recognizes that the housing resources in Charlestown are a true building block of the community. The town is committed to improving the stability, utility, condition and affordability of its housing stock for the benefit of all of its residents, current and future. This bedrock philosophy requires that issues of housing choice remain in the forefront of the town's administrative and functional agenda, and requires partnerships with state and federal entities, neighboring communities, and with the private sector and non-profit community.

² RI Housing 2019 LMI Inventory plus additional units

³ Statewide Planning Program estimate, Charlestown 2017 Data Points for Comprehensive Planning



LAND USE

CHARLESTOWN COMPREHENSIVE PLAN

A description of the way land is used and regulated in Charlestown, with recommendations to keep the general pattern, scale and density of development with large areas of protected open space, including use of creative and flexible land use controls.

Maps

- LU-1 Aerial Photograph 2019
- LU-2 Land Cover 2011
- LU-3 Zoning 2020
- LU-4 Future Land Use Map
- LU-5 Land Use Inconsistencies Map

Cover Photo: Jane Weidman

LAND USE CHAPTER

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CHARLESTOWN COMPREHENSIVE PLAN
CHAPTER 11. LAND USE

INTRODUCTION

This chapter discusses the way land is used in Charlestown. The history and pattern of developed and undeveloped land and the density, quality and mixture of land uses define the character of the community. This land use pattern is strongly influenced by geology and landforms, and the types of uses affect how the community functions and where people live, work and recreate. In addition:

- Land use affects the taxable property base and the need for municipal services. The presence or absence of municipal services can also affect land use.
- The density, type and distribution of land uses affect the natural resources on which the town depends for its potable water and waste disposal, hazards protection and plant and wildlife habitats.
- The land use pattern affects the cultural resources of the community, which contribute to the character of the town. It is important to ensure that future land uses are consistent with and protective of the community character as defined by these resources.
- Tourism is a critical component of Charlestown’s economy. Tourist attractions include the beaches and the coastal salt ponds, forested areas, freshwater lakes and ponds, and Charlestown’s uniquely dark skies, all of which must continue to be protected to sustain the town’s economy and high quality of life.

RELATIONSHIP TO OTHER CHAPTERS

The Land Use chapter is the culmination of the comprehensive planning process; it builds upon and is informed by the other chapter components of the plan. The Land Use chapter is consistent with the overall tenor and content of the other plan chapters. It provides the vision for future land use in Charlestown and the basis for land development regulations, i.e., the zoning ordinance and the subdivision regulations, and also, to an extent, the town’s capital improvement program. Included in this chapter is a Future Land Use Map (FLUM), a “mirror” to the town’s vision and the zoning map and land use regulations that is consistent with the policy directions identified in this comprehensive plan. The Land Use chapter also considers state policies and regulations affecting the coastal zone and transportation systems, as well as the impact of the large land holdings of the Narragansett Indian Tribe.

The vision for land use in Charlestown requires protection of natural resources and open space for both conservation and recreation; preservation of the town’s heritage; protection of potable water and soils suitable for wastewater disposal; and provision of good-quality public services, including well-maintained transportation systems and a safe and sustainable built environment, including housing. All of these are addressed in depth in other chapters of this plan.

EXISTING LAND USE

According to the U.S. Census Bureau, the Town of Charlestown is comprised of a total area of 59.3 square miles, of which 36.8 square miles is land (upland) and 22.5 square miles (over 35%) is water (wetlands, lakes and ponds). From its beginnings, Charlestown has been a rural community, with several small historic village settlements situated at the northern and southern ends of the town. It does not have a defined town center per se. Beyond the village settings and the coastal residential areas south of Route 1, much of the town is only sparsely developed, with development fronting on existing roads. It is important to note that the community as a whole is outside the Urban Services Boundary as defined in the RI State Guide Plan, and the town’s planning philosophy, especially regarding permitted densities, is consistent with this rural- and village-based locational characteristic.



Jane Weidman

Rural Scene in Charlestown

Map LU-1, *Aerial Photograph, 2019* shows the town’s parcel data (property lines) on an aerial map. Map LU-2, *Land Cover 2011*, shows the general distribution of land across Charlestown by category – residential, commercial, agricultural, industrial, institutional, etc. Together these maps depict the town’s active land uses and its extensive open spaces, dominated by its forest and large wetland systems, particularly those associated with Watchaug Pond and Indian Cedar Swamp in the central portion of Charlestown (north of Route 1 and west of Route 2). Much of this undeveloped portion includes the Settlement Lands of the Narragansett Indian Tribe and significant properties owned by the State of Rhode Island. Shown also are the town’s transportation network, its water bodies and areas of residential development.

Table LU-1, based on August 2019 data from the Charlestown Tax Assessor, shows the acreage and parcel count of the various categories of land use in town.

**Table LU-1
Land Use by Category in Charlestown, 2019**

Land Use Category	Acres	Percent of Total Acres	Parcel Count
Residential	7,027.9	32.7	5,106
Commercial/Industrial	534.3	2.5	98
Agricultural	1,324.5	6.2	66
Exempt/Other*	9,642.8	44.8	246
Undeveloped, Residential	2,809.2	13.1	771
Undeveloped, Commercial/Industrial	167.8	0.8	42
Total Land**	21,506.4	100 %	6,476

* Properties in public or non-profit ownership (municipal, state and federal property, open space, park land, churches, etc.), also includes utilities, railroad property, other improved land and tax sale properties).

** Total acreage based on updated surveys in land evidence records.

It is apparent that most developed land in the community consists of residential use, which occupies over 5,100 parcels and nearly a third of the land area. However, it is important to note that many of these parcels may be over-sized for the zoning district in which they are located, i.e. may be capable of being further subdivided. Residential land use on Map LU-2 is displayed according to density: low-density residential (yellow) has less than 1 house per acre; medium-density residential (peach) has 1 to 4 houses per acre; and high-density residential (orange) has 4 or more houses per acre. Other land uses shown on Map LU-2 include commercial (red), industrial (purple), mixed-use (pink), institutional (blue) and recreation, agriculture and undeveloped (all green). Of note, undeveloped land (light green) is the most predominant land cover shown.

Aside from the historic village areas, most development in Charlestown consists of single-family homes that are scattered along the town's major roads, with residential subdivisions accessed off the town's road network. The village areas are more densely developed than are the residential areas, but the rural character of Charlestown remains evident in these areas as well.

The town's relatively small commercial and industrial acreage tends to be located in proximity to the historic villages. Most of the commercial uses are small businesses that are located in the village of Cross Mills and along other sections of Route 1A (Old Post Road). Other commercial uses are scattered along Route 1 (Post Road), Route 2 (South County Trail) and Route 112 (Carolina Back Road). The only major industrial use is Kenyon Industries, a specialty fabric finishing and dyeing company, located off Route 2 and alongside the railroad and the Pawcatuck River in northernmost Charlestown.



Frances Topping

Kenyon Mills in Shannock

As described in more detail in the Services and Facilities chapter, all homes and businesses receive water through individual and community private wells; there is no public water system. The town also relies entirely on individual Onsite Wastewater Treatment Systems (OWTS) to treat and recycle wastewater back into the ground; there is no public sewer system. The reliance on private wells and septic systems limits the density and location of development in the community. In addition, under its Special Area Management Plan (SAMP), the Coastal Resources Management Council (CRMC) regulates the density of land use allowed along the south shore to protect the integrity of the salt ponds. Because providing public water and sewer systems would be cost prohibitive and would undermine the rural nature of the community, there are no plans to provide either in any area of Charlestown.

As described in the Natural Hazards chapter, climate change has resulted in rising sea levels and increased precipitation. In coastal areas this will result in higher groundwater levels, impacting the ability of OWTS to properly function, and in other parts of town, especially in northern areas where the soils are not well drained, the likelihood of flooding will increase. This will require that Charlestown frequently review and amend its land use regulations to provide resiliency against these and other challenges, and to work closely with state regulatory agencies.

There is a large amount of conservation and recreation land in Charlestown, reflecting the importance of natural resources and rural character to the town and its tourism economy. These important open space and recreational properties include Burlingame State Park and Management Area, East Beach, the Ninigret Conservation Area, the Ninigret National Wildlife Refuge, Ninigret Park (town-owned), and the Francis C. Carter Memorial Preserve (owned by The Nature

Conservancy). There are also many smaller parcels, owned by the town and the Charlestown Land Trust, as well as conservation easements on private land. These are described in more detail in the Natural Resources and Recreation chapters of this plan.

Charlestown has extensive freshwater wetland systems, including the Pawcatuck River system, several large lakes, many smaller "kettle hole" ponds, and associated rivers, streams, swamps and marshes. Charlestown is fortunate that significant portions of area wetland systems are owned and protected by the state or conservation entities. With the exception of small areas in the villages, developed years ago, little of the town's historic development pattern is within inland floodplain areas; in the southern portion of the town development is located around the salt ponds (Ninigret Pond and Quonochontaug Pond), which are located behind barrier beaches connected to the ocean by breachways and tidal wetlands. Contemporary regulations provide appropriate protection to these sensitive areas, including coastal floodplains, but the town must prepare for the eventual impacts of sea level rise.

The following text describes land use in Charlestown by two areas: north of Route 1 and south of Route 1, which are separated by the recessional, glacial moraine. A more extensive description of the town's geology, natural features and landscape is contained in the Natural Resources chapter, and a history of how the town was developed and its scenic and cultural character, is contained in the Historic and Cultural Resources chapter. Most of what are now woodlands in Charlestown had at one time been cleared as agricultural fields and pastures by early settlers.

Land Use in Areas North of Route 1

The land north of Route 1 is topographically diverse. Roads are generally winding with well-vegetated borders, supporting the rural feel. Soils in this area are rocky and poorly drained and, as a result, present more constraints to development than the land south of Route 1. Residential uses are generally scattered and often unobtrusive behind treed buffers or on larger lots, also contrasting to the development south of Route 1.

The Pawcatuck River forms the northern border of the town. It was historically the source of water power for a number of mills that led to the development of several mill villages. In addition, there are 1,800 acres of land held in restricted trust for the Narragansett Indian Tribe by the federal government, referred to as the Settlement Lands, the majority of which are to remain permanently as conservation land.

Historic Mill Villages

The village centers of Carolina, Shannock, Kenyon and Columbia Heights, built during the Industrial Revolution, evolved as small, compact mill villages centered on manufacturing operations, housing for mill workers and a few supporting commercial uses. A number of historic structures remain in the villages. Shared with the Town of Richmond, across the Pawcatuck

River, these villages are densely developed; however, they have experienced very little growth in recent years and still exhibit a rural character and ambiance. The presence of a post office and churches add to the village feel. A few subdivisions of low to moderate density have been developed in proximity to these historic villages. An affordable housing complex with a community water system has recently been built in Shannock. Shannock also contains the state's first designated scenic roadway, Shannock Road (see Transportation chapter). Kenyon Industries, formerly Kenyon Piece Dye Mill, around which the nearby Kenyon Village formed, is still in operation. The village straddles both sides of the river, with factory buildings and mill housing also on the Richmond side.

Northeastern Charlestown

Extending east from Pasquiset Pond and north to the town border, this area is sparsely developed except for a few residential subdivisions of low to moderate density. Extensive wetlands are present. There are a few commercial uses (primarily two restaurants), and a portion of the state-owned Great Swamp Management Area is located at the northeast corner. The town transfer station and animal shelter are located off Old Coach Road, along with the town-owned South Farm and Pasquiset Preserve owned by The Nature Conservancy. Several large farms are also found in this part of town, including Earth Care Farm, Rhode Island's oldest operating farm composter.

Northwestern Charlestown

Including Shumankanuc, Kings Factory and Burdickville Roads, this area is also sparsely developed. Low to moderate density residential development has occurred, and a few small subdivisions of moderate density have been developed at the northwestern edge of town. This area contains some agricultural uses, including a horse farm along the Pawcatuck River and other historic farms.

Central Charlestown

Much of central Charlestown is environmentally constrained and largely undeveloped. Routes 2 and 112 are major roads connecting the northern and southern areas of town. Along Route 2, development of low to moderate density is interspersed with undeveloped land and a few small commercial uses. The town hall and one of the Charlestown Fire District stations are located on Route 2. Residential development found along Route 112 is typically low-density. There are two very large tracts of open space – the Francis C. Carter Preserve, owned by The Nature Conservancy, that abuts Route 112 and the railroad and extends to the Pawcatuck River, and Burlingame Park and Management Area, owned by RI DEM, that abuts both sides of the railroad, a portion of the river, many local roads and most of the shore of Watchaug Pond. The Patricia Sprague Forest Preserve, owned by the town, is also located along the river at the northern end of this central portion of Charlestown, and the single elementary school is located on Route 112 along

with two active recreational sites – Wicklund Field by the school and Puchalski Field by the town hall.

Narragansett Indian Tribe Settlement Lands

Within the central portion of Charlestown are 1,800 acres that have been set aside for the Narragansett Indian Tribe. This area is held in a restricted trust by the federal government, subject to state and town jurisdiction, as a result of a settlement agreement with the federal government in 1978 (the Rhode Island Indian Claims Settlement Act, 25 U.S.C. §1701, et seq.). Approximately 900 acres, much of which is wetland, must remain permanently as conservation land, and 75% of the remaining 900 acres must remain as a limited conservation area. Activities such as agriculture are permitted in the limited conservation area, and the remaining 25% (approximately 225 acres) can be developed. A *Land Use Plan for the Narragansett Indian Land Claim Settlement Area* was developed in 1986 by the RI Office of State Planning in cooperation with the Narragansett Indian Tribe for the purpose of providing guidelines for the efficient and orderly use of settlement land, including where limited development is appropriate, and the criteria and standards for such future development. See Appendix LU-1 for a more detailed history and explanation of the Narragansett Indian Tribe Settlement Lands.

The Settlement Lands are indicated on Map LU-3 *Zoning 2020*. Within the Settlement Lands are many of the cultural sites of the tribe. However, the vast majority of the land is undeveloped or sparsely developed and includes the large wetland systems associated with Indian Cedar Swamp, Schoolhouse Pond and Deep Pond. There are a number of facilities along Route 2 that are owned by the Narragansett Indian Tribe, including the Narragansett Indian Health Center, the Tribal Longhouse and Meeting House (Narragansett Indian Church). The tribe also operates a recently constructed Narragansett Indian Health Center just off Route 2 on Old Mill Road.

Transition Area

The portion of town from Route 216 (Ross Hill Road) west to Watchaug Pond and the vicinity of Narrow Lane–Old Coach Road is a transitional area between the land uses of northern Charlestown and those south of Route 1. There are bands of low-density residential frontage lots, and subdivisions of low to moderate density. Along the southern and eastern shores of Watchaug Pond, such as along Sanctuary Road and Prosser Trail, are moderate and higher density developments. In general, however, this area retains the rural qualities characteristic of the other northern areas of Charlestown, with vegetation and topography separating land uses from each other.

Land Uses along Route 1 and in Areas South of Route 1

Route 1 is a divided, four-lane highway designated as a scenic roadway in 2000. Although it is a well-travelled road, it retains a rural character. It is a limited-access highway as far west as Prosser

Trail, passing by woods and hills. At the South Kingstown border is a densely built condominium complex – Castle Rock (146 units in 37 buildings) and Kingsland (24 units in 6 buildings) with direct access off of Route 1 on the north side, but buffered from it by heavy vegetation. A few scattered businesses are visible on the south side of the highway. On both sides of Route 2, just north of its intersection with Route 1, there is a small complex of retail and services businesses. In the area between the US Fish and Wildlife Kettle Pond Visitors’ Center and the Westerly border, there are a number of roadside businesses that take advantage of the access off of and onto Route 1 from both directions, including motels, restaurants, gas stations, gift shops, a farm stand and a mini-golf facility. However, even this highway related business is intermittent and of a moderate intensity consistent with the small-town character of Charlestown, primarily supporting local and tourist needs. A small grouping of commercial uses are also found at the intersection of Route 1 and Route 216.



Frances Topping

Route 1 Business with Access along a Frontage Road

The land south of Route 1 is generally flat with well-drained glacial outwash soils which extend to the salt ponds and barrier beaches. This area was the location of early plantation settlements and the historic village center at Cross Mills (see Historic and Cultural Resources chapter). Later, this area became the focus of mostly modest summer home development, “summer colonies” as they were known, and related tourism activities, and has continued to be a popular location for residential development. It is the most densely developed area of Charlestown and includes many businesses, principally along Old Post Road and Matunuck Schoolhouse Road. The area west of Narrow Lane and south to Charlestown Beach Road includes a hardware store, bakery, landscaping

business, rental cottages, restaurants and other services. Although some of these areas are within the CRMC’s Lands Developed Beyond Carrying Capacity (see Natural Resources chapter), the density of development now allowed along the south shore has been reduced to protect the salt ponds, the coastal groundwater and the village character of the community. However over the years many houses have been converted to or rebuilt as year-round residences, leading to a change in character as well as impacting natural resources.



Frances Topping

Charlestown Beach Road in the Summer

Cross Mills

Cross Mills extends from the “Natale Building” at the intersection of Route 1 and Route 1A (Old Post Road) east to the South Kingstown town line. Much of the development is along Old Post Road, which was the historic route through the area dating to the late 1600s. The Old Post Road corridor contains a number of small businesses that provide a variety of local services including an historic inn, a bank, restaurants, a grocery store, a gas station, real estate agencies, an insurance agency, a motel, landscaping-oriented businesses, marine service operations and the like. Cross Mills also contains many single family residences and institutional uses including a fire station, the town’s library, a post office and churches. It functions as a mixed-use village area.

Old Post Road West

West of Cross Mills is a distinctive area of Charlestown where a mile and a quarter of Old Post Road provides access to important institutional sites, including the Charlestown Chamber of Commerce, the Police Station and the Charlestown Ambulance Service, all at the western end, and the Gateway South Shore Center (mental health facility) at the eastern-most end. The bulk of the remainder area of this large expanse of land between Old Post Road and Post Road is owned by

the South County Sand and Gravel Company, and its affiliate, and is the site of an active extractive industry. On the south side of Old Post Road is the entrance to Ninigret Park and access to the Arnolda residential area (Arnolda, South Arnolda, Arnolda Round). There are a few commercially zoned lots including the parcel containing the Fantastic Umbrella Factory, a combination of unique retail uses that is known throughout the region.

Residential Communities

Summer colonies such as Arnolda, which is located along the northern shores of Ninigret Pond; the neighborhoods located around Charlestown Beach Road; those on the Quonochontaug peninsula; and others, all developed as vacation areas with access to the salt ponds and the beaches. These neighborhoods are typical of shoreline seasonal communities in Rhode Island, encompassing a variety of housing types (some cottages, some grander homes). In many of these communities, houses are being expanded and often converted from seasonal to year-round use, permanently changing the nature of these areas. Development on the barrier beaches and close to the salt ponds, which continues to this day, has increased the potential for property damage from coastal storms and sea level rise, and for groundwater contamination from salt and nitrates as discussed in the Natural Resources and Natural Hazards chapters.

Publicly Owned Land

Much of the land around the salt ponds is owned by federal, state or local government agencies. The largest parcels include Ninigret National Wildlife Refuge, Ninigret Park, Charlestown Town Beach and infrastructure, the Charlestown Breachway, Blue Shutters Beach and its infrastructure, East Beach, the Ninigret Conservation area, and the Quonochontaug Breachway State Park. Smaller publicly owned parcels, such as the town dock and Fort Ninigret provide additional access to or views of the ponds. These areas are highly valuable for habitat protection, for passive and active recreation and as protected open space.

Land Use in Surrounding Communities

Achieving or maintaining compatibility of land use among communities allows for better alignment of land use policy and more effective long-range planning from a regional perspective. Land use in Charlestown is, in general, compatible with land use in the abutting regions of the surrounding communities. In particular, easily accessible shopping and service opportunities in both South Kingstown and Westerly provide most of Charlestown residents' needs, lessening the need for large-scale commercial development in town.

South Kingstown

Although South Kingstown is considerably larger, both in size and population, its land use pattern is similar to that of Charlestown's, grading from rural in the north to a more densely developed south shore residential area with conservation and recreational uses near the ocean. In the north, South Kingstown contains the Great Swamp Wildlife Management Area and Worden's Pond, connected to Charlestown by one of the town's rural roads. The village of Kingston houses the University of Rhode Island, and Wakefield provides many commercial services.

As with all of the south shore communities, South Kingstown has salt ponds formed by barrier beaches – Green Hill (which it shares with Charlestown), Trustom, Potter and Point Judith, and many protected coastal areas such as the barrier beaches at Trustom Pond and Moonstone Beach. However, very high-density development near the border is not seen as compatible with the rural character of Charlestown. For example, South Shore Village on Shannock Road in South Kingstown near the town line is an age-restricted development containing 303 units, a golf course (nine holes), clubhouse, pool and other facilities on a 265-acre parcel. While it is serviced by public water, it is dependent on OWTS for wastewater disposal. This density permitted in South Kingstown is an environmental and quality of life concern for the neighbors in Charlestown.

Richmond

Richmond's land use and regulatory environment is similar to and considered compatible with that in Charlestown. Charlestown shares a regional school district (Chariho) with Richmond and Hopkinton and shares the historic villages of Shannock, Carolina and Kenyon, as well as a fire station. Kings Factory Road in Charlestown crosses the Pawcatuck River and leads into the village of Wood River Junction, a settlement with historic houses and a few small businesses in Richmond. Commercial-scale solar development in Richmond has raised the issue of land use compatibility with Charlestown, which as of the date of this plan, has not experienced the destruction of large swaths of forests and farm fields for commercial solar development that adjoining communities have (see Energy chapter).

Hopkinton

Like Richmond, neighboring Hopkinton is a rural community with scattered village centers. Residential development on Burdickville Road in Charlestown continues to the village of Burdickville in Hopkinton, which is a mostly residential area with a few small businesses. The town is also sparsely developed between Charlestown and the village of Ashaway, on the south side of Route I-95. The village of Alton also abuts Charlestown. Large parcels of commercial-scale solar development in Hopkinton also raise the issue of land use compatibility with Charlestown.

Westerly

Westerly contains a mixture of land use types and settings. Its land use pattern ranges from rural in the north to a more densely developed south and, similarly, from rural and suburban at its eastern boundary to more urban at its western boundary. In the north, the village of Bradford, mostly a residential settlement with a small commercial sector, spills over into Charlestown. Bradford also contains some larger commercial uses and the now vacant Bradford Dye Associates industrial complex. Charlestown's relatively dense development along Route 216 continues along the road into Westerly. Westerly has active sand/gravel and quarrying operations in close proximity to the Charlestown borders, and the nuisance conditions and environmental impacts have concerned Charlestown's residents. These excavation industries should continue to be monitored and should be managed by the Town of Westerly and state regulatory entities to ensure that the impacts are properly mitigated. However, Westerly also includes large areas of open space, easily accessible to Charlestown residents, including the 550 acre Grills Preserve, owned and managed by the Westerly Land Trust, and DEM's Woody Hill Management Area, that abuts the Shelter Harbor Golf Club, which lies partially in Charlestown.

In contrast to Charlestown, Route 1 in Westerly becomes increasingly developed as it proceeds westerly towards Connecticut. A short distance from the town border, Route 1 is characterized by dense residential (suburban) development, commercial strip development and large "big-box" stores and a commercial center at Dunn's Corners. The night lighting associated with these uses poses a concern to Charlestown in terms of maintaining dark skies. Westerly's salt ponds include Quonochontaug (which it shares with Charlestown) and Winnapaug. Along the shore, development in Westerly consists of clusters of residential development, interrupted by the state Misquamicut Beach and the surrounding resort/amusement setting. Watch Hill, an affluent coastal village, sits on Block Island Sound at the border with Connecticut.

Land Use Controls

Land use is governed by a number of factors. Land can be protected from future development by means of public ownership or by private ownership with protective restrictions, such as conservation easements and transfer of development rights (TDR). Private land can also be protected through the use of tax incentives, although not permanently. Land use is also governed through regulatory measures, that is, zoning and subdivision regulations and by state law.

Ownership

Nearly 6,050 acres in Charlestown are publicly owned (town, state or federal government) for open space or conservation purposes. There is another 1,700 acres of undeveloped land owned by private conservation or non-profit organizations, which are either permanently protected or unlikely to be developed. There is also over 1,200 acres which are privately owned by individuals

or homeowners associations which are in permanent conservation easement. In combination with the 1,575 acres of protected lands owned by the Narragansett Indian Tribe, approximately 10,600 acres are in conservation and open space status in Charlestown. This represents approximately 45% of the land area (see table and descriptions in the Natural Resources chapter). These holdings protect sensitive habitat areas and environmental settings, while also providing opportunities for recreation and public access to freshwater and saltwater bodies, woodlands and other open spaces across the community.

Tax Incentives

Although providing a conservation easement or selling development rights to land results in a tax benefit to private property owners by permanently lowering assessed value, there is also a state program that encourages temporary protection of land. State legislation (RIGL §44-27) provides for reduced assessments on farms, managed forests and certain types of open space through the Farm, Forest and Open Space Program (FFOS). The program allows properties to be assessed according to their current use rather than at their value for development as a means to reduce the pressure to develop these lands. Although a valuable tool, it does not provide permanent protection of land because owners can exit the program without penalty after participating for 15 years according to the legislation and rules implementing the program developed by RI DEM.

Zoning

Charlestown currently has thirteen zoning designations. These are divided into four residential use districts, one commercial-residential mixed-use district, three commercial districts, one industrial district, one planned development district, one municipal district and one open space/recreation district. There are four overlay or special districts that include additional development criteria based upon unique characteristics or environmental features. Along with the regulations of an underlying zoning district, uses permitted by right or by special use permit are subject to the regulations of the applicable overlay district.

These zoning designations were mapped and officially adopted by the Charlestown Town Council in 1998. These designations directly reflect the recommendations of the 1991 Comprehensive Plan, which focused on protecting the rural environment while allowing for limited growth in the existing village areas. Subsequent changes to the zoning ordinance and subdivision regulations have strengthened this approach to growth. Existing districts in the Charlestown Zoning Ordinance are listed below and are shown on Map LU-3, *Zoning, 2020*:

- **Residential Districts:** R-20; R-40; R-2A; and R-3A

These are districts whose primary use is residential. The four residential districts are defined by their minimum lot size: 20,000 square feet, 40,000 square feet, two acre and three acre, respectively.

- **Commercial Districts:** C-1; C-2; and C-3

These are districts whose primary uses are nonresidential, with allowed commercial uses at a scale and character appropriate to village and neighboring areas for the C-1 district; larger retail and service businesses in the C-2 district; and highway related uses due to proximity to Route 1 for the C-3 district.

- **Other Standard Districts:** Traditional Village District (TVD); Planned Development District (PDD); Industrial (I); Municipal (M); and Open Space/Recreation (OSR)

These are districts defined by specific uses or standards, or by ownership, and include the mixed-use village-scale district along Route 1A (TVD); the environmentally sensitive potentially mixed-use district assigned to two large parcels in town (PDD); the district intended to be set aside for manufacturing uses (I); the district applied to town-owned parcels (M); and that assigned to areas of open space, conservation and recreation (OSR).

- **Overlay Districts:** Flood Hazard Areas; Groundwater Protection Overlay (GWP); Historic Village Overlay (HV); Mixed-Use Zoning Overlay (MU)

These four overlay districts provide additional development criteria based upon the unique characteristics or environmental features of an area, including flood hazard areas, groundwater recharge areas, historic village areas and a few parcels of mixed-use outside of the TVD and not included in the village overlay.

- **Other Land within Charlestown:** The Settlement Lands of the Narragansett Indian Tribe, which constitutes 1,800 acres that are held in restricted trust by the US government for the tribe. These lands are subject to conservation and other restrictions contained in law, and are likely subject to the *Land Use Plan for the Narragansett Indian Land Claim Settlement Area* that was developed in 1986 by the RI Office of State Planning in coordination with the tribe. Other properties owned by the tribe which are outside of the settlement lands are subject to local zoning.

The Charlestown Zoning Ordinance does provide for reduced density subdivisions on private roads. The residential compound regulations require the developer to reduce the density to half that of a conventional subdivision in exchange for not constructing a public road. The lots are then permanently deed restricted to prevent any further subdivision. The zoning ordinance does not however, include form-based zoning, a land development tool in which the form or external appearance of development is considered concurrent with the proposed use of the property. Form-based zoning can help retain or improve the visual character of an area and may result in improved environmental sustainability. This approach may be appropriate for certain locations in the town, as described in the policies and recommendations section of this chapter.

Subdivision Regulations

The subdivision of land within the town must be approved by the Planning Commission or the Town Planner (also called the Administrative Officer). The Planning Commission must approve all subdivisions involving the creation of new lots. The Town Planner has the authority to approve administrative subdivisions, where lot lines between existing lots of record are revised (no increase in the number of lots).

Subdivision of land and land developments are governed by the Charlestown Land Development and Subdivision Regulations. These regulations, in concert with the zoning ordinance, guide and shape future land use by specifying the requirements that must be met in order to subdivide and/or develop property. The regulations include physical design and public improvement standards such as street design standards, the lay-out of lots, easements and utilities, stormwater management, erosion and sediment controls and landscaping standards. Charlestown's regulations were updated in 2014 to comply with state low impact development (LID) standards and are modified as deemed necessary by the Charlestown Planning Commission. The regulations help to ensure development that is in keeping with Charlestown's rural character.

Biological wetlands may be included as part of a lot but are not counted towards the minimum lot area required by the zoning district, or as part of an overall parcel density calculation. However, under state law the perimeter wetland (the state regulated buffer) cannot be excluded from minimum lot areas or density calculations. As a result, new lots can be created with large areas of wetland buffer which restrict the actual buildable area. To respond to this, the Planning Commission should evaluate the subdivision regulations and consider amendments to provide for necessary environmental protections, for example to require that all lots in new subdivisions contain a minimum area of "contiguous upland" on which development can occur, or are otherwise designed to minimize impacts on wetlands and other natural features.

State Regulations

Several sets of environmental protection regulations affect land use and are discussed briefly below. Additional detail in this regard may be found in the Natural Resources chapter of this plan.

- **Inland Wetlands** – The Department of Environmental Management (RI DEM) regulates the development and activities that are permitted in proximity to inland wetland areas. These measures protect water supply and habitat, and manage stormwater run-off.
- **Coastal Regulations** – The Coastal Resources Management Council (CRMC) regulates development in proximity to the coast. The salt pond region along the southern shore of Rhode Island is governed by the CRMC's Salt Pond Special Area Management Plan (SAMP) which has stricter regulations for development than regulations in other areas

away from the coastal ponds. Nearly a third of Charlestown lies within the SAMP region (the watershed of the coastal ponds). Given the sensitive nature of these areas, it is important that the regulatory partnership between the state and the town remain collaborative and adapt to the future challenges that sea level rise and climate change generally will bring, as well as the continued pressure to develop.

- **Septic Disposal Regulations** – RI DEM oversees the permitting and installation of all on-site wastewater treatment systems (OWTS) in the state. In certain areas, mostly coastal, permitting by RI DEM includes the requirement for advanced treatment OWTS to service new development or when replacement of failed or outdated septic disposal systems is necessary, to reduce the pollutant nitrogen content of wastewater.

Recent Trends in Land Use Development

The table below clearly indicates that residential usage is the largest component of new construction in Charlestown. For the years of 2009 through 2018, there were 295 new residential units built, or an average of 29 units per year. The high point was in 2016, with 48 units, in contrast to 2012 when 19 new residences were built. Using the average of 29 units per year and an expected average household size of 2.4 persons per unit (2010 Census), annual population growth averaged 70 new residents. Commercial construction (new) averaged 1.2 units per calendar year. No industrial buildings were constructed during the time frame noted.

**Table LU-2
New Construction Permits in Charlestown, 2009–2018**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Commercial	1	1	0	2	0	0	3	3	1	1
Residential	27	21	25	19	25	23	36	48	30	41

Source: Charlestown Building Official, new construction permits issued through December 31, 2018.

The trends noted in the table are expected to continue over the 20-year timeframe of this comprehensive plan. Such trends are viewed as consistent with Charlestown’s desire to remain a rural and small town residential community in a sensitive environmental setting. In particular, the amount of land zoned for residential purposes and that zoned for commercial and mixed-use purposes and their distributions are seen as sufficient to accommodate the growth trends expected over time. Industrial development as a new use is not viewed as a significant factor in the future land use of Charlestown. If residential growth accelerates to a point beyond the administrative capabilities of staff and town boards, consideration should be given to reinstating a growth management regulations formerly utilized by the town.

Build-Out Analysis

Evaluating the need for growth management should include a GIS build-out analysis and detailed trend line projections for residential land uses. Build-out is the future condition in which all available land is fully developed according to its designated zoning. Since not all lots can or will be developed due to constraints and/or ownership restrictions (self-imposed or otherwise), it is considered an academic exercise undertaken to determine the maximum possible density allowable under current regulations.

An initial build-out analysis (in 2016) was undertaken during the development of this comprehensive plan to determine the total number of dwelling units and associated residential population of the town that could occur under a full development scenario. There are many factors involved in undertaking and interpreting a build-out analysis, including that it may require many decades to occur, or may never take place at all, at least well into the foreseeable future. However, by applying the current residential zoning described above (R-20, R-40, R-2A, R-3A) to land which is both unprotected and unconstrained, and available (either vacant or only partially developed), the following was determined:

- The number of new dwelling units could range from approximately 3,800 to 7,800, although the lower number is more realistic because it excludes large areas of town with hydric soils.
- The corresponding total number of dwelling units at build-out could range from 8,950 to 12,950, an increase of 74% to 150% of the current housing count of 5,150 units.
- The corresponding total number of residents, assuming the current average rate of 1.5 persons per dwelling unit (based on a population of 7,800) could range from 13,500 to 19,500 persons, an increase of 73% to 150% of population (or 1.7 to 2.5 times the current level). However, if the actual average household size of 2.5 persons per year-round dwelling unit was applied to all of the new dwelling units, the population could range from 17,300 to 27,300 persons at build-out, a result that would clearly alter the character of Charlestown.

FUTURE LAND USE IN CHARLESTOWN

Map LU-4, *Future Land Use Map* (called the FLUM), shows the overall plan for the future use of land in Charlestown. Preparation of the FLUM was guided by the following policies:

- The town will maintain its existing land use pattern and balance of uses;
- Future growth and redevelopment will be sustainable and compatible with current land uses and with the rural character of the town; and
- The town will protect and enhance the current acreage of conservation and open space land.

The FLUM is a key element of the comprehensive plan in that it is a visual reflection of the goals, policies and action elements of the overall document and its component chapters. It is also the policy foundation of the town's zoning regulations. The zoning map and zoning ordinance must be consistent with the FLUM or amended to either conform with the zoning district designations, or with the uses and development standards regulated by the appropriate zoning district.

Land Use Categories on the Future Land Use Map (FLUM)

The land use types shown on the FLUM are described below by category. The Narragansett Indian Tribe Settlement Land areas are indicated by a neutral grey.

Residential Uses

Residential is the predominant “active” land use permitted by local regulations in Charlestown. The FLUM depicts four classifications, based on density: Low-Density Residential (pale yellow), which is analogous to the R-3A (3-acre) zoning district; Low-Density Residential (yellow), which is analogous to the R-2A (2-acre) zoning district; Medium-Density Residential (tan), which is reflective of the R-40 (1-acre) zoning district; and High-Density Residential (brown), which is reflective of the R-20 (0.5-acre) zoning district.

Traditional Village

The traditional village area of Charlestown, shown on the FLUM in pink, is the mixed-use corridor along Old Post Road extending westerly from the South Kingstown town line to Tockwotten Cove Road, and including a few other parcels outside of this area. It is analogous to the current Traditional Village District (TVD), although the boundaries are adjusted to remove land which is in institutional and protected status. As defined in the zoning ordinance, the purpose of this district is to encourage small-scale business and residential uses consistent with the historic and pedestrian-scale characteristics that exist and which are unique to Charlestown village, to preserve

the town's heritage, to strengthen the local economy with appropriate uses, to continue small town character and aesthetics and to promote the general welfare of the town. This includes efforts such as limiting noise and very large commercial vehicles, and prohibiting corporate-style buildings not consistent with the village character.

Commercial Uses

The town's current commercial zoning designations: C-1, C-2, and C-3 are shown in various shades of red on the FLUM as: Village Commercial, General Commercial and Scenic Highway Commercial, respectively. It is felt that this nomenclature is better reflective of the town's goals and policies for commercial uses in the community. While these designations are generally analogous to the current zoning districts, implementation of the comprehensive plan will likely include revisions to allowable uses and dimensional standards as well as the nomenclature change. Implementation may also include incorporation of form-based standards and techniques to promote the vision of a small-town model for commercial development and services.

Village Center Designation

A village center designation is proposed for the villages of Carolina, Shannock and Cross Mills, which includes areas in proximity to the traditional core areas of these village centers. As stated in the Historic and Cultural Resources chapter, the current Historic Village Overlay District will provide the basis for the village center overlay. The boundaries of each village will be refined. In the case of Cross Mills, the boundaries are proposed to be much more compact, encompassing the area around Old Post Road and the intersecting streets of Cross Mills Drive and Town Dock Road (rather than the much larger area around and south of Old Post Road between Ninigret Park and the South Kingstown town line). These mixed-use village centers are intended to accommodate growth, reuse and redevelopment at a "village" scale. The underlying zoning, whether residential, commercial or other, will govern allowable uses. Guidelines should be developed to ensure that new development is done in a manner that is compatible with the character and integrity of the villages.



Frances Topping

Historic Homes in Carolina Village

Industrial

Only two areas in Charlestown are zoned for industrial use, the larger one being Kenyon Industries, located on Route 2 alongside the Pawcatuck River, and two separately owned parcels on Kings Factory Road with a history of fabrication. Both areas correspond to the industrial designation shown in purple on the FLUM.

Institutional

The FLUM contains an “institutional” category, shown in blue, for public and quasi-public facilities, where specific services and functions are provided to residents and constituents. It includes all of the municipal buildings and facilities such as the town hall, the police station and the animal shelter; the elementary school; semi-public facilities such as the fire district stations and the grange; state facilities, such as the RI DOT garage; and the post office and other federal facilities. It also includes churches, and similar facilities owned by private organizations to serve constituents in a community manner. Publicly owned parcels whose primary purpose is recreational are not included in this category (see below). In general, this institutional classification is intended to recognize these services and facilities and support their continued usage into the future. The current zoning of such properties would not be changed. For example, the town hall and the animal shelter would remain in the municipal zone and a church in a residential zone would stay in that designation.

Areas of Open Space: Recreation and Conservation

The current zoning map has one open space designation: Open Space / Recreation, which is assigned to large parcels of publicly owned undeveloped land. This mostly consists of DEM park land including Burlingame State Park and Management Area, the Great Swamp Wildlife Management Area, East Beach and Ninigret Conservation Area, and the state parks at the two breachways. It also includes some of the large parcels owned by the US Fish and Wildlife Service including the Ninigret National Wildlife Refuge – the Salt Pond Unit (adjoining Ninigret Park) and the Barrier Beach Unit. However, much of Charlestown’s conservation and open space land is in residential zoning, including other park land owned by DEM and other refuge land owned by US Fish and Wildlife, as well as large parcels owned by The Nature Conservancy, the Charlestown Land Trust and the town. Many of these parcels were acquired in the years following the adoption of the current zoning map.

The FLUM shows two areas of open space; Open Space – Recreation (light green) and Open Space – Conservation (dark green). These two classifications of open space in Charlestown are described in the format of a zoning district, as follows:

Open Space/Recreation (OS-R): This designation is intended for areas that are principally in use for active recreation, which may be in combination with conservation purposes and passive recreation. This district contains lands owned by public and private agencies and its purpose is to allow a variety of uses compatible with active recreation areas. It is noted that this district may have certain areas of overlap with the OS-C district based upon historic usage and intentions of such properties. The OS-R district is intended to underscore and support the primary recreational functions, needs and values of the properties within the district.

Open Space/Conservation (OS-C): This designation is intended for areas that are in conservation ownership and use. The OS-C district encompasses lands that are inherently sensitive in nature from an environmental, habitat and/or natural resource perspective. Such areas may be under public or private non-profit agency ownership and may accommodate passive recreational uses (trails and potentially small scale facilities to support non-invasive recreational access). These areas may also be closed to public access for the purpose of protecting wildlife habitat and unique or sensitive features. It is noted that this district may have certain areas of overlap with the OS-R district based upon historic usage and/or conservation intents of such properties. The OS-C district is intended to underscore and support the conservation needs and values of the properties within the district.

These two designations are distinguished by the type of use and to a large degree, the ownership of the open space parcel, although not entirely. With some exceptions, they will provide the basis for two new zoning districts to replace the current OS/R district.

The recreation land includes those properties used for active recreation which provide public access. This recognition is intended to support the continuation of the active usage of such lands for the benefit of residents, visitors, tourists and others. Land in this designation includes the campground section of Burlingame; town owned parks, playing fields and bathing beaches; all of Ninigret Park; and even the Charlestown portion of the privately-owned Westerly-based Shelter Harbor Golf Club.

The conservation designation is shown for federal, state, town and non-profit organizational holdings within the town, where the primary function of such lands is for conservation and passive or low-impact use. This includes parcels owned by US Fish and Wildlife, DEM, Town of Charlestown and Charlestown Land Trust, The Nature Conservancy and the Audubon Society. Land in this designation includes all of the land currently in OS/R zoning which is not set aside for recreation and many more. The depiction is also applied on the FLUM to privately held lands that are subject to conservation deed restrictions or sale of development rights. Where no public access is provided, the policies of the comprehensive plan would be to not propose the rezoning of these properties from residential to open space, but to honor and enforce easement restrictions as defined in the deeds.

Common open space in residential “cluster subdivisions” are also shown as either conservation or recreation open space. It must be noted that such open space parcels are integral to the zoning and land development regulatory compliance of these developments (they support the density of the smaller sized cluster lots), and while they will remain in residential zoning designation, are not available to accommodate any additional development.



Frances Topping

Shannock Falls in Autumn

Inconsistencies between Existing Land Uses and Zoning Regulations and the Plan for Future Land Use

Inconsistencies between existing land uses and zoning regulations, and the FLUM are summarized in this section. In Charlestown, the amount of land available for new residential and other types of development is sufficient to accommodate anticipated growth needs of the community over the 20-year timeframe of this plan. The town’s current and projected demographic profile and recent trends in construction are supportive of this conclusion.

The future plan for land use and the regulatory approach regarding new development or substantial redevelopment must include measures that provide adequate protection for the salt ponds, freshwater bodies and groundwater quality. This approach is critical to provide potable water supply for existing development and to protect the natural environment. As such, local regulatory requirements must be aligned with the goals and policies articulated in the SAMP for the salt pond region, which attempts to maintain and preferably reduce, overall development density in areas designated as “self-sustaining lands” and “lands of critical concern”. Any future program of transfer of development rights (TDR) will not send developments rights (as receiving areas) to lands under these SAMP designations.

The FLUM also depicts lower density development north of the watershed boundaries of the salt ponds, particularly in the northeast area of town and along some of the major roads. This reflects several factors: an increase in dedicated open space; acknowledgement that there are certain natural resources which are to be protected and which also pose legal constraints to development; and the effectiveness of conservation development and low impact development techniques. The additional designation of the village center overlay is intended to provide more flexibility in development options while preserving existing village character.

Map LU-5, *Land Use Inconsistencies Map*, illustrates inconsistencies between the policies regarding future land use and the zoning now in place that governs land use. These inconsistencies are discussed generally below followed by a more specific summary by location in town. Areas where rezoning should be considered or where other regulatory techniques should be used to address these inconsistencies are identified. The last section of this chapter, Land Use Goals, Policies and Actions, includes among other recommendations, provisions to appropriately address the inconsistencies between current regulations and future land use.

Application of the Planned Development District (PDD)

One significant potential change between the FLUM and the 2020 zoning map is the application of the Planned Development District (PDD), which, at present, is assigned to only two large areas in town. One is the parcel once owned by the United Nuclear Corporation in the northern section of town (discussed in other chapters of this plan). This land was purchased by The Nature Conservancy in two parcels (in 2001 and 2015) to be managed as conservation land and is indicated on the FLUM as OS-C. Changing the zoning from PDD to a designation of OS-C would reflect its current use as a preserve, its constrained environmental characteristics and the intentions of TNC to provide for long term protection while being consistent with the FLUM.

The other area is an approximately 120-acre parcel between Post Road and Old Post Road, midway between the Westerly and South Kingstown town lines, which is currently an active sand and gravel operation. This land can be converted to low density residential (R-3A) or can remain in the PDD, and in conformance with the district requirements, be used at a density consistent with the SAMP designation of “lands of critical concern”, equivalent to one residential unit per 3 acres of unconstrained land. The PDD regulations were developed to be consistent with the policies and regulatory environment of the SAMP; the standards, use allowances and procedures in the PDD detail a local regulatory environment that will permit new development and redevelopment consistent with this sensitive environmental setting.

Because the Planned Development District is not proposed to be expanded to other parcels in Charlestown, if it is removed from both parcels, it can also be eliminated from the zoning ordinance.

Residential Density

In some areas of town, the existing residential density does not conform to the underlying zoning district, or to the goals and policies of the SAMP. In particular, the majority of the lots within the salt pond area south of Route 1 existed prior to the implementation of the SAMP, and many were even in place before zoning was established in Charlestown. As a result, the density is much greater than would be allowed under current planning and regulatory efforts.

Undersized lots for the zoning district in which they are located are referred to as substandard lots of record; they are “grandfathered” lots because they were considered legal at the time they were created. Where such parcels are vacant and held in common ownership with adjoining properties, town zoning regulations require the merger of these into one development lot (Section 218-43 B.1 of the zoning ordinance).

However, substandard lots which cannot be merged are of concern because they may allow development densities that are considered potentially harmful to natural resources such as the salt ponds and the groundwater. To bring these areas into a more consistent land use configuration, the town should consider policies and regulations that would be triggered by new and expanded uses of land, such as rehabilitations of existing houses or new houses replacing “tear-downs” on non-conforming lots, or lots less than a half-acre. Requirements regarding on-site drainage management, limitation of impervious surfaces, provision of vegetative buffers, and dimensional requirements that would limit development impacts (especially with regard to nitrate impacts to groundwater) should be considered in the form of an overlay district.

Because much of this area south of Route 1 has been developed over many generations and the zoning has been in place for decades, no changes in residential zoning density are proposed. These lots are not generally depicted on Map LU-5.

Development in the area of town north of Route 1 is typically more conforming with the underlying zoning. In this part of town, a majority of the residential land is zoned for either two or three acre lots, with some exceptions – an area in the western portion of town adjoining Westerly off Ross Hill Road and Buckeye Brook Road, and an area in the northern part of town that extends from the Carolina Village area to the Shannock Village area. These areas are zoned for R-40, as are several miles of frontage along major roadways, described below. The density generally matches the zoning in the portion of Charlestown north of Route 1, with two distinct exceptions. One is an area in northern Charlestown in the triangle between Old Mill Road and Carolina Back Road where the medium density zoning (R-40) along these road frontages should be extended back to cover a developed area consisting of multiple lots averaging a half acre in size. The other is the complex of condominiums right off Route 1 at the South Kingstown border (Castle Rock and Kingsland). These two developments are labeled on the FLUM as high density residential and could be considered for rezoning from R-3A to a higher density district provided that the long term impacts

of such rezoning is considered i.e., the potential for tear downs that could result in the loss of units which are “practically affordable (see Housing Choice chapter) and replacement by fewer units that nonetheless could have a greater impact on the site than the single story condo units in place now. These are the only areas of town where the zoning designation could conceivably be up-zoned (changed to a designation allowing greater density), but only because the areas are already fully developed at a density greater than the current designation.

R-40 Frontage Parcels

Along many of Charlestown’s major roadways, the road frontage is zoned R-40, typically for a depth of 270 feet from the road, while the remainder of the land is zoned R-3A. This “split-zoning” designation is found along the following roadways: South County Trail, Sand Plain Road, Carolina Back Road, Alton Carolina Road, Shumankanuc Hill Road and Burdickville Road. Many of these split-zoned lots have been developed along their frontages and are integrated into the town’s land use pattern. However, the remaining undeveloped lots along these roads should be reviewed by the town to determine if the lower density zoning is appropriate, consistent with the surrounding zoning to the rear of such properties, or if specific standards should be enacted to prevent one acre lots from being created along road frontages while allowing equivalent density.

Commercial and Industrial Uses

The commercial and industrial uses in Charlestown generally conform to the requirements of the zoning ordinance because the commercial and industrial zones were primarily designated around existing uses. As noted, the nomenclature of the three commercial zoning districts, C-1, C-2 and C-3 is proposed to be changed to Village Commercial, General Commercial and Scenic Highway Commercial, respectively. Under the implementation phase of this zoning review, revised use allowances, dimensional standards and the use of form-based code standards coupled with low impact design requirements will be considered. The Traditional Village District will remain. There are a few commercially zoned properties that, because their current use is residential, could be changed to the residential zoning classification of the surrounding area.

There are just a few parcels in town zoned for industrial use because this designation reflected the use of these parcels at the time the zoning was adopted. However, should those uses change or be abandoned, another industrial use could be established. As a result, the allowable uses and dimensional and other standards of the Industrial Zone should be reviewed to ensure future compatibility should these parcels be subject to new uses or redevelopment. The town should also consider allowing uses other than “manufacturing, warehousing, and research and development” for which the Industrial Zone is reserved. This would include uses such as furniture making, textile production and others involving small scale production or “light assembly”. Such uses could be permitted in other districts as well, with appropriate standards.

Recreational and Conservation Uses

The inconsistencies between the current zoning and the existing and proposed long term use of land in Charlestown are principally reflected in the large parcels of recreation and conservation land in residential zoning. There are many parcels proposed to be converted from residential to either Open Space – Recreation or Open Space – Conservation, and of course all of the parcels in the current OS / R district are proposed to be placed in one of the two new open space districts. Such parcels were not considered to be inconsistent because they are currently in an open space designation.

Specific Areas of Zoning / Land Use Inconsistencies

The following bulleted summary outlines amendments to current zoning or other regulatory approaches that would be needed to address inconsistencies between zoning and the Future Land Use Map. As noted above, the *Land Use Inconsistencies Map* (LU-5) indicates the areas and parcels where change would be necessary to address these inconsistencies.

- Change existing residential zoning of various properties to reflect their conservation ownership and passive recreational and educational use. These properties generally correspond to Open Space – Conservation on the FLUM. Property with conservation restrictions without public accessibility would not be considered for rezoning, nor identified as inconsistent on Map LU-5. In addition, the future zoning designation of properties identified as conservation on the FLUM that are held by private organizations would be determined following individual review of each parcel and the legal restrictions placed upon the parcels, in consult with the organization.

Note that properties currently zoned OS/R which are shown as Open Space-Conservation on the FLUM are not considered inconsistent for the purposes of implementation of this plan.

- Change existing residential zoning of various properties to reflect their active recreational use. These properties correspond to Open Space – Recreation on the FLUM.
- Revise existing OS/R zoning for all open space properties. These properties correspond to either Open Space – Conservation or Open Space – Recreation on the FLUM and will be applied to town, state and federal holdings based on their functional intentions.
- Change existing Municipal zoning to various properties owned by the town to either Open Space – Conservation (ex: School House Pond Preserve) or Open Space – Recreation (ex: Ninigret Park) as shown on the FLUM.

- Change existing commercial zoning where such properties are currently utilized for residential purposes, to an appropriate residential designation – low density/3-acre, low density/2 acre, medium density or high density residential, as shown on the FLUM.
- Refine the current boundaries of the TVD to include certain abutting residential and commercially zoned properties, and to exclude open space properties.
- Define and establish the Village Center Overlay Districts as depicted on the FLUM; these include Carolina, Shannock and Cross Mills.
- Consolidate commercial uses in Carolina Village and the Route 2 / Shannock Road intersection and Cross Mills Village into a consistent Village Commercial designation.
- Consider the revision of the R-3A residential zoning designation of the Castle Rock and Kingsland condominium developments to reflect the high density residential designation shown on the FLUM (R-20). Any rezoning of these parcels would be intended to reflect the existing density and not to accommodate additional residential development or re-development at an inappropriate scale or density.
- Revise the residential zoning designation of the area in the triangle between Old Mill Road and Carolina back Road, including frontage lots along Old Mill Road and “interior” lots in the Scapa Flow Road developed area off of Carolina Back Road, to reflect the medium density residential designation shown on the FLUM (R-40). Note that this change is intended to reflect the existing density of this area and not to accommodate additional residential development.

LAND USE: GOALS, POLICIES AND ACTIONS

OVERALL GOAL: To protect the natural and cultural resources and rural character of Charlestown while providing the housing, economic base and services necessary for its residents and visitors to enjoy a high quality of life.

POLICIES AND ACTIONS

The following policies and actions have been developed to implement the vision and goals for land use in Charlestown.

Policy 1: Maintain the current pattern, scale and densities of development within the community in an overall sense. The town’s historic villages, commercial nodes and mixed-use corridors shall accommodate more dense development and provide for the service and institutional needs of Charlestown residents and visitors. The remaining areas of town shall be designated for less dense development along with large areas of protected open space.

Policy 1.1 Maintain Residential Density Consistent with Current Development Patterns and Environmental Constraints.

As noted in the section entitled Land Use Controls, Charlestown, which relies on individual on-site wastewater systems and almost entirely on private wells, has four residential densities:

Low-Density Residential: 3 acre and 2 acre – one house per two or three acres of unconstrained land. This includes most of the residential areas in Charlestown including the large majority of undeveloped land not protected as open space. These areas are zoned as R-2A and R-3A (although some areas under this designation, including land south of Route 1 and along state roads and certain local roads, are already developed at higher densities).

Medium-Density Residential – one house per acre (40,000 SF) of unconstrained land. This includes the area off Ross Hill Road near the Westerly border, areas within and nearby Carolina and Shannock Villages, areas with frontage along major roadways, including Route 2 and Route 112, and residential areas between Old Post Road and Matunuck Schoolhouse Road. These areas are zoned as R-40.

High-Density Residential—One house or dwelling unit per one-half acre (20,000 SF) of unconstrained land. This is the densely developed residential area south of Route 1A adjacent to the border with South Kingstown (Ocean Ridge vicinity). This area is zoned as R-20, and reflects the built environment before the SAMP was developed.

Action 1 Review the residential zones with consideration of environmental constraints, particularly wetland areas, the Pawcatuck River, Natural Heritage areas, and land within the CRMC SAMP land use designations of Self-Sustaining Lands and Lands of Critical Concern.

Action 2 Review specific areas of town which are fully developed at a density greater than the current zoning, and consider options for rezoning so as to be consistent with existing development patterns.

Two areas of R-3A – the single family lots off Old Mill Road and Carolina Back Road, and the condominium complex off Route 1 – have been identified as being developed at a much higher density than that which the zoning would currently allow. However a proposal for rezoning to a greater density must consider the potential environmental and social impacts of any redevelopment which could result.

Action 3 Review the undeveloped parcels with split-zoning along the major roads and consider regulatory options to ensure overall development consistent with the surrounding zoning to the rear of such parcels.

Rezoning of these areas should be considered, or as an alternative, the application of specific techniques to protect the existing road frontages from being cut into one acre lots, by transferring the density either into the larger parcel or elsewhere in town through the transfer of development rights (discussed in other action items below).

Policy 1.2 Identify and Enhance the Mixed-Use Village Centers.

Village centers are areas of traditionally scaled development with different uses that work well together. Uses include residential, both single and multi-family; mixed-use buildings (apartments over stores); village-scale and commercial uses; municipal and institutional buildings; and recreation and other open space. These villages, which include Carolina, Shannock and the center of Cross Mills, are designated as mixed-use village centers on the FLUM. Such centers are intended to accommodate growth and redevelopment at a “village” scale to meet the housing, particularly affordable housing, and commercial and institutional needs of the neighborhoods.

A study of Shannock Village entitled “Design Guidelines for Building in the Village” was completed in 2010. The design guidelines in this study should be adopted for the Village of Shannock and used as a template for the villages of Carolina and Cross Mills.

Action 1 Establish village center overlay districts to review uses and to govern the scale and design of new development and redevelopment in the village centers, in order to facilitate diversity of housing and commercial uses in vibrant, walkable villages.

The village center overlays include the underlying districts of residential, commercial, municipal and open space, but are to be tied together by consistent design standards for development.

Action 2 Review the zoning regulations for the villages of Shannock, Carolina and Cross Mills and adopt standards relating to building and parking placement, building form and design and signage and site amenities so as to protect and enhance traditional uses and development patterns, and the historic nature of the villages.

Action 3 Consider the establishment of a transfer of development rights (TDR) program to conserve land in rural and environmentally sensitive areas of town while encouraging appropriate density of development in the village centers.

Policy 1.3 Maintain Old Post Road as a Mixed-Use Traditional Village District.

Areas along Old Post Road that consist of both commercial and residential uses are intended to allow commercial development, including conversions of residential structures to commercial, while protecting the rights of residential property owners to remain and expand as residential. Mixed-use buildings are allowed and encouraged. This area is now zoned as the Traditional Village District. This designation will be maintained and remain centered on its original purposes.

Action 1 Review the boundaries and general configuration of the TVD, the allowable uses and densities, in a manner compatible with CRMC SAMP policies, including limiting footprints and impervious cover, and applicable design standards, including architecture, building placement and landscaping.

The TVD will be adjusted by including within its boundaries all commercially zoned lots in the Old Post Road area between the South Kingstown town line and Tockwotten Cove Road, and by specifically excluding areas of protected open space.

Policy 1.4 Identify and Define Commercial Districts in Town.

In addition to the TVD, Charlestown has three commercial districts, described in the Background section of this chapter.

The C-1 is intended to be “village” in nature. Areas so zoned are generally limited to the intersection of Matunuck Schoolhouse Road with Charlestown Beach Road, and commercial parcels in the Shannock and Carolina village areas.

The C-2 is intended to be the general retail and service business district in town. Areas so zoned include some lots along Matunuck Schoolhouse Road, the commercial parcels along Old Post Road outside of the TVD and generally west of Cross Mills, lots along Route 2 both near Route 1

and the intersection with Route 112, lots along Route 1 near the Westerly border, the marinas and other commercial parcels scattered throughout town.

The C-3 is intended to be “highway” in nature, specifically related to Route 1, with an emphasis on traffic oriented uses and services. Areas so zoned include the commercial parcels along Route 1 between Ross Hill Road and where Old Post Road diverges from Post Road (near the entrance to the Ninigret National Wildlife Refuge).

These three commercial zoning districts are to be redefined as described below, and the actual boundaries and allowable uses reviewed.

Village Commercial: Commercial districts providing neighborhood services consistent with the historic and pedestrian-oriented characteristics of the villages. These areas to include the commercial zones contained within the village center overlay districts for the three Charlestown villages of Carolina, Shannock and Cross Mills.

General Commercial: Commercial districts providing general retail and service businesses serving town-wide needs. These areas to include the commercial parcels along Matunuck Schoolhouse Road and Charlestown Beach Road; areas along Old Post Road west of Cross Mills; the marinas; lots along Route 2 including those at the southern end near Route 1 and at the intersection with Route 112; at Klondike Road near its intersection with Ross Hill Road; and at commercially used sites scattered around town.

Scenic Highway Commercial: Commercial areas that abut Route 1 where sensitivity in scale and design compatible with the scenic roadway, must be considered. These areas to include all commercially used parcels with access from Route 1 from its intersection with Old Post Road west to the Westerly border.

Action 1 Establish Village Commercial, General Commercial and Scenic Highway Commercial zoning districts consisting of areas now zoned as C-1, C-2 and C-3 Zones, and review allowable uses and dimensional requirements (minimum lot size, setbacks, building height, and lot coverage allowances).

Action 2 Establish architectural and site design standards, including but not limited to maximum building size and total impervious lot coverage for all commercial districts.

A comprehensive review of the use table must be done to ensure that the intensity and scale of uses allowed in the Village Commercial, General Commercial and Scenic Highway Commercial Districts are compatible with the areas so zoned. The biggest change is proposed for the Scenic Highway Commercial District with an emphasis not on highway access and

large areas of parking, but for uses that enhance this unique visual corridor with its proximity to the salt ponds and areas within the CRMC SAMP jurisdiction.

Policy 1.5 Retain Limited Industrial Land Uses in Town.

Industrial areas are those used or reserved for manufacturing, warehousing, and research and development. In Charlestown, this is limited to the Kenyon Industries site and a parcel on Kings Factory Road that currently is the location of Wood River Industries.

Action 1 Review the allowable uses and dimensional and other standards of the Industrial Zone to ensure future compatibility should the industrial parcels be subject to new uses or redevelopment.

Action 2 Consider additional options for small-scale production or light manufacturing which are compatible with areas of town outside of the Industrial Zone.

Policy 1.6 Ensure Adequate GIS mapping

Mapping that includes zoning designations, property boundaries and resources and environmental constraints needs to be up-to-date and available for the town staff and the boards and commissions as they undertake development reviews and approvals and make land use decisions. GIS capability also provides a valuable educational tool for the general public and development community.

Action 1 Maintain, update and enhance the town’s GIS mapping – parcel-based mapping and all data and overlay layers – to facilitate review of development applications, to help preserve natural and cultural features and to help provide permanently protected open space.

Action 2 Provide periodic outreach to the general public regarding use of the town’s GIS system. This may be accomplished via postings on the town’s website, in the community newsletter and/or by conducting workshops for residents and other interested parties.

Policy 2 Maintain a strong program of open space protection and management in order to balance ongoing residential development and retain the rural character and high quality of life in Charlestown.

Policy 2.1 Identify and Categorize Open Space Parcels in Town.

The town currently has a single zoning designation for open space: Open Space/Recreation (OS/R). It encompasses a range of open space categories, ownerships and uses. As described in

the Natural Resources and Recreation chapters, Charlestown has significant areas of open space. These are of two general types:

Open Space – Conservation: Land protected for conservation and passive recreation purposes. This includes land owned by the town and by state and federal agencies, and land owned by private conservation organizations for the purpose of protecting significant plant and animal habitat areas, landscapes, wetlands, groundwater resources and other valuable open space from development. It also includes most common open space associated with cluster residential developments. Use of such areas are limited to passive outdoor activities, such as hiking, plant study and bird watching.

Open Space – Recreation: Open space intended to be used for active recreation with improvements in the form of structures, playing fields and courts permitted. It encompasses areas of open space not protected exclusively for conservation purposes including recreation camps, bathing beaches and common open space specifically set aside for recreational use, as well as active recreation areas. Although it can be used recreationally such land may also be preserved for conservation purposes.

Action 1 Establish two new open space zoning designations: “OS-Conservation” (OS-C) and “OS-Recreation” (OS-R) to replace the OS/R.

Many areas now zoned for OS/R would be moved to the more restrictive designation, OS-C, and many currently protected and conservation areas now zoned for residential use would be rezoned OS-C. Some areas used recreationally now zoned for municipal or residential use would be rezoned OS-R. A review of restrictions and allowable uses must be completed for both districts.

Policy 2.2 Support the Continued Acquisition of Open Space for Conservation and Recreation Purposes

Charlestown remains an attractive community for new residential development. Even given the significant amount of area protected as federal, state and local open space and park land, an estimate of the number of new houses that could result from build-out has the potential to significantly change the character of the town. To offset this, the town will continue to undertake and support a local program of land acquisition and protection, as well as actively work with state, federal and private partners. One important opportunity involving the federal government is the Great Thicket National Wildlife Refuge that is to be implemented by the US Fish & Wildlife Service through a focus on land acquisition and habitat management of certain parcels in southern Rhode Island.

Action 1 Continue to fund the purchase of title and/or development rights to land using local open space bond money, with acquisitions based on open space ranking criteria (see Recreation chapter).

Action 2 Work with the Charlestown Land Trust, RIDEM, US Fish and Wildlife Service and organizations such as The Nature Conservancy to identify and preserve land with important natural features and wildlife habitat, farmland, and land with recreation potential by means of outright purchase, acquisition of development rights or through conservation easement.

Action 3 Promote, through educational outreach efforts to property owners, expanded participation in the Farm, Forest and Open Space (FFOS) program and the selling or donating of conservation easements.

Policy 3 **Coordinate with the Narragansett Indian Tribe, and with neighboring communities, to achieve compatibility in land use decision making for areas with common borders and on other issues of interest and concern.**

Policy 3.1 **Establish an Active and Ongoing Relationship with the Narragansett Indian Tribe**

The town and the tribe are not only connected geographically, but the land use decisions that each make have significant impacts on the other.

Action 1 Identify resources shared by the tribe and the town, and issues of common concern, and establish a means of regular communication. Such issues include but are not limited to the following:

- Development on tribal lands which are not settlement lands.
- Protection of groundwater resources, wildlife habitats and cultural features on tribal lands.
- Construction of affordable housing for tribal residents that might be counted towards Charlestown's inventory of year-round low and moderate-income housing (see Housing Choice chapter).

Policy 3.2 **Continue an Active Collaboration with Other Communities**

It is important that the communities which share boundaries and resources with Charlestown engage in regular and ongoing dialogue, particularly related to activities that can negatively impact

neighboring communities, as well as collaboration related to the provision of common services and facilities.

Action 1 Continue to coordinate with the Town of Richmond on the redevelopment of the villages of Carolina and Shannock, including development of compatible zoning and design standards.

Action 2 Coordinate with adjoining communities as needed on natural resource protection and public water supply production and distribution, including establishment of policies restricting transfer of water resources out of watershed boundaries (see Services and Facilities chapter).

Action 3 Coordinate the harbor management of Quonochontaug Pond that Charlestown shares with Westerly, and Green Hill Pond that is shared with South Kingstown.

Action 4 Review outdoor lighting regulations with adjoining communities to lessen the impact of lighting from these towns on Charlestown’s dark skies.

Action 5 Collaborate with neighboring communities regarding land use ordinances with special attention to regulations governing major developments such as commercial solar, multi-use complexes and affordable housing.

Policy 4 **Require that land be developed in a sustainable manner and in a manner that preserves natural and cultural features to the maximum extent possible.**

Policy 4.1 **Prevent Overdevelopment in Sensitive Coastal Areas**

Areas within the Quonochontaug peninsula and along Charlestown Beach Road and its environs are classified by CRMC as “lands developed beyond carrying capacity.” The dense development of these areas results in nutrient loading in the groundwater. This adversely affects the quality of drinking water for the residents as well as the health of the salt ponds. These areas are also subject to natural hazards in the form of sea level rise, coastal flooding and storm surges.

Action 1 Review town regulations (zoning ordinance and land development and subdivision regulations) to identify areas that may conflict with CRMC’s policies and regulations under the SAMP for the salt ponds region. On the basis of such review, develop and enact regulatory modifications to better coordinate town and CRMC policies and eliminate conflicts between these regulations in these sensitive, coastal environments. Such modifications should pertain to all classifications of land use, including commercial properties.

Action 2 Develop a “Nitrogen Reduction Overlay District” applied to critical resource areas to regulate the size and impact of new development so as to reduce groundwater nitrogen in a scientifically based manner (see Services and facilities chapter).

Policy 4.2 **Review, revise and amend the subdivision regulations and zoning ordinance as needed to be consistent with this comprehensive plan.**

As a final policy, the town must work to ensure that the regulations governing land use and development achieve the goals of the comprehensive plan to protect important site features, the environment, the rural character and quality of life in Charlestown. Some of these regulatory efforts may include innovative and/or flexible tools which the town can utilize when regulating and reviewing land developments and subdivisions. The town will remain abreast of all available land management tools and work to apply them as appropriate. Some specific action items are described below, but others may be identified in the years ahead.

Action 1 Amend the land development and subdivision regulations and the zoning ordinance to include provisions to allow for conservation design and development, as an alternative, or in addition to mandatory cluster.

Action 2 Revise the zoning and subdivision regulations to ensure that impractical lots are not created, and that impacts on wetlands and other natural features are avoided or minimized by reviewing and strengthening lot design standards.

Action 3 Periodically review and amend the residential compound regulations to ensure that they are meeting the town’s rural design standards.

Action 4 Utilize transfer of development rights (TDR) to conserve land in rural areas of town while allowing construction of traditional neighborhood designs on small lots in designated village areas, including multifamily and affordable housing, without increasing the overall buildout of the town.

Enactment of TDR will require working with property owners, developers and conservation interests to identify property for conservation (sending area) and property that can support more dense development (receiving area). Density in the receiving area should not negatively impact the environment or land use context of the area, particularly within the SAMP region.

Action 5 Undertake a study of the use of form-based codes to determine their applicability to commercial and mixed use areas of Charlestown, specifically regarding redevelopment and new development in the Traditional Village and the Village Commercial Districts.

Appendix LU-1

The Settlement Lands of the Narragansett Indian Tribe

In January 1973 the Narragansett Indian Tribe filed suit against the State of Rhode Island and a number of private individuals asserting ancestral claims to approximately 3,200 acres of land in the Town of Charlestown.

The claim was ultimately settled out of court by an agreement in 1978 entitled Joint Memorandum of Understanding Concerning Settlement of Rhode Island Indian Land Claims. The agreement was also memorialized in federal law in the Rhode Island Indian Claims Settlement Act (9/30/78 – 25 U.S.C. §1701, et seq.). In 1979, the Narragansett Indian Land Management Corporation was established by state law for the purposes of acquiring, managing and purchasing real property as provided for in the Rhode Island Indian Claims Settlement Act.

The Rhode Island Indian Claims Settlement Act, provided the Narragansett Indian Tribe with approximately 1,800 acres of land (called the Settlement Lands of the Narragansett Indian Tribe) in two equal parcels, as follows:

- *Public Settlement Lands* – Lands originally owned by the Narragansett Indian Tribe, including the Indian Cedar Swamp Management Area, the Indian Burial Hill and Deep Pond. Amounting to about 900 acres, these lands are to remain perpetually as a conservation area.
- *Private Settlement Lands* – Lands privately owned that were purchased utilizing \$3.5 million in funds appropriated by Congress. Also amounting to about 900 acres, 75% of these lands are to remain as a limited conservation area where certain activities such as agriculture are permitted, while the remaining 25% (approximately 225 acres) can be developed by the Narragansett Indian Tribe.

The boundaries of the Settlement Lands have been determined through a federal cadastral survey that is on file in the Charlestown Town Hall. The Settlement Lands are held in restricted trust for the Narragansett Indian Tribe by the federal government.

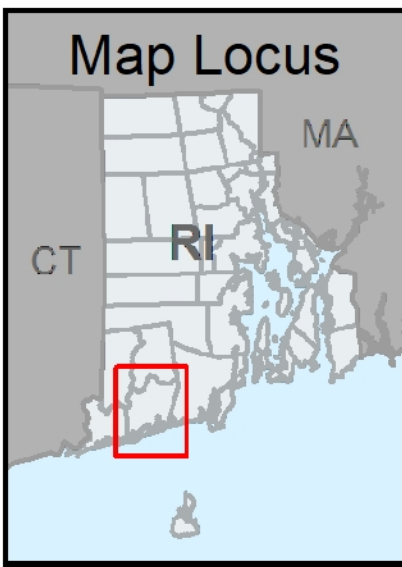
In 1983 the Narragansett Indian Tribe was recognized by the US Department of the Interior as a sovereign entity, which provided the tribe with the equivalent of a government-to-government relationship with the United States. This entitled the tribe to participate in a myriad of federal programs. In 1985 the Narragansett Indian Land Management Corporation was dissolved.

In 1986, as required by the settlement act and in cooperation with the tribe, the RI Office of State Planning prepared a document entitled *Land Use Plan for the Narragansett Indian Land Claim Settlement Area for the Narragansett Indian Tribe*. The Land Use Plan included a land capability

analysis which inventoried physical resources, including geology, water resources, soils, vegetation and wildlife, and human and cultural resources, including land use, road systems, public utilities, and historic sites and areas. The land capability analysis categorized the land into its relative suitability for development, both residential and commercial, and for agriculture and for conservation. Two usage categories were established, namely “conservation” and “development”, along with associated standards that relate to site design, impervious coverage, on-site sewage disposal, buffer areas, wetlands protection and preservation of surface and ground water quality. The plan does not delineate the actual 225 acres of development area within the private settlement lands, but does identify areas that would be suitable for development based on the land capability analysis.

There are several other aspects of the Rhode Island Indian Claims Settlement Act that are worthy to note: The Narragansett Indian Tribe may establish hunting and fishing regulations for the Settlement Lands. The Settlement Lands are not subject to Charlestown real estate taxes, but the tribe has the right to tax its people and business activities on the land. In addition, the State of Rhode Island has been granted the use of rights of way providing access to Deep Pond and the Pawcatuck River for specified purposes, as well as a 45 foot wide right-of-way through the Settlement Lands in order to provide emergency access to Watchaug Pond from Kings Factory Road. The Providence Boys Club, and its successors, as owner of a 105 acre parcel off Lewis Trial with frontage on School House Pond (Camp Davis) was also granted perpetual access to its holdings. This property is now owned by the RI Department of Transportation. Parcels acquired by the tribe outside the Settlement Lands are subject to local land development and zoning regulations, and taxation by the Town of Charlestown.

As of 2019, with the exception of the new health center, there is no significant development within the settlement lands nor any specific plans for the 225 acres that can be potentially developed. The town’s comprehensive planning process recognizes this potential and the importance of maintaining a cooperative and open relationship with the tribe to ensure that the future of the settlement lands is managed in a way that is compatible with the interest of both the Narragansett Indian Tribe and the Town of Charlestown.



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Map Sources:



TOWN OF CHARLESTOWN
RHODE ISLAND

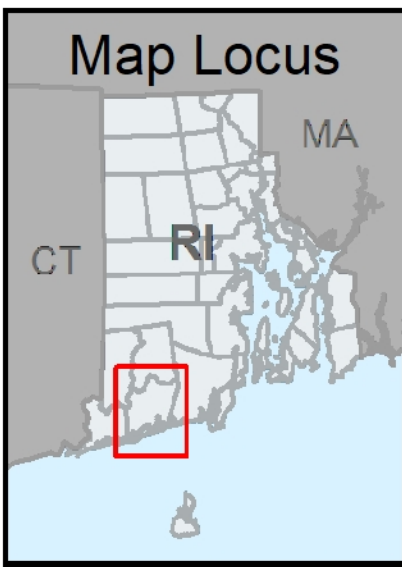


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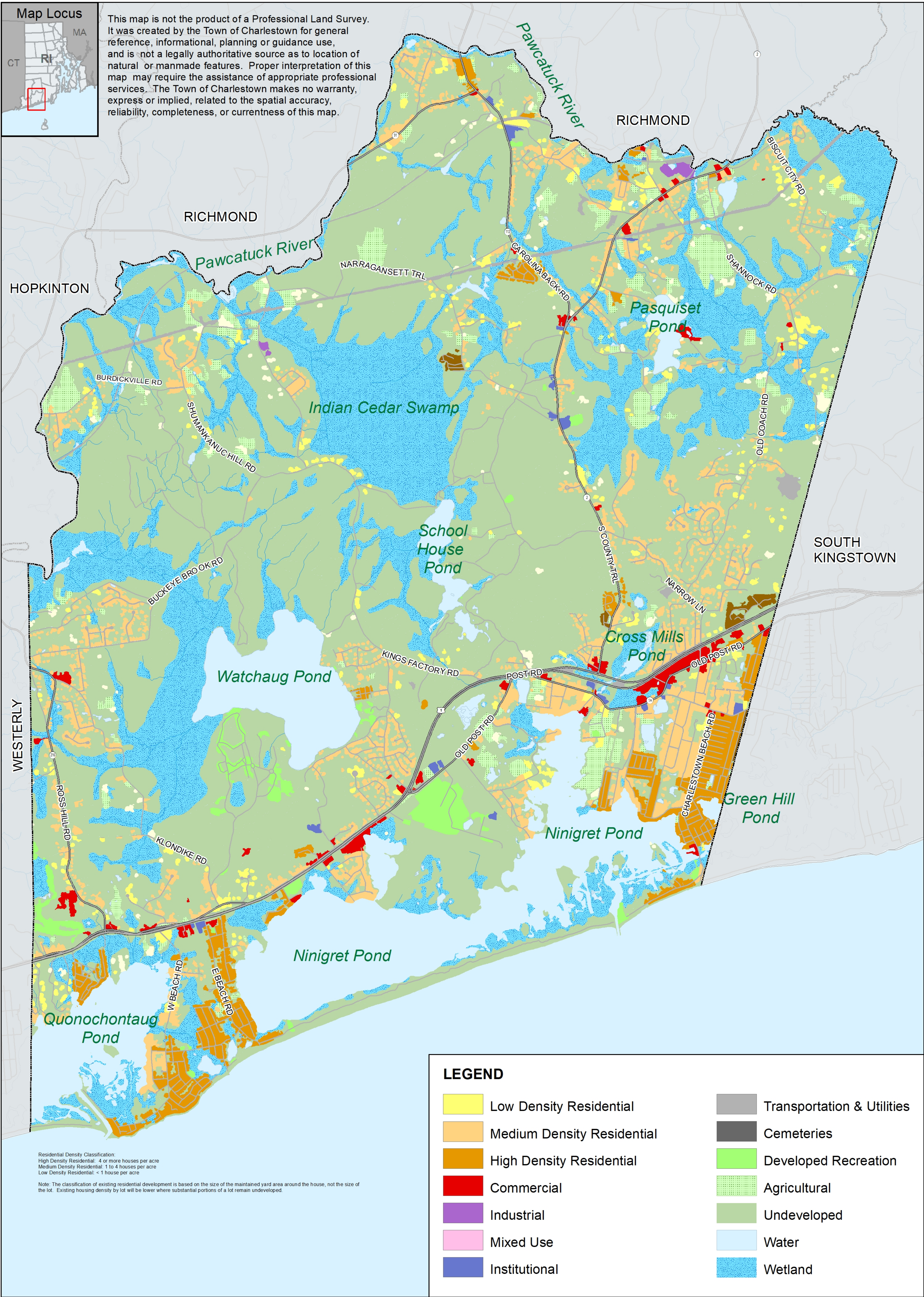
COMPREHENSIVE PLAN, 2020

**AERIAL
PHOTOGRAPH 2019**

MAP LU-1



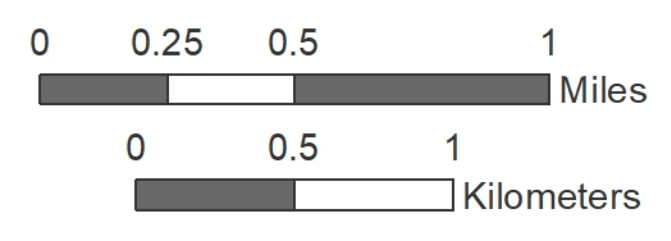
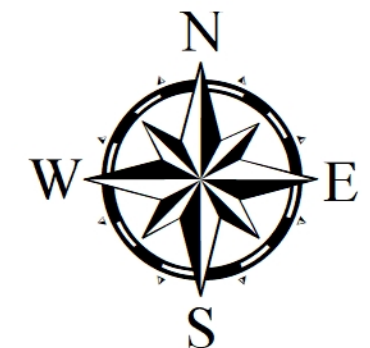
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Residential Density Classification:
 High Density Residential: 4 or more houses per acre
 Medium Density Residential: 1 to 4 houses per acre
 Low Density Residential: < 1 house per acre
 Note: The classification of existing residential development is based on the size of the maintained yard area around the house, not the size of the lot. Existing housing density by lot will be lower where substantial portions of a lot remain undeveloped.

LEGEND			
	Low Density Residential		Transportation & Utilities
	Medium Density Residential		Cemeteries
	High Density Residential		Developed Recreation
	Commercial		Agricultural
	Industrial		Undeveloped
	Mixed Use		Water
	Institutional		Wetland

Map Sources:



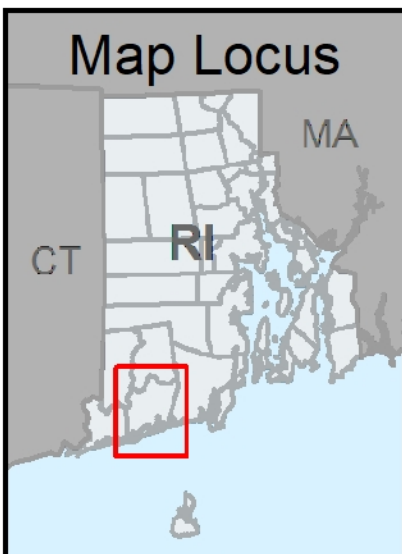
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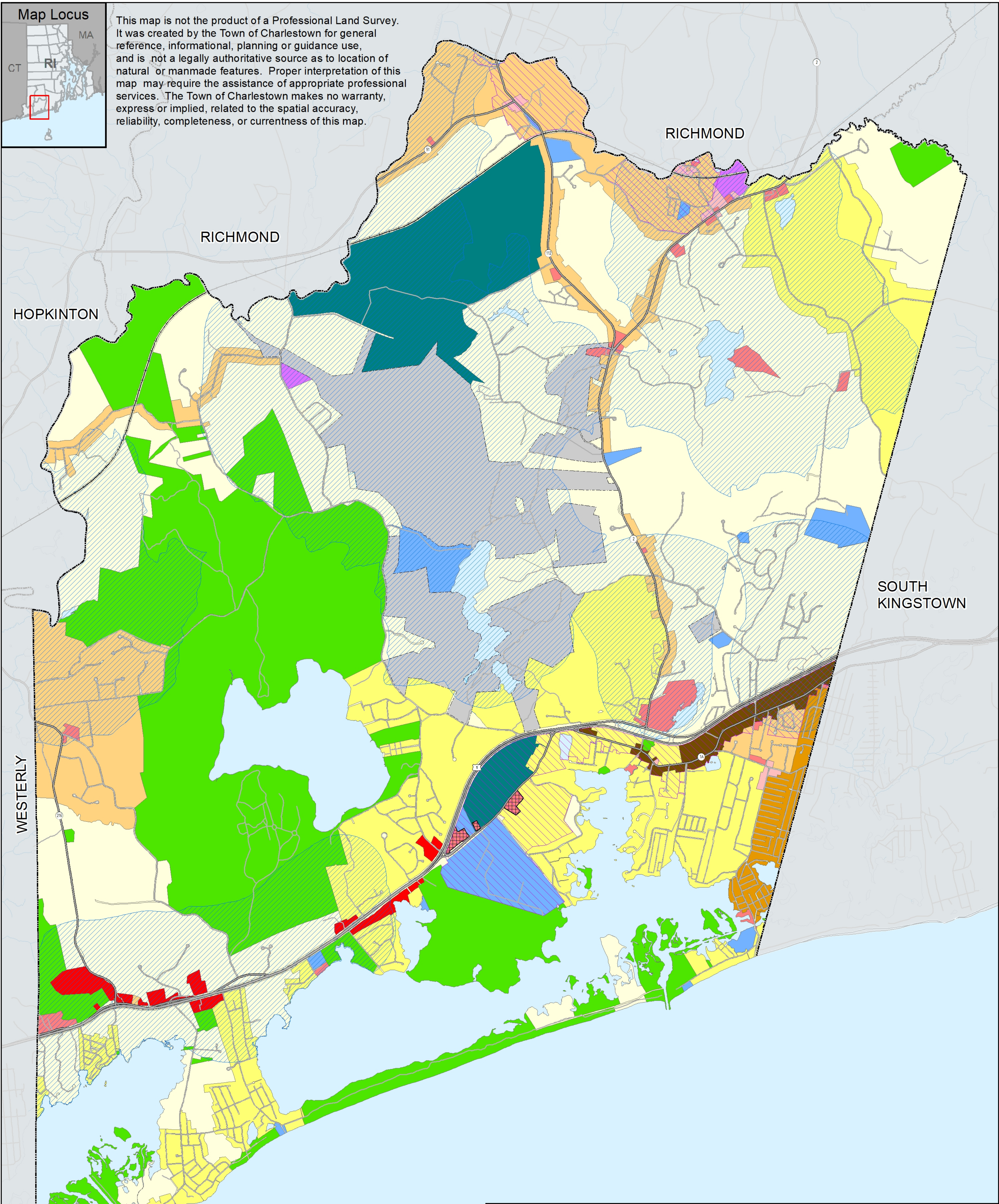
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LAND COVER 2011



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OTHER

- Narragansett Indian Tribe Settlement Land
- Lakes & Ponds

OVERLAY DISTRICTS

- Groundwater Protection: GWP
- Historic Village: HV
- Mixed Use Zoning: MUZ

STANDARD ZONING DISTRICTS

- Residence: R20
- Residence: R40
- Residence: R2A
- Residence: R3A
- Traditional Village District: TVD
- Commercial 1: C1
- Commercial 2: C2
- Commercial 3: C3
- Planned Development District: PDD
- Industrial: I
- Open Space / Recreation: OSR
- Municipal: M

Map Sources:



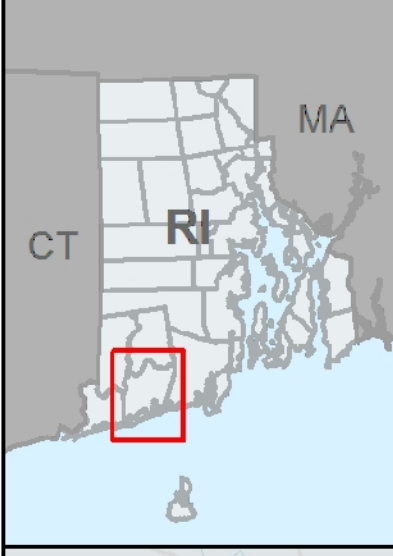
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RHODE ISLAND



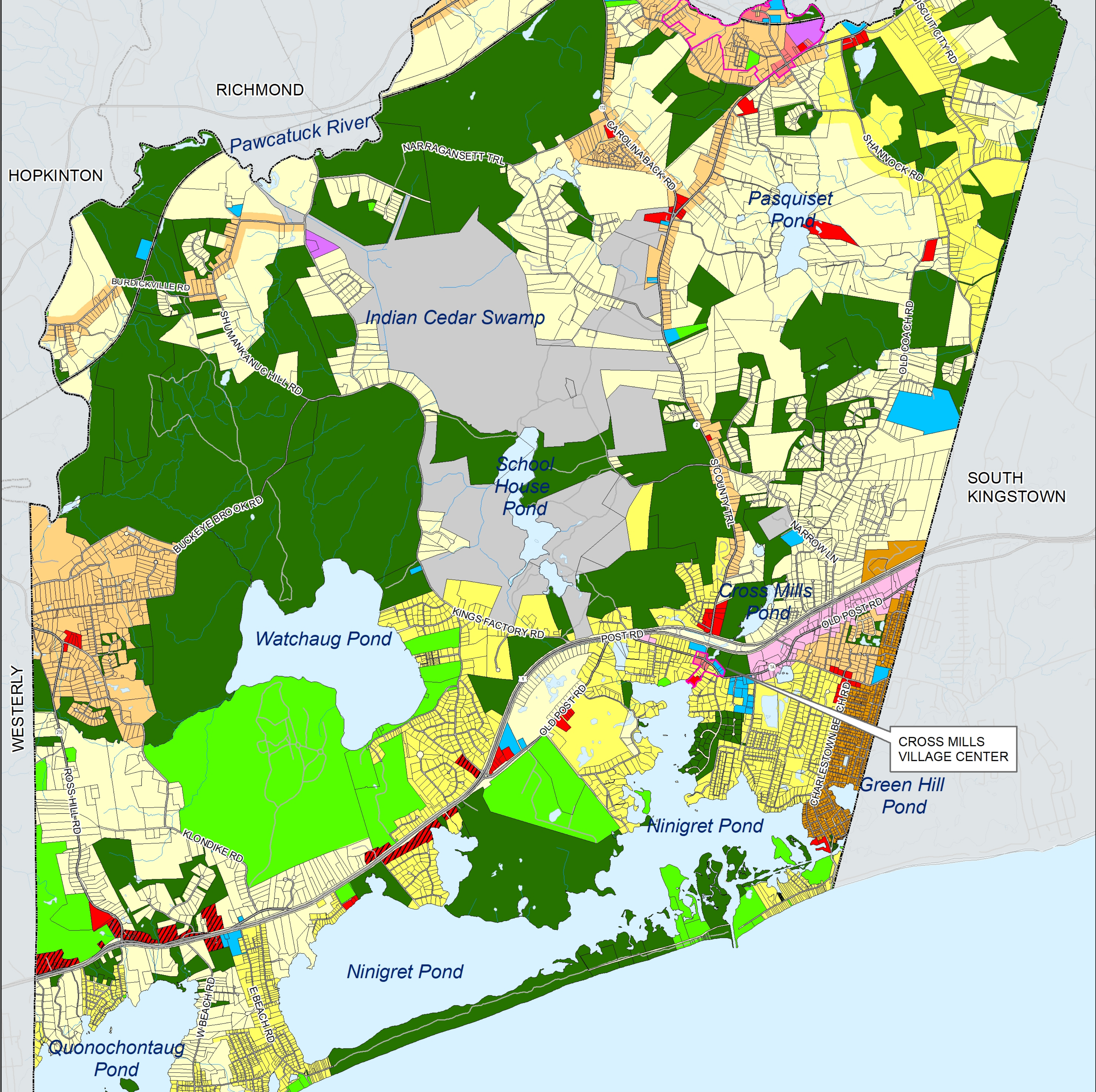
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ZONING 2020



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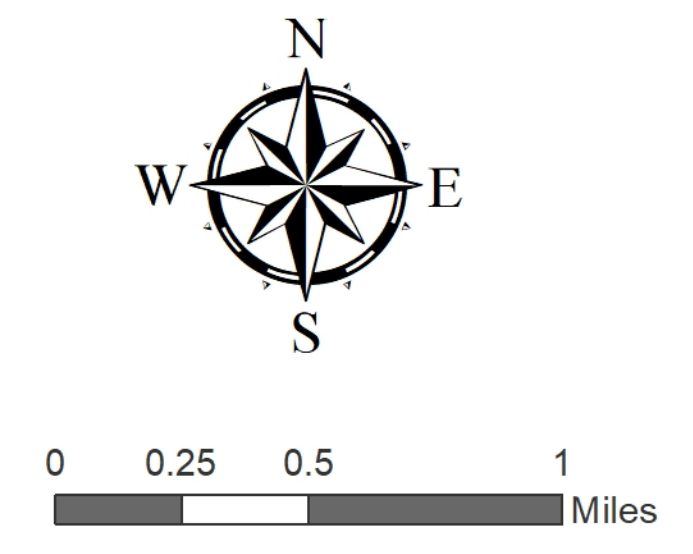


REFERENCE

- Town Boundary
- Lakes & Ponds
- Rivers & Streams

LEGEND	
	Low Density Residential (R-3A)
	Low Density Residential (R-2A)
	Medium Density Residential
	High Density Residential
	Traditional Village
	Village Commercial
	General Commercial
	Scenic Highway Commercial
	Industrial
	Institutional
	Open Space - Recreation
	Open Space - Conservation
	Narragansett Indian Tribe Settlement Land
	Village Centers

Map Sources:



TOWN OF CHARLESTOWN
 RHODE ISLAND

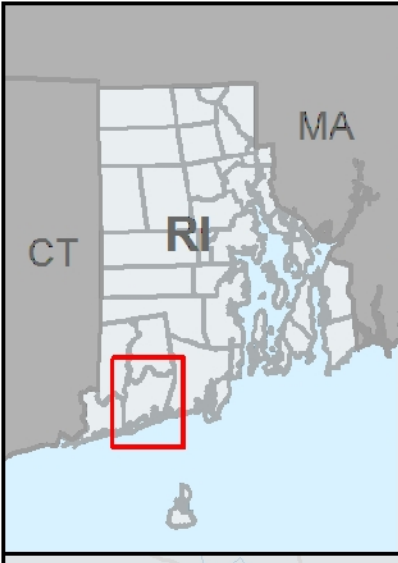


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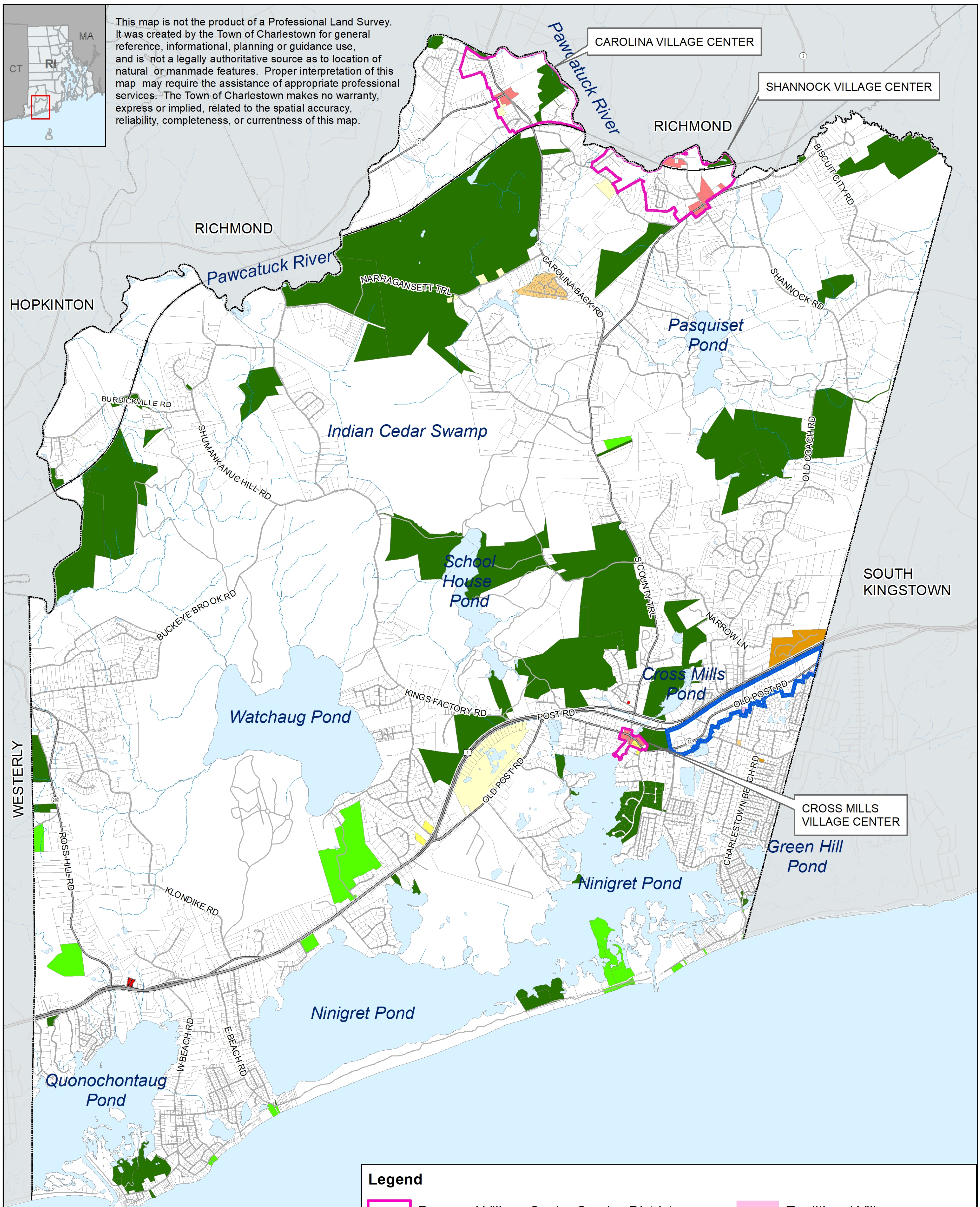
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FUTURE LAND USE

MAP LU-4



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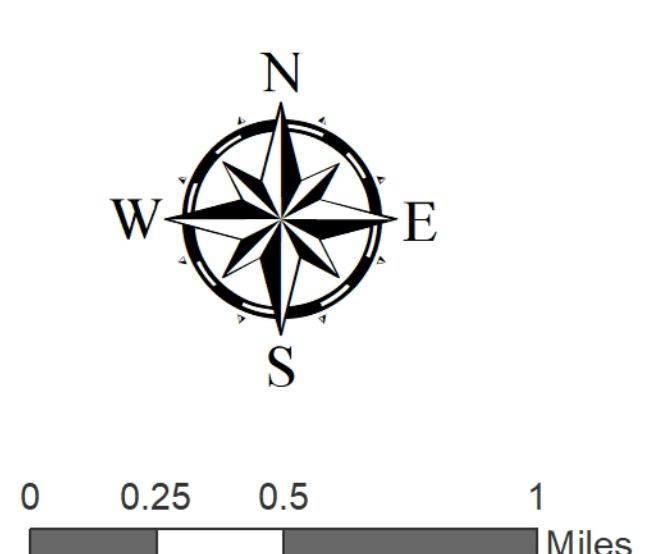
REFERENCE

- Town Boundary
- Lakes & Ponds
- Rivers & Streams

Legend

Proposed Village Center Overlay District	Traditional Village
Proposed Traditional Village District Boundary	Village Commercial
Low Density Residential (R-3A)	General Commercial
Low Density Residential (R-2A)	Scenic Highway Commercial
Medium Density Residential	Open Space - Recreation
High Density Residential	Open Space - Conservation

Map Sources:
RIGIS



TOWN OF CHARLESTOWN
RHODE ISLAND



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COMPREHENSIVE PLAN, 2020

**LAND USE
INCONSISTENCIES
MAP**

MAP LU-5



IMPLEMENTATION

CHARLESTOWN COMPREHENSIVE PLAN

A series of tables containing all of the action items from each chapter with the responsible party and the time frame for implementation identified for each.

IMPLEMENTATION CHAPTER

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Economic Opportunity	12-25
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**CHARLESTOWN COMPREHENSIVE PLAN
IMPLEMENTATION TABLES – RESPONSIBLE PARTIES AND TIME FRAMES**

<u>Responsible Parties</u>	Town Council (TC) Town Administrator (TA)
Town Department:	Planning (PD) Building/Zoning (B/ZD) and Floodplain Management (FMD) Geographic Information Services (GIS) Police Department (CPD) Fire Districts: Charlestown (CFD) or Dunn’s Corner (DCFD) Emergency Management Agency (CEMA) Finance (FD) Harbor Management (HMD) Public Works (PWD) Parks and Recreation (PRD) Wastewater/Stormwater Management (WWMD)
Commissions/Boards:	Planning Commission (PC) Affordable Housing Commission (AHC) Agricultural Preservation Commission (APC) Budget Commission (BC) Coastal Pond Management Commission (CPMC) Conservation Commission (CC) Economic Improvement Commission (EIC) Parks and Recreation Commission (PRC) Wastewater Management Commission (WWMC) Zoning Board of Review (ZBR)
Conservation Organization	The Nature Conservancy (TNC) Charlestown Land Trust (CLT)
Private Organization:	Charlestown Chamber of Commerce (COC) Charlestown Historical Society (CHS) South County Tourism Council (SCTC) Washington County Community Development Corp. (WCCDC) Washington County Regional Planning Council (WCRPC)
State:	Division of Statewide Planning (DSP) Coastal Resources Management Council (CRMC) Department of Environmental Management (DEM) Historical Preservation and Heritage Commission (HPhC) Office of Energy Resources (OER) Department of Transportation (DOT) RI Public Transit Authority (RIPTA) RI Housing (RIH)

Federal: Narragansett Indian Tribe (NIT)
US Fish and Wildlife Service (USFWS)

Time Frames
On-going
Short-term; within five years
Medium-term; five to ten years
Long-term; over ten years

NATURAL RESOURCES

Action	Responsible Party	Time Frame
Policy 1.1 Continue to acquire and protect open space areas that preserve important natural resources.		
Action 1 Identify and rank open space land that provides for critical resource and habitat protection.	CLT CC / PC PD / GIS	On-going
Action 2 Assess the value of municipal property and tax sale parcels as permanent open space or conservation areas.	CLT / CC PD TA / TC	On-going
Action 3 Continue to collaborate/partner with various agencies and organizations such as US Fish and Wildlife Service, RI DEM, The Nature Conservancy, RI Audubon Society and private developers (through the land development process) regarding open space acquisition and conservation.	CLT CC / PC PD TA / TC	On-going

Action	Responsible Party	Time Frame
Policy 1.2 Protect natural resources through zoning and subdivision regulations and the development review process.		
Action 1 Make use of flexible land use management tools to provide alternatives to conventional development in a manner that protects important natural resources such as water bodies, significant vegetation and wildlife habitats, from potentially negative development impacts: <ul style="list-style-type: none"> a. Allow for conservation design and development as an alternative to, or in addition to, mandatory cluster; b. Revise the zoning and subdivision regulations to ensure that impractical lots are not created, and that impacts on wetlands and other natural features are avoided or minimized by reviewing and strengthening lot design standards, and; c. Require the installation or preservation of vegetative buffers or increased setbacks. 	PD WWMD PC TC	Short-term to Medium-term
Action 2 Provide for the permanent protection of wetlands as part of the land development and subdivision review process: <ul style="list-style-type: none"> a. Require peer review for all major developments, particularly those involving new road construction, on parcels with significant areas of wetlands; 	PD PC	On-going

<p>b. Require minimum areas of contiguous upland when creating new lots on parcels with significant areas of wetlands or other severe constraints;</p> <p>c. Require wetland and buffer areas to be within protected open space areas to the extent possible;</p> <p>d. Demarcate wetland edges with permanent markers to protect the wetland resource area from alteration/use and incremental deterioration; and</p> <p>e. Require that restrictions on use of wetland resource areas be included on the deeds to the new or impacted parcels.</p>		
<p>Action 3 Preserve the Pawcatuck River corridor as both a scenic resource and wildlife habitat area through the establishment of zoning regulations to control the placement and scale of development along the river.</p>	<p>PD PC TC</p>	<p>Short-term</p>
<p>Action 4 Periodically review all town regulations that are in place to protect natural resources in order to ensure effectiveness and that all standards are up to date. These include but are not limited to:</p> <ul style="list-style-type: none"> • Dark sky ordinance; • On-Site Wastewater Management System (OWTS) regulations; • Groundwater protection district; • Soil erosion and sedimentation control ordinance; • Energy siting regulations; and • Noise ordinance, particularly as it relates to protecting wildlife 	<p>PD B/ZD WWMD PC TA / TC</p>	<p>On-going</p>
<p>Action 5 Consider adoption of a transfer of development rights (TDR) ordinance to provide for the conservation of land in rural and undeveloped areas of town while encouraging appropriate density of development in village centers, including Cross Mills, Carolina, and Shannock.</p>	<p>PD PC TC</p>	<p>Medium-term</p>

Action	Responsible Party	Time Frame
<p>Policy 2.1 Provide long-term preservation and conservation of natural resources through proper management by town administration.</p>		
<p>Action 1 Consider establishing a position in town to monitor and manage protected open space, either as an employee or person or entity under contract.</p>	<p>TA / TC PD / PRD CLT CC / PC</p>	<p>Medium-term</p>

Action 2	Maintain a current database of all critical natural resource areas, including a listing of parcels and GIS maps of the following: a. All conservation lands and protected open space areas; b. Critical habitats of federal- and state-listed rare, threatened and endangered species, both plant and animal; c. Wetland areas, including forested, shrub and emergent; and d. Any other significant natural resource areas.	GIS PD CLT CC / PC	On-going
Action 3	Review state maps and other databases to ensure that all publicly-owned protected lands, river and shoreline access points, and historic buildings and sites appear on the maps and in databases.	GIS PD	On-going
Action 4	Consider the establishment of a water source protection ordinance which requires that water drawn from aquifers within Charlestown remain within the watershed and prohibits the withdrawal and sale of groundwater as a commodity	PC GIS / PD TA TC	Short-term

Action	Responsible Party	Time Frame	
Policy 2.2 Work with state and federal agencies, and private conservation organizations, and with neighboring communities and the NIT to protect shared natural resources and achieve compatibility in open space acquisitions and land use decisions.			
Action 1	Support efforts by agencies and organizations to monitor, evaluate and implement programs to improve water quality and habitat in the freshwater bodies and salt ponds of the town.	CPMC CC GIS	On-going
Action 2	Coordinate land acquisition efforts, including identifying priorities and sharing information and resources, and funding, with the Charlestown Land Trust, RI DEM and The Nature Conservancy.	CLT CC / PC PD TA / TC	On-going
Action 3	Work with the Narragansett Indian Tribe and the neighboring communities to protect shared natural resources.	PD CC NIT	On-going

Action	Responsible Party	Time Frame
Policy 2.3 Promote appreciation for and proper use of natural resources by residents and visitors through public education.		
Action 1 Educate those who enjoy the town’s abundant open space areas on appropriate use in order to protect natural resources and habitats by developing and distributing public informational brochures.	CC CLT PD / PRD	Short-term
Action 2 Publicize forested and natural areas in town that are available for passive recreation and nature study through various organizations and media, including the Chamber of Commerce and the town website.	PRD / PD CC CLT COC	Short-term
Action 3 Maintain and update town efforts, specifically under its Stormwater and Wastewater Management Programs, to educate homeowners on the following: a. Proper septic system maintenance; b. Use of fertilizers, particularly in the salt ponds watershed; c. Ecologically sensitive landscaping; and d. Managing pet waste	WWMD GIS	On-going

Action	Responsible Party	Time Frame
Policy 3.1 Integrate efforts related to acquisition of land, allocation of funds and review of land developments to achieve this network of open space and conservation areas.		
Action 1 Make an interconnected network of conservation land a priority in protection and conservation of open space.	CLT CC / PC	On-going
Action 2 Apply for grants from potential federal, state and private sources to acquire, promote access to and educate the public regarding Charlestown’s natural resources and habitat areas.	CLT / CC TA / TC	On-going
Action 3 Maintain a natural resources map, develop plans and undertake site visits to identify resources that should be permanently protected from development.	GIS / PD	On-going

RECREATION

Action	Responsible Party	Time Frame
Policy 1.1 Continue to provide active recreational programming for all ages.		
Action 1 Annually review the variety and accessibility of recreational programming to determine the adequacy in meeting the needs of all residents.	PRD PRC	On-going
Action 2 Continue to coordinate recreational programming with that of other organizations and recreational facilities in the region.	PRD PRC	On-going

Action	Responsible Party	Time Frame
Policy 1.2 Maintain and expand opportunities for outdoor active recreation.		
Action 1 Undertake a facilities study to evaluate the condition and use level of all active recreational facilities, and to identify the need for additional facilities, particularly in areas of town which are underserved.	PRD PRC	Short-term
Action 2 Review the previous plans developed for Ninigret Park to determine the best utilization of the park.	PRD PRC PD / PWD TA / TC	Short-term
Action 3 Develop a schedule for acquisition and development of additional playing fields and active recreation facilities in town, based on need and availability of funding.	PRD / PWD PRC TA / TC	Medium-term

Action	Responsible Party	Time Frame
Policy 1.3 Provide opportunities for year-round recreation.		
Action 1 Develop and expand programs for early spring, fall and winter activities for both passive and active recreation.	PRD PRC	Short-term
Action 2 Publicize forested and natural areas as available for year-round passive recreation activities, and make use of such areas in recreational programming.	PRD PRC / EIC CLT SCTC	Short-term
Action 3 Continue to partner with the public schools, neighboring municipalities and other organizations for use of indoor recreational facilities.	PRD PRC	On-going

Action 4	Consider the development of a new indoor recreational facility/community center and determine its needed capacity and appropriate location.	PRD PRC TA / TC	Medium-term
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Action		Responsible Party	Time Frame
Policy 2.1 Continue to acquire, protect and manage open space areas that can be utilized for passive recreation open to the public.			
Action 1	Identify and rank open space land that provides both resource and habitat protection and recreational opportunities.	PD / PRD CC / PRC GIS	Short-term
Action 2	Provide trailhead facilities and well-marked trails to facilitate use of natural areas, while notifying users of any restrictions due to natural resource protection.	PWD / PRD PRC / CC CLT	On-going
Action 3	Develop (jointly with Carolina and Kenyon in Richmond) a Heritage Trail along the Pawcatuck River that would link the Carolina Management Area and the Great Swamp Management Area.	PRD PRC / CC DEM	Medium-term
Action 4	Collaborate with conservation groups such as The Nature Conservancy, the RI Wild Plant Society and the Audubon Society to expand recreational programming focusing on Charlestown's natural resources, and to educate the public on their ecological importance and need for sensitive management.	PRD PRC / CC CLT	Short-term

Action		Responsible Party	Time Frame
Policy 3.1 Maintain the varied recreation opportunities on Ninigret and Quonochontaug Ponds, on the freshwater ponds and the Pawcatuck River, for boating, swimming shell fishing and fishing, while protecting the resources from the adverse impacts of overuse.			
Action 1	Continue to develop small-scale access ways to the shore, the freshwater ponds and the river, to allow a few visitors, such as anglers, hikers or people who wish to sit and look at the water at these areas. Provide limited parking at or near shore access points where appropriate.	CPMC PRC / CC PRD DPW	Medium-term
Action 2	Investigate the potential for additional boat ramps or small boat put ins to increase access to the salt ponds and the Pawcatuck River.	PRD CPMC PRC	Medium-term

Action 3	Identify coastal areas subject to the conditions of climate change, such as storm surges and sea level rise, for public acquisition as a means to provide additional shoreline access, while preventing inappropriate development.	GIS PD	Medium-term
Action 4	Identify public ROWs to be upgraded to CRMC ROW designation, and assist the process by undertaking preliminary research involving town records, historical records and physical evidence of the proposed sites.	CPMC CRMC	Medium-term

Action	Responsible Party	Time Frame	
Policy 3.2 Educate the public on the availability and proper use of Charlestown's significant areas of open space.			
Action 1	Educate recreational users and others who enjoy open space on appropriate use to protect natural resources and habitat by developing and distributing public informational brochures.	CC / PRC PRD	Short-term
Action 2	Publicize the wide array of available recreational opportunities through various organizations and media, including the town website and social media.	PRD PRC	Short-term

Action	Responsible Party	Time Frame	
Policy 3.3 Ensure that the facilities required to support recreational uses are adequate.			
Action 1	Annually review figures for use of all facilities and activities in order to assess the adequacy of staff, facility and maintenance needs. Compare these with projected population demographics on a periodic basis.	PRD DPW PRC TA	On-going
Action 2	Conduct a utility assessment of parking, sanitary facilities, shelter and trash disposal associated with all recreational facilities.	PRD DPW	On-going
Action 3	Continue to apply for recreation and open space grants to meet facility needs.	PRD / PD PRC / PC TA	On-going

HISTORIC AND CULTURAL RESOURCES

Action	Responsible Party	Time Frame
Policy 1.1 Protect historic and cultural resources through zoning and subdivision regulations and the development review process, using innovative techniques as they become available or feasible.		
Action 1 Recognize the contribution of historic and cultural resources and structures when reviewing land developments, subdivisions and other applications to ensure the preservation of important resources and the appropriate re-use of historic structures.	PD B/ZD PC / ZBR	On-going
Action 2 Develop a database of significant historical and cultural resources to be used as a “red flag” in reviewing developments.	PD / GIS PC CHS	Medium-term
Action 3 Review the zoning regulations for the mill villages and adopt standards governing building and parking placement, building form and design, and signage and site amenities, so as to protect and enhance traditional uses and development patterns, and the historic nature of the villages.	PD PC CHS TC	Short-term
Action 4 Consider the adoption of historic district zoning with review of building changes and new development in designated historic districts under the purview of a new historic district commission.	PD PC CHS TC	Medium-term

Action	Responsible Party	Time Frame
Policy 1.2 Preserve the visual qualities of Charlestown’s historic areas and scenic roadways.		
Action 1 Develop context sensitive design guidelines for summer colonies to ensure that new construction, renovations and additions are compatible with the neighborhood.	PD PC CHS TC	Medium-term
Action 2 Amend the zoning ordinance to facilitate the re-use of motels for low to moderate income housing, so that the summer colony character of these properties can be retained.	PD B/ZD PC TC	Short-term
Action 3 Continue Implementation of the <i>Route 1 Scenic Roadway Stewardship Plan</i> . including the establishment of scenic roadway design standards for new development and building improvements along Route 1, including signage, lighting and buffers between the roadway and structures, with consideration given to preservation of important views.	PD PC TC	Medium-term

Action 4	<p>Continue to implement the following policies when reviewing subdivisions and land developments along local and minor roadways, with amendments to land development regulations enacted as needed:</p> <ul style="list-style-type: none"> • Retention of stone walls. • Maintenance of undisturbed natural landscape buffers, particularly significant trees and shrubs, to shield view of new construction from the road where the character of the roadway would be adversely changed by clearing. • Locate new “curb cuts” (driveways) to town roadways so as to preserve existing stonewalls, natural buffers and the scenic qualities of these corridors. Encourage shared driveways to service new development unless there are safety or functional factors that preclude them. 	PD PC PWD	On-going
Action 5	<p>Develop and implement a right-of-way vegetation management program for local roadways that uses low impact but effective methods to manage trees and other vegetation that is consistent with roadway safety standards.</p>	PWD PD PC	Short-term

Action	Responsible Party	Time Frame	
Policy 1.3 Maintain and expand public understanding of Charlestown’s cultural and development history through research, public education and public events.			
Action 1	<p>Educate the public on Charlestown’s history by developing and distributing informational brochures.</p>	CHS HCC* PD	Short-term
Action 2	<p>Support the activities of, and work in conjunction with, the Charlestown Historical Society to continue educational efforts and group activities that raise awareness of the significance of historical and cultural resources to both the community and the seasonal tourist economy.</p>	HCC* / EIC CHS COC	On-going
Action 3	<p>Undertake field research to locate, and map, all historic trails and old road names.</p>	HCC* CHS	Short-term
Action 4	<p>Partner with the University of Rhode Island, Roger Williams University and other educational institutions on programs and projects documenting the historical and cultural assets of the community.</p>	HCC* CHS	Medium-term

Action 5	Educate residents on the benefits of National Register designation, including use of state and federal investment tax credits for restoration of historic structures.	HCC* CHS HPHC	Medium-term
Action 6	Develop and distribute guidelines for restoration of historic properties for use by homeowners.	HCC* CHS B/ZD	Medium-term

Action		Responsible Party	Time Frame
Policy 2.1 Work with the Narragansett Indian Tribe to delineate and protect shared historic and cultural resources.			
Action 1	Establish an inventory of Native American heritage resources located outside of the Narragansett Settlement Lands.	PD NIT CHS / HCC*	Short-term
Action 2	Establish procedures that encourage review and input by the Narragansett Indian Tribe of proposed subdivisions and developments that may impact Settlement Lands.	PD NIT PC / HCC*	Short-term

Action		Responsible Party	Time Frame
Policy 2.2 Support the prehistoric and historic heritage of the Narragansett people.			
Action 1	Include land that provides for the protection or enhancement of Native American cultural assets as an additional important criterion in consideration of parcels for open space acquisition.	PD NIT HCC* / CC TC	Short-term
Action 2	Work with tribal representatives to educate the public on the history of the Narragansett, and to provide access to significant cultural resources, as determined by the tribe.	CHS / EIC HCC* / CC NIT	Medium-term

* The Charlestown Historic and Cultural Commission (HCC) would be a new commission established to inventory features, provide public education, work with the NIT and administer historic district regulations, if enacted.

SERVICES AND FACILITIES

Action	Responsible Party	Time Frame
Policy 1.1 Continue collaboration with adjoining towns, particularly Richmond and Hopkinton, on regional issues and resource sharing efforts.		
Policy 1.2 Continue to review and meet the town's educational needs in the context of the Chariho Regional School District and the standards, programs and resources of the RI Department of Education.		
No Specific Action Items	Policy 1.1 Town Administration Policy 1.2 School Department	On-going On-going

Action	Responsible Party	Time Frame
Policy 1.3 Ensure that the physical facilities are up-to-date and can effectively meet the town's public service needs.		
Action 1 Evaluate the feasibility of re-locating the Department of Public Works to land on Old Post Road near the Police Station and with easy access to Route 1.	PWD B/ZD TA / FD TC	Medium-term
Action 2 Evaluate all public safety buildings and structures to determine their resilience in storm and emergency events, and make upgrades as needed.	PWD B/ZD / FMD TA / FD TC	Short-term
Action 3 Identify all town roads to be impacted by sea level rise or increased flooding due to the impacts of climate change and initiate planning for their modification or abandonment.	PWD GIS TA / TC	Medium-term

Action	Responsible Party	Time Frame
Policy 1.4 Work to increase recycling rates as a means to reduce the amount of solid waste sent to the state Central Landfill.		
Action 1 Encourage composting by establishing a compost bin program at the Charlestown Residential Collection Center.	PWD WWMD	Short-term
Action 2 Explore the placement of recycling bins in various town locations to facilitate recycling by tourists and seasonal residents.	PWD PRD	Short-term
Action 3 Facilitate electronic and hazardous waste recycling in the community by coordination of special collection opportunities with RI DEM and RI RRC and evaluate the consideration of a dedicated program in the community to permit ongoing disposal of these types of waste.	PWD WWMD	Short-term

Action	Responsible Party	Time Frame
Policy 1.5 Promote effective health and social service programs and facilities, in cooperation or partnership with other public, private and non-profit agencies and groups.		
Action 1 Evaluate the feasibility of re-locating the senior/community center and consider options for a location more suitable for emergency shelter purposes.	PRD CEMA PRC TA / TC	Medium-term
Action 2 Develop and distribute public information brochures regarding municipal facilities and services that are available to Charlestown residents, particularly those related to emergency situations.	CEMA PWD	Short-term On-going
Action 3 Support the emergency management agency in coordinating emergency response services to any health care providers, senior housing facilities or any resident living independently with a health concern during power outages and other natural hazard emergencies.	CEMA TA	Medium-term

Action	Responsible Party	Time Frame
Policy 1.6 Encourage and recognize volunteerism in the fire, rescue, ambulance service, library, Parks and Recreation Department activities, town boards and commissions, and other volunteer services.		
No Specific Action Items	Policy 1.6 Town Administration	On-going

Action	Responsible Party	Time Frame
Policy 2.1 Maintain Charlestown's long-range program of effective stormwater management to reduce risk of flooding, control erosion and sedimentation and protect surface and groundwater quality and quantity.		
Action 1 Continue to locate and inventory existing municipal stormwater facilities and work towards correcting problems for existing drainage in a manner which considers the surrounding drainage patterns and natural resources, including: <ul style="list-style-type: none"> a. Digital mapping in the town's GIS system of the stormwater handling elements and outfalls; b. Sampling and analysis of outfall effluent at all stormwater outfall locations; and c. Development of conceptual treatment and/or retrofit plans where problems are detected. 	WWMD* PWD GIS	Short-term to Mid-term

<p>Action 2 Continue to apply Low Impact Development site standards in the review and approval of new land developments and subdivisions, including:</p> <ul style="list-style-type: none"> a. Encourage the installation of raingardens and other “green infrastructure” at residential and commercial developments; and b. As necessary, contract with independent professional engineering or environmental planning consultants to review stormwater management designs. 	<p>PD WWMD* PC</p>	<p>On-going</p>
<p>Action 3 Develop a stormwater reuse program that includes the use of best management practices, such as the installation of rain barrels, cisterns or other water storage and reuse facilities at public buildings.</p>	<p>WWMD* PWD</p>	<p>Short-term</p>
<p>Action 4 Continue to undertake public education, participation and outreach in accordance with the Phase II Stormwater Management Program, including educating homeowners on using buffers, vegetation or other measures to increase water retention on site.</p>	<p>WWMD*</p>	<p>On-going</p>
<p>Action 5 Develop a database of storm drains in town that are located within the projected sea level rise scenarios and can be monitored during flood events and/or extreme high tides</p>	<p>WWMD* PWD GIS</p>	<p>Short-term On-going</p>
<p>Action 6 Undertake a comprehensive stormwater management study for areas exposed to flooding and/or sea level rise, developed through state and/or federal funding.</p>	<p>WWMD* FMD / PD PC</p>	<p>Medium-term</p>

Action	Responsible Party	Time Frame
<p>Policy 2.2 Maintain and expand Charlestown’s successful program for on-site wastewater management.</p>		
<p>Action 1 Work with property owners who have failed or underperforming OWTS’s to upgrade or replace them to current and acceptable standards.</p>	<p>WWMD</p>	<p>On-going</p>
<p>Action 2 Establish a program to monitor nitrogen-reducing OWTS’s to determine effectiveness and facilitate reduction of nutrients to the drinking water.</p>	<p>WWMD</p>	<p>On-going</p>
<p>Action 3 Develop a “Nitrogen Reduction Overlay District” applied to critical resource areas to regulate the size and impact of new development so as to reduce groundwater nitrogen in a scientifically based manner.</p>	<p>WWMD PD WWMC / PC TC</p>	<p>Short-term</p>

Action 4	Undertake feasibility studies for potential collective OWTS's in higher-density "village" areas of town, including conceptual plans and cost estimates for collective OWTS's or package mini-treatment plants.	PD WWMD PC TC	Medium-term
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Action		Responsible Party	Time Frame
Policy 2.3 Continue and enhance municipal efforts to ensure the protection of groundwater resources in the community.			
Action 1	Consider the establishment of a water source protection ordinance which requires that water drawn from aquifers within Charlestown remain within the watershed and prohibits the withdrawal and sale of groundwater as a commodity.	PD PC TA / TC	Short-term
Action 2	Review the local zoning and subdivision regulations relative to groundwater protection, and enact the following regulatory changes as needed, including: <ul style="list-style-type: none"> a. An update of the list of uses prohibited in the groundwater protection section of the zoning ordinance; b. Inclusion of groundwater protection methodologies in growth management standards and regulations; c. Delineation of common open space within cluster developments so as to protect groundwater recharge areas; and d. Use of GIS modeling or updated flood mapping for projected sea level rise and storm surge impacts in the review process for development proposals in coastal and flood prone areas. 	PD WWMD* GIS PC TC	Short-term

Action		Responsible Party	Time Frame
Policy 2.4 Minimize town use of water through conservation and other protective measures.			
Action 1	Consider a cooperative program for the watering of agricultural fields (odd/even days).	PWD	On-going
Action 2	Limit water use on athletic fields by using new drought resistant varieties when reseeding fields, and by establishing a policy to prohibit watering of fields during drought emergencies.	PWD PRD WWMD	Short-term

Action 3	Establish a signage program encouraging efficient water use in bathrooms and kitchens of municipal buildings and the elementary school.	PWD WWMD	Short-term
Action 4	Amend the zoning ordinance and land development regulations as needed to mandate best practices to reduce water consumption.	PD WWMD PC / TC	Short-term

* Wastewater Management Department includes stormwater management

ENERGY

Action		Responsible Party	Time Frame
Policy 1.1 Promote conservation and energy efficiency.			
Action 1	Complete remaining energy efficiency improvements to all municipal buildings as recommended by the on-going energy audits.	PWD TA	On-going
Action 2	Continue the policy of replacing town automobiles with the most fuel efficient models as feasible.	PWD CPD	On-going
Action 3	Continue to use CDBG funds to assist low and moderate income households to increase the energy efficiency of their homes.	WCCDC AHC	On-going
Action 4	Explore the placement of recycling bins in various town locations to facilitate recycling by tourists and seasonal residents.	PWD WWMD PRD	Short-term
Action 5	Establish a composting program of public education and outreach. It is recommended that the town take advantage of the presence in Charlestown of leaders in composting, Earth Care Farm and the Worm Ladies, to educate and encourage composting by more residents in Charlestown and other rural towns of the state.	WWMD WWMC	Medium-term

Action		Responsible Party	Time Frame
Policy 1.2 Reduce local dependence on fossil fuels.			
Action 1	Promote the Rhode Island Woods website and similar information resources to make residents aware of the sources of local firewood and to help local forest owners maintain markets for their forest products.	APC PD GIS	Short-term

Action 2	Produce an informational brochure on the specifics and benefits of adding solar panels when a new house is constructed or roof is replaced.	B/ZD OER	Short-term
Action 3	Adopt a town ordinance that incentivizes solar roofs on both new and existing structures by reducing or eliminating fees, or providing other economic incentives.	PD B/ZD PC TC	Short-term
Action 4	Consider amending the zoning ordinance to allow reduced setbacks and greater lot coverages for ground mounted solar systems installed to meet on-site energy needs.	PD B/ZD PC TC	Short-term
Action 5	Reduce or prohibit barriers to energy conservation and use of renewables in subdivision or land development covenants. This action can be completed by the adoption of a town ordinance by the Town Council which prohibits such covenants from restricting the use of on-site renewables by homeowners' associations, or by the establishment of such a policy by the Planning Commission when reviewing such documents.	PD B/ZD PC TC	Medium-term

Action		Responsible Party	Time Frame
Policy 1.3 Maintain a regulatory environment that encourages alternative energy development while protecting natural and cultural resources.			
Action 1	Establish zoning which allows the installation of renewable energy systems in a manner which also protects the natural and cultural environment.	PD B/ZD PC TC	Short-term
Action 2	Enact zoning which directs commercial solar development to degraded land such as the landfill or gravel banks; or to parking lots or other already developed land.	PD B/ZD PC TC	Short-term

Action		Responsible Party	Time Frame
Policy 1.4 Support energy efficient land uses and lifestyles			
Action 1	Continue to enact, amend (as needed) and implement zoning and subdivision regulations that preserve open space and promote compact growth.	PD PC TC	On-going
Action 2	Adopt and implement land use conservation strategies that reduce greenhouse gases.	PD PC / CC TC	On-going

Action 3	Continue to plan and develop town-wide biking and hiking routes.	PRC / CC PD / PRD DOT	Medium to Long-term
Action 4	Periodically review town ordinances to ensure that there are no local restrictions against ride-sharing or ride-hailing business.	PD / PWD TA / TC	On-going

Action	Responsible Party	Time Frame
Policy 1.5	Maintain an awareness of the history of energy proposals in Charlestown, such as the proposed nuclear power plant, and consider the environmental impacts of new energy technologies and proposals.	
No Specific Action Items	Policy 1.5	Town Administration On-going

NATURAL HAZARDS

Action	Responsible Party	Time Frame	
Policy 1.1	Preserve natural resources and improve community resiliency through land conservation and protection.		
Action 1	Develop an acquisition strategy for properties in the town's most vulnerable areas, including determination of appropriate funding sources.	PD / GIS PC / CC CLT	Short-term
Action 2	Review land uses in vulnerable areas to determine whether restrictions are necessary to prevent or lessen potential losses during large storm events or as a result of sea level rise.	PD / GIS FMD	Medium-term

Action	Responsible Party	Time Frame	
Policy 1.2	Educate the public on the probabilities and risks associated with natural hazards and climate change, and on methods of community resilience, with technical assistance provided if possible.		
Action 1	Develop and disseminate an educational campaign for the public on actions that can be taken to reduce risks to private property and to improve resiliency, particularly in coastal hazard and flood prone areas.	PD FMD WWMD* CEMA	Short-term
Action 2	Continue to maintain the emergency and disaster preparedness page on the municipal website with information on minimizing risk to private property and on general preparedness.	CEMA	On-going

Action 3	Continue to offer property owners online resources and updates related to changes or amendments to the local Flood Insurance Rate Maps (FIRMs) and the National Flood Insurance Program (NFIP).	FMD	On-going
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Action		Responsible Party	Time Frame
Policy 2.1 Ensure that the local Hazard Mitigation Plan is up-to-date and utilizes the most recent available technical data for natural hazards and climate change.			
Action 1	Continue to improve community resilience in order to improve or maintain the town's current Community Rating System score.	FMD PD WWMD*	On-going
Action 2	Ensure that there is adequate funding and administrative support to implement the recommendations of the Charlestown Hazard Mitigation Plan.	FMD BC TA / FD	On-going

Action		Responsible Party	Time Frame
Policy 2.2 Incorporate resiliency planning into government functions.			
Action 1	Develop a municipal review process for developments proposed within the areas projected to be exposed to sea level rise.	FMD PD / GIS	Medium-term
Action 2	Maintain a separate database of building permits for all properties within the Special Flood Hazard Areas and the projected sea level rise areas.	FMD GIS	Short-term
Action 3	Upgrade existing GIS databases after natural disasters, where applicable.	GIS FMD	On-going
Action 4	Evaluate the impact of storm-related structural losses on local municipal tax revenues in the annual budget.	B/ZD FD / TA	On-going

Action		Responsible Party	Time Frame
Policy 2.3 Incorporate resiliency into governmental projects.			
Action 1	Identify municipal roads that intersect sea level rise scenarios, determine their long-term viability and initiate the redesign (or relocation) efforts necessary to maintain their transportability for the foreseeable future.	PWD GIS TA / TC	Medium-term

Action 2	Improve the functioning and resiliency of municipal roads through regular maintenance and by identifying and upsizing drainage culverts as needed through the annual capital improvement program.	PWD WWMD* TA / FD	On-going
Action 3	Implement non-structural alternatives to shoreline protection through the reuse of dredged materials, or other emerging best practices.	CPMC / TC CRMC	Short-term to Medium-term

Action		Responsible Party	Time Frame
Policy 2.4 Review and amend local development regulations to incorporate sustainability practices.			
Action 1	Limit the percentage of allowable impervious surface within developed parcels by amending the zoning ordinance to include total lot coverage standards.	B/ZD PD PC TC	Short-term
Action 2	Regularly review local regulations as they relate to rising groundwater levels and flooding potential, and maintain close contact with appropriate state agencies in this regard.	B/ZD PD WWMD* PC TC	On-going

* Wastewater Management Department includes stormwater management

TRANSPORTATION

Action		Responsible Party	Time Frame
Policy 1.1 Maintain rural character through flexibility in new roadway design.			
Action 1	Allow new public subdivision streets to be constructed at a reduced width of 20 feet, depending on the site characteristics and the number of lots.	PD PWD PC	Short-term On-going
Action 2	Review and evaluate roadway design and stormwater standards in the subdivision regulations and modify as needed to promote rural and low impact design.	PD WWMD PC / CC	Short-term
Action 3	Require, to the degree possible, compact development in the form of cluster or conservation subdivisions, to reduce the length of new roadways.	PD PC	On-going

Action	Responsible Party	Time Frame
Policy 1.2 Maintain the scenic quality of existing roadways.		
<p>Action 1 Continue to implement the following policies when reviewing subdivisions and land developments along local and minor roadways, with amendments to land development regulations enacted as needed:</p> <ul style="list-style-type: none"> • Retention of stone walls. • Maintenance of undisturbed natural landscape buffers, particularly significant trees and shrubs, to shield view of new construction from the road where the character of the roadway would be adversely changed by clearing. • Locate new “curb cuts” (driveways) to town roadways so as to preserve existing stone walls, natural buffers and the scenic qualities of these corridors. Encourage shared driveways to service new development unless there are safety or functional factors that preclude them. 	PD PC PWD	On-going
<p>Action 2 Develop and implement a right-of-way vegetation management program for local roadways that uses low impact but effective methods to manage trees and other vegetation that is consistent with roadway safety standards.</p>	PWD PD PC	Short-term

Action	Responsible Party	Time Frame
Policy 1.3 Actively manage the town’s designated scenic roadways.		
<p>Action 1 Establish scenic roadway design standards for new development and building improvements along Route 1, and other designated scenic roadways, including those for signage, lighting and buffers between the roadway and structures, with consideration given to preservation of important views from the scenic roadway. Incorporate these standards in the town zoning and subdivision regulations, to be applied when reviewing development proposals along the Route 1 corridor.</p>	PD PC TC	Short-term
<p>Action 2 Inventory and evaluate both developed and undeveloped parcels along Route 1 in order to:</p> <ul style="list-style-type: none"> • Propose site improvements to preserve, restore or enhance the appearance and scenic quality along the roadway. 	PD B/ZD GIS TA / TC	Short-term

<ul style="list-style-type: none"> • Bring properties into compliance with existing town codes as required. • Pursue protection of unique undeveloped parcels along Route 1 through conservation easements, purchase of development rights, or purchase of the property, as opportunities arise. 		
Action 3 Continue to pursue the designation of scenic and rural roadways in Charlestown as state scenic highways.	PD / PWD TA / TC	Medium-term
Action 4 Consider the establishment of a Scenic Roadway Stewardship Commission to oversee and assist in the implementation of the Stewardship Plan.	PD / PWD TA /TC	Medium-term

Action	Responsible Party	Time Frame
Policy 1.4 Maximize safety of travel along local roads.		
Action 1 Review roadways in town to ensure adequate posting of speed limits, and add signage as needed, including alerts regarding bicycle and pedestrian use.	PWD PRD PRC*	Short-term
Action 2 Incorporate traffic calming techniques along designated roadways.	PWD PD PC	Medium-term

Action	Responsible Party	Time Frame
Policy 2.1 Support multimodal transportation on a county-wide and statewide basis.		
Action 1 Consult with RIPTA on development of a shuttle service to Kingston Station, at such point when there are sufficient train riders in Charlestown to support such a service.	TA / TC PWD RIPTA	Medium-term
Action 2 Evaluate development of a park and ride lot for carpooling, vanpooling and possible future RIPTA bus service at a suitable site in Charlestown.	TA / TC PWD RIPTA	Medium-term

Action	Responsible Party	Time Frame
Policy 2.2 Support alternative means of travel within Charlestown and the region.		
Action 1 Periodically review town ordinances to ensure that ride-sharing or ride-hailing businesses that provide for travel needs on a case-by-case basis are permitted in a safe and equitable manner.	PD / PWD TA / TC	On-going

Action	Responsible Party	Time Frame
Policy 3.1 Work locally, regionally and at the state level to expand options for bicycling in Charlestown.		
Action 1 Communicate with RI DOT to ensure that roadways suitable for bicycle travel are properly signed.	PWD PRD / PRC* TA / TC DOT	Short-term
Action 2 Collaborate with RI DOT to expand the designated state bike route network by identifying additional roadways suitable for bicycle travel.	PWD PRD / PRC* TA / TC DOT	Medium-term
Action 3 Work towards the development of the shoreline bike route, including collaboration with the Towns of Westerly, South Kingstown and Narragansett.	PRD / PRC* TA / TC DOT	Short-term
Action 4 Work with RI DOT to develop safe crossings of Route 1 for bicyclists, with a focus on the area between Narrow Lane and Prosser Trail	PRD / PRC* TA / TC DOT	Short-term

Action	Responsible Party	Time Frame
Policy 3.2 Support pedestrian improvements throughout town to encourage walking as an alternative to the automobile.		
Action 1 Undertake an engineering study of the three main town-owned roads leading to the beaches to consider options for increasing the safety of bicycle and pedestrian travel, while working within the existing road rights-of-way.	PWD / PD PRD / PRC* TA / TC	Medium-term
Action 2 Require sidewalks within new commercial developments and pathways within and between residential subdivisions and walkable destinations.	PD PWD PC	On-going

Action 3	Identify existing trail systems within Charlestown that can be used as alternative travelways and publicize this connectivity along with information of a recreation nature.	PD / PRD PRC / EIC COC	Short-term
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Action		Responsible Party	Time Frame
Policy 3.3 Collaborate with other agencies and communities			
Action 1	Regularly discuss upcoming state projects and their impact on the town and the town's needs with the Division of Statewide Planning, RI DOT and RIPTA.	PD / PWD TA / TC DSP / DOT / RIPTA	On-going
Action 2	Review all phases of RI DOT plans, and submit formal comments to the State to ensure that RI DOT road and bridge improvements are in keeping with the town's character, and with local safety concerns.	PWD / PD TA / TC	On-going
Action 3	Participate in the planning and development of RI DOT road and transportation projects involving the state roads within the town, including those that seek to manage traffic safety, particularly during the summer.	PWD TA / TC	On-going

* Bicycle Sub-Committee of the Parks and Recreation Commission

ECONOMIC OPPORTUNITY

Action		Responsible Party	Time Frame
Policy 1.1 Attract, retain and support businesses that directly benefit residents, tourists and visitors.			
Action 1	Review and amend the zoning ordinance as needed to ensure that a variety of small scale and mixed commercial-residential uses are allowed at appropriate locations, particularly within the villages of Carolina, Shannock and Cross Mills, and within the Traditional Village District along the Old Post Road corridor.	PD B/ZD PC / EIC TC	Short-term
Action 2	Establish a funding mechanism, or tax incentive program, that would allow the Town to assist in small business development and/or enhancement, such as building and site improvements, signage and promotion. These could include establishing a revolving fund for building improvement loans, or a tax rebate program that offsets the cost of signage and landscaping improvements.	EIC BC FD TA / TC	Medium-term

Action 3	Utilize the resources of the RI Commerce Corporation, including the RI Small Business Center at the University of Rhode Island, to assist in business development, building reuse and tourism support.	EIC COC	On-going
Action 4	Allow and encourage cost saving measures such as community wells and shared septic systems, and common signage and shared parking for businesses.	PD WWMD PC	On-going

Action		Responsible Party	Time Frame
Policy 1.2 Establish design standards for new development and redevelopment to both protect the character of the town and ensure vibrant successful commercial areas.			
Action 1	Establish specific site and building design standards for Carolina, Shannock and Cross Mills and the Traditional Village District regulating building and parking placement, building form and design, and signage and site amenities so as to protect and enhance traditional uses and development patterns.	PD PC CHS TC	Short-term
Action 2	Provide town-wide standards that protect against homogeneous development represented by chain stores, including “small-box” stores, while allowing the flexibility that encourages local businesses.	PD PC TC	Short-term

Action		Responsible Party	Time Frame
Policy 1.3 Identify and support economic activities with potential for growth and/or which could complement existing activities.			
Action 1	Review and amend the zoning ordinance as needed to ensure compatible manufacturing activities in the industrial zones in town, and to provide additional options for light assembly and small scale production in the commercial zoning districts.	PD PC / EIC TC	Short-term
Action 2	Review, and amend if necessary, local regulations that support home-based businesses, including those that provide many of the local services required in a small community and do not impair or negatively impact surrounding properties.	PD PC / EIC TC	Short-term
Action 3	Review and amend the zoning ordinance as needed to ensure that opportunities for senior support services are allowed and encouraged in appropriate districts in town.	PD PC / EIC TC	Short-term

Action	Responsible Party	Time Frame
Policy 2.1 Continue to acquire, protect and manage open space areas for passive and active recreation use.		
Action 1 Identify and rank open space land that provides additional passive recreation opportunities.	PD / PRD PC / PRC CC	On-going
Action 2 Provide trailhead facilities and well-marked trails to facilitate use of natural areas.	PRD / PWD PRC CC	On-going

Action	Responsible Party	Time Frame
Policy 2.2 Utilize Ninigret Park in a manner that is compatible with the adjacent Ninigret National Wildlife Refuge.		
Action 1 Investigate the possibility of establishing public events at the park such as a community yard sale, an arts festival or an antique show.	PRC / EIC PRD COC	Medium-term
Action 2 Promote year-round tourism based on Charlestown's dark skies and the night sky viewing opportunities at the Frosty Drew Observatory.	PRC / EIC PRD (Frosty Drew) COC	Medium-term

Action	Responsible Party	Time Frame
Policy 2.3 Maintain the varied recreational opportunities on Ninigret and Quonochontaug Ponds, on the freshwater ponds and the Pawcatuck River, for boating, swimming, fishing and shell fishing.		
Action 1 Investigate the potential for additional boat ramps or small boat put ins to increase access to the salt ponds and the Pawcatuck River.	HMD / PRD CPMC / PRC	Medium-term
Action 2 Undertake a study to evaluate beach access and parking, and if necessary, develop a plan to meet demand while not encouraging over-use.	HMD / PRD CPMC / PRC	Medium-term

Action	Responsible Party	Time Frame
Policy 2.4 Continue to support the Economic Improvement Commission, Charlestown Chamber of Commerce and South County Tourism Council in promoting local events and recreational activities, including year round activities, as an attractive alternative to more distant vacation destinations.		

Action 1	Publicize the wide array of outdoor recreational opportunities available to visitors and tourists through various media and organizations, including the town website.	PRD PRC / EIC COC / SCTC	On-going
Action 2	Develop a series of hiking, walking, biking and kayaking/canoeing maps of Charlestown showing locations of all natural areas with trails and access points; locations of mill villages and cultural sites; scenic bike routes; and water trails, along with locations of local businesses that support tourism and outdoor activities.	PRD PRC / EIC CHS COC / SCTC	Short-term
Action 3	Develop tourism packages focused on visitors of varying ages and interests including ecotourism, heritage tourism, agri-tourism and dark sky tourism.	COC / SCTC PRD PRC / EIC CHS	Medium-term

Action		Responsible Party	Time Frame
Policy 2.5 Develop and support regional recreation and tourist activities.			
Action 1	Provide links to regional tourism routes in Washington County and eastern Connecticut.	SCTC / COC EIC / PRC	On-going
Action 2	Develop a scenic and historic driving tour contiguous with and similar to one developed by the Town of South Kingstown (posted on town website).	SCTC / COC EIC / PRC	Short-term
Action 3	Develop a coastal bicycle route along the Route 1A corridor in conjunction with Westerly and South Kingstown (see Transportation chapter).	PRD / PRC TA / TC DOT	Long-term
Action 4	Develop, jointly with Carolina and Kenyon in Richmond, a heritage trail along the Pawcatuck River that would link the Carolina Management Area and the Great Swamp Management Area.	PRD PRC / CC DEM	Medium-term
Action 5	Develop and market an art trail, linking artist studios, galleries, and performance spaces.	EIC (CHARTS)	On-going
Action 6	Work with the Narragansett Indian Tribe to market information on local Native American heritage.	CHS / EIC NIT	Medium-term

Action	Responsible Party	Time Frame
Policy 3.1 Support existing farms and promote the establishment of new farms.		
Action 1 Work with the Charlestown Land Trust and/or other conservation agencies or groups to identify and preserve prime agricultural lands, with funding available from local and state bond money (including from the State Agricultural Preservation Commission).	APC CLT CC TC	On-going
Action 2 Partner with active farms and/or community groups to develop an agricultural lease program to assist new farmers.	APC DEM	On-going
Action 3 Collaborate with the RI DEM Division of Agriculture on marketing and promotion, including use of grants opportunities such as the Local Agriculture and Seafood Act program to support the growth, development and marketing of local food and seafood.	APC CPMC	On-going

Action	Responsible Party	Time Frame
Policy 3.2 Promote farms and farming as multi-use operations.		
Action 1 Review and amend the zoning ordinance as needed to allow appropriate accessory uses on active farms, such as farmers' markets, retail sales and special events, that are in scale with the size of the farm, are sensitive to environmental and neighborhood impacts, and are linked to the potential for development pressure on the land based on the underlying zoning.	PD B/ZD PC / APC TC	Short-term

Action	Responsible Party	Time Frame
Policy 3.3 Support and manage aquaculture in the salt ponds as a sustainable and important local economic activity.		
Action 1 Work cooperatively with aquaculture farmers to educate the public on shellfish cultivation and growing in the salt ponds, to both encourage a balanced and peaceful co-existence with other salt pond users and to provide public support for this growing industry.	HMD GIS CPMC CRMC	On-going

HOUSING CHOICE

Action	Responsible Party	Time Frame
Policy 1.1 Help residents with limited income to be able to stay in their homes.		
Action 1 Continue partnerships using grant funding (CDBG) to provide rehabilitation and maintenance services for qualified income residents.	WCCDC AHC	On-going
Action 2 Encourage the purchase, rehabilitation and management of existing housing resources by non-profit community development organizations to expand rental and ownership opportunities.	WCCDC	On-going
Action 3 Identify distressed homeowners and work with them to meet their particular housing needs.	AHC WCCDC	On-going
Action 4 Review and define the extent and context of homelessness in Charlestown. This review could be led by the Charlestown Affordable Housing Commission, in concert with state and adjacent community agencies (regional approach).	AHC WCCDC RIH	On-going

Action	Responsible Party	Time Frame
Policy 1.2 Utilize creative local approaches to achieve a variety of housing options in Charlestown.		
Action 1 Amend the zoning requirements for multifamily units to encourage construction of one- and two-bedroom units and to allow use of “bedroom equivalencies” to be considered in determining density allowances.	PD B/ZD PC TC	Medium-term
Action 2 Consider ordinance amendments to allow and/or encourage smaller housing units (i.e. “tiny houses”, efficiency units, accessory apartments) to provide affordable housing for one and two person households.	PD B/ZD PC TC	Medium-term
Action 3 Pursue programs, regulatory efforts and strategies that will encourage the conversion of trailer park residences to qualifying, affordable status.	AHC PD WCCDC RIH	Medium-term

Action		Responsible Party	Time Frame
Policy 1.3 Utilize regional efforts to meet housing needs.			
Action 1	Routinely meet with neighboring towns to compare housing needs and identify ways to combine and coordinate efforts. Utilize the Washington County Regional Planning Council to address regional housing issues.	AHC PD WCRPC	Short-term On-going
Action 2	Coordinate with Richmond officials on the village planning efforts for Carolina and Shannock, and continue partnership with Richmond to utilize CDBG funding to improve neighborhoods and community facilities.	AHC PD WCCDC	Short-term On-going
Action 3	Participate actively in regional strategies, including establishing a regional HOME consortium, an affordable housing regional land trust and/or a housing and redevelopment agency that will leverage state and federal funds and draw on the strengths of each town.	AHC WCCDC RIH	Medium-term
Action 4	Continue efforts with the federal government and the Narragansett Indian Tribe to encourage affordable housing opportunities for tribal members in the community.	AHC PD NIT	Short-term On-going

Action		Responsible Party	Time Frame
Policy 2.1 Encourage a mix of housing unit types and price ranges in new residential development and adaptive reuse of property.			
Action 1	Implement conservation design development that allows a mixture of dwelling unit types, including single and two-family dwellings according to an overall plan of development that respects the density requirements of the underlying zoning district, while protecting important site features.	PD PC TC	Short-term
Action 2	Utilize transfer of development rights (TDR) to conserve land in rural areas of town while allowing construction of traditional neighborhood designs on small lots in designated village areas, including multifamily and affordable housing, without increasing the overall buildout of the town.	PD PC AHC TC	Medium-term

Action 3	Establish options for housing reserved for seniors in response to projections that the percentage of the population over the age of 60 will continue to grow.	PD AHC PC	Medium-term
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Action		Responsible Party	Time Frame
Policy 2.2 Continue to promote housing that protects the town’s natural and cultural resources and rural character and reflects the natural constraints of the land.			
Action 1	Consider the suitability of municipal land purchased in the future for affordable housing construction, along with open space and recreation uses.	PD TA TC	On-going
Action 2	Regulate housing location and density to avoid adversely impacting natural resources, habitat corridors, and groundwater, specifically including the terminal moraine area and the CRMC SAMP region.	PD PC	On-going
Action 3	Encourage preservation of existing homes, particularly historic homes and summer cottages, to protect both existing housing stock and the town’s heritage.	PD B/ZD	On-going

Action		Responsible Party	Time Frame
Policy 3.1 Promote production strategies for units that qualify as affordable under the Rhode Island Low and Moderate-Income Housing Act.			
Action 1	Continue to pursue regional strategies with the Washington County Community Development Corporation, the Women’s Development Corporation and other agencies involved in affordable housing.	AHC WCRPC WCCDC RIH	On-going
Action 2	Pursue the use of land trust models to produce affordable housing, in cooperation with South County Habitat for Humanity and other state-wide or regional land trusts.	AHC WCCDC	Medium-term
Action 3	Consider amendments to the Traditional Village District to better promote the production of affordable housing and mixed-uses within this district, and consider the extension of mixed-use zoning to other village areas.	PD PC AHC TC	Short-term

Action 4	Review the Income-Restricted Accessory Dwelling Unit provisions of the zoning ordinance to identify ways to encourage its utilization, through marketing to local property owners and/or amendments to improve its functionality.	PD AHC PC TC	Short-term
Action 5	Pursue discussions with the owners of adaptive re-use and site-specific properties as identified in the town's 2004 Affordable Housing Plan.	AHC PD WCCDC	On-going
Action 6	Review distressed properties (potential tax title properties) before proceeding with tax sale to determine if such can be converted to affordable status via partnership with non-profit development entities or other means.	PD FD / TA WCCDC	On-going
Action 7	Propose a new bond issue specifically the acquisition and repurposing of existing housing for permanent use as affordable housing or for the construction of new LMI housing.	AHC FD / TA TC	Short-term
Action 8	Evaluate the potential for development of a dedicated funding source for supporting affordable housing proposals. This may take the form of an impact fee applicable to all subdivisions or land development projects.	AHC FD / TA TC	Medium-term
Action 9	Consider seeking enabling legislation to permit the use of the "real estate transfer tax" to support and facilitate affordable housing production programs in Charlestown.	AHC FD / TA TC	Medium-term

LAND USE

Action	Responsible Party	Time Frame
Policy 1.1 Maintain Residential Density Consistent with Current Development Patterns and Environmental Constraints.		
Action 1	Review the residential zones with consideration of environmental constraints, particularly wetland areas, the Pawcatuck River, Natural Heritage areas, and land within the CRMC SAMP land use designations of Self-Sustaining Lands and Lands of Critical Concern.	PD PC CC TC
Action 2	Review specific areas of town which are fully developed at a density greater than the current zoning, and consider options for rezoning so as to be consistent with existing development patterns.	PD PC TC

Action 3	Review the undeveloped parcels with split-zoning along the major roads and consider regulatory options to ensure overall development consistent with the surrounding zoning to the rear of such parcels.	PD PC TC	Short-term
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Action		Responsible Party	Time Frame
Policy 1.2 Identify and Enhance Village Centers (Mixed-Use).			
Action 1	Establish village center overlay districts to review uses and to govern the scale and design of new development and redevelopment in the three village centers, in order to facilitate diversity of housing and commercial uses in vibrant, walkable villages.	PD PC EIC TC	Short-term
Action 2	Review the zoning regulations for the villages of Shannock, Carolina and Cross Mills and adopt standards relating to building and parking placement, building form and design and signage and site amenities so as to protect and enhance traditional uses and development patterns, and the historic nature of the villages.	PD PC CHS TC	Short-term
Action 3	Consider the establishment of a transfer of development rights (TDR) program to conserve land in rural and environmentally sensitive areas of town while encouraging appropriate density of development in the village centers.	PD PC AHC TC	Medium-term

Action		Responsible Party	Time Frame
Policy 1.3 Maintain Old Post Road as a Mixed-Use Traditional Village District.			
Action 1	Review the boundaries and general configuration of the TVD, the allowable uses and densities, in a manner compatible with CRMC SAMP policies, including limiting footprints and impervious cover, and applicable design standards, including architecture, building placement and landscaping.	PD PC EIC TC	Short-term

Action		Responsible Party	Time Frame
Policy 1.4 Identify and Define Commercial Districts in Town.			
Action 1	Establish Village Commercial, General Commercial and Scenic Highway Commercial zoning districts consisting of areas now zoned as C-1, C-2 and C-3 Zones, and review allowable uses and dimensional requirements.	PD PC EIC TC	Short-term

Action 2	Establish architectural and site design standards, including but not limited to maximum building size and total impervious lot coverage for all commercial districts.	PD PC EIC TC	Short-term
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Action		Responsible Party	Time Frame
Policy 1.5 Retain Limited Industrial Land Uses in Town.			
Action 1	Review the allowable uses and dimensional and other standards of the Industrial Zone to ensure future compatibility should the industrial parcels be subject to new uses or redevelopment	PD PC EIC TC	Short-term
Action 2	Consider additional options for small-scale production or light manufacturing which are compatible with areas of town outside of the Industrial Zone.	PD PC TC	Short-term

Action		Responsible Party	Time Frame
Policy 1.6 Ensure Adequate GIS Mapping.			
Action 1	Maintain, update and enhance the town’s GIS mapping to facilitate review of development applications, to help preserve natural and cultural features and to help provide permanently protected open space.	GIS PD B/ZD	On-going
Action 2	Provide periodic outreach to the general public regarding use of the town’s GIS system. This may be accomplished via postings on the town’s website, in the community newsletter and/or by conducting workshops for residents and other interested parties.	GIS TA	On-going

Action		Responsible Party	Time Frame
Policy 2.1 Identify and Categorize Open Space Parcels in Town.			
Action 1	Establish two new open space zoning designations: “OS-Conservation” (OS-C) and “OS-Recreation” (OS-R) to replace the OS/R.	PD PC TC	Short-term

Action	Responsible Party	Time Frame
Policy 2.2 Support the Continued Acquisition of Open Space for Conservation Purposes.		
Action 1 Continue to fund the purchase of title and/or development rights to land using local open space bond money, with acquisitions based on open space ranking criteria.	CLT FD / TA TC	On-going
Action 2 Work with the Charlestown Land Trust, RIDEM, US Fish and Wildlife Service and organizations such as The Nature Conservancy to identify and preserve land with important natural features and wildlife habitat, farmland, and land with recreation potential by means of outright purchase, acquisition of development rights or through conservation easement.	CLT CC / PC PD TA / TC	On-going
Action 3 Promote, through educational outreach efforts to property owners, expanded participation in the FFOS program and the selling or donating of conservation easements.	CC FD / TA	On-going

Action	Responsible Party	Time Frame
Policy 3.1 Establish an Active and Ongoing Relationship with the Narragansett Indian Tribe.		
Action 1 Identify resources shared by the tribe and the Town of Charlestown, and issues of common concern, and establish a means of regular communication. Such issues include but are not limited to the following: <ul style="list-style-type: none"> • Development on tribal lands which are not settlement lands. • Protection of groundwater resources, wildlife habitats and cultural features on tribal lands. • Construction of affordable housing for tribal residents that can be counted towards Charlestown’s inventory of year-round low and moderate-income housing. 	PD B/ZD TA TC AHC NIT	On-going

Action	Responsible Party	Time Frame
Policy 3.2 Continue an Active Collaboration with other Communities.		
Action 1 Continue to coordinate with the Town of Richmond on the redevelopment of the villages of Carolina and Shannock, including development of compatible zoning and design standards.	PD PC EIC TC	On-going

Action 2	Coordinate with adjoining communities as needed on natural resource protection and public water supply production and distribution, including establishment of policies restricting transfer of water resources outside of watershed boundaries.	PD WWMD GIS TA	On-going
Action 3	Coordinate the harbor management of Quonochontaug Pond that Charlestown shares with Westerly, and Green Hill Pond that is shared with South Kingstown.	HMD CPMC	On-going
Action 4	Review outdoor lighting regulations with adjoining communities to lessen the impact of lighting from these towns on Charlestown's dark skies.	PD B/ZD TC	On-going
Action 5	Collaborate with neighboring communities regarding land use ordinances with special attention to regulations governing major developments such as commercial solar, multi-use complexes and affordable housing.	PD WCRPC B/ZD TC	On-going

Action	Responsible Party	Time Frame	
Policy 4.1 Prevent Overdevelopment in Sensitive Coastal Areas.			
Action 1	Review town regulations (zoning ordinance and land development and subdivision regulations) to identify areas that may conflict with CRMC's policies and regulations under the SAMP for the salt ponds region. On the basis of such review, develop and enact regulatory modifications to better coordinate town and CRMC policies and eliminate conflicts between these regulations in these sensitive, coastal environments.	PD CC PC CPMC TC	Short-term
Action 2	Develop a "Nitrogen Reduction Overlay District" applied to critical resource areas to regulate the size and impact of new development so as to reduce groundwater nitrogen in a scientifically based manner.	WWMD PD WWMC / PC TC	Short-term

Action	Responsible Party	Time Frame	
Policy 4.2 Make use of Flexible Land Use Management Tools.			
Action 1	Amend the land development and subdivision regulations and the zoning ordinance to include provisions to allow for conservation design and development, as an alternative, or in addition to, mandatory cluster.	PD PC TC	Short-term
Action 2	Revise the zoning and subdivision regulations to ensure that impractical lots are not created, and that impacts on wetlands	PD PC	Short-term

	and other natural features are avoided or minimized by reviewing and strengthening lot design standards.	CC TC	
Action 3	Periodically review and amend the residential compound regulations to ensure that they are meeting the town's rural design standards.	PD PC TC	On-going
Action 4	Utilize transfer of development rights (TDR) to conserve land in rural areas of town while allowing construction of traditional neighborhood designs on small lots in designated village areas, including multifamily and affordable housing, without increasing the overall buildout of the town.	PD PC AHC TC	Medium-term
Action 5	Undertake a study of the use of form-based codes to determine their applicability to commercial and mixed-use areas of Charlestown, specifically regarding redevelopment and new development in the Traditional Village and the Village Commercial Districts.	PD B/ZD PC EIC TC	Medium-term