

Town of Smithfield, Rhode Island



Comprehensive Community Plan

Adopted by the:
Smithfield Town Council
On
May 3, 2016

Amended: January 17, 2017

Adopted by the:
Smithfield Planning Board
On
January 28, 2016

Approved by the:
Rhode Island Department of Administration
On
<DATE>

SMITHFIELD, RI COMPREHENSIVE PLAN 2014

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INTRODUCTION

The Smithfield Comprehensive Plan 2014 provides a long-range guide for the Town's future with a *comprehensive* look at the community as a whole. It assesses historic and current trends, presents the vision residents have for the town, and provides the framework for reaching that vision. The framework incorporates goals, policies and actions that are short-term, mid-term and long term in nature. These focus on the following eight plan elements:

- Land Use
- Housing, including affordable housing,
- Economic Development,
- Community Services and Facilities,
- Natural Resources,
- Cultural Resources
- Conservation, Open Space, and Recreation, and
- Circulation

The previous Smithfield Comprehensive Plan was adopted by the Planning Board and the Town Council in April of 2006 and approved by the State of Rhode Island on January 17, 2007. This document responds to a prior mandate of the State Comprehensive Planning and Land Use Act that community comprehensive plans be updated at five year intervals (now amended to provide for 10 year updates). This 2014 Update is a 10 year plan that supersedes the 2007 plan and is in force upon its adoption by the Town Council.

Format of Update

This Plan Update provided an opportunity for the Town to review its progress in meeting the goals established in the 2007 Plan, review the relevancy of these goals and policies relative to changing conditions in the Town, and provide a chance to revise, delete or add goals the Town feels will further support its future vision. It is also the intent of this Update to present the public with a more user-friendly document that more clearly articulates the vision of the Town and its Policies.

This updated plan presents each element from the original Plan. Within each element, there is a brief discussion of the technical information. This technical information has been updated to extend the planning horizon and to reflect changed conditions more accurately. The complete Implementation and Recommendation Program of each element is then presented with amendments, as needed. Changes and amendments to the original plan are based on the public participation program of the update, which included a series of public workshops and coordinated meetings with local committees, boards and commissions.

Regional Coordination

Smithfield makes conscientious efforts to coordinate with adjacent towns to ensure consistency with their local comprehensive plans and to work together to meet regional goals. Collaborative issues include:

- With an airport, multiple major regional employers, and a significant amount of commercial, retail, and industrial development, Smithfield is an economic engine for the State. Smithfield is working cooperatively with adjacent towns and with the State to sustain and enhance this role.
- Property around the Wenscott Reservoir in the Southeast part of Smithfield, including the former Camp Meehan property and adjacent tracts in North Providence, Lincoln, and Smithfield, is a significant amount of open space that straddles the boundary between all three towns. Smithfield is eager to ensure that this important open space is maintained and enhanced for the use of the public in all three communities.
- The Woonasquatucket River is an important natural resource for Smithfield. The Woonasquatucket also flows through Glocester, North Smithfield, North Providence, Johnston, and Providence. The Stillwater River also rises in Glocester and flows into the Woonasquatucket in Smithfield. Smithfield is working with its neighbors to promote the restoration and preservation of the Woonasquatucket and Stillwater watersheds as environmental, recreational, cultural, and economic assets for the region.
- Multiple lakes and ponds, including Woonsocket Reservoir #3, Hawkins Pond, Slacks Reservoir, and Waterman Reservoir all straddle the boundary between Smithfield and adjoining Towns. Smithfield is continuing to work with these Towns to protect water quality and maintain public access to these waterbodies.
- Nipsachuck is a priority heritage landscape in the northwestern part of Smithfield, overlapping with North Smithfield, which includes Nipsachuck swamp and surrounding irregular kame and kettle topography. It is largely undeveloped or sparsely developed and includes areas identified by the Narragansett Indians as being of cultural significance to the Tribe. Smithfield is continuing to work with North Smithfield to protect natural and cultural values in this rural area.

Consistency with State Guide Plans

The 2014 Update has been prepared to be consistent with the State Guide Plan.

Major Initiatives of the Update

Land Use

Growth control was a critical issue in the 2007 Comprehensive Plan as the Town was being inundated by development proposals when that plan was written. Since that time, an economic downturn regionally and nationally has led to the collapse of the housing market and has also created significant obstacles to other types of development. This downturn has had the effect of relieving some of the development

pressure in Smithfield. The 2014 update regards this downturn as a temporary respite which has provided the Town with the opportunity to reassess goals and policies related to development and to more effectively prepare for the development proposals that are likely to reappear as the economy improves.

Housing

The 2007 Plan placed an emphasis on construction of new multi-family housing within established villages to ensure a steady supply of available and affordable housing for a growing population. This updated Plan continues that emphasis, but recommends adjustments to compensate for projects that were not carried out as planned. It also clarifies minimum requirements for affordable housing and includes recommendations to provide further incentives for inclusion of affordable units, beyond the minimum required, in new developments.

The Town adopted an Inclusionary Housing ordinance in 2009 that requires 20% of all lots/units in Major Subdivisions/Residential Land Developments projects contain a minimum of 20% LMI units. The Town has approved one (1) 14-lot subdivision under the provisions of the inclusionary ordinance that, upon completion, will yield two (2) LMI units and a fee-in lieu of for one unit. Revisions to the Inclusionary Zoning provisions are likely to address recent changes in the Zoning Enabling Act that allow developers to choose fee in-lieu of over production of LMI housing.

Economic Development

As noted above, Smithfield is a major contributor to the economy of the State and the Region. The 2007 plan emphasized the importance of the Planned Corporate district as the keystone of local economic development efforts. This plan continues that priority and makes further recommendations or “tweaks” to discourage overdevelopment of retail uses and encourage planned corporate developments that incorporate uses most likely to benefit the community and the State.

Service and Facilities

The 1998 Plan placed an emphasis on impact fees as the means to sustain and expand services and facilities, particularly water supply, sewer service, police and emergency services to better serve an expanding population. The Town initially adopted impact fees in 2001. Fees were collected for park, recreation and historic facility improvements, libraries, schools, road improvements and open space and conservation areas. A 2015 analysis of the impact fees resulted in adjustments to the fees as shown in Table LU-1 below.

Table LU-1: Impact Fee Adjustments –Adopted 2015

Type of Residential Dwelling Unit	Library	Schools	Roads	Open Space	Parks and Recreation	Police Facilities	Total
Single family detached	\$709	\$0	\$2,604	\$0	\$1,819	\$1,441	\$6,573
Two- and three-family	\$731	\$0	\$1,575	\$0	\$1,824	\$1,467	\$5,596
Condominium	\$5,596	\$0	\$1,575	\$0	\$1,824	\$1,467	\$5,596
Multi-household	\$731	\$0	\$1,575	\$0	\$1,824	\$1,467	\$5,596

Note : Figures are rounded to the nearest dollar.

In addition to the impact fee categories listed in the Table LU-1 above, it is likely that fire protection, will be added as an additional fee category in the future.

This updated plan recognizes that, while existing services and facilities are adequate to meet existing needs, these facilities will prove inadequate to meet the needs of a growing population without some further expansion. The new challenge is to find a way to continue to fund the gradual expansion of facilities to keep pace with population growth and to fund maintenance and operation of these systems over the long term. This update contains several recommendations to help improve the tax base to ensure the availability of future funding for police, emergency services and the school department and it also includes specific recommendations that will help the Town ensure necessary funding for repair and maintenance of roadways, sewers, and water systems.

Natural Resources

The 2007 Plan recognized the importance of natural areas in the community and emphasized the importance of the Woonasquatucket and Stillwater Rivers with associated wetlands as critical natural resources worthy of protection. This update does not depart significantly from the approach to protection of natural resources contained in the 2007 plan, but it updates some of those approaches. In particular, this update places a greater emphasis on floodplain protection, natural hazard vulnerability assessment and hazard mitigation in recognition of new state guidelines in these areas. This plan update encourages the Land Trust to acquire important properties such as the former YMCA Camp Shepard, and to continue to take an active role in managing open space owned by other entities such as the Washington Grove owned by RIDOT. It also offers recommendations to assist the Land Trust as they make the transition from a land acquiring agency, focused on purchasing new properties and property rights, to a land management agency, focused on providing stewardship for the many important properties in their charge.

Cultural Resources

The formation of a local Historic Preservation Commission, and the adoption of review procedures for development and demolition proposals, has placed Smithfield at the forefront of Historic Preservation among Rhode Island cities and Towns. However, these processes and procedures are still relatively new. The Commission is still working to complete the inventory of resources and to formally establish review procedures for development and demolition proposals. This Plan Update includes a new recommendation that the Town require applicants to provide an assessment of impacts on historic and

cultural resources as part of the site plan review process for development and part of the review process for demolition. This recommendation is provided to help prevent accidental damage or destruction of historical resources due to construction activities and to help Smithfield maintain its lead in protection of cultural resources.

Open Space and Recreation

Like the 2007 Plan, this Plan Update seeks to ensure an adequate supply of open space for the community and to ensure that all residents have access to recreational facilities. The prior plan set a goal of securing 15% of the Town for open space. That goal has now been achieved. This plan encourages continued acquisition of property for open space with a focus on priority properties and heritage landscapes to preserve the rural character of the community. This plan also seeks to enhance recreational facilities in the Town, with modernization of existing facilities and development of new playing fields to better meet the recreational needs of residents in the future.

Circulation

The 2007 Plan recognized that the private automobile is the preferred means of transportation for most Smithfield residents. This update also recognizes that and includes recommendations for enhanced automobile transportation such as more effective use of a pavement management program, access management plans for major roadways and a reassessment of parking requirements. However, this update also seeks to encourage alternative modes of transportation such as measures to encourage transit use and efforts to retain and improve existing transit service despite fiscal constraints. This update also recommends more improvements for pedestrians and bicycles, including extension of a multi-use trail along the Woonasquatucket River through Esmond and Georgiaville into North Smithfield. The trail would follow parts of the abandoned railroad right-of-way, switching to local streets within the villages to avoid adverse impacts on local residences.

Public Participation Process

The 2014 Update involved the public through a series of public workshops and meetings. Public participation was encouraged early in the process and provisions were made for public participation in the preparation of the draft document and through the editing and approval process. Most of the Departments and local committees were met with individually, including the Land Trust, Conservation Commission, Historical Preservation Commission, Economic Development, Recreation Department, Fire Department, Police Department, Department of Education and Planning Board. Public participation was encouraged at all meetings throughout the planning process. A presentation was made for the public on the draft document and the public was encouraged to comment on all draft materials prior to approval.

LAND USE

Land Use Overview

Land use in Smithfield has changed dramatically from its early days as an outlying agricultural area. Industrial development along the Town's rivers established a manufacturing economic base and shaped the character and look of the Town. The Town was transformed from a rural area, dotted with farming homesteads and minor mills, to a cluster of manufacturing villages, each centered around a textile factory located at a water power site. During the second half of the nineteenth century, the most dramatic change in Smithfield was the great growth of the villages, especially Georgiaville and Greenville. New stores, banks, post offices, schools, churches, and other institutions served the needs of the villagers and gave form and identity to the villages.

More recently, the most important factors determining Smithfield's land use patterns have been accessibility to Providence, transportation routes and patterns, and geography. In the second half of the twentieth century, the Town became part of the suburban ring surrounding Providence. The development of the automobile and the rapid growth of the motoring public since the 1940's played a large role in the twentieth-century suburban development of the Town. New residential building followed the suburban pattern; detached single-family ranch, split level, and Cape Cod houses on moderately-sized lots in large, single-use tracts. The open spaces between mill villages were at least partially filled by such tract development. In the 1940's and 1950's, most suburban development occurred in the southern part of Town, near Esmond, Georgiaville, and Greenville. In the 1970's, development started to shift toward the Limerock and Bryant University area. Newer residential development also includes some condominiums, particularly in the southwest corner of Town and near the Stillwater Reservoir.

The process of suburbanization has affected commercial, educational, and industrial construction as well. Strip commercial development has been characteristic of the major highways, especially Douglas, Farnum and Putnam Pikes. The completion of Interstate Route 295 in 1975 led to increased commercial development in the vicinity of the two interchanges in Smithfield, particularly along Putnam Pike and Douglas Pike. Access to Interstate 295 was a prime consideration in the siting of Bryant University and Fidelity Investments at their present locations in Smithfield. Furthermore, new industries were located in open areas, along Farnum Pike and especially at an industrial park in the north-central portion of Town.

Land Use Trends

As in many other Rhode Island communities, Smithfield's agricultural and forested land is being steadily converted to other uses. The residential land use category has increased by approximately 704 acres since 1970. Urban land uses such as commercial, industrial, and institutional uses, increased by 642 acres while non-urban uses such as open space and recreation gained 898 acres. Since 1970, a total of 1,522 acres of agricultural land has been converted to other uses or has reverted to forest. Smithfield has lost 523 acres of forest since 1970.

Existing Land Uses

The Town has been divided into four districts for planning purposes based on existing patterns of development. These four districts are:

1. Spragueville and the northwest
2. North Central Airport and vicinity
3. Greenville and the Apple Valley, and
4. Esmond, Georgiaville and vicinity

The boundaries of these planning districts are shown on the Figure LU- 2 Planning Districts and existing land use coverages are shown on Figure LU-2 Existing Land Use. Their surface areas, in acres, are displayed in Table LU-1. Each is described in detail below.

Table LU-2 Smithfield Planning Districts

District	Area (Acres)
1. Spragueville & Vicinity	7,278
2. Airport & Vicinity	3,392
3. Greenville & Apple Valley	2,965
4. Esmond, Georgiaville	4,107
Total:	17,742

District 1

District 1 includes Spragueville Village, and the large rural area in the northwest part of town. This district is the largest in land area with 7,278 acres, and is the least dense in terms of population. Located in the northwest portion of Town, the district extends east from the Smithfield-Glocester Town line to Stillwater Road and John Mowry Road, and from the Smithfield-North Smithfield Town line to its southern border formed by Austin Avenue, Colwell Road, Pleasant View Avenue and Cedar Swamp Road, across a largely undeveloped area to the Route 295 overpass on Mountaindale Road.

District 1 can be generally characterized as rural in nature, and is dominated by largely undeveloped forest land and contains several water bodies including Sprague Lower Reservoir, a portion of Slacks Reservoir on the southern boundary with Johnston, Mountaindale Reservoir and, Stillwater Pond. Other natural features in this district include the Woonasquatucket River, Nine Foot Brook, Latham Brook and a portion of the Nipsachuck Swamp along the Smithfield/North Smithfield boundary. EPA Superfund remediation efforts at the Davis GSR Landfill located off Tarkiln Road in the northwest part of the district continue and land use decisions are still affected by this land use. Low to medium density residential development occurs along secondary roads, and a few areas of medium density residential development are also found in the District. Industrial land use is confined to the industrial park on Route 104 on the northeast shore of the Stillwater Reservoir.

Other forms of land use which are prominent in the district include existing or former gravel operations between Swan Road and Pleasant View Avenue and off Mountaindale Road, and approximately 66 acres of power line rights-of-way. Forest lands and agricultural land dominate the District, along with water bodies including the Upper Sprague, Stillwater and Mountaindale reservoirs and numerous small water bodies. Surface water accounts for approximately 428 acres of the District.

Land uses are generally compatible in District 1. There are a few areas where incompatible uses are in close proximity to each other. The large excavation areas off Pleasant View Avenue and Mountindale Road are adjacent to medium density residential development. Noise, dust, vibration, and truck traffic are by-products of gravel and quarry operations and, depending on extent of mitigation efforts, can negatively impact surrounding neighborhoods.

Industrial land uses are also found near residential development and environmentally sensitive areas. The industrial park on Route 104 is the most notable example. While this park is primarily an office industrial park which does not typically produce high levels of noise, smoke or odors, the large paved areas could increase the runoff and pollutant loading to the Stillwater Reservoir which is immediately adjacent to the park. Residential development around the park is sparse so conflicts have been minimal.

District 2

District 2, also known as the Planned Corporate District, is also sparsely populated but has a higher percentage of developed area. District 2 is located in the northeastern portion of Town. It extends south from the Smithfield-North Smithfield Town line to Limerock Road south of North Central Airport, and extends west from the Smithfield-Lincoln Town line to Route 104/Stillwater Road and along Route 7 and Stillwater Road between Route 116 and Route 295. This district, once considered the “airport” district, now gets its identity from Fidelity/Bryant and other office/light industrial uses on Route 7/116 and Thurber Boulevard. Prominent natural features found in the district include a portion of the Woonsocket Reservoir No.3 along the northeast boundary with North Smithfield and Lincoln which is a drinking water supply source for Woonsocket and North Smithfield. Large wetland systems in the northern part of the district drain south to Stillwater Pond as does Harris Pond which lies between Harris Road and Route 295.

Low to medium density residential development occurs primarily along Route 7, along Brayton Road in the northwest section of the district and along Harris Road in the southern section. Stillwaters Place, a 32-unit condominium project located at the intersection of Stillwater Road and Thurber Boulevard, which received Preliminary approval in 2009, is pending. Bryant University and Fidelity Investments dominate the northern part of the district along Route 7 and other large office/industrial land uses have developed in the southern part of the corridor, taking advantage of the proximity of major transportation links in this district including Routes 295, 116 and the North Central Airport. The presence of wetland soils, and the Woonsocket Reservoir in the northern portion of the district have resulted in a relatively sparse settlement pattern in the northeast.

A potential land use conflict arises in District 2 from residential development which has occurred in the flight path of the main runway to the west of the North Central Airport. Industrial development at the intersection of Routes 7 and 5 is also located near medium-low density residential development. Small pockets of residential development remain in the office/industrial area along Rocky Hill Road and Reservoir Road in the northeast part of the district.

District 3

This district roughly corresponds to the village of Greenville, and is the most densely settled district. It consists of approximately 2,965 acres, extending east from the Smithfield-Glocester Town line to Pleasant View Avenue/Cedar Swamp Road and Route 295.

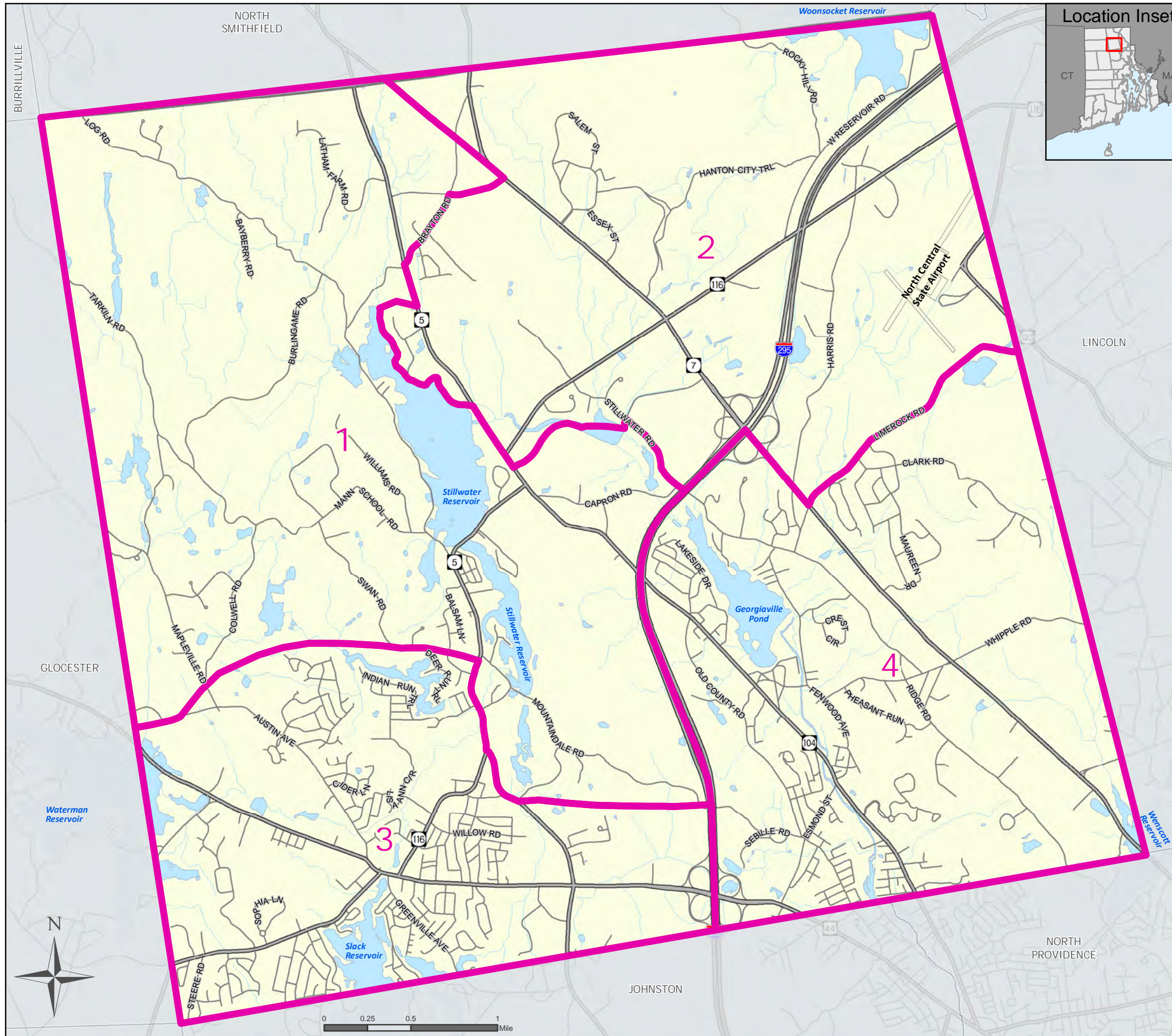


Fig. LU-1 :: PLANNING DISTRICTS



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend



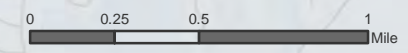
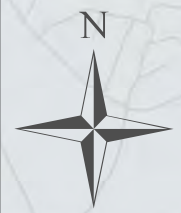
- Planning Districts**
- 1. Spragueville & Vicinity - 7,278 acres
 - 2. Airport & Vicinity - 3,392 acres
 - 3. Greenville & Apple Valley - 2,965 acres
 - 4. Esmond, Georgiaville - 4,107 acres
 - TOTAL - 17,742 acres**

Features

- Highways
- Roads
- Water
- Streams

Boundaries

- Smithfield
- RI Municipal
- Other States



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District 3 is dominated by medium density residential development. Commercial strip development along Route 44 extends from the Route 295 interchange through the Route 5 intersection and continues north and south along Route 5. Pockets of industrial development are found along both these routes in District 3.

Residential development occupies most of the areas which are not constrained by wetland soils, open water or gravel operations. Other prominent natural features found in the district include Sprague Lower Reservoir, a portion of Slacks Reservoir on the southern boundary with Johnston, and Waterman Reservoir on the western boundary with Gloucester. The Stillwater River flows east and north from the Waterman Reservoir and Slacks Reservoir to the lower portion of the Stillwater Reservoir. Reaper Brook flows south out of a large cedar swamp west of Cedar Swamp Road and Sanderson Road. Areas which have not been developed include forest land in the northwest part of the district and a 56 acre parcel between Fanning Lane, St. Phillips Church and Route 44 in the southwest part of the district.

District 3 contains the major commercial development in Smithfield and has the highest concentrations of residential development but there are surprisingly few conflicts between land uses. Commercial development for the most part is confined to the Route 44/Route 5 frontage. The Apple Valley Parkway subdivision is one of the few competing residential developments in the area. Small industrial businesses located close to schools and medium density housing in Greenville are some other examples of potentially conflicting uses. An active concrete batching operation located adjacent to a commercial development and across the road from Smithfield High School on Pleasant View Avenue has the potential to conflict with nearby residential uses depending on the intensity of the gravel operation. Deerfield Park the Town's primary recreation area and location of the Senior Center occupy approximately 100 acres of land in the middle of the district. The park was developed in a former sand and gravel operation that conflicted with the adjacent schools and residential neighborhoods. Multifamily units are also located off Route 116 and West Greenville Road immediately adjacent to medium density single family residences with little buffer area.

District 4

District 4 includes the villages of Esmond and Georgiaville and is intensively developed in its western third but moderately developed in the center and sparsely developed in the eastern portion. District 4 extends west from the Smithfield-Lincoln Town line to Route 295, and north from the Smithfield-North Providence Town line to Limerock Road and the Route 7-Route 295 interchange. Residential development in Georgiaville and Esmond is mostly medium density. Some medium/low density development occurs in the northwestern part of this area. More recent condominium development in the district includes the Village at Summerfield, 125 detached units east of Waterman Avenue in the southern part of the district and Orchard Meadows a 94 unit (duplex) development south of Limerock Road near route 7. The Oaks, a 32 unit duplex condominium project approved in 2008 located just off Route 7 on Harris Road is pending. Frontage development occurs along Whipple and Ridge Road in the center of the district. A 34 unit condominium project south of Ridge Road was proposed in 2010 and a 14 lot condominium development on Whipple Road/Douglas Pike in 2007. On Ridge Road near the North Providence boundary the former town landfill and scrap yards abut similar land uses in North Providence. Large areas of forest land dominate the eastern part of the District. Georgiaville Pond and the Woonasquatucket River with associated tributaries are the primary natural features in the western

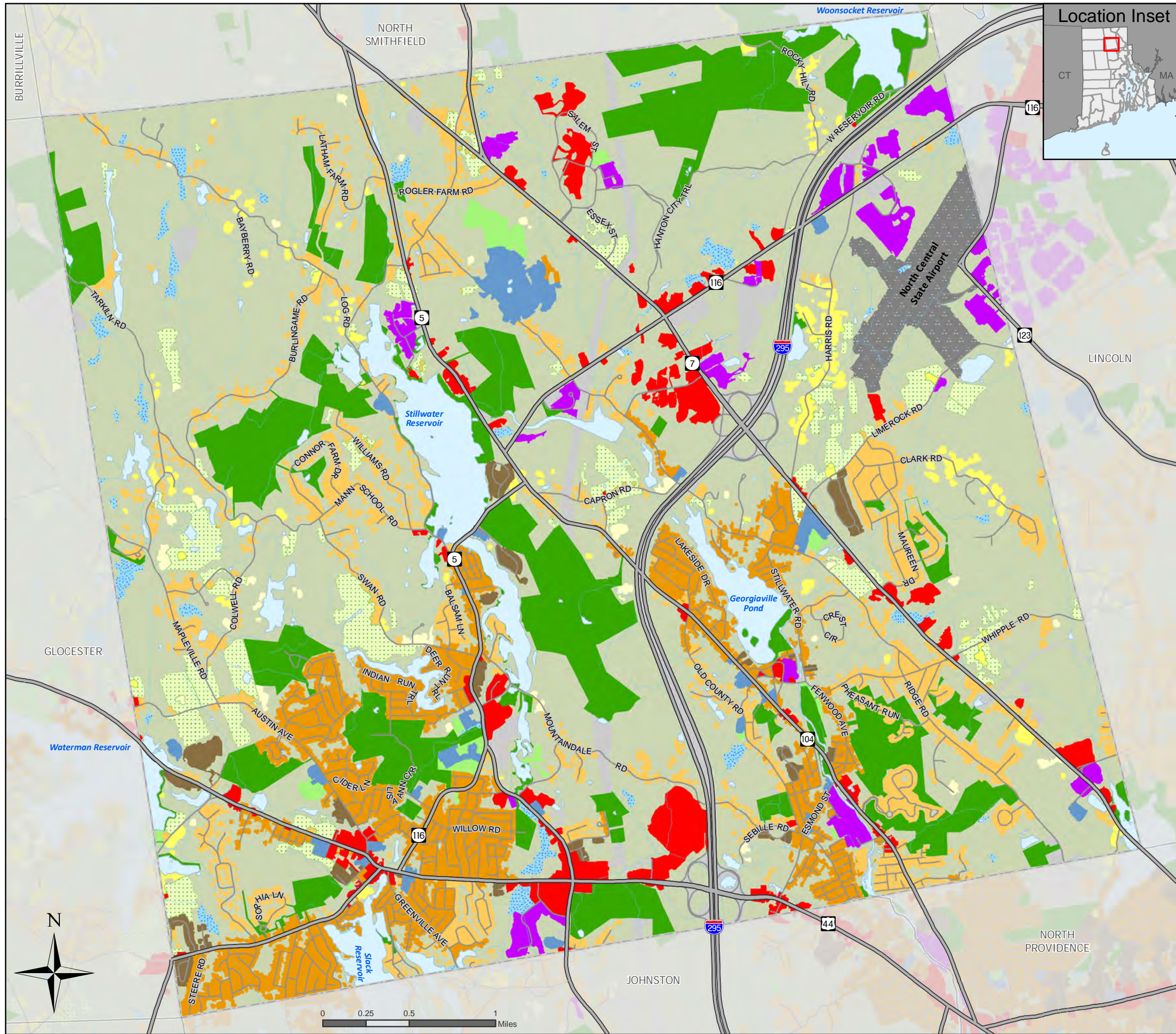


Fig. LU-2 :: EXISTING LAND USE



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

Existing Land Use (2011)

- Low Density Residential (>2 acre lots)
- Medium Low Density Residential (1 to 2 acre lots)
- Medium Density Residential (1 to 1/4 acre lots)
- Medium High Density Residential (1/4 to 1/8 acre lots)
- High Density Residential (<1/8 acre lots)
- Commercial
- Industrial
- Institutional
- Transportation "&" Utilities
- Airports
- Conservation/Open Space*
- Developed Recreation
- Agricultural
- Undeveloped/Unprotected
- Water
- Wetland

Note: * Includes 2011 State and Local Conservation Lands

Features

- Highways
- Roads
- Streams

Boundaries

- Smithfield
- RI Municipal
- Other States

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part of the district. The West River flows south along the Lincoln boundary to the Wenscott Reservoir on the North Providence-Lincoln -Smithfield town-line.

Industrial development is mixed in with residential land uses in the villages of Esmond and Georgiaville, a land use typical of 19th century mill villages. Other isolated commercial/ industrial areas occur along Route 7 which is otherwise predominantly a residential route. Commercial development also extends from North Providence along Route 44 to the Route 295 interchange.

Current Conditions and Challenges

Smithfield has developed a well-defined plan to guide development in the future and has implemented that plan through adaptation of zoning and land development regulations. This plan reflects the citizens' vision to maintain the rural character of the Town while encouraging controlled growth that is respectful of natural resources, compatible with existing development, and adds value to the community. The Town has also invested significant resources into the development of a Town-wide Geographic Information System (GIS) that provides the necessary data for sound planning decisions and assists the Town in providing accurate and up to date information to the public. The development of this GIS system, a major goal of the 2001 Comprehensive Plan, has been achieved and the Town continues to add data layers and improve access to the public.

Since the publication of the 2001 plan, and the 2007 update, the Town has taken several significant steps toward implementing its vision for the future. For example, the Town has implemented a Low and Moderate Income Housing Plan, adopted Conservation Development, passed a Stone Wall Preservation and Protection Ordinance, and enacted a Woodland Conservation Ordinance. Each of these successful initiatives illustrates the proactive commitment of the Town to ensure that the Smithfield of 2030 and beyond will provide a high quality of life for Smithfield residents. This plan recognizes that additional changes are still needed in order to fully realize the aforementioned vision.

Major Challenges

The very fact that the Town has such a high quality of life and is in a desirable location with respect to regional metropolitan centers has created some of the Town's greatest land use challenges. Residential development pressures in particular have posed a major threat to the Town's character and ability to provide necessary services to its citizens. These challenges include:

- The ability to expand and maintain infrastructure (sewer, water, and road network) to support projected development.
- The ability to preserve and protect the Town's natural resources (especially surface water quality).
- The ability to provide a balance of housing opportunities to include low and moderate income housing.
- The ability to continue to provide a high quality primary and secondary education for our children.
- Mitigation of existing and growing traffic on the major roadways and the impacts this traffic has on the community.
- The ability to minimize conflicts between North Central Airport hazard zones and new development proposals.

Trends and Projections

Smithfield’s population has grown rapidly over the past half-century, as have most suburban Rhode Island communities. As highway development expanded to provide easy access to undeveloped areas outside of the older urban core communities of Providence and Woonsocket, housing construction blossomed in the previously rural towns. The “Northern RI Market Area” as defined by Statewide Planning is comprised of the five communities of Smithfield, North Smithfield, Woonsocket, Cumberland and Lincoln. This housing market area grew at an overall rate of 31.8 percent between 1950 and 2000. The range of growth varied greatly between communities. For example, Smithfield’s population grew by 208 percent, while Woonsocket lost 13.9 percent of its population. Lincoln and North Smithfield both grew at about 85 percent, while Cumberland’s population increased by 148 percent. Figure LU-3 shows population in Smithfield as reported by the US Census from 1950 to 2010. This figure shows very rapid population increases, particularly in the 1950s and 60s.

Figure LU- 3: Smithfield Population 1950-2010

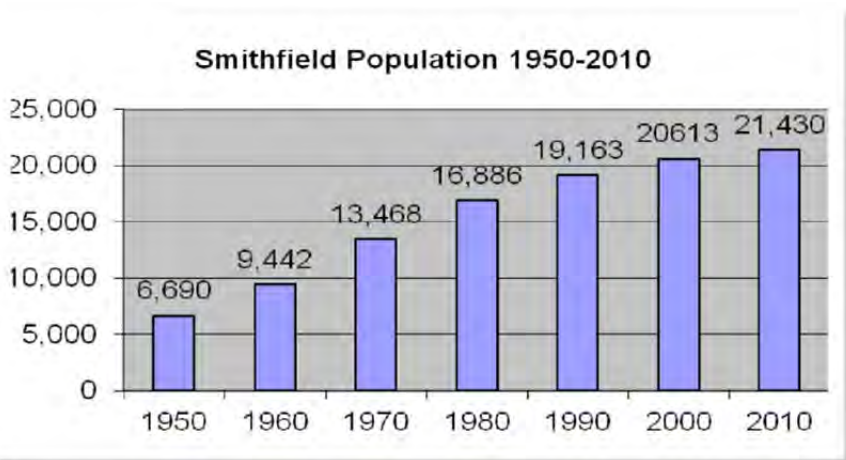
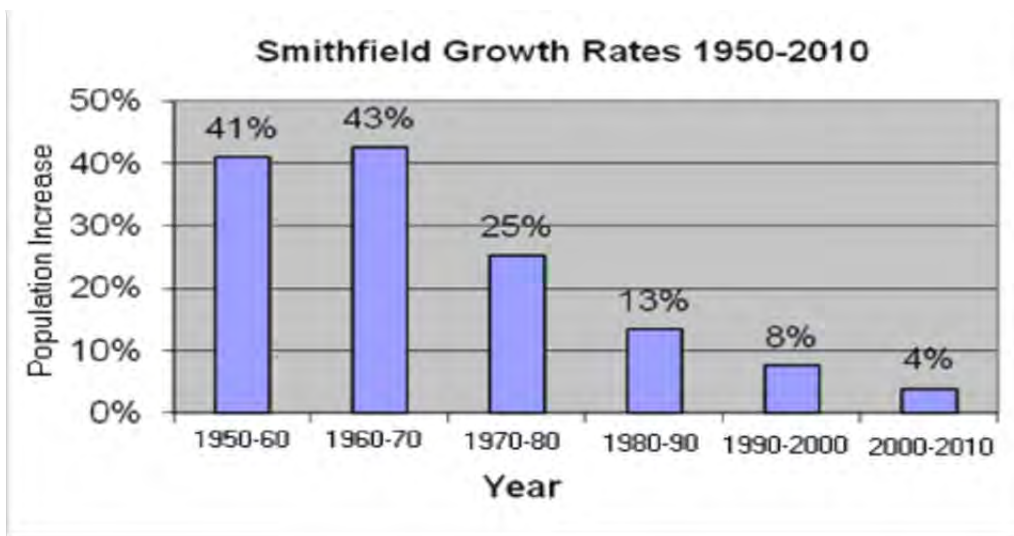


Figure LU- 4: Smithfield Growth Rates 1950-2010



By the 1970s, the rate of population growth in Smithfield was beginning to slow. Figure LU-4 shows the rate of growth between 1950 and 2010. While 10-year growth rates of more than 40% were typical of the 1950s and 1960s, the decade of the 1970s saw only 25% growth. Since that time,

population growth rates have declined by roughly half each decade. Growth was 13% from 1980 to 1990, 8% from 1990-2000 and population grew only by 4% from 2000-2010. The recent lower growth rates reflect a combination of factors, ranging from the Town’s efforts to control growth to economic forces that have affected the state and regional housing market. However, it is clear that the population of Smithfield is continuing to grow, and it is reasonable to expect growth rates in the range of 2-4% for the foreseeable future.

Build-Out Analysis

Over the years, the Town of Smithfield has conducted analyses of future growth potential, known as “build-out analyses” to forecast demands on town land resources and public facilities. The 1992 Comprehensive Plan contained a build-out analysis that developed two future growth scenarios based upon two different assumptions regarding physical constraints to development. One study scenario determined that the Town had a buildout capacity of 4,555 additional housing units, which corresponded to a maximum population of just over 30,000 persons.

In 2001, a second build-out analysis was performed for the Town.¹ This study examined the potential for future residential and commercial development based on then-current zoning. The residential component of the study considered eight zoning districts that permitted residential development of some type. The total buildout added 4,243 housing units to the 7,396 existing units.² Development that has occurred since the 2001 buildout, and developments that have achieved at least Master Plan approval account for approximately 800 units of this buildout capacity. Allowing for variability in data sources and dating of this information, the 2001 Analysis indicated that Smithfield has significant residential development potential with the possibility of growing by an additional 57 percent. This latter study also predicts that the Town’s population could double in the future.

Housing Units Authorized

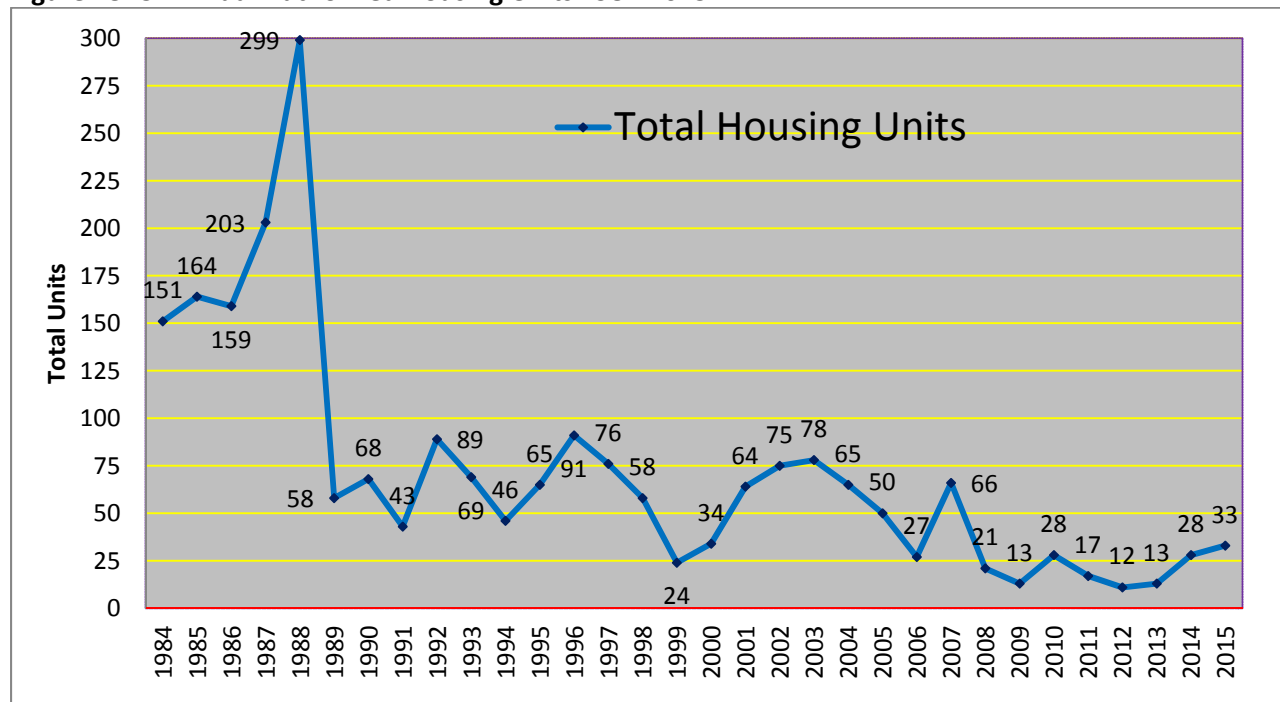
Where and how new growth in Smithfield occurs manifests itself in the Town’s growth management challenges. This section looks at recent trends in the issuance of building permits and housing construction activity to get a better sense of the trajectory of the Town’s growth. The pace and location of new construction, and its consequent population, has potentially negative impacts on public services. Likewise, the type of housing (i.e., single-family, multi-family, condominiums, etc.) indicates just how many people can live on the remaining developable land in Town (e.g. the density of new development.)

Figure LU-5 displays the number of housing units authorized by building permits in Smithfield for the past three decades. The quantity of annual building permits issued ranges from a low of 12 units in 2012 to a high of 299 units in 1988. Over time, the data indicate that the development of new housing has historically proceeded at a moderate pace. The notable exception was in the mid- to late-1980s when a very active economy and regional housing “boom” resulted in high numbers of building permits being issued. On average, 60 units per year were authorized for the 10-year period, 1991 to 2000. In comparison, for the last 10-year period, there was an average of 23.4 units per year. The overall 20-year average was 43.7 units.

¹ MassGIS, CRMRPC & Applied Geographics, Buildouts Across Borders, Blackstone River Watershed Super Summit Resource CD, June 23, 2001.

² U.S. Census 2000

Figure LU- 5: Annual Authorized Housing Units 1984-2015



Source: Smithfield Building Department.

Affordable Housing

In 2002, the State amended the **Rhode Island Low and Moderate Income Housing Act (LMI Act)** allowing developers to seek local zoning approval through a comprehensive permit process requiring that 25% of the proposed units must be affordable. As shown in Table LU-3 below, the Zoning Board of Review, which acts as the Comprehensive Permit Review Board Town approved seven (7) developments under the revised LMI Act representing a total of 212 housing units with 135 affordable units. Of the approved developments only, Country Hill Estates (12 Units with 5 LMI units) and Macintosh Estates (45 units, 45 LMI), Dean Pines Affordable (34 Units with 15 LMI) have been constructed and occupied to date. Another 574 units in eight (8) projects were approved through zone changes and/or Inclusionary Zoning with a total of 148 LMI units. Another three (3) projects representing 682 total units with 205 LMI units were either denied and subsequently withdrawn or had approvals expire.

As allowed under the LMI Act, the Town instituted a cap of 1% of all housing units/year for comprehensive permit consideration. For 2005, that cap was set at 75 units. This number is now 78 units to reflect the 2010 Census figure for total year round housing units.

The Town adopted Inclusionary Zoning in 2009 that requires 20% of all lots/units in Major Subdivisions/Residential Land Developments projects contain a minimum of 20% LMI units. The Town has approved two (2) projects under the provisions of the inclusionary ordinance that upon completion will yield two (2) LMI units and a fee in-lieu of for a third unit. A 28-unit multi-family inclusionary project received Final Plan approval in 2015 and began construction in 2016 will provide 6 LMI units. A large mixed use project with 309 proposed residential units received Master Plan approval in April 2017 that, when completed, could yield 62 LMI units under the inclusionary provisions.

Table LU- 3: Comprehensive Permit / LMI / Inclusionary Projects 2004-2016

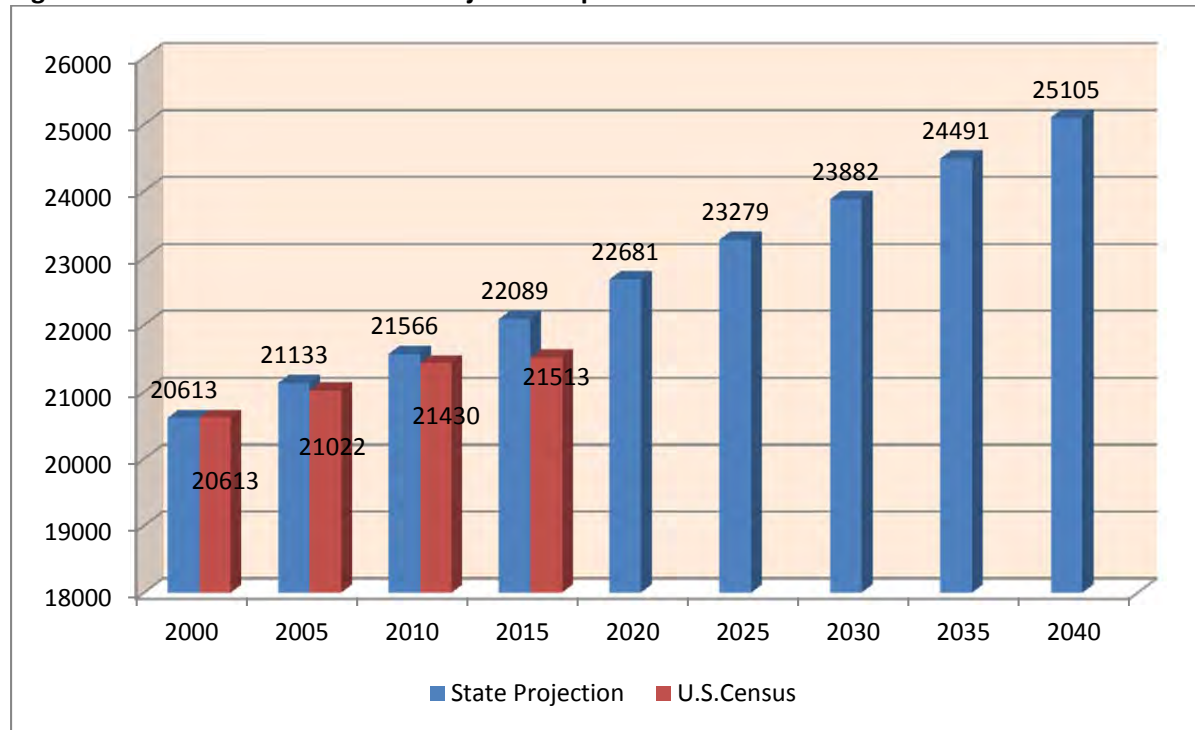
Comprehensive Permit/LMI Projects	LMI Units	Total Units	% LMI	Status
Whipple Creek	16	16	100%	Comp. Permit Approval -Oct. 2009 -PB Master Plan Approval Aug. 2008
Dean Pines Affordable	15	34	44%	Comp. Permit Approval -Aug. 2009 -PB Approval - Nov. 2011 - Construction 2014
Georgiaville Village Green	42	42	100%	Comp. Permit Approval- Aug. 2006- Consent Judgement, Feb. 2008- ZBR Comp Permit Modification, 2015 , PB Approval 2016
Macintosh Estates	45	45	100%	Comp. Permit Approval -Jul. 2005 - Completed 2007
Country Hill	5	12	42%	Comp. Permit Approval -Jan. 2008 - Completed 2011
The Oaks	4	32	13%	Comp. Permit / Zone Change - Jul. 2006 -PB Prelim. Approval 2008
Dean Estates Affordable	8	31	25%	Comp Permit Approved 2016, PB Final Approval 2017
Old County Village	20	79	25%	Comp Permit Denied 2016, SHAB Overtuned, 2017 PB Preliminary Plan pending.
Cardinal Hill	2	16	13%	Zone Change - Jan. 2006, Site work 2010- Not active
Stillwaters Place	3	32	9%	Zone Change -Mar. 2007, Site work 2014
Smithfield Village (Mixed Use)	25	124	20%	Zone Change -Oct. 2014, PB Approval pending
Stone Post Estates	3	15	20%	Inclusionary Subdivision - Construction 2014, Fee in-lieu of 1-Unit
The Residence at Lime Rock	6	28	20%	Inclusionary Condo w/ Zone Change -Dec. 2014, PB Final Plan Approval 2015- Construction 2016
Stillwater Village (Mixed Use)	62	309	20%	Inclusionary Mixed Use Development- Master Plan 2017.
35 Smith Avenue Subdivision/Variance	1	4	25%	1 LMI unit for required dimensional relief and subdivision approval- UC
Total Approved Units in Comp. Permit & LMI Projects	258	819	32%	
Comp. Permit/LMI Projects Denied, and Withdrawn				
Country Glen	84	336	25%	Comp Permit Submitted Dec. 2003, withdrawn
Sand Trace	75	300	25%	Comp Permit Denied Jan. 2009, appeal withdrawn
Esmond Village	46	46	100%	ZBR-SUP Granted-Oct. 2005- Approval expired
Total	205	682	30%	

Projected Population Changes

The Rhode Island Department of Administration, Division of Planning prepared population projections for each Rhode Island community through the year 2040 in Technical Paper 162, published in April of 2014. Figure LU-6 displays the projected population of Smithfield with the population reported by the U.S. Census. Census data indicate that population growth between 2000 and 2010 has been slightly slower than projected, but the difference is only 126 persons, a margin of error of only 0.58%. However, there is a more significant difference between the 2015 DOA projection and the 2015 ACS population

figure. The DOA population figure was higher by 576 people, a 2.6% variance. The decennial Census figures generally validate the projections. The projections indicate that Smithfield should expect a growth in total population of about 3,675 persons by 2040 or an increase of about 17 % over the 2010 population. An increase of 2,452 people is predicted by 2030 which represents an 11 percent increase over 2010.

Figure LU- 6: Smithfield Actual vs. Projected Population 2000-2040

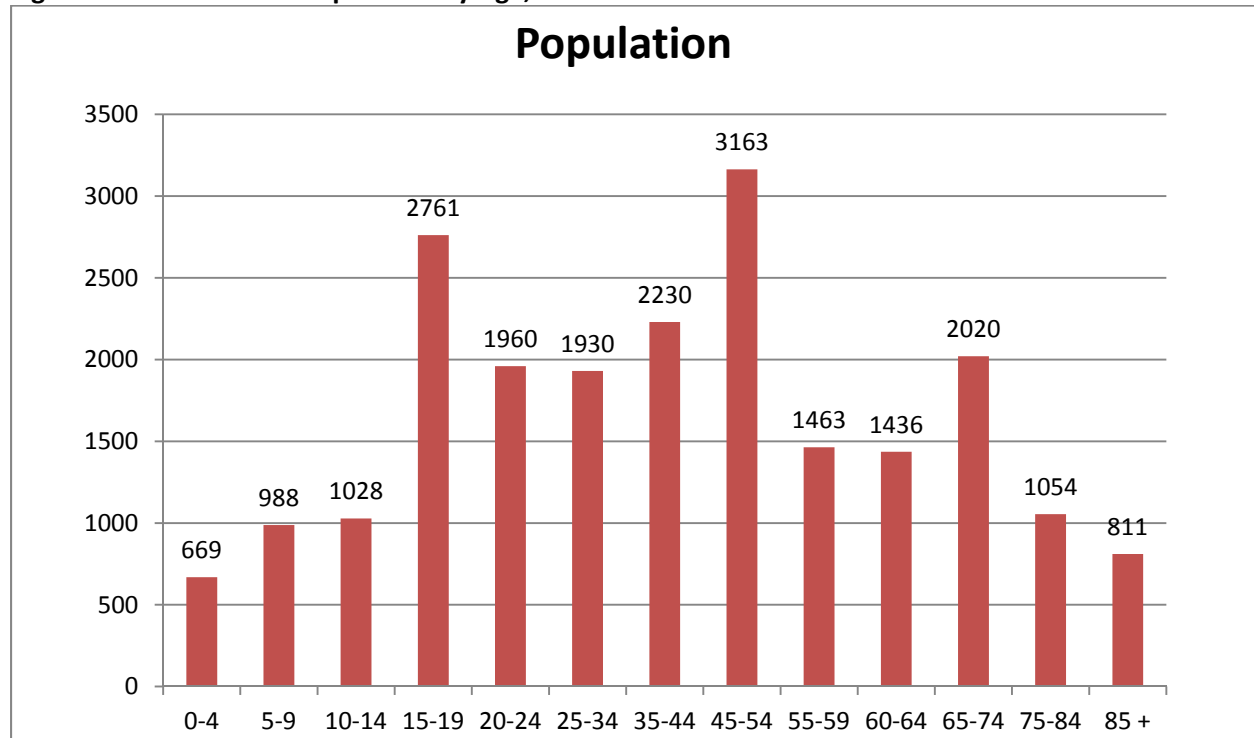


Change in total population, however, is only part of the picture of population change in the community. Further insights can be obtained by examining the projected changes in the composition of the population, including pre-school and school age children, the working age population (labor force) and the elderly population.

Figure LU-7 displays the population of Smithfield as reported by the 2015 ACS, broken down by age categories in 5 and 10 year increments. This breakdown shows a marked spike in population at the younger end of the scale, particularly in the 15-24 age group. This population spike is attributable to two influences. The first is the rapid rate of new home construction in the past few decades, which may have led to a major influx of young couples starting families. The second may be Bryant University. Bryant has a current enrollment of 3,459 undergraduate students, many of whom live in dormitories on campus. Students who report a Bryant residence hall as their primary residence would be counted by the U.S. Census as Smithfield residents. The 2010 Census listed 2,869 non-institutionalized persons living in group quarters (which would include college dormitories) in Smithfield while most surrounding towns have less than 50. Technical Paper 154 has tended to underestimate the 15-24 year old age cohorts as compared with the U.S. Census data, but it projects only small changes in this population group to 2030 with a slight increase (1.5%) in the 15-19 age group and a larger decrease of about 5.8% in the 20-24 age group.

The total potential labor force, generally considered the population between ages 16 and 65, is also not projected to change by much over the next 20 years. The total projected net change in all working age cohorts is a decrease of about 1.1%. A closer examination of the projections for the individual age cohorts indicates a projected increase in younger workers, ages 25-44, and in the oldest workers, ages 60 and over, that will offset projected decreases in middle aged workers, ages 45 to 59.

Figure LU- 7: Smithfield Population by Age, 2015 ACS



In contrast, the population of pre-school age children, ages 0-4, is projected to increase significantly through 2030. The 2010 population in this age cohort of 1,251 is project to increase to 1,491 in 2030, an increase of about 19%, and a higher rate of growth than that projected for the overall town population. This projection reflects a continuing trend of young family growth in Smithfield. The School age population is also projected to increase significantly, with the 5-9 year old cohort increasing from 1,287 in 2010 to 1,514 in 2030, an increase of 17.6% while the 10 to 14 year old cohort is projected to increase from 1,279 to 1,518 or 18.7% by 2030. These projections have implications for the future of the Smithfield school system that will be discussed further in the Services and Facilities element of this plan.

Another part of the population projected to increase significantly is the elderly population. Total population over 65 is projected to increase from 3,012 in 2010 to 4,920 in 2030, an increase of 1,908 or 63% over 20 years. The largest increases are projected in the 65-69 age cohort, expected to increase by 72%, and the 70-74 cohort, projected to increase by 108% over the next 20 years. These projected increases are part of a national trend resulting from the aging of the “baby boom” generation, born shortly after World War II and now approaching retirement age. This aging population will affect demand on public services and facilities, increasing demand for senior services and public health services needed to serve the needs of an aging population.

Agriculture

Agriculture has been an important component of the landscape and the economy of Smithfield since the earliest settlement of the area. Throughout the early part of the 20th century, Smithfield's orchards and farms sustained the local population and provided food to nearby metropolitan areas. The Town became known as "Apple Valley" for the abundance and high quality of its orchards. In the last few decades, economic growth and development pressures have led to conversion of many prominent local farms and orchards to suburban housing. Despite these pressures, the Town's orchards and farms continue to sustain open space, provide scenic views, and contribute basic economic activity to the Town to the present day. Agriculture remains an extremely valuable, but small sector of the local economy enhancing the general welfare of the Town's residents by providing a local source of fresh food, contributing to community character, and preserving open space. Farms listed below are found in Rhode Island DEM/Division of Agriculture's Directory of Rhode Island Farms (Revised August 2007).

- Audubon Society of Rhode Island 12 Saunderstown Road Smithfield - Xmas-Trees
- Clover Hill Farm 56 Capron Road Smithfield - Hay, Pasture, Beef Cattle, Hogs
- Harris Farm 144 Harris Road Smithfield - Sheep
- Jaswell's Farm 50 Swan Road Smithfield- Xmas-Trees, Apples, Strawberries, Sweet Corn, Apple Cider, Mixed, Vegetables, Blueberries
- McDevitt, John Pole 27 Swan Road Smithfield Xmas-Trees
- Niles Dairy Farm 60 Limerock Road Smithfield - Hay, Xmas-Trees, Apple, Peach, Beef Cattle, Dairy Cows
- Pine Ledge Stable 184 Mann School Road - Horses
- Pleasant View Farm 143 Pleasant View Ave. Smithfield – Apples, Nursery stock, Flowers, Mixed Vegetables
- Shag's Tree Farm 221 Farnum Pike Smithfield - Xmas-Trees

Other Smithfield Farms not listed include:

- Steere Orchard 150 Austin Avenue- Apples, Peaches, Water Melons, Pumpkins, Vegetables
- Blackbird Farm 122 Limerock Road Harris - Beef Cattle, Pork, Breeding Stock, Turkey Eggs
- Captain Elisha Steere Farm- 30 West Greenville Road- Vegetables & Fruits
- Revive the Roots 374 Farnum Pike, Community Gardens, Vegetables, Strawberries

The Rhode Island Department of Labor & Training's Quarterly Census of Covered Employment and Wages for 2013 showed that the jobs sector that includes Agricultural, Forestry, Fishing, & Hunting comprised only .05% of Smithfield's total jobs, compared to .06% for Providence County and .15% for the State as a whole. Wages in this employment sector represented only .01% of total wages which is smaller than the statewide percentage for this sector, about .11%.

Agricultural operations are sometimes adversely affected by the random encroachment of urban land uses into the rural areas of the Town. One result of this random encroachment has been conflicts between traditional agricultural land uses and urban or suburban land uses. These conflicts threaten to force the abandonment of agricultural operations and accelerate the conversion of agricultural land to non-agricultural uses, a conversion which causes permanent losses to the economy and the environment of the Town. The Future Land Use Map tends to focus growth in areas serviced with sewer and water leaving agricultural areas in lower density districts where development pressure is less intense. Farms and farm soils have been and will continue to be an important consideration when considering protection/acquisition of properties. Many of the recent acquisitions by the Land Trust

including the Judson property, Mowry Farm, Matteo property, Sledoda Farm and the Booker property are listed in RIDEM's inventory of farms and/or have some soils listed as Prime Farmland or soils of Statewide Importance for farming (See Figure LU-8 Critical Farmland).

There are a variety of tools available to the Town to protect agricultural land. One such tool is agricultural zoning. Agricultural zoning can be used to restrict non-farm uses of existing farms and also restrict development on lands with soils and topography that are well suited to agriculture (See Figure LU-8). Agricultural zoning alone won't protect Smithfield's farms. Agricultural zoning would have to be implemented together with a package of incentives and protections for farmers because agricultural zoning makes little sense without farmers actually working the land. Also, since zoning can be, and often is, changed in response to development pressures, agricultural zoning cannot be relied on for permanent protection of farmland.

Agricultural zoning may reduce the tax burden on local farmers, thereby reducing some of the economic pressure for conversion of farmland. However, it also has the potential to suppress property values of land which is restricted to agricultural uses, adversely affecting the net worth of local farmers. This can prove counterproductive if it reduces a farmer's ability to raise capital by borrowing against the value of the land. It can also make it more difficult for farmers to raise capital by selling off those parts of their property that are not well suited to agriculture, but are located within the agricultural zone.

Pressure for development can also be reduced, and the associated tax burden removed, by purchasing the development rights to the farm property. The purchase may be made by the Town, by the State, or by a private non-profit entity. The Rhode Island Department of Environmental Management Farmland Protection Program includes funds for State purchase of development rights. There is also local precedent for this approach as, in 2004, Smithfield voters approved a \$5 million bond to protect farms, forests, and open space. In a purchase of development rights, the value of farmland is determined with, and without, a covenant restricting non-agricultural uses. The farmer or property owner is then paid the difference in value and the restrictive covenant is placed on the land in form of an easement running with the deed. Because the restricted land cannot be developed, the development pressure is removed and the property owner receives compensation for the diminution of value. Thereafter, the property is taxed as undevelopable land.

Another way to reduce the tax burden on farmers is to encourage participation in Rhode Island's farm, forest and open space tax relief program. The Rhode Island' Farm Forest and Open Space (FF&OS) program is a voluntary program whereby local farmers and owners of land can apply to have their land designated as farmland, forest land, and/or open space. To join the program, farmers must voluntarily agree to keep their property in agricultural use. In return, they are granted a special tax rate based on the value of the land for agriculture, forests and/or open space, rather than on the development value. This type of program can help farmers to avoid the adverse tax impacts of rising property values that might otherwise result from rapid development and resulting land speculation. Smithfield has over 1,300 acres of land in the FF&OS program representing over 10 million dollars of assessment value.

Another way to help sustain local agricultural operation is to provide support directly to local farmers by promoting the sale and purchase of locally grown food and agricultural products. Encouraging Community Supported Agriculture (CSA) programs is a good example. In CSA programs, local residents purchase shares in the crops of local farms in the spring and are then provided with the fruits of the harvest as they are produced. CSA programs generate cash for farmers in the spring, when it is needed most, and provide guaranteed consumers for the farm's products. Other examples include "buy local"

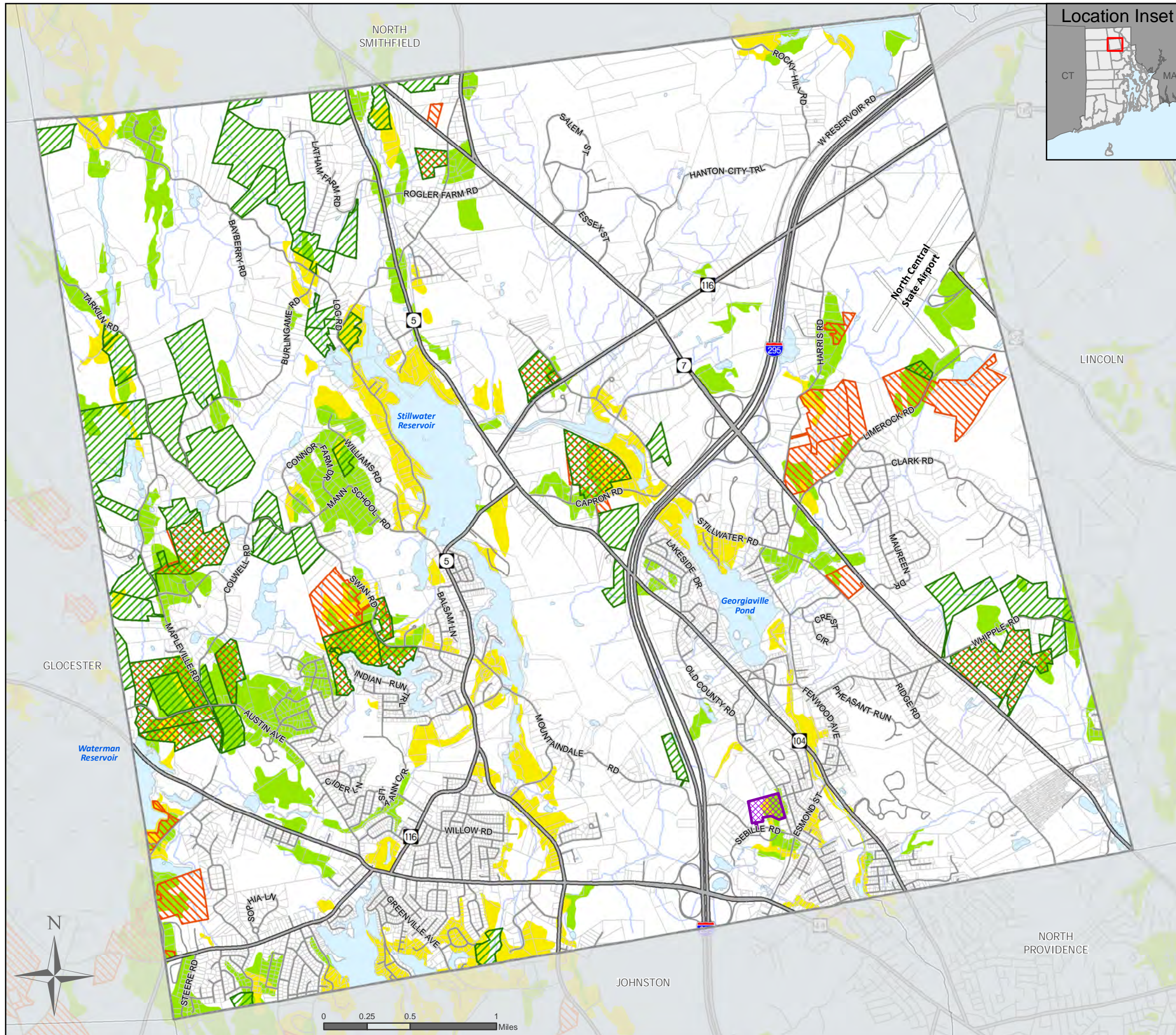


Fig. LU-8 :: CRITICAL FARMLAND



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

USDA Farmland Soil Types

- Not Rated
- Prime Farmland
- State-wide Important Farmland

- Protected Farm (Smithfield Land Trust)
- Farm Forest Open Space Program (2012) *
- Farms (Source: RIDEM Inventory 2012)

Features

- Highways
- Roads
- Water
- Streams

Boundaries

- Smithfield
- RI Municipal
- Other States
- Parcels (2012)

* Source: Smithfield Tax Assessor

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programs such as the Farm Fresh RI program. Farm Fresh RI combines promotion of wholesale food to restaurants, schools, and grocers with direct sales to the public, distribution of culinary information (cooking tips), food demonstrations, and public education about the importance of fresh food. Other examples include seasonal farm fairs and festivals. Smithfield has a number of active farms including the Steere Orchard, Jaswell 's Farm, Blackbird Farm, Elisha Steere Farm which offer a diverse array of agricultural products.

The Rhode Island Farm Ways program, which began in 2004, is a statewide program administered by RI Department of Environmental Management (DEM). The purpose of the program is to work with farmers to increase 'agri-tourism' and 'agri-tainment' on their farms, provide professional development and training, and help market local agricultural products and services. This type of program supports the continuation of farms as businesses and thereby helps protect the rural and agriculture uses and character so prevalent in northwestern Smithfield. Figure LU-8 Critical Farmland shows areas with soils suitable for farming, properties that are included in the Farm Forest and Open Space Program and where the active farms are located.

Recent Initiatives

In order to successfully and effectively meet the challenges that steady growth and development pose on a community like Smithfield, it has been and remains imperative that the Town continually improve its planning and regulatory capabilities. To that end several major initiatives have been implemented and others are in the developmental stages. A brief description of each follows.

Low and Moderate Income Housing Plan

In 2005, the Town amended the Comprehensive Plan to provide for a Low and Moderate Housing Plan. This Low and Moderate Income Housing Plan was prepared to address the provisions of the Rhode Island Low and Moderate Income Housing Act (RI General Laws, 45-53) and is incorporated into the Housing Element as further provided herein. This plan calls for 485 additional affordable housing units over the next 15 years. The Town has made significant progress in achieving this goal as the Zoning Board, Planning Board and Town Council have approved 138 additional affordable units in the past few years. This plan incorporates an update to the original Low and Moderate Income Housing Plan as part of its Housing Element.

Conservation Development

As a means of implementing the land use, conservation and open space policies contained within this Plan, the Town supports the concept of Conservation Development. This term describes a relatively new type of residential development, in which, exclusive of wetlands and other types of land unsuitable for development, the majority of flat, dry and otherwise buildable land is protected from clearing, grading, and construction by creating open spaces and by reducing lot sizes in order to achieve full-yield density.

This technique is an important tool that should be used to preserve the rural character of the Town, a goal that was expressed very strongly by residents of the Town during the preparation of this Plan. By preserving large areas of open space, and by situating development in compact areas, the Town can create viable neighborhoods while at the same time avoiding sprawling, land-wasting suburban-type subdivisions.

Since Conservation Development provisions were adopted in 2006, 5 conservation development subdivisions have been approved, yielding 45 lots with a total of 65 acres of open space. The compact design provisions include a reduction in the amount of lot frontage required for each subdivision lot which results in a reduction of road length in most cases. The conservation development designs of the 5 approved conservation subdivisions show a reduction of 3,500 linear feet of subdivision roadway when compared to the conventional designs submitted for these subdivisions. This represents a significant reduction in the amount of run-off coming from these new developments and over time will result in a reduction of maintenance costs incurred by the Town.

Forest/Woodland Conservation Ordinance

Based upon the results of the community survey of 2003, the single most important issue according to those surveyed is the protection and preservation of the Town's natural resources. Open Space Acquisition through the recently approved Smithfield Open Space Bond Initiative, the 100-foot wetland buffer requirement and Conservation Development are very important tools to accomplish this goal. The Forest/Woodland Conservation Ordinance, adopted in 2009 is another key tool that applies to commercial zones.

The Forest/Woodland Conservation Ordinance was modeled after the successful State of Maryland Forest Conservation Act. Key to the act is a requirement that forbids clear-cutting of development sites within buffer areas. Combined with the aforementioned tools, this act will go a long way to protecting the Town's natural resources and preserving its rural character.

Access Management Plan

Access management has been defined as the process that provides or manages access to land development, while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. This process is achieved through managing the design and location of driveways, median openings, signalization, and points of access to the state highway system. The level of highway access control is based on the importance of the highway to regional and statewide travel as determined through a functional classification system. Research indicates that effective access management programs have the potential to dramatically increase the safety of streets and highways and also to increase roadway capacity, reduce congestion, reduce air pollution emissions, and reduce average travel times for motorists, preserving the capacity and functionality of the existing transportation system, enhancing safety, increasing system capacity in a manner that is sensitive to potential community and environmental impacts, and maximizing the return of scarce transportation resources.

Recognizing the importance of access management to maintaining high levels of service in key growth areas of Town, the Town commissioned an access management plan of the Route 7/116 corridor. The plan, completed in 2011, provides the guidance to implement access management techniques in this and other corridors in Town. The draft of an access management ordinance was developed as part of the plan. The Planning Board will review the ordinance and forward it to the Town Council for adoption in the coming months. The plan will be incorporated into both the Land Use and Circulation elements of this plan. More information on Access Management can be found in the Circulation element of this plan.

Growth Rate Control

The Town has conducted studies and has followed State planning documents to develop a growth management program as called for in the Comprehensive Community Plan. The study is entitled Needs Assessment and Growth Study, Town of Smithfield, and was adopted as part of the Comprehensive Community Plan 5 Year Update by the Town Council and by the Planning Board in April 2006. The Town Council and Planning Board found that this study, together with the footnotes and sources contained therein, established the basis for the Town's growth management program.

Growth Centers

The State Land Use Plan, Land Use 2025 encourages communities to identify areas within the Urban Services Boundary that are suited for new development. The Urban Services Boundary demarcates areas that have a higher level of public service or are likely to have these services to accommodate more intense development. Figure LU-9 shows that with the exception of some small areas in the northwest and northeast part of Town, Smithfield is entirely within the Urban Services Boundary. The Town has identified the Route 7/116 corridor (Corridor) as a growth center. This area contains all the necessary components of a growth center; it is largely served by municipal water and sewer, it has good access to Route 295, Route 7 and Route 116, is serviced by RIPTA and has significant area available for the development of office, light industrial and residential uses. Most importantly, it has an established base of corporate businesses and institutions that have the ability to attract similar types of businesses to the area.

It has been the mission of Smithfield Economic Development Commission (SEDC) to facilitate the development of the Planned Corporate District (PCD) in a manner that would result in balanced economic development and job creation; jobs that provide a living wage like those created by such firms as Fidelity, Citizens, Navigant, FGX, Bryant University and others. In 2012, the SEDC worked with Bryant University to explore a cluster strategy for the (PCD). With the nearby campuses of Bryant University and Fidelity, it could provide a site where similar institutions and corporations could build facilities that would benefit from being in close proximity.

A corridor access management plan prepared by VHB in 2011 identified the potential for more than 6 million square feet of new development, which could generate an additional 66,900 vehicle trips per day. While such growth is unlikely, it illustrates the capacity of the site to absorb future growth. Substantial investment in roadway, municipal water and sewer systems and other infrastructure will be required to accommodate the development of the Corridor. Regardless of the ultimate level of that growth, following the more sustainable model promoted by the growth center criteria will foster a center that can thrive amid ongoing economic changes.

The RhodeMap RI Growth Center initiative coordinated by the State Division of Planning worked with communities to identify potential growth centers throughout the State. The Route 7/116 corridor was identified as one of six (6) areas to be studied as a potential growth center. The following is an excerpt from the Smithfield Growth Center Concept Plan produced by RhodeMap RI:

This concept for the Smithfield Growth Center is designed to promote development of the corporate park concept by creating at its core a vibrant mixed-use center with a combination of office, retail, entertainment and residential uses. Uniting the entire project is a focus on the public realm of beautiful, pedestrian friendly streets, parks, squares and other gathering places.

Some steps suggested in the Growth Center Concept Plan include:

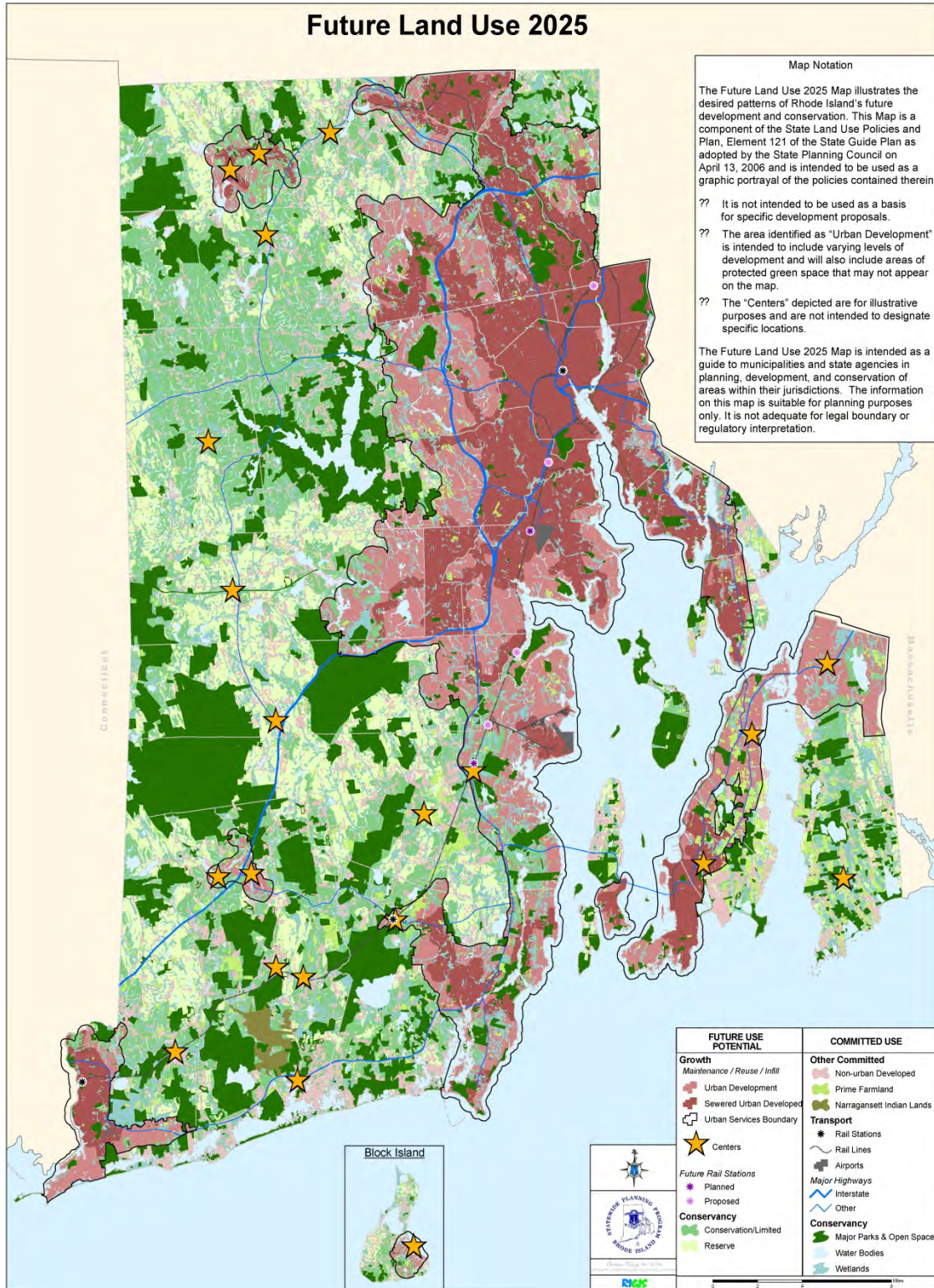
- Pursue a stakeholder-driven master planning process. Seek consensus on the desired future uses, the size and shape of the growth center, and the detailed layout of streets, blocks, parks and other elements.
- Revise the zoning ordinances for the growth center that encourages a mix of compatible uses.
- Work with the Department of Transportation (DOT) in redesigning the roadway cross section to make it more compatible with a pedestrian-friendly center, as well as helping with planning for public transit improvements.
- Consider establishing a town redevelopment agency that could participate in assembling parcels, developing plans and perhaps most important, issuing bonds to build roads and other infrastructure.

The Town took a positive step toward the establishment of the Route 7/116 Growth Center when it established the Economic Growth Overlay Review Committee, an ad-hoc committee, charged with reviewing a proposed growth overlay ordinance introduced by a group of Corridor land owners. The Committee was comprised of planning staff, Planning Board, Zoning Board, Economic Development Commission members and Corridor land owners. During a year long review process, the Committee conducted a SWOT analysis and received input from State Planning Officials, Statewide Planning's Growth Center consultant, and real estate/marketing and economic development professionals.

The Economic Growth Overlay District (EGOD) ordinance was adopted on September 15, 2015 and contains a wider array of uses than are allowed in the Planned Corporate District. The new ordinance has limits on the percentage of land area that can be devoted to single use stand-alone retail and residential land uses, contains many of the design guidelines and standards typically used in village center ordinances, and allows for sufficient density to foster the development of a compact self-sustaining growth center. The EGO District is comprised of 105 lots with approximately 904 acres of land and is shown on Figure LU-11 Future Land Use.

A mixed use development known as "The Village at Stillwater" has been submitted within the EGO District. The project which received Master Plan approval in 2016 sits on an 80 acre site, contains a mixture of retail, mixed retail/offices, residential and large corporate office uses and features an interior roadway system running from Route 7 to Route 116. Infrastructure improvements including water and sewer upgrades will be required to adequately service the development at full buildout.

Figure LU-9 Urban Services Boundary



Open Space Zoning

The Zoning Enabling Act allows for the designation of Open Space districts. Land held by the Town, State or private conservation organizations such as the Audubon Society of Rhode Island that is currently or, is planned to be used for recreation or conservation purposes should be considered for inclusion in an Open Space zone. Land listed in Table NR-4 in the Natural Resources section, excluding land held by private home owner's associations should be considered for designation as open space land.

Permitted uses in the Open Space zone would be those agricultural uses allowed in the R-80 and R-200 zoning districts, certain open recreation and public and semi-public uses. The primary intent of an Open Space zone is to ensure that land preserved as open space or recreation is not developed or used for other purposes. The Planning Board supports the future designation of an Open Space district in the Land Use Plan and the Zoning Ordinance. Further detailed study may be necessary prior to designating areas for inclusion in this type of district.

North Central Airport

North Central Airport (SFZ), built in 1951, is located in the northeastern part of Smithfield and in Lincoln. It serves the greater Blackstone River Valley region of northern RI and southern Massachusetts. SFZ accommodates a spectrum of general aviation traffic, from single-engine piston aircraft used for recreational and flight training to operations by most small and mid-sized corporate jets. North Central is considered a reliever airport, which are essentially large general-aviation airport located in metropolitan areas that serve to offload general aviation aircraft traffic from hub airports in the region.

Airport Hazard Areas

To establish the standard for Rhode Island's Airport Hazard Areas, the Part 77 surfaces and the Runway Protection Zone (RPZ) has been combined to create an overall "area of airport influence," as required by the R.I.G.L. The area of airport influence is comprised of five specific zones, creating a comprehensive region focused on maintaining compatible land use around the airport. The combined five zones cover approximately a three-mile radius from each runway end. Each zone has a compatible land use recommended based on their location and proximity to the airport. The specific size for each zone depends upon the classification of each runway and the associated approaches. The following is a brief description of each zone, including their recommended land use compatibility standards. Rhode Island Airport Corporation (RIAC) is responsible for establishing and maintaining the Airport Hazard Areas. Figure LU-10 North Central Airport Hazard Area Land Use Zones shows the area of each of the five (5) hazard zones.

Zone A –Runway Protection Zone (RPZ)

Zone A is the closest area to the runway end. The intent is to provide a clear area that is free of above ground obstructions and any structures. Land uses within Zone A should be limited, where possible. Best management practices should be used when determining compatible land uses such as parking lots (with restrictions), roadways, and open spaces in proximity to an airport's environs. Construction of new structures should be prohibited and existing structures, buildings and vegetation should be removed through the use of land acquisition and/or the purchase of avigation easements, when practicable.

Zone B –Approach Surfaces

Zone B is a critical airport zone that reflects the approach and departure areas for each airport runway. The size of Zone B is predicated upon the type of runway instrument approach (visual, non-precision, or precision) and the type/size of aircraft utilizing the runway. Land uses allowed in Zone B typically require additional review to maintain compliance with land use guidelines that limit concentrations of people, wildlife attractants, visual obstructions, tall structures, and noise sensitive developments. For example, dense residential developments should be discouraged from this area to minimize noise complaints. However, residential developments may be permitted with additional review to determine consistency with airport compatibility requirements.

Zone C –Transitional Surfaces

Zone C includes those areas that are abeam of the runway pavement and extend specific distances based on the types of operations at that particular airport and its instrument approaches. The purpose of this zone is to provide an area relatively free of obstructions that is in closest lateral proximity to the runway environs. This is essentially the area between the runway and the standard airport traffic pattern. Within this area consideration should be given to the potential for aircraft incidents such as engine out or aircraft stalls during approach or departure. Land uses allowed in Zone C should not congregate people, generate visual obstructions, attract wildlife hazards, or create tall structures. Noise sensitive developments should be discouraged as well because this area could experience noise from engine-run-up and from aircraft in the traffic pattern.

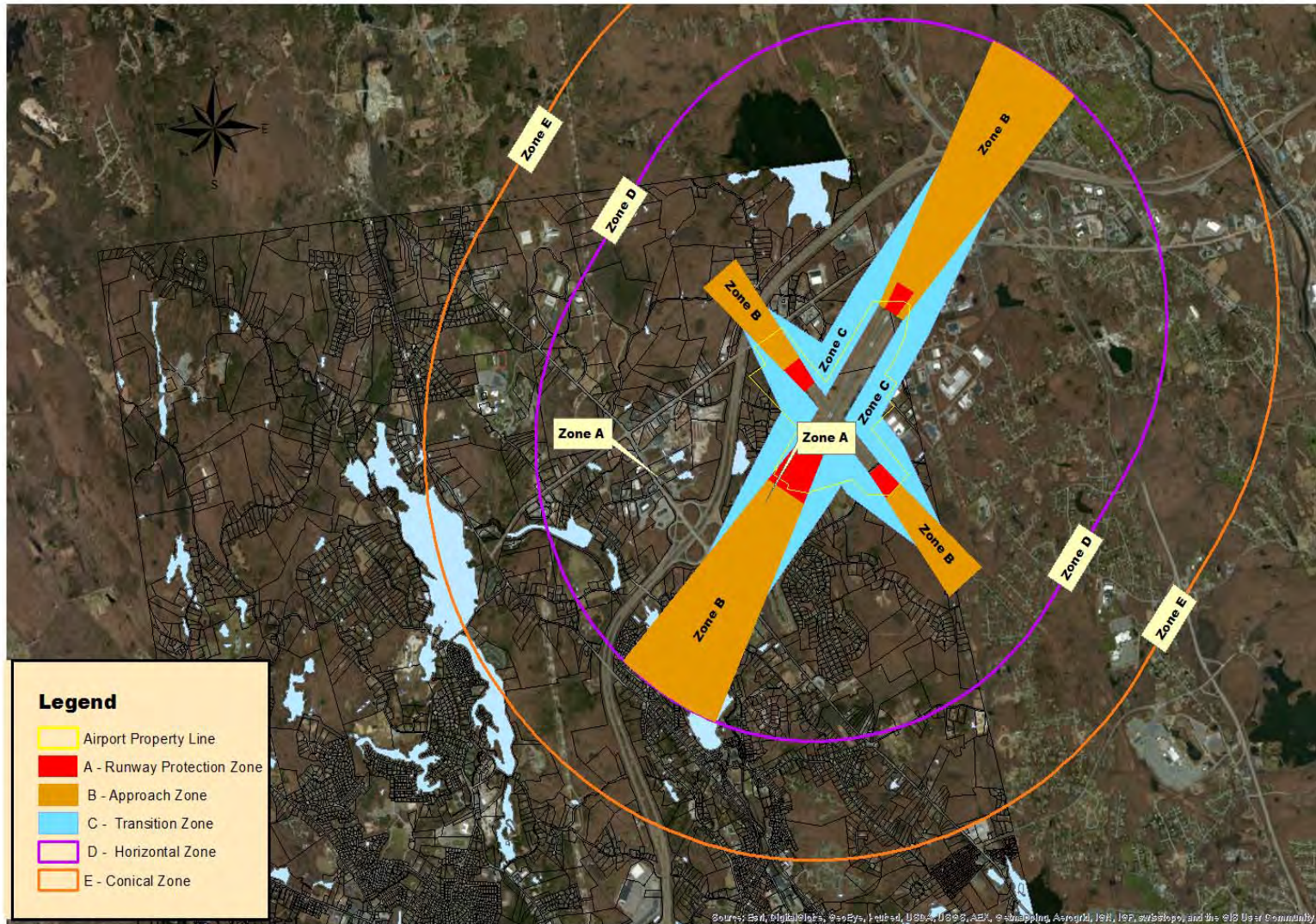
Zone D- Horizontal Surface

Zone D is typically elliptical in shape, depending upon the runway types and configurations at individual airports. Zone D experiences a number of aircraft over-flights within its boundary during approach or departure at an airport. This zone should be clear of all uses that may generate visual obstructions, wildlife attractants, or tall structures because aircraft typically operate at lower altitudes and slower air speeds in this area. If a pilot is distracted by visual obstructions, potential safety concerns can arise. Depending on their location within the zone, land uses that encourage congregations of people or involve development of tall structures should also be limited. Noise sensitive development in Zone D should also be discouraged, particularly if it is in close proximity to a runway end.

Zone E –Conical Surface

Zone E is the outermost zone of the airport overlay zoning areas and has the least number of land use restriction considerations. This zone is intended to preclude the development of any land uses that may generate concerns related to significant height limitations, wildlife attractants, and visual obstructions. Concentrations of people and noise sensitive land uses should also be evaluated to ensure compatibility within the airport's environs. Many land uses within Zone E can be compatible with the airport; however, appropriate consideration should be given to evaluate uses that may pose a potential hazard to the airport.

Figure LU-10 North Central Airport Hazard Area Land Use Zones



Roughly 48 percent of the Town's land area is located within one of the five airport zones A-E and approximately 8 percent of the Town's area is either runway, Airport Hazard Zone A, Runway Approach Zone B or in the Transitional Zone C. Areas within these three zones is sparsely settled with the exception of the western portion of the B Zone of Runway 33, which contains medium high density residential development and some multi-family development. The eastern portion of the B Zone extending into Lincoln, contains commercial and light industrial land uses nearest the airport and contains medium high density residential development north and east of Route 295 in Lincoln.

Future Land Use

Figure LU-11 Future Land Use Map displays future residential, commercial, industrial, and other land uses of the Town. The Future Land Use Map reflects the maintenance of the R-200 Low Density (Conservation) Residential, reduction of areas R-80 Low/Medium Density areas, expansion of R-Med Medium Density Residential, some expansion of R-20 High Density areas and an expansion of multi-family residential areas. The expansion of areas zoned Planned Development and Multi-family will allow for higher densities of single and multifamily dwellings in some areas, reducing development pressures on more rural parts of the town. The focus for maintaining high densities lies generally within the Greenville and Georgiaville/Esmond areas. Sites that have been identified as potential Low and Moderate Income housing sites are shown on the future land use as high density multi-family.

The non-conforming single and multifamily homes already existing in these areas are accepted as legal non-conforming uses. Non-conforming uses are those uses that are incompatible with permitted uses within the zoning districts in which they are located. Non-conforming uses in residential zones have traditionally been treated in a stricter fashion than non-conforming uses in non-residential zones. To reduce the amount of non-conforming lots, the future land use map shows certain areas in and around the existing villages that are serviced by municipal sewer to change from the low/medium to a medium density land use designation.

Approximately 1,500 acres in northeastern section of town are zoned Planned Corporate. After deducting developed land, land with wetland and soil constraints and land owned by the Land Trust or Audubon Society, approximately 700 acres of useable land remains in the Planned Corporate District. While some sewer extensions have occurred in the area, full buildout of the area will require upgrades in sewer and water services. The future land use map also depicts the elimination of some split zoned areas; one involving the elimination of an Industrial district located at the rear of a light industrial district along Farnum Pike. Elimination of a split zones along Smith Avenue (R-20/R-80), Ridge Road (R-40/R80), Douglas Pike (C/R-80) are also contemplated.

The Future Land Use map calls for small expansion of the mixed-use district along Pleasant View Avenue to accommodate a new parking and access layout for the Greenville Library. Creation of a mixed-use district is also envisioned along Route 7 immediately south of Route 295. Conversion of a commercial area to a Planned Development district is contemplated east of Route 295 along Route 44 and Esmond Street.

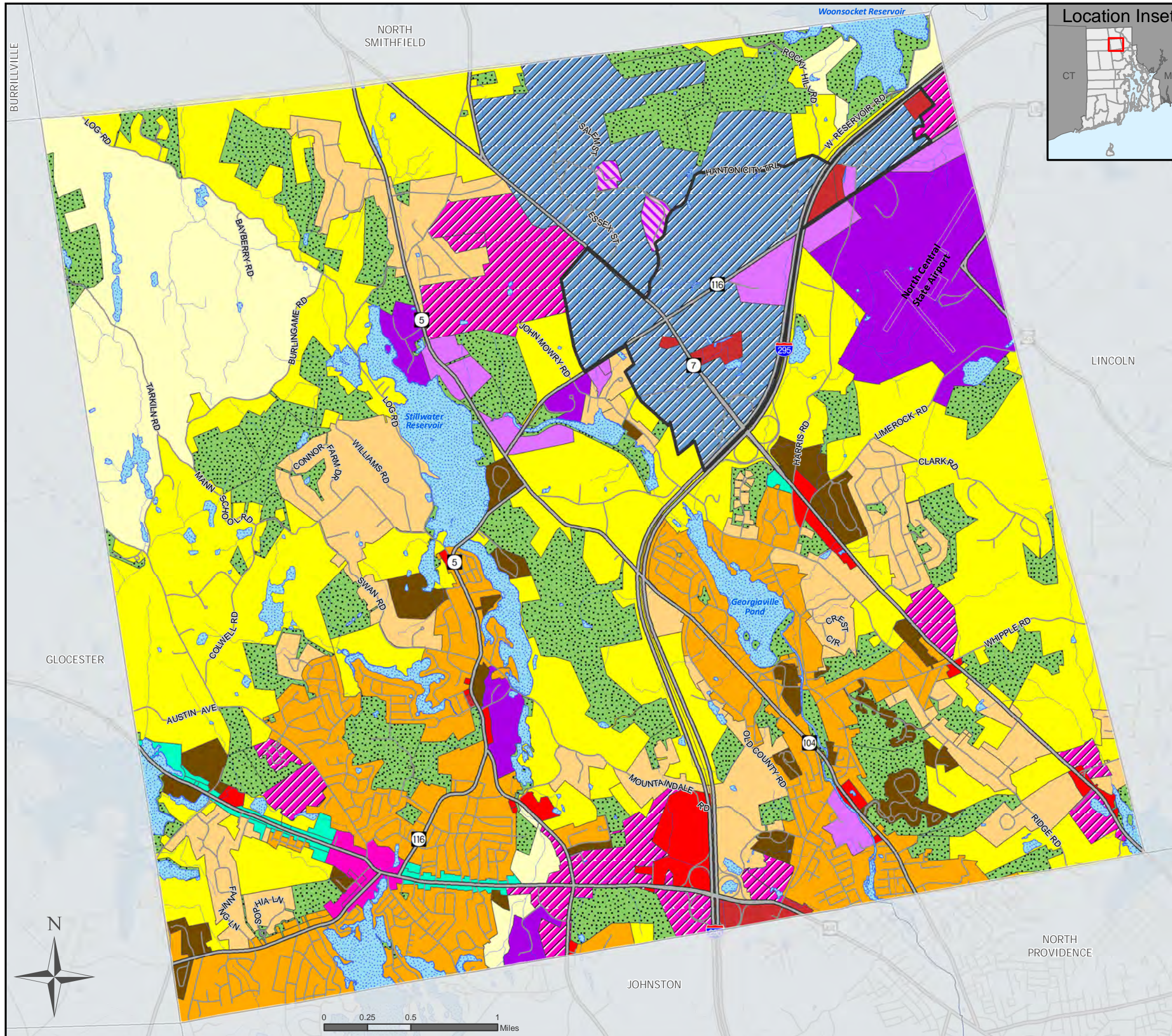


Fig LU-11 :: FUTURE LAND USE



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

ECONOMIC GROWTH OVERLAY -- EGO

Future Land Use Categories

- LOW DENSITY RESIDENTIAL
- LOW-MEDIUM DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- HIGH DENSITY MULTI-FAMILY
- MIXED-USE
- VILLAGE
- COMMERCIAL
- HIGHWAY COMMERCIAL
- INDUSTRIAL
- LIGHT INDUSTRIAL
- PLANNED CORPORATE
- PLANNED CORPORATE BIO-PHARMACEUTICAL
- PLANNED DEVELOPMENT
- OPEN SPACE

Features

- Highways
- Roads
- Water
- Streams

Boundaries

- RI Municipal
- Other States

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services and the Town of Smithfield 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

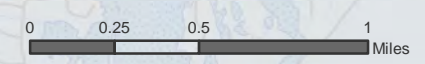


Figure LU-11 shows proposed future land uses in Smithfield. The main purpose of the Future Land Use Map is to guide future land uses within the town. The following provides a description of the land use categories and identifies areas of inconsistency between Future Land Use categories and current Zoning District designations.

Low Density Residential (LDR) 2-5 Acre Lots - This land use category is established to provide areas for rural density residential use, with single dwelling unit detached structures, located on large lots in areas not typically served by municipal water and sewer. Areas in the northwest part of Town around the Davis Liquid Waste Dump Superfund Site and Davis GSR Landfill, and areas around the Woonsocket Reservoir #3 are designated LDR. An area west of Cedar Swamp Road and Lark Industrial Park located in the southern part of town is proposed to be changed from the Low/Medium Density LMDR district to LDR district. This area is primarily wetland dominated by a white cedar forest.

Low/Medium Density Residential (LMDR) 1 – 2 Acres Lots - This land use category is established to provide areas for low/medium density residential use, with single dwelling unit detached structures on medium to large lots in areas outside of villages. Most areas in this category are not served by municipal water and sewer. An increase in this land use category is proposed in the area east of Route 295 along Old County Road (See Item #18 on Table LU-2). A reduction in area of this category is proposed in several neighborhoods including the Fanning Lane neighborhood (See Item #27 on Table LU-2); Swan Rd., Connors Farm Rd. and portions of Williams Rd. and Log Rd. (See Item #53 on Table LU-2) An additional reduction in this category is proposed in the north eastern part of Town including lots on Farnum Pike Between Old Forge and Rogler Farm Road, Latham Farm Rd., Bulingame Rd., a portion of Highland Terrace, Rogler Farm Rd., a portion of Brayton Rd. Dungay Rd., Levesque Dr., Jambray Dr., John Mowry Rd. (north) and Elna Dr. (See Item #54 on Table LU-2) These neighborhoods developed over time at densities of less than one unit per 2 acres. Sewer and/or water service is available in most of the proposed areas. Smaller reductions in this land use category are proposed to conform the land use designation to the built condition (See Items 4,7,8,9,13,15,17,19,26,27,32,46 & 47 on Table LU-2).

Medium Density Residential (MDR) ¼ -1 Acre Lots - This land use category is established to provide areas for medium to low density residential use, with single dwelling unit detached structures in more suburban setting in and around the villages. Lot areas are typically around 1 acre in size and are in areas served by municipal sewer and water. An increase in this category is proposed in the Fanning Lane neighborhood. (See Item #27 on Table LU-2). Smaller increases in this land use category are proposed to conform the land use designation to the built condition. (See Items 4,8,9,13,27 & 32 on Table LU-2).

High Density Residential (HDR) 1/8 – 1/2 Acre Lots - This district is established to provide areas for higher density residential use, with single dwelling unit detached structures and duplex units located in village areas where municipal services are provided. There are two main areas being converted from the HDR category including a large agricultural/forest tract off Swan Road which would convert to LMDR, and a number of lots fronting on Pleasant View Avenue that will convert to Mixed Use (See Items #24 and #33 respectively). There are a number of other areas being converted from HDR to other districts, mainly HDRM to accommodate multi-family residential projects (See Items 16 17,18,28,44,49,13,27 & 32 on Table LU-2)

High Density Multi-Family (HDRM) 1/8 – 1/2 Acre Lots -This district is established to provide areas for higher density residential use, with multiple family dwelling units to allow for a variety of housing types. There are a number of areas that are being designated HDRM, mainly to accommodate multi-family

housing developments approved as comprehensive permits or conventional density condominium developments (See Items 4,6,11,15,16,17,41 & 49 on Table LU-2).

Mixed-Use (MU) - This district is established to provide areas for mixed residential and limited professional and office uses, where such use is limited to the street level story and residential occupancy is mandatory. An expansion of the mixed-use district is proposed along Pleasant View Avenue north of Route 44 to Willow Road. An expansion of this use is proposed on lots fronting on Pleasant View Avenue and a new area is proposed on Douglas Pike south of Route 295. (See Items #24 and #7 respectively on Table LU-2)

Village (V) - This district is established to provide areas for neighborhood oriented, low intensity commercial retail uses, business services, and small scale professional offices areas along Route 44 and Smith Avenue in Greenville are designated Village.

Commercial (C) - This district is established to provide areas for town-wide and medium intensity commercial retail uses and business/professional services, including office buildings. Small increases are proposed in two areas on Cedar Swamp Road (See Items 51 and 53 respectively on Table LU-2).

Highway Commercial (HC) - This district is established to provide areas for regional and high intensity commercial retail uses, business/professional services, office buildings, and automotive uses. A conversion of HC to PD is proposed along Route 116 near the Lincoln Border (See Items #1 on Table LU-2).

Light Industrial (LI) - This district is established to provide areas for light industrial and office uses. A conversion from the residential use category to LI is proposed on 116 to more closely match existing land uses (See Items #38 & 39 on Table LU-2).

Industrial (I) - This district is to provide for general industrial and planned development cluster of such uses for general manufacturing and related activities and office uses.

Planned Corporate (PC) - This district is established to provide an area for planned employment uses, including planned office, as well as research and development parks, light industrial development, corporate headquarters, hotel/conference facilities, and related accessory uses to create a coordinated development approach along selected major corridors. A conversion from PC to PCB is proposed to reflect a 2005 zone change (See Items #2 on Table LU-2).

Economic Growth Overlay (EGO) This overlay district is intended to provide for a diversity of compatible land uses and development densities. A parcel may include a mixture of residential, office, retail, recreational, open space, and other uses with the specific design guidelines and access management principals. The intent of the EGO is to encourage:

- Compact development
- Traditional village center scale and context
- Expanded land usage that fosters an environment for corporate and mixed use development
- More intensive, self-contained development that includes mixtures of commercial, industrial and residential uses
- Development is multi-modal- pedestrian, bicycle, and vehicular

- Diverse housing opportunities and choices: Residential uses within the core of the growth center can include upper-level flats or free-standing apartment buildings
- Transportation choice: Current RIPTA bus lines traverse the site, and there is room for bike lanes or an off-road bike path along each corridor
- Design for sense of place: By enhancing the presence of new buildings on both sides of Routes 7 and 116, the development concept (opposite page) creates a sense of arrival

The ultimate goal to be achieved in establishing the EGOD is fostering an environment that not only realizes development of the Planned Corporate District, but also realistic development of those properties at the intersection of Routes 7 and 116.

Planned Corporate Bio-Pharmaceutical (PCB) - This district is established to permit by right the manufacture of drugs and pharmaceuticals. In all other respects, the provisions pertaining to a Planned Corporate District shall apply to this district (See Items #2 on Table LU-2).

Planned Development (PD) - This district is established to provide areas for large scale residential and/or commercial development within a comprehensive site plan, subject to development plan review by the Planning Board. A new area is proposed along Route 116 near the Lincoln border and on Austin Avenue (See Items #1 and 29 on Table LU-2).

Open Space (OS) - Land held by the Town, State or private conservation organizations such as the Audubon Society of Rhode Island that is currently or, is planned to be used for recreation or conservation purposes are classified as Open Space. Permitted uses in the Open Space zone would be those agricultural uses allowed in the R-80 and R-200 zoning districts, certain open recreation and public and semi-public uses. There are 77 properties representing 2,854 acres listed in Table NR-4 that are considered Open Space, an increase of 40 properties and 1,316 acres from the 2006 Update.

Zoning and Land Use Inconsistencies

State Guidance requires communities to identify discrepancies between their current zoning and the future land use plan. Communities are required to develop a plan to correct identified inconsistencies, and provide a schedule for implementing the corrections. Specific changes to land use designations and areas where inconsistencies exist between land use designations and existing zoning district designations are noted in Table LU-4 below and depicted on Figure LU-12. Figure LU-13 shows existing zoning district designations. Properties proposed for inclusion in the new Open Space zone are not listed individually in Table LU-4 Land Use Changes /Zoning Inconsistencies but are shown in Figure LU-12 as “Open Space Zoned Otherwise”. Table NR-4 and Figure NR-4 provide details on properties that will be included in the Open Space zone.

Table LU-4: Land Use Changes /Zoning Inconsistencies

Map ID	Existing Land Use	Proposed Land Use	Existing Zoning	Proposed Zoning	Description	Change Schedule
1	PC	PCDB	PC	PCDB	2 Lots 100 Technology Way & DeCotis Farm Road 2005. Zone Change originally for Dow Chemical	Short Term 1Yr.
2	LT Industrial/ Industrial	LT Industrial	LT Industrial/ Industrial	LT Industrial	Multiple lots, 325-347 Farnum Pike. Lots with split zoning.	Short Term 1Yr.
3	LMDR	MDR	R-80	R-Med	Multiple lots on Hanton City Trail and Pond View Court. Developed neighborhood with lots <= 1 ac w/municipal sewers	Mid Term 3/5Yrs.
4	MDR	HDR	R-20M	R-20 M	Stillwaters Place, 300 Stillwater Road, 32 Unit Multi Family condominium development- Zone Change	Short Term 1Yr.
5	LMDR	HDRM	R-20M	R-20 M	The Oaks & The Residence @ Limerock 32 & 28 unit multi-family condominium developments - Zone Change	Short Term 1Yr.
6	LMDR/ HDR	MU/HDR	R-80/R-20	MU/R-20	South of Route 295, 696 Douglas Pike to Harris Road. Commercial use mixed with residential adjacent to highway and other commercial zoning.	Long Term 10/Yrs.
7	LMDR	MDR	R-80	R-Med	149-179 Stillwater Road and Tristan Court Frontage lots and new plat with lots <= 1 ac w/municipal sewers	Mid Term 3/5Yrs.
8	LMDR	MDR	R-80	R-Med	Isolated lot at the end of Hill Street in Low/Med District	Mid Term 3/5Yrs.
9	LMDR /C	PD	R-80/C	PD	371-445 Douglas Pike. Split lot frontage C - Rear R-80/ Commercial/Ind./Residential uses	Short Term 1Yr.
10	LMDR	HDRM	R-20M	R-20 M	406-426 Douglas Pike/Whipple Road. Cardinal Hill, 14 –Unit condominium development. Zone Change	Short Term 1Yr.
11	HDR &Med. LMDR	HDR /MDR / LMDR	R-20, R-Med & R-80	R-Med/ R-80	Ridge Road, Dillon Lane, & Deerhill Drive w/ some split lots.	Short Term 1Yr.

Smithfield Comprehensive Community Plan

Map ID	Existing Land Use	Proposed Land Use	Existing Zoning	Proposed Zoning	Description	Change Schedule
12	LMDR	MDR	R-80	R-Med	322-1405 Douglas Pike & Ridgeview Court Road. Developed neighborhood with lots <= 1 ac	Mid Term 3/5Yrs.
13	Medium Res.	PD	R-Med	PD	3 Twin River Road. Large lot across from PD zone.	Mid Term 3/5Yrs.
14	LMDR	HDRM	R-80	R-20 M	Dillon Lane Dean Pines Affordable 34 -Unit multi-family and Dean Estates Condominium 31-Unit multi-family. Comp Permit 24 LMI Units Total	Short Term 1Yr.
15	HDR	HDRM	R-20	R-20 M	Country Hill Lane off of Whipple Road 12-Unit Condominium project. Comp Permit	Short Term 1Yr.
16	HDR Density	HDRM	R-20	R-20 M	13 Hill Street. Whipple Creek 16-Unit (Prelim/Final pending) Comp Permit	Short Term 1Yr.
17	Medium Res.	LMDR	R-Med	R-80	Farnum Pike and Old County Road. Primarily large vacant lots between Route 295 and Old County Road.	Short Term 1Yr.
18	HDR	MDR	R-20	R-Med	West side of Old County Road. Primarily developed lots 1+ acres	Short Term 1Yr.
19	LMDR & HDR	MDR	R-80 & R-20	R-Med	Developed lots on Mountindale Road, Stoney Lane, Walter Carey Road and Carlton's Way primarily 1 acre lots mostly unsewered.	Mid Term 3/5Yrs.
20	HDRM/ HDR	MDR	R-20/R-20M	R-Med	80 Seville Road. Property abuts Esmond Village. Not served by municipal water or sewer	Mid Term 3/5Yrs.
21	PD/LMDR	LDR	PD/R-80	R-200	44 Cedar Swamp south to Route 44. Large lots, primarily wetland.	Short Term 1Yr.
22	PD, MU /Industrial HDRM	PD/LDRHD RM HDRM	MU/Indus t./R-20	R-200, PD & R-20 M	Back lots south of Route 44 and Lark Industrial Highway with significant wetlands change to LDR. Bank and commercial office building along Route 44 change to PD and multi family development change to HDR-M.	Short Term 1Yr.
23	LMDR	HDR	R-80	R-20	45-93 Smith Avenue. Split lots along north side of Smith Avenue.	Short Term 1Yr.

Smithfield Comprehensive Community Plan

Map ID	Existing Land Use	Proposed Land Use	Existing Zoning	Proposed Zoning	Description	Change Schedule
24	HDR/ LMDR	MU	R-20 & R-80	MU	Split lots along Putnam Pike change to Mixed Use	Short Term 1Yr.
25	LMDR	MDR	R-80	R-Med	South side of West Greenville Road, Fanning Lane, Tanglewood Plat. Developed neighborhood with lots <= 1 ac w/municipal sewers.	Short Term 1Yr.
26	HDR	MU	MU	MU	659-707 Putnam Pike. Intent was to have Mixed Use zone along both sides of Route 44.	Short Term 1Yr.
27	HDR	LMDR/ MU & Village	R-20& R-20M	R-80, MU & Village	Large lots along Stillwater River. Mostly wetland and agricultural fields. Developed lot at the end of Garnett Lane to Village to match surrounding development. Split lot MU/HDR to MU	Mid Term 3/5Yrs.
28	LMDR	PD	PD	PD	60 Austin Avenue. Consistent with 2008 zone change for Mater Ecclesiae. Zone Change	Short Term 1Yr.
29	LMDR	HDR	R-80	R-20	Valjean Drive & Fieldstone Circle. Consistent with development in Sprague Village Phase I	Short Term 1Yr.
30	MDR	LMDR	R-Med	R-80	150 Austin Avenue. Large agricultural lots.	Mid Term 3/5Yrs.
31	LMDR	MDR	R-80	R-Med	Cherry Blossom Lane Plat. Consistent with development in Sprague Village Phase II	Short Term 1Yr.
32	HDR	LMDR	R-20	R-80	66 Swan Road. Large agricultural lot.	Mid Term 3/5Yrs.
33	PC	LMDR	R-80	R-80	Menard Lane & Mowry Farms subdivision. Approved subdivisions shown as PC on FLU	Mid Term 3/5Yrs.
34	LDR	LDR	R-80	R-200	Rocky Hill Road & West Reservoir Road Area around Woonsocket Reservoir #3. Watershed protection.	Short Term 1Yr.
35	LMDR	Light Industrial	R-80	LI	181 George Washington Hwy. Restaurant along 116 in R-80	Mid Term 3/5Yrs.
36	Industrial	Light Industrial	Industrial	LI	167 George Washington Hwy Vacant lot with power lines	Mid Term 3/5Yrs.

Smithfield Comprehensive Community Plan

Map ID	Existing Land Use	Proposed Land Use	Existing Zoning	Proposed Zoning	Description	Change Schedule
37	LMDR	LMDR	R-20	R-80	220 Stillwater Road. Lot at the head of Georgiaville Pond.	Short Term 1Yr.
38	MU/HDM	C	MU/R-20M	C	711 Putnam Pike. Salamon Mills to Commercial zoning to reflect current use.	Mid Term 3/5Yrs.
39	LMDR	LMDR	PD	R-80	Back lot off of Mountaindale Road. Mostly wet lot near mall.	Mid Term 3/5Yrs.
40	HDR / LMDR & Village	Village	R-20/R-80/Village	Village	Cemetery lot west of 35 Smith Avenue and at the end of Church Street. Split zone change to all Village.	Short Term 1Yr.
41	PD	LMDR	PD	R-80	268 Ridge Road (rear) Split lot change to Low/Med.	Short Term 1Yr.
42	HDR	HDRM	R-20	R-20 M	29 Whipple Road. Georgiaville Village Green proposed for 42 LMI rental units and existing multi family units at 34 & 38 Whipple Ave.	Short Term 1Yr.
43	MU/HDR	MU	MU/R-20	MU	719-733 Putnam Pike. Split lots.	Short Term 1Yr.
44	C/LMDR	C/LMDR	R-80	C/R-80	39 Cedar Swamp Road. Split lot shown on FLU	Mid Term 3/5Yrs.
45	LDR	LMDR	R-80	R-80	125 Burlingame Road. Zone Change.	Short Term 1Yr.
46	HDR	C	R-20	C	Split lot zoning.	Short Term 1Yr.
47	LMDR/HDR	HDRM	R-80 & R-20	R-20M	Town owned lots identified in Table H-23 as potential LMI site (See Map ID 22 & 23.	Short Term 1Yr.
48	PC	HC	HC & PC	HC	Land use change- Existing/pending commercial development. Zoning on a small portion of an adjoining lot to HC from PC.	Short Term 1Yr.
49	HDR	MU	R-20	MU	Lots used for parking and future access at the Greenville Library	Short Term 1 Yr.

Map ID	Existing Land Use	Proposed Land Use	Existing Zoning	Proposed Zoning	Description	Change Schedule
50	LMDR	MDR	R-80	R-Med	Single undeveloped R-80 lot on Farnum Pike with municipal services listed as LMI site.	Short Term 1Yr.
51	PC	HC	PC	HC	One developed lot on 116 and one vacant lot with frontage on the dead end section of Rocky Hill Road	Short Term 1Yr.
52	LMDR	MDR	R-80	R-Med	Swan Rd., Connors Farm Rd. and portions of Williams Rd. and Log Rd. Developed neighborhood with the majority of lots under 2 acres.	Short Term 1Yr.
53	LMDR	MDR	R-80	R-Med	Developed neighborhood with the majority of lots under 2 acres. Sewer and/or water service in most areas. Farnum Pike Between Old Forge and Rogler Farm Road, Latham Farm Rd., Bulingame Rd., a portion of Highland Terrace, Rogler Farm Rd., a portion of Brayton Rd. Dungay Rd., Levesque Dr., Jambray Dr., John Mowry Rd. (north) and Elna Dr.	Mid Term 3/5Yrs.

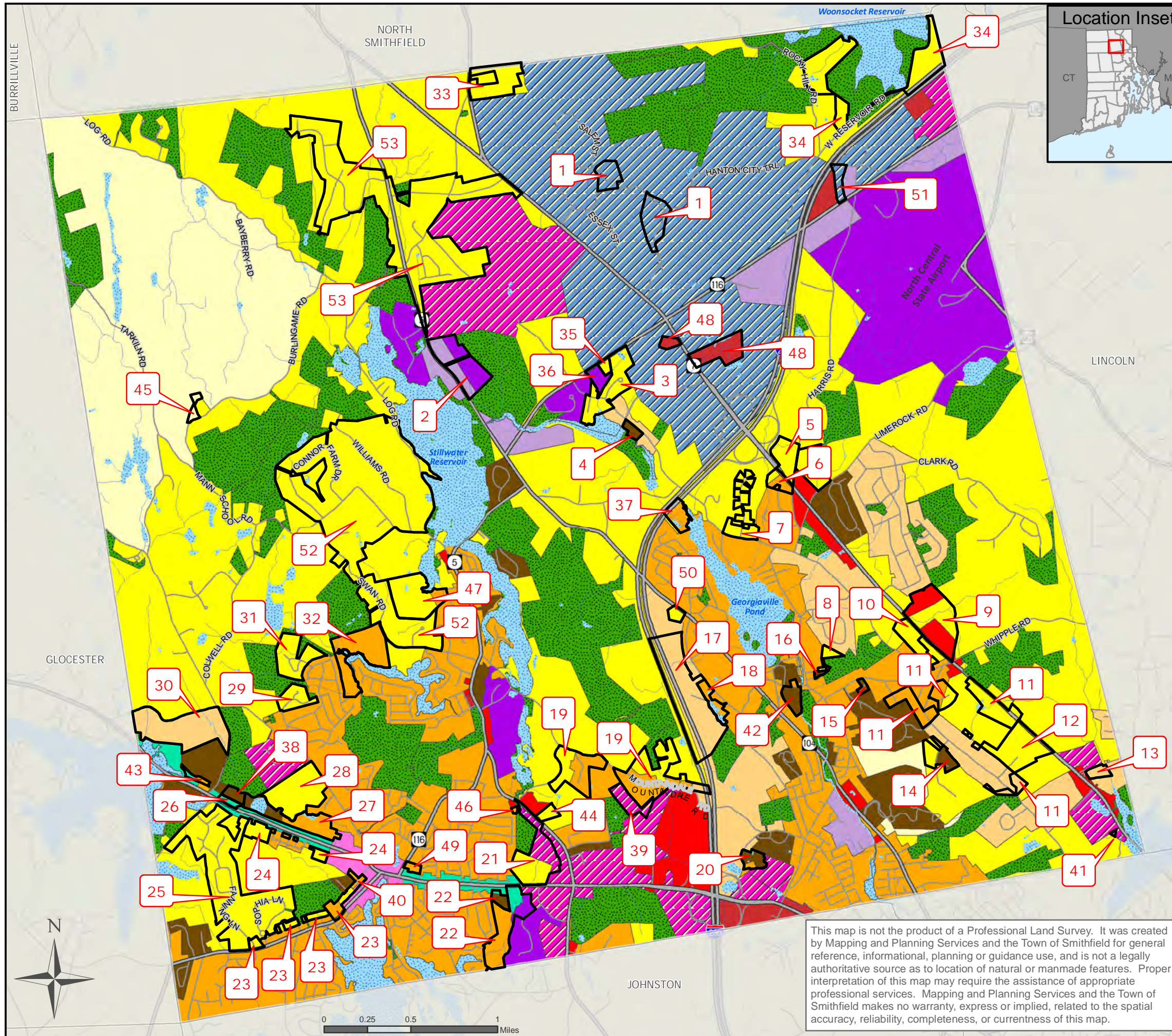


Fig. LU-12 :: INCONSISTENCIES between FUTURE LAND USE and EXISTING ZONING



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- See Table LU-4 for numeric listing 1
- Open Space zoned otherwise
- See Table NR-4 and Fig NR-4

Existing Zoning Districts

- Residential Conservation (R-200)
- Low Density Residential (R-80)
- Medium Density Residential (R-Med)
- High Density Residential (R-20)
- Multi-Family Residential (R-20M)
- Mixed Use (MU)
- Village (V)
- Commercial (C)
- Highway Commercial (HC)
- Light Industrial (LI)
- Industrial - Planned (I)
- Planned Corporate District (PCD)
- Planned Development (PD)

Features

- Highways
- Roads
- Open Water
- Streams

Boundaries

- RI Municipal

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services and the Town of Smithfield 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

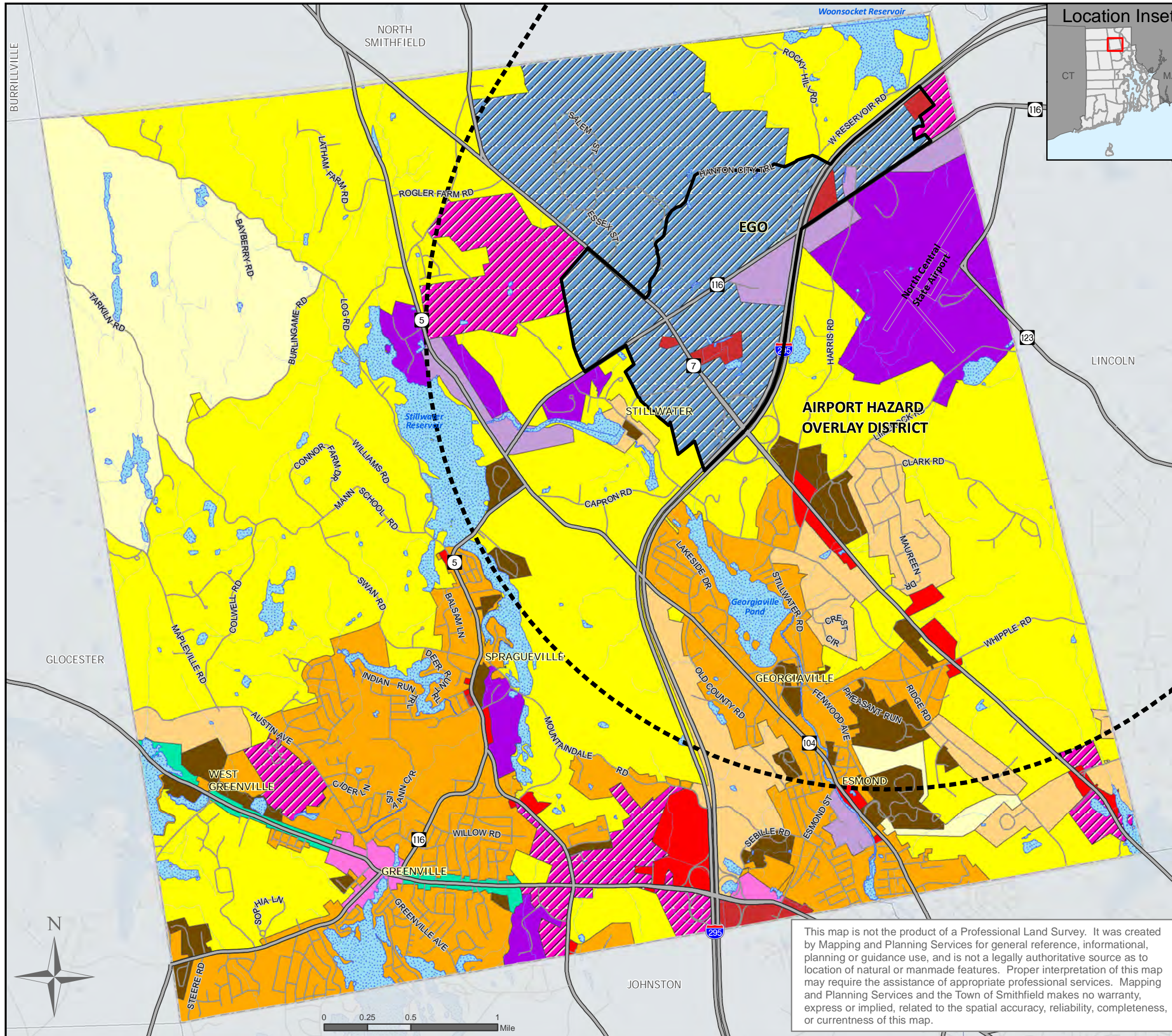


Fig. LU-13 :: EXISTING ZONING
Includes last amendment 10/20/2015

**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- Zoning Districts**
- Residential Conservation (R-200)
 - Low Density Residential (R-80)
 - Medium Density Residential (R-Med)
 - High Density Residential (R-20)
 - Multi-Family Residential (R-20M)
 - Mixed Use (MU)
 - Village (V)
 - Commercial (C)
 - Highway Commercial (HC)
 - Light Industrial (LI)
 - Industrial - Planned (I)
 - Planned Corporate District (PCD)
 - Planned Development (PD)
- Overlay Districts**
- Airport Hazard Overlay District
 - Economic Growth Overlay District (EGO)
- Features**
- Highways
 - Roads
 - Water
 - Streams
- Boundaries**
- Smithfield
 - RI Municipal
 - Other States

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Goals, Policies, and Actions

“Allow a planned growth in population with provision for supporting adequate residential, commercial, industrial, recreational and community facilities while providing for open space. Provide residential areas consistent with long-range land use and growth management policies and upon housing need. Land use allocations would be evaluated on the land’s capability for development, present use, impact of present or future use on natural and cultural resources, impact on public services and facilities, and compatibility of land uses in and around the area.”

GOAL LU-1

ESTABLISH A BALANCE BETWEEN RESIDENTIAL, COMMERCIAL, INDUSTRIAL, RECREATIONAL, PUBLIC FACILITY, AGRICULTURAL AND CONSERVATION LAND USES THAT SERVICE THE CURRENT AND FUTURE NEEDS OF THE COMMUNITY THROUGH THE DEVELOPMENT OF SOUND LAND USE PRACTICES.

Policy LU-1.1 Strive to achieve equity between the costs and benefits of new development.

Action LU-1.1a Locate residential developments and neighborhoods in the vicinity of employment and commercial centers, community facilities and services, and transit corridors.

Policy LU-1.2 Encourage residential, commercial, industrial and mixed use areas which do not conflict with one another, are compactly grouped, attractive and compatible with the ability of land and water resources to support the development.

Action LU-1.2a Direct the location of affordable housing developments to the areas identified, and in accordance with the guidelines provided for, in the Town’s Low and Moderate Income Housing Plan (LMI Plan).

Action LU-1.2b Amend the list of potential affordable housing sites by adding new sites in the identified areas to make up for sites that have been developed or found to be undevelopable.

Action LU-1.2c Implement innovative planning of residential and commercial development. Continue to require conservation developments in residential zones where appropriate to address new land development, and reduce the minimum lot area requirements by zoning district.

Policy LU-1.3 Maintain and enhance desirable existing industrial areas, shopping areas and concentrations of service activities to minimize the need for new infrastructure investment and to maximize the utilization of existing infrastructure.

Policy LU-1.4 Prevent the preemption of commercial and industrial sites and buildings, within commercial and industrial zones, by conversion to uses with less demanding locational requirements, such as residential uses.

Policy LU-1.5 Ensure that residential growth does not outpace the Town’s ability to provide necessary services and facilities and to provide for public health and safety.

Action LU-1.5a Investigate the possibility of expanding Impact Fees to include infrastructure cost for sewer, and road improvements and maintenance.

Action LU-1.5b Exclude wetlands and other unbuildable land from the calculation of buildable lots in proposed subdivisions and Land Development Projects.

Action LU-1.5c Develop design review guidelines and performance standards that mitigate conflicts between industrial and commercial development with other land uses and activities.

Action LU-1.5d Review and amend the Airport Overlay District ordinance as necessary.

Action LU-1.5e Review all land development projects proposed within designated airport hazard zones for compliance with the Rhode Island Airport Land Use Compatibility Guidebook.

Policy LU-1.6 Explore the development of a growth center in keeping with the State's Growth Center initiative.

Action LU-1.6a Seek formal Growth Center designation for the Route 7/116 Corridor.

Action LU-1.6b Develop a master plan for the growth center that sets out desired future uses, delineates the boundaries and provides a detailed layout of streets, blocks, parks and other elements.

Action LU-1.6c Develop an overlay ordinance for the Route 7/116 Corridor with the flexibility necessary to allow the development of a mixed use center while maintaining the principals of the Planned Corporate District.

Action LU-1.6d Evaluate form-based zoning to guide development within the Corridor in accordance with architectural guidelines.

Action LU-1.6e Collaborate with RIDOT as a partner in master planning efforts to ensure that the redesign of Route 7 and 116 incorporates pedestrian, mass transit and access management elements.

Action LU-1.6f Evaluate establishing a Redevelopment authority to assemble parcels and issue bonds for road and infrastructure improvements.

GOAL LU-2

PROMOTE THE PRESERVATION, IMPROVEMENT AND ENHANCEMENT OF THE POSITIVE AND DESIRABLE CHARACTERISTICS OF SMITHFIELD'S ENVIRONMENT AND LAND USE PATTERNS.

Policy LU-2.1 Preserve and support the remaining viable agricultural endeavors.

Policy LU-2.2 Recognize the Town's scenic rural landscapes, roads, wildlife habitat, sensitive resources and vistas as important cultural and economic resources, and act to preserve them.

Policy LU-2.3 Consider the location of planned industrial and commercial districts when planning new or expanded public sewer and water services and highway improvements.

Action LU-2.3a Identify and maintain a database of sites suitable for commercial and industrial development which are served by, or planned to be served by, public sewer and water, have adequate access to major arterial roadways, and will not intrude upon less intensive land uses.

Action LU-2.3b Identify vacant or underused buildings suitable for commercial and industrial development/redevelopment which have adequate access to major arterial roadways and will not intrude upon less intensive land uses.

Policy LU-2.4 Preserve viewsheds of remaining farm fields by purchasing easements and employing conservation development principals when reviewing development proposals.

Policy LU-2.5 Preserve valuable open space and large contiguous natural resources by zoning for less intensive use.

Action LU-2.5a Adopt an open space zoning district and rezone parcels as identified on the Future Land Use map.

GOAL LU-3

TO MAINTAIN AND IMPROVE VILLAGE CHARACTER OF THE TOWN.

Policy LU-3.1 Encourage continuation of the village development pattern through application of zoning and land development regulations.

Action LU-3.1a Amend zoning regulations to support greater infill development in existing villages and support greater densities in areas designated as within the Urban Services Boundary.

Action LU-3.1b Develop appropriate design guidelines for all development projects that will ensure the preservation of community and historic character of all neighborhoods. Examine form-based zoning codes as a potential alternative.

Action LU-3.1c Identify areas suitable for new traditional residential neighborhoods. Amend zoning to support such development to include mixed-use and low to moderate income housing, if appropriate.

Action LU-3.1d Utilize farmland preservation methods such as purchasing of development rights, transfer of development rights, allowance of farm related commercial activities by right and/or special permit, and permitting limited, properly buffered residential development at the edges of large agricultural properties.

GOAL LU-4

MINIMIZE THE IMPACTS OF THE SITING OR EXPANSION OF POTENTIALLY HAZARDOUS LAND USES.

Policy LU-4.1

In future applications for open space grant funds, consider for acquisition or other forms of protection, those areas having unique visual qualities as identified in the Natural and Cultural Resources Elements.

Action LU-4.1a Develop and enforce adequate location and siting criteria within the Town's land use regulations for major utilities and public facilities such as electrical generation, power lines, pipe-lines and landfills.

Policy LU-4.2 Minimize the adverse impacts of power transmission facilities on the environment by careful planning and by capitalizing on potential compatible uses to the greatest extent possible.

GOAL LU-5

CONSIDER THE NATURAL CAPACITY OF THE LAND TO SUPPORT FUTURE DEVELOPMENT, POPULATION AND THE EXISTING QUALITY OF LIFE.

Policy LU-5.1 Promote land development which is sympathetic to the existing landforms.

Action LU-5.1a Create open space systems and corridors that protect complete ecological units, link to contiguous open space in adjoining communities and provide structure and character to the built environment.

Policy LU-5.2 Ensure that development projects consider the capacity of water resources in the area.

Policy LU-5.3 Recognize the importance of recreation, open space, public access to water bodies, and historic resources to the Town's economy, in tourism development and in attracting and retaining industry.

Action LU-5.3a Develop site plan guidelines to require that structures be designed to blend with the natural surroundings of a site, and harmonize with the natural features of the area.

Policy LU-5.4 Promote stormwater best management practices to prevent contamination of the Town's surface water resources and ensure maintenance of water quality.

Policy LU-5.5 Retain open spaces large enough to serve as wildlife habitat, store flood waters, abate air and water pollution, provide a sense of openness, and serve as buffers and aesthetic amenities to existing development.

Action LU-5.5a Amend Town's Land Development and Subdivision Review Regulations to include requirements for Low Impact Design techniques for stormwater and Landscape requirements.

Policy LU-5.6 Preserve, and where necessary restore, rivers, and water bodies and their shorelands for recreational use, wildlife habitat, water supply and open space corridors.

Policy LU-5.7 Continue regional and watershed-wide planning effort begun by the Woonasquatucket Greenspace Protection Strategy to coordinate policy and planning efforts across municipal boundaries. Include watershed organizations in the process where possible.

Policy LU-5.8 Maintain wetlands in their current state to the extent possible as critical elements of groundwater recharge, wildlife habitat, flood storage and for their recreational value.

Action LU-5.8a Enforce a no-build buffer around all wetlands consistent with State and Town wetland setback requirements.

Policy LU-5.9 Maintain and improve the quality of groundwater in Smithfield.

Policy LU-5.10 Protect undeveloped land from development in Identified critical groundwater recharge areas.

Policy LU-5.11 Focus growth in existing high density (urban services) areas and designated Growth Centers.

Action LU-5.11a Identify potential growth centers in Town and seek state designation (target areas around existing village centers and Routes 7 and 116 Planned Corporate Zone).

GOAL LU-6

ENSURE THAT ACCESS TO LAND DEVELOPMENT PROJECTS IS PLANNED OUT IN ADVANCE OF DEVELOPMENT THROUGH A COMPREHENSIVE ACCESS MANAGEMENT PLAN.

Action LU-6.1a Formally adopt the Route 7/116 Corridor Access Management Plan and apply access management principals to projects on a Town wide basis.

Action LU-6.1b Develop a Town-wide Access Management Ordinance as called for in the Route 7/116 Corridor Access Management Plan.

GOAL LU-7

PROTECT, PRESERVE, AND ENHANCE AGRICULTURAL LAND WITHIN THE TOWN

Policy LU-7.1 Require that all applications for land development with a potential to encroach on farmland include an assessment of the impact of development on agricultural operations, prime farmland soils, soils of statewide importance, and locally important farmland soils using the method prescribed by the Natural Resource Conservation Service (NRCS) farmland impact conversion rating form (AD1006) or equivalent.

Action LU-7.1a Amend the subdivision regulations to require all applications for land development to include mitigation of adverse impacts on agricultural operations, prime farmland soils, soils of statewide importance, and locally important farmland soils.

Policy LU-7.2 Support the preservation of farmland for farming activities by prohibiting the conversion of farmland to housing without mitigation.

Action LU-7.2a Work with local farmers and appropriate agencies to reduce or eliminate the potential contamination of the ground and surface waters with pesticides, herbicides, rodenticides, fungicides, fertilizers, untreated stormwater and soil through runoff and erosion from agricultural activities.

Action LU-7.2b Utilize farmland preservation methods such as purchasing of development rights, transfer of development rights and permitting limited, properly buffered residential development at the edges of large agricultural properties.

HOUSING

Introduction

The comprehensive planning process involves an analysis of existing conditions, projections of future needs based on trends, issues identification, establishment of goals and policies, and finally recommendations and implementation. The Comprehensive Planning and Land Use Regulation Act requires that the Comprehensive Plan reflect its goals, policies and policies for housing, as well as other elements. At a minimum, the Town's housing policies must address the following:

- Upgrading deteriorating and substandard housing;
- Providing new housing opportunities geared to the needs of all elements of the population;
- Identifying steps to enhance the affordability of housing and identifying resources to be used in this regard;
- Identifying resources and steps designed to achieve housing goals and implement housing policies:
 - Specific steps to enhance housing affordability;
 - Municipal agencies responsible for housing;
 - Code and Ordinance changes and innovations to encourage achievement of housing goals;
 - Public and private resources to be utilized in achievement of housing goals;
 - Sites for housing development (location and types);
 - Potential conversion of existing structures to housing use; and
 - Financial strategies to be developed for housing.

The Rhode Island Comprehensive Planning and Land Use Regulation Act (RI General Laws, Title 45, Chapter 22.2) establishes a series of goals to provide overall direction and consistency for state and municipal agencies in the comprehensive planning process established in the Act. With regard to housing, the Act provides the following goal:

“To promote a balance of housing choices, for all income levels and age groups, and which recognizes the affordability of housing as the responsibility of each municipality and the state.”

The State Guide Plan is composed of several sections, or elements. Element 421, the State Housing Plan, and Element 423, the Rhode Island Five Year Strategic Housing Plan: 2006-2010, *Five Thousand in Five Years* make specific recommendations for housing in Rhode Island which the Smithfield plan must take into consideration. One of the principal goals of these plans is to increase the availability of low and moderate housing for State residents.

State Guide Plan Goal 1-1-5 Affordability

Goal 1-1-5 encourages every municipality to provide an adequate number of low and moderate housing units for low-income citizens, those with severe cost burdens and those with special needs. As described in the State Guide Plan Overview¹, the housing policies of the State of Rhode Island are:

1. Population and Diversity: to use the most reliable population and housing statistics available to periodically establish and update state housing proposals; promote diversity

¹ State Guide Plan Overview, Statewide Planning Program, p. 421.2.

of housing types and affordability; and help different racial, ethnic, and special population groups find suitable housing.

2. Housing Code Enforcement: promote the updating and enforcement of the various housing codes and ordinances within the state.
3. Stabilizing and Protecting Existing Areas: help protect historic as well as other essential aspects of neighborhoods that provide identity and character; help prevent residents from being displaced; and promote ground water protection, watershed management, and flooding abatement.
4. Improved Usage of Existing Structures: support the best use and maintenance of existing housing stock.
5. Optimum Locations for New Housing Units: encourage new housing construction, as warranted, in proximity to planned or existing infrastructure and support the expansion of neighborhoods relative to a closer relationship with local and regional needs.
6. Affordable Housing and New Housing Concepts: study, develop, and support improved methods, techniques, legal remedies, and institutional structures for producing low/moderate income affordable housing; and encourage improved planning of neighborhood development, growth management, affordable housing financing, and housing maintenance programs.

The State Housing Plan² does not contain a list of specific actions to which local communities are required to conform. The Plan instead provides several Strategies and Recommendations that both state agencies and local communities are urged to consider in their activities and plans that affect the provision of housing. The recommendations on housing affordability are provided below:

Table H-1: State Strategies for Housing Affordability

Summary of Strategies and Recommendations for Housing Affordability State Housing Plan 2000
<p>The State should provide monetary incentives and/or technical support for courses and training for elected local community officials, and planning and zoning administrators regarding affordable housing and responsibilities in meeting mandated state housing Policies. Such training can demonstrate that affordable housing can be attractive and serve as an asset to the host community.</p> <p>The Rhode Island Housing and Mortgage Finance Corporation should encourage the establishment of non-profit housing cooperatives (either single or multi-family housing units) for low and moderate-income households. Housing cooperatives impart a sense of ownership and can serve households that would otherwise lack the means to purchase housing.</p> <p>Communities should consider appropriate zoning changes to allow smaller residential lot sizes as infill for “built-up” areas where there are adequate public utilities and services.</p> <p>Communities should encourage increased residential construction and conversion of existing</p>

² State Housing Plan, State Guide Plan Element 421, RI Statewide Planning Program, March 2000, p. 5.10.

units for cooperatives, condominiums, and attached housing, when such units will serve low-income households.

Communities should make wider use of planned unit and cluster developments to increase affordability where appropriate.

Entitlement communities under the Community Development Block Grant Program should make vacant “building” and “lot” homesteading programs an affordable housing initiative.

The RI Housing Resources Commission should sponsor periodic statewide housing conferences and workshops to promote information sharing on such topics as state housing program policies, and innovative ways to lower housing costs to stimulate action to resolve housing need issues. Such conferences should target the financial community, providers, developers and key public officials.

Communities should be encouraged to earmark an adequate amount of land for the construction of multi-family housing; especially those towns and cities that do not currently meet the 10 percent low-moderate income housing goal as established by the RI Low and Moderate Income Housing Act (RIGL 45-53).

Source: State Housing Plan, State Guide Plan Element 421, March 2000

The Low and Moderate Income Housing Act

The Low and Moderate Income Housing Act (R.I. General Laws, 45-53) was enacted in 1991 to address the need for cities and towns in the state to provide opportunities for the establishment of low and moderate income housing. The Act establishes a ten percent minimum threshold goal for such housing in each city and town, including Smithfield.³ As of November 30, 2012 (the latest report available) the Housing Resources Commission reported that 5.05 percent of the housing units in Smithfield could be considered “affordable” to persons of low and moderate income.

The Act, along with several companion statutes, was substantially amended in 2004 to provide for the provision of safe and affordable housing in accordance with a 5-year strategic plan for housing, to be prepared by a newly-created Rhode Island Housing Resources Commission. This Plan was to have been prepared by July 1, 2006. Until that plan is prepared, communities are required to prepare the housing element of their Comprehensive Plans in accordance with current guidelines adopted by the State Planning Council (see below).

Communities such as Smithfield that do not meet the ten percent goal are subject to what is described in the Act as the “Comprehensive Permit Procedure.” A comprehensive permit is defined as “...a single application for a comprehensive permit to build that [low and moderate] housing in lieu of separate applications to the applicable local boards...”⁴ This procedure allows a developer of such housing to apply to the local Board of Review for a permit to build affordable housing under a “streamlined” procedure designed to greatly reduce the time normally required to obtain development permits. The Act also allows a development to request exceptions to local requirements and regulations normally applied to similar developments. These “exceptions” can greatly increase the density and intensity of a proposed project. During 2003-2004, for example, five separate applications were submitted to the

³ The Act also provides that urban municipalities having at least 5,000 occupied rental units and where those units comprise 25 percent or more of all housing units, the requirement is that at least 15 percent of the rental units must be affordable to persons of low and moderate income. As of January 2004, the following communities fell into this category: Cranston, North Providence, Pawtucket, Warwick and West Warwick.

⁴ [R.I.G.L. 45-53-4](#).

Smithfield Zoning Board for comprehensive permits to construct a total of 1,006 housing units (of which 219 were affordable) at a net density of nearly 12 units per developable acre. The zoning regulations in effect at that time permitted a maximum density of two units per acre in the Town's principal multifamily zoning district (R-20M).

In February 2004, the General Assembly enacted a moratorium on for-profit developers using the Comprehensive Permit Procedures contained in the Act.⁵ All current applications on file with a local community are subject to review and appeal procedures specified in the 2004 general revisions. The moratorium also provided that local communities must prepare by December 31, 2004 a comprehensive plan housing element for low and moderate income housing as specified by the Act. If the plan is submitted and approved, new or pending comprehensive permit applications must conform to the community's approved housing plan.

The Act prescribes standards and procedures for the Board of Review to follow in its review of comprehensive permit applications. Where an application is denied, or is granted with conditions and requirements that make the project infeasible, the applicant may appeal to the State Housing Appeals Board (SHAB), which has the authority to overturn a denial or otherwise unfavorable decision made by the local Board of Review.

The Act also allows the SHAB to promulgate its own rules and regulations in hearing petitions filed for review. Under the regulations, the minimum percentage of such units required in order to be eligible to file for a comprehensive permit from the town is twenty-five (25) percent of the total number of units. The stated intent of this provision in the regulations was to encourage a mixture of housing types and occupants. It may also permit developers to create low and moderate income units via cross subsidization from market rate units. Finally, under an amendment to the Act made by the General Assembly in 2002, private developers were granted expanded authority to file applications. Previously, applications under the Act could only be filed by public agencies, nonprofit organizations, limited equity housing cooperatives and private developers of rental projects. As stated previously, in the case of Smithfield, these amendments resulted in applications being filed for 787 market-rate housing units out of a total of 1,006 units in 2003 - 2004. Under these circumstances, the Town had to consider the impacts generated not only from the affordable units, but also from the market rate units as well. If allowed, the development of this many units would have overburdened the local school system that was already near capacity. As allowed under the LMI Act, the Town instituted a cap of 1% of all housing units/year for comprehensive permit consideration. For 2005, that cap was set at 75 units. This number is now 78 units to reflect the 2010 Census figure for total non-seasonal housing units.

Census and Housing Data Inventory

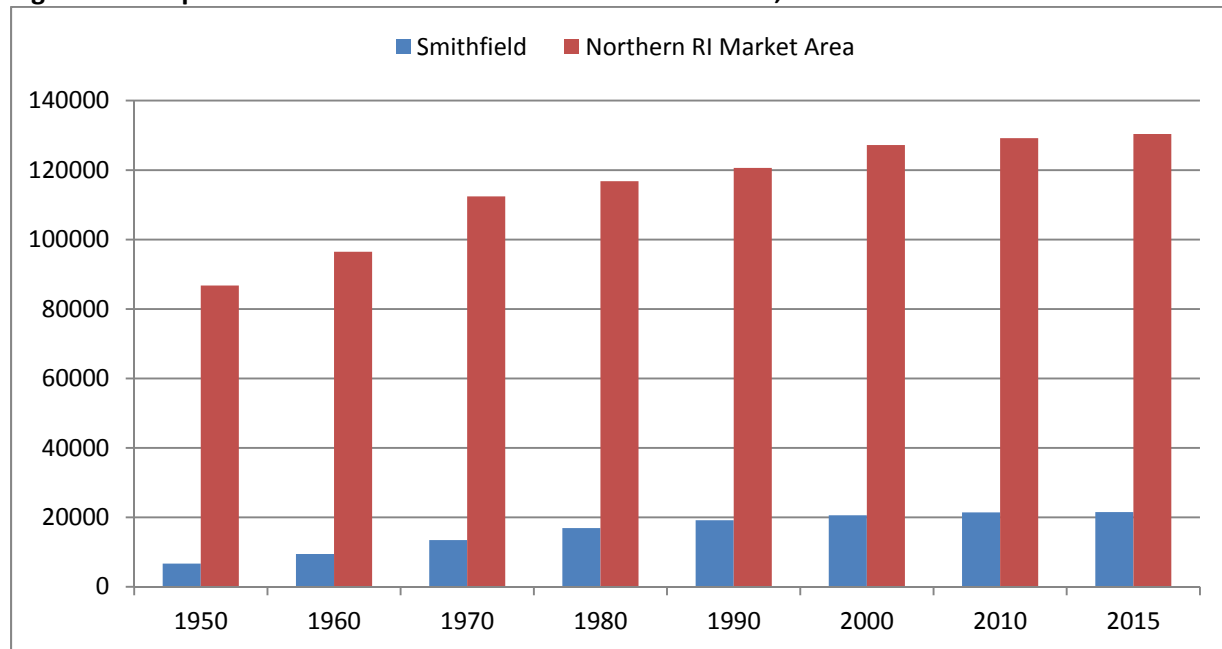
This section provides an inventory of demographic, economic and housing data for the Town of Smithfield, Rhode Island. Local, state and federal sources were used to compile this data with the greater proportion of statistics coming from the 2000 and 2010 decennial Census. State compilations of the Census data were cited where applicable. Each sub-section summarizes particular datasets and provides interpretations that will lead to further analysis and planning later in this Plan.

⁵ R.I.G.L. 45-53-4, as amended February 13, 2004.

Population Growth and Characteristics

Smithfield’s population has grown steadily over the past half-century, typical of most Rhode Island suburban communities. As highway development provides easier access to undeveloped areas outside of the older urban core communities of Providence and Woonsocket, housing construction steadily proceeds in the suburban areas. Figure H-1 compares population growth in the Northern Market Area to that of Smithfield.

Figure H-1: Population Growth from 1950 to 2015 in Smithfield, RI and the Northern RI Market Area



The Northern RI Market Area as defined by Statewide Planning is comprised of five communities: Smithfield, North Smithfield, Woonsocket, Cumberland and Lincoln. This market area grew at an overall rate of 48.9 percent between 1950 and 2015, but the range of growth varies greatly. More information on Smithfield population characteristics may be found in the Land Use Element of this Plan.

Racial and Ethnic Composition

Table H-2 summarizes the Town of Smithfield’s racial and ethnic composition as captured by the 2013 American Community Survey (ACS). These data show a relatively homogenous local population in terms of race and ethnicity. As of the 2013 ACS, Smithfield’s population was 97.1 non-Hispanic and 2.9% Hispanic. Smithfield is expected to continue to see increases in its Hispanic and other minority populations as will the State as a whole.

Table H-2: Smithfield Racial and Ethnic Composition, 2015 ACS

Race	Population	% of Total Population
White	20,295	94.3
Black or African American	293	1.4
Asian	512	2.4
Hawaiian / Other Pacific Islander	24	0.1
Some Other Race	76	.4
American Indian / Alaskan Native	69	0.3
Two or More Races	244	1.1
TOTAL:	21,454	100
Ethnicity	Population	% of Total Population
Hispanic or Latino (any race)	615	2.9
Not Hispanic or Latino	20,898	97.1

2015 American Community Survey (ACS)DP05

Smithfield's Households

A household is defined as a person or group of people who occupy a housing unit as their usual place of residence. The number of households equals the number of occupied housing units in a census unit. As the tables and discussion below show the 2015 ACS appears to under count households and housing units in Smithfield. Accordingly, the 2010 Census figures will be used in conjunction with building department figures for new homes constructed since 2010 to determine total households and total units. In Smithfield, the number of households increased 4.7% from 2000 to 2010– slightly more than eight times the increase in households statewide for the same period. Adding the 109 new units built between 2010 and 2015 to the 2010 household count indicates that there was an increase in households of about of 1.5%. Using this number also supports the continuing trend for smaller households. Instead of the small increase in household size suggested by the 2015 ACS figure, there is a reduction from 2.85 in 2010 to 2.82 in 2015.

Table H-3: Smithfield and Rhode Island Households, 2000 – 2015

	2000 Smithfield	2010 Smithfield	2015 Smithfield	% Change 00-10	2000 Rhode Island	2010 Rhode Island	2015 Rhode Island	% Change 00-10
Total Population	20,613	21,430	21,513	4.4	1,048,319	1,052,567	1,053,661	+0.5%
Total Households	7,194	7,532	7,641 ¹ 7,243 (ACS)	6.2 .4	408,424	413,600	410,602	+5%
Ave. Number of Persons per Household	2.9	2.85	2.82 2.97 (ACS)	-2.7 2.4	2.6	2.56	2.57	

1. Total Households 2010 Census + Certificates of Occupancy Issued 2010-2015 = 7,532 + 109 = 7,641 Households
Source: U.S. Census 2000, 2010, 2015 ACS

Homeless and Special Needs Populations

The Rhode Island Emergency Shelter Information Project, a consortium of the RI Emergency Food and Shelter Board, United Way of Southeastern New England and the RI Department of Human Services, defines a homeless person, "...as anyone who received emergency shelter, for whatever reason or whatever length of time." The Emergency Shelter Information Project tracks the usage of shelters, nights stayed in shelters and the overall statewide homeless rate to assess the homeless situation in the state. Considered a crisis, homelessness is a growing statewide problem.⁶

The Project's most recent report shows a slight decrease in the number of unduplicated shelter clients and total shelter nights in Rhode Island shelters from the previous year, but still indicates a marked increase in homelessness during the previous decade. For example, in the reporting year of 2007-2008, 6,437 clients utilized shelters. This compares to 5,686 in 2002 - 2003 and 4,466 in 1999-2000. Similarly, 218,858 nights of shelter were provided by Rhode Island's shelter system in 2008-2009⁷ as compared with 192,000 in 2002-2003 and 134,540 in 1999-2000.

In addition to trends in the usage of shelters, the Information Project calculates the overall homeless rate for the State of Rhode Island. Based on the 2007 American Community Survey Data from the U.S. Census, the chance that a RI resident would enter a homeless shelter was determined. For 2008-2009, 6.1 Rhode Islanders per 1,000 were likely to enter a homeless shelter. In 2002-2003 this number was 5.4 Rhode Islanders per 1,000.⁸

Figure H-1 shows the number of unique individuals who have utilized an emergency shelter or transitional housing program during the given time period. These figures do not include others who might be considered to be homeless, including those sleeping out of doors or those involuntarily doubled-up with friends or family. These statistics were compiled by the Rhode Island Coalition for the Homeless (RICH) and show a steady increase in the number of homeless during the most recent economic downturn, peaking in 2012 with 4,868 individuals. The number of homeless dropped dramatically through 2014 as the recession eased.

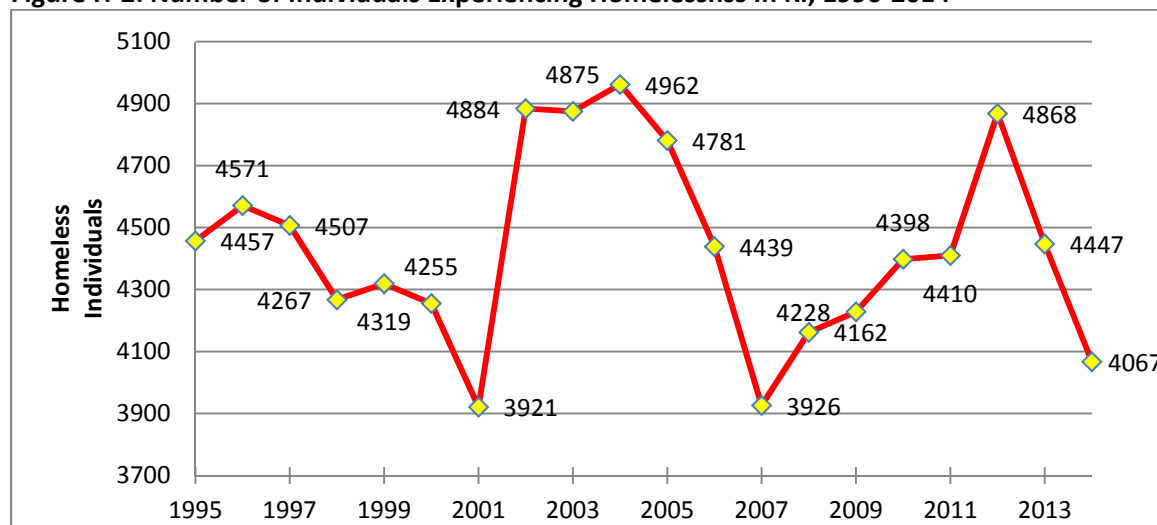
Multiple circumstances inherent to the homelessness problem render gathering accurate information difficult but the RI Emergency Food and Shelter Board does attempt to survey shelter clients to determine the last place of residence for each individual. These numbers provide some indication of the homeless need in the area. Twenty (20) clients reported the Town of Smithfield as their last place of residence in 2008-9 as compared with Eleven (11) in 2002-2003. Seven hundred thirty seven (737) individual clients claimed to originate from towns in the Northern Market Area. Of the Northern Market towns, Woonsocket has a disproportionate number of clients claiming that city as a last place of residence – 370 clients – compared to 24 for North Smithfield, 21 for Lincoln and 32 from Cumberland. The total number statewide for 2008 -2009 was 6,437 with Providence reporting the most clients at 2,109.

⁶ RI Emergency Shelter Annual Report, July 1, 2007 to June 30, 2008. RI Emergency Food and Shelter Board. 2009.

⁷ Ibid, Page 2.

⁸ Ibid, Page 6.

Figure H-2: Number of Individuals Experiencing Homelessness In RI, 1996-2014



Source: <http://www.rihomeless.org/AboutHomelessness/HomelessnessStatistics/tabid/248/Default.aspx>

There is no homeless shelter, permanent or emergency, in the Town of Smithfield although homeless persons originate from the Town of Smithfield. Regionally, the Woonsocket Shelter, operated by Family Resources Community Action, is the closest shelter available to area homeless people. Also, Smithfield is geographically located near (e.g. within 30 miles) two known population centers with relatively high numbers of homeless people, Providence and Woonsocket. Homelessness is a statewide crisis with potentially severe localized impact for certain municipalities. These factors suggest that Smithfield has a potentially significant role in managing the regional and state homelessness crisis.

Special Needs Populations

Special need populations in Rhode Island consist of the frail elderly, veterans, persons with physical, mental or developmental disabilities, substance abuse problems and HIV/AIDS persons.⁹ These individuals have unique treatment and housing needs particular to their situation. In addition, many require specialized medical and/or psychiatric care as well as permanent housing. Others require transitional housing and treatment facilities to assist them in adapting to life outside of the institutional environment.

The 2010–2015 Consolidated Plan discusses special needs populations from a statewide perspective. The State’s frail elderly population is expected to increase as the population 75 years and older grows, which will increase the demand for assisting living facilities and beds. This statement reinforces observations of a study by Blue Cross/Blue Shield, the SHAPE Study, which points to the aging “baby boom” generation as increasing the demand for nursing homes and assisted living facilities.¹⁰ Currently, Smithfield ranks 13th in the state for its elderly (i.e. 65 or older) population, which reported some 2,246 disabilities for the 2000 U.S. Census.¹¹ As discussed in the Services and Facilities Element of this Plan, Smithfield has heavily invested in caring for its elderly population and has current needs and plans to increase its offerings in this regard.

⁹ Rhode Island Consolidated Plan 2010 – 2015. Rhode Island Housing and Mortgage Finance Corporation, January 15, 2010.

¹⁰ The Economic Impact of the Housing Crisis on Businesses in Rhode Island. RIPEC, 2003.

¹¹ Housing Data Base, Report No. 106, Statewide Planning Program, July 2003.

Other disabled people, people living with HIV/AIDS, and persons transitioning from prison, psychiatric and/or substance abuse treatment program represent a growing population of special needs individuals. Statewide, there has been a rise in the number of people living with AIDS from 203 cases in 1993 to 1,881 in 2010.¹² No AIDS cases were reported for Smithfield based on 2002 data; however, the metropolitan areas of Providence County reported the greater proportion of the State's cases overall.¹³

Generally, individuals leaving prison, a treatment center for substance abuse, or mental health care facility require assistance entering the community in which they intend to live. These populations are particularly important to consider in light of the fact that they are "at risk" of succumbing to homelessness without support. At the time of this study, there were no data available estimating the population of these special needs populations in the Town of Smithfield. However, it is well-documented that, statewide these populations are increasing rather than decreasing.¹⁴

Housing Availability

This section presents data to provide a detailed look at the total number of housing units, the number of owner-occupied units, the number of renter-occupied units, the number of vacant year-round units and the number of vacant seasonal units for Smithfield and its surrounding area for 1990, 2000 and 2010. Table H-4 provides an overview of these data.

The data suggest that there has been a change in owner-occupancy of local housing stock over the past decade. The percentage of units occupied by renters rose from 19.5% in 1990 to 21.6% in 2000 and then fell to 20.7% in 2010 and further to 20.1 % in 2015. In addition, an increase in seasonal units since 1990 continued. A possible trend may be suggested by these numbers; more households own a second home and choose to vacate and/or rent their Smithfield home on a seasonal or annual basis.

The rate of increase in housing units in Smithfield since 1990 has generally exceeded population increases (see Table H-5). These numbers may reflect the national trend toward smaller household sizes, especially in rural and suburban communities. According to the Rhode Island Statewide Planning Program, "...between 1970 and 1995, the state added two units of housing for every one new addition to the population. Reasons for this are complicated. Factors include demographic trends such as smaller households, more elderly persons living independently, and economic trends such as the building boom of the mid-1980's". Between 2000 and 2010, the average household size in Smithfield went down slightly, from 2.9 to 2.8 persons, and the average family size also decreased slightly, from 3.1 to 2.98. The number of vacant year-round units increased by 85%, from 202 to 374, most likely as a result of the national trend of housing foreclosures which has been especially acute in Rhode Island.

¹² [2010 HIV/AIDS Epidemiologic Profile with Surrogate Data](http://www.health.ri.gov/publications/epidemiologicalprofiles/2010HIVAIDSWithSurrogateData.pdf)
(<http://www.health.ri.gov/publications/epidemiologicalprofiles/2010HIVAIDSWithSurrogateData.pdf>)

¹³ Ibid.

¹⁴ [RI Consolidated Plan 2010 – 2015](#), op. cit.

Table H-4: Housing Tenure and Ownerships

	Smithfield	% of NMA	Northern Market Area	% of RI	Rhode Island	%
Total Units						
1990	6,308	13.3	47,380	11.4	414,572	100
2000	7,396	14.4	51,303	11.7	439,837	100
2010	7,906	14.4	55,041	11.9	463,388	100
2015	7,644	13.9	54,930	11.9	462,900	
% Increase						
1990-2000	14.7		7.6		6.1	
2000-2010	6.9		7.2		5.4	
2010-2015	-3.4		-.2		-.1	
Occupied Units						
		% of Total Units		% of Total Units		% of Total Units
1990	6,134	97.2	45,237	95.5	377,977	91.2
2000	7,194	97.3	49,339	96.2	408,424	92.9
2010	7,532	95.3	50,916	92.6	413,600	89.3
2015	7,243	94.8	50,743	92.4	410,602	
Owner-Occupied						
1990	4,936	80.5	26,851	56.7	224,792	59.5
2000	5,639	78.4	29,797	58.1	245,156	60.0
2010	5,897	74.6	31,573	57.4	250,952	54.2
2015	5,773	75.5	31,338	57.1	250,814	
Renter Occupied						
1990	1,198	19.5	18,386	38.8	153,185	40.5
2000	1,555	21.6	19,542	38.1	163,268	40.0
2010	1,635	20.7	19,343	35.1	162,648	35.1
2015	1,470	20.1	19,405	35.3	159,244	2013
Vacant Units						
1990	174	2.7	2,143	4.5	36,595	8.8
2000	202	2.7	1,964	3.8	31,413	7.1
2010	374	4.7	4,125	7.5	49,788	10.7
2015	401	5.3	4,187	7.6	52,458	
Seasonal Units						
1990	16	0.3	64	0.1	12,037	2.9
2000	42	0.6	157	0.3	12,988	3.0
2010	61	0.8	228	0.4	17,077	3.7
2015	59	0.8	226	0.4	17,127	3.7

Source: U.S. Census 1990, 2000, 2010, and 2015 ASC

Table H-5: Percent Increases in Population and Housing 1990-2015

	Smithfield			Rhode Island	
	% Increase 1990-2000	% Increase 2000-2010	% Increase 2000-2015	% Increase 1990-2000	% Increase 2000-2010
Population	+7.6	+4.0	+4.08	+4.5	+0.41
Total Housing Units	+17.2	+6.9	+6.1	+6.1	+5.4

Source: U. S. Census, 2013 ASC

Foreclosures

Between 2000 and 2006 home prices appreciated at the steepest rate in the state’s history, more than doubling from \$135,976 to 282,900. These increased home prices, coupled with a decreased supply of housing and reduced family incomes, resulted in risky behavior on the part of mortgage lenders and borrowers. In the first six months of 2012, there were 896 residential foreclosure deeds filed throughout the state and half of those foreclosed homes were purchased between 2000 and 2006. Historically, the majority of homes that foreclosed over the past three years were purchased during the same housing bubble years.

Table H-6 below illustrates that the foreclosure rate in Smithfield was lower than the region for the most part and represented a small portion of foreclosures statewide 1-1.5%. Smithfield foreclosures as a percentage of regional foreclosures ranged from 8.7 percent in 2009 to 14.1 percent in 2012. Smithfield housing units make up 14.3 percent of the Northern Regions total housing stock.

Table H-6: Foreclosures 2009-2015

	Forclosures	% of Northern Region
Smithfield	159	11.2
Lincoln	175	12.3
Cumberland	251	17.6
North Smithfield	85	6.0
Woonsocket	753	52.9
Northern Region	1,423	
Rhode Island	12,331	

Source: Rhode Island Housing <http://www.housingworksri.org/cities-towns/smithfield>

Unit Distribution & Total Units

The most common housing type in Smithfield is a single family detached home. As shown below in Table H-7, from 1990 to 2000 the proportion of single family homes in town slightly decreased to just over two-thirds of the entire housing inventory. This decrease can be directly correlated to a marked increase over the same time period in the number of houses with 10 or more units. This proportion increased by less than 1 percent between 2000 and 2010.

Table H-7: Town of Smithfield Housing Stock Distribution

	1990	% of 1990	2000	% of 2000	2010	% of 2010	2015	% of 2015
Total # Units	6,308	100%	7,403	100%	7,906	100%	7,644	100%
Single Family Home	4,517	71.6%	5,034	68.0%	5,431	68.7	5,533	71.1%
Multi-Family	1,742	27.6%	2,355	31.8%	2,473	31.3%	2,211	28.9%
1 Unit Attached (e.g. Condo)	313	5.0%	440	6.0%	442	5.6	-	-
2-4 Units	666	10.6%	598	8.0%	601	7.6	-	-
5-9 Units	268	4.2%	406	5.5%	411	5.2	-	-
10 or more units	495	7.8%	911	12.3%	1019	12.9	-	-
Mobile home	49	0.7%	14	<0.1%	0	0.0	-	-
Boat, RV, van, etc.	0	0.0%	0	0.0%	0	0.0	-	-

Source: U.S. Census 1990, 2000, 2010 & 2015 ACS

Table H-8 contains data from the Smithfield Building Inspector on the number of housing units authorized by building permit in Smithfield for the past three decades. The quantity of annual building permits issued ranges from a low of 11 units in 2012 to a high of 299 units in 1988. The data indicate that the development of new housing has historically proceeded at a moderate pace. The notable exception was in the mid- to late-1980s when a very active economy and regional housing “boom” resulted in high numbers of building permits being issued. On average, 110 units per year were authorized for the 10-year period, 1986 to 1995. In comparison, for the 10-year period ending in 2005, there was an average of 61.5 units per year. During the 10 year period ending in 2015 the average fell to 23.6 units per year. The overall 20-year average was 43.7 units/year.

Table H-8: Smithfield Residential Building Permits 1984 to 2015

YEAR	SINGLE FAMILY ¹	MULTI-FAMILY ²	TOTAL UNITS
1986	69	90	159
1987	75	128	203
1988	58	241	299
1989	42	16	58
1990	39	29	68
1991	43	0	43
1992	71	18	89
1993	69	0	69
1994	40	6	46
1995	51	14	65
1996	51	40	91
1997	38	38	76
1998	38	20	58
1999	24	0	24
2000	26	8	34
2001	64	0	64

YEAR	SINGLE FAMILY ¹	MULTI-FAMILY ²	TOTAL UNITS
2002	75	0	75
2003	78	0	78
2004	62	3	65
2005	50	0	50
2006	27	0	27
2007	21	45	66
2008	21	0	21
2009	12	1	13
2010	16	1	17
2011	13	1	14
2012	11	0	12
2013	13	0	13
2014	23	6	29
2015	17	8	25
TOTALS	1,237	713	1,950

1 Single Family includes detached condominium units

2 Multi-Family includes total number of attached condominium units.

Source: Town of Smithfield Building / Zoning Office, 2015

These records of building permits issued by the Town show that 63.4% of the new housing stock consisted of single family homes (1,237 units) and 36.5% or 713 were new multi-family units.

The 2015 ACS figure appears to under count the total number of housing units in Smithfield. The 2010 Census figure for total units is 262 units higher than the 2015 ACS figure. The under count is even more drastic when the 109 new units built since 2010 are added to the 7,906 total units reported by the 2010 census, yielding a figure of 8,015 total housing units. Of the five regional communities used for comparison, only Smithfield and Lincoln showed reductions in housing units between 2010 and 2015 as shown in the 2015 ACS, 3.4 percent and 5 percent respectively.

Age and Condition of Housing

Data on “Year Structure Built” was obtained for both occupied and vacant housing units (Table H-9). ‘Year Structure Built’ refers to when the building was first constructed, not when it was remodeled, added to, or converted. The data relate to the number of units built during the specified periods that were still in existence at the time of enumeration of the 2010 Census. Since 1989, the number of new units per decade has declined significantly; an indication of a declining rate of new dwelling unit construction.

Table H-9: Year Housing Structures were Built in Smithfield

	Number of Units	% of Total Units
2000 or later	672	8.5
1990-1999	751	9.5
1980-1989	1,454	18.4
1960-1979	2,198	27.8
1940-1959	1,431	18.1
1939 or earlier	1,399	17.7
Total Housing Units	7,906	100

Source: U.S. Census

Table H-8 also shows that over 83% of the housing stock in Smithfield was constructed after 1940 and 64% of it was constructed after 1960. Because so much of the housing stock in the town is relatively new, most homes are still in good condition and most are likely to remain that way within the 20 year planning horizon. The median age of a Smithfield home is 43 years, with a median year built of 1973.¹⁵ However, older homes may be more vulnerable to deterioration and attrition. About 18% of the housing stock, 1,399 units, was constructed before 1939. Those units tend to be concentrated in the mill villages of Esmond, Georgiaville, Stillwater and Greenville, the town's earliest areas of development. As a result, these areas have higher needs for housing maintenance and rehabilitation than some of the more recently developed areas. Smithfield participates in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) housing rehabilitation program, providing grants and other assistance to qualifying home owners for housing rehabilitation projects. (See *Smithfield Housing Rehabilitation* below)

Further, some of the housing in the mill villages is vulnerable to the natural hazard of flooding. Because the mills ran on water power, they were built on low lying land adjacent to the rivers and so were the villages that grew up around them. The town has adopted regulations restricting development in floodplains in order to maintain eligibility for participation in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). As described in the Natural Hazards section of this plan, the town has over 12 dams classified as high or significant hazard. Failure of any one of these dams could cause housing loss and localized displacement. The town is in the process of developing Emergency Action Plans (EAPs) for these dams to reduce the risks of loss of life, property damage, and housing loss from dam failures. Unlike coastal communities, Smithfield's housing is not particularly vulnerable to the impacts of climate change and sea level rise, but alterations in local weather patterns, particularly storm intensity, have the potential to exacerbate longstanding flooding problems.

Recent Housing Development

Recent development patterns in Smithfield suggest that new residential development has occurred in all areas of the Town. The condominium form of development has constituted a significant proportion of the units developed since 1980. Contrary to the Town's policy of directing new development toward the existing population and village centers of Esmond, Georgiaville and Greenville, a high proportion of new homes have been scattered throughout the rural areas of Town. Additionally, in 2003-2004, 1,006 units were proposed under the Low and Moderate Income Housing Act permit process. If allowed, the development of this many units would have overburdened the local school system. Two hundred and

¹⁵ 2015 ACS 25035

nineteen of these units were considered “affordable” while the rest were to be sold at market rates. Proposed densities for these new applications averaged 12 units per acre and would be located at scattered sites throughout the town.

The Town opted to challenge all of the developers in court. In 3 of the 5 cases rulings were issued by the Rhode Island Supreme Court in favor of the Town. The other two (2) cases settled at a greatly reduced number of units. The state has since reworked the language of the Act, requiring developers to seek local zoning approval through a more restrictive comprehensive permit process and requiring that 25% of the proposed units must be affordable. The Town approved six (6) developments under the revised LMI Act representing a total of 195 housing units; with 137 affordable units. Of these approved developments, only one, Country Hill Estates (12 Units with 5 LMI units), has been constructed to date. In 2012, the Rhode Island Superior Court upheld a Zoning Board denial of a proposed 31 unit LMI development, based in part, on a demonstrated lack of capacity within the municipal sewer system. The sewer issue has since been resolved and the development was approved and had been builtout by the end of 2016. As allowed under the LMI Act, the Town instituted a cap of 1% of all housing units/year for comprehensive permit consideration. For 2005, that cap was set at 75 units. This number is now 78 units to reflect the 2010 Census figure for total non-seasonal housing units.

The Town adopted an Inclusionary Housing ordinance in 2009 that requires 20% of all lots/units in Major Subdivisions/Residential Land Development projects contain LMI units. The Town approved two (2) developments under the provisions of the inclusionary ordinance; one a 14-lot subdivision that yielded two (2) LMI units and one fee-in lieu of payment and a 28-unit condominium development that yielded six LMI units. More recently, economic conditions have adversely affected the housing market, and residential development proposals have declined significantly. The decline appears to be temporary, but it has granted the Town a respite to plan for the orderly growth of housing and especially affordable housing development. Table H-10 lists the status of Comprehensive Permit, LMI and Inclusionary Housing projects since 2004.

Table H-10: Comprehensive Permit / LMI / Inclusionary Projects 2004-2017

Comprehensive Permit/LMI Projects	LMI Units	Total Units	% LMI	Status
Whipple Creek	16	16	100%	Comp. Permit Approval -Oct. 2009 -PB Master Plan Approval Aug. 2008
Dean Pines Affordable	15	34	44%	Comp. Permit Approval -Aug. 2009 -PB Approval - Nov. 2011 - Construction 2014
Georgiaville Village Green	42	42	100%	Comp. Permit Approval- Aug. 2006- Consent Judgement, Feb. 2008- ZBR Comp Permit Modification, 2015 , PB Approval 2016
Macintosh Estates	45	45	100%	Comp. Permit Approval -Jul. 2005 - Completed 2007
Country Hill	5	12	42%	Comp. Permit Approval -Jan. 2008 - Completed 2011
The Oaks	4	32	13%	Comp. Permit / Zone Change - Jul. 2006 -PB Prelim. Approval 2008
Dean Estates Affordable	8	31	25%	Comp Permit Approved 2016, PB Final Approval 2017
Old County Village	20	79	25%	Comp Permit Denied 2016, SHAB Overtuned, 2017 PB Preliminary Plan pending.
Cardinal Hill	2	16	13%	Zone Change - Jan. 2006, Site work 2010- Not active

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Comprehensive Permit/LMI Projects	LMI Units	Total Units	% LMI	Status
Stillwaters Place	3	32	9%	Zone Change -Mar. 2007, Site work 2014
Smithfield Village (Mixed Use)	25	124	20%	Zone Change -Oct. 2014, PB Approval pending
Stone Post Estates	3	15	20%	Inclusionary Subdivision - Construction 2014, Fee in-lieu of 1-Unit
The Residence at Lime Rock	6	28	20%	Inclusionary Condo w/ Zone Change -Dec. 2014, PB Fianl Plan Approval 2015- Construction 2016
Stillwater Village (Mixed Use)	62	309	20%	Incusionary Mixed Use Development- Master Plan 2017.
35 Smith Avenue Subdivision/Variance	1	4	25%	1 LMI unit for required dimensional relief and subdivision approval- UC
Total Approved Units in Comp. Permit & LMI Projects	258	819	32%	
Comp. Permit/LMI Projects Denied, and Withdrawn				
Country Glen	84	336	25%	Comp Permit Submitted Dec. 2003, withdrawn
Sand Trace	75	300	25%	Comp Permit Denied Jan. 2009, appeal withdrawn
Esmond Village	46	46	100%	ZBR-SUP Granted-Oct. 2005- Approval expired
Total	205	682	30%	

Zoning

The Town of Smithfield is divided into 15 zoning districts, of which 8 districts allow for some type of residential use (see Table H-11 below). In addition to the residential zones allowed in the conventional zoning districts, the newly formed Economic Groth Overlay District (EGO) allows multi-family residential development at densities of up to 20 units per acre.

Table H-11: Town of Smithfield, RI Residential Zoning Districts

Zoning District	Single-family Min. Lot Area (sq. ft.)	Two-family Min. Lot Area (sq. ft.)	Multi-family Density / Min. Lot Area
Residential Conservation <i>R-200</i>	200,000 (P)	N	N
Low Density Residential <i>R-80</i>	80,000 (P)	N	N
Medium Density Residential <i>R-Med</i>	65,000 - no Public water/sewer(P) 40,000 - Public water/sewer (P)	N	N
High Density Residential <i>R-20</i>	20,000 (P)	N	N
Multifamily Residential <i>R-20M</i>	20,000 (P)	40,000 (S)	2 units/acre 1 acre min. lot area (P) Multi (S) Elderly
Mixed-Use <i>MU</i>	20,000 (S)	N	N
Village <i>V</i>	20,000 (S)	20,000 (S)	N
Planned Development <i>PD</i>	20,000 (P)	40,000 (P)	2 units/acre 1 acre min. lot area (P)

N= Use not permitted; S= Use permitted by Special Use Permit; P= Permitted by Right

Notes

All Multifamily dwellings must be serviced by public water and public sewer. There is a maximum of 4 dwellings per structure, except for housing for the elderly which may have a maximum of 8 units per structure.

The Town of Smithfield prohibits Manufactured Home, Mobile Home and Mobile Home Parks.

Accessory Family Dwelling Units are allowed by special use permit in R-200, R-80, R-Med, R-20, R-20M and MU any zoning districts, upon a lot which has only one principal residential structure. The size may be 40 percent of the gross floor area of the principal structure, but not less than 400 square feet.

In Residential Cluster Developments, minimum lot areas may be reduced. In addition, a density bonus of up to one lot for every ten lots may be approved by the Planning Board.

Developable Land / Build-Out Analysis

A Build-Out Analysis is a technique used to estimate the resulting development in a community if it were to be entirely developed under the provisions of existing zoning. It is a planning exercise that shows future land uses that result from existing regulations and policies. There are two major reasons for performing a build-out analysis. First, basic knowledge regarding the ability of the land to accommodate additional development under present zoning can be understood. Second, it can help to identify critical issues (e.g., land shortage or surplus) which may need to be considered in the formulation of planning policies and implementation strategies designed to address them.

The 1992 Comprehensive Plan contained a build-out analysis that developed two future growth scenarios based upon two different assumptions regarding physical constraints to development. At that time, it was determined that the Town had a build-out capacity of 2,345 additional units under Scenario 1, and 4,555 units in Scenario 2. From this build-out analysis, it was also determined that there were zero acres of land available for multi-family housing under the zoning at the time of that analysis.

In 2001, a second build-out analysis was performed for the Town by Beta Group, Incorporated.¹⁶ This study examined the potential for future residential and commercial development based on then-current zoning (2001). The residential portion of the study looked at eight zoning districts that permit residential development of some type. The total residential build-out was determined to be 4,243 additional housing units, in addition to the 7,396 units in the Town at the time of the 2000 U.S. Census. Allowing for differences in data sources and dating of this information, the Build-out Analysis indicated that in general terms, Smithfield still has significant residential development potential, and could grow by an additional 57 percent. This residential development potential did not include any housing units that may be included in a Mixed-Use, Planned Development or Village development that was not calculated by the 2000 Build-out Analysis.

In 1991, the Town did not have any significant capacity for the construction of multifamily housing. The Town has since created the R-20M zoning district, which permits a density of two dwelling units per acre except for properties listed in Table H-24. It is the Town's policy to require any new multifamily development to apply for a zone change to be granted by the Town Council. In 2001, it was estimated that there were only 44 acres of vacant or underdeveloped land in this zoning district. Approximately 36 acres of this land is devoted to approved projects with a total of approximately 156 units. The development potential of the remaining 11 acres of land in the R-20M is constrained by the small

¹⁶ Buildouts Across Borders, Blackstone River Watershed SuperSummit Resource CD, MassGIS, RIGIS, CRMRPC & Applied Geographics, June 23, 2001.

amount of acreage involved, and by the limits and conditions imposed as a result of previous zone changes.

Table H-12: Zoned Land in Smithfield, RI.

ZONE	DESCRIPTION	NO. OF PARCELS	AREA IN ACRES	% OF TOTAL
C	COMMERCIAL	86	197.07	1.3%
HC	HIGHWAY COMMERCIAL	26	88.19	0.6%
I	INDUSTRIAL	98	431.62	2.8%
LI	LIGHT INDUSTRIAL	43	206.38	1.3%
MU	MIXED USE	77	86.22	0.5%
PC	PLANNED CORPORATE	149	1,582	10.5%
PD	PLANNED DEVELOPMENT	91	377.34	3.1%
R20	RESIDENTIAL 20,000 S.F.	4008	2,271.33	14.5%
R200	RESIDENTIAL 200,000 S.F.	93	1,333.09	8.5%
R20M	RESIDENTIAL 20,000 S.F. MULTI-FAMILY	40	440.35	2.8%
R80	RESIDENTIAL 80,000 S.F.	2067	7,769.61	49.5%
RMED	RESIDENTIAL 40,000 S.F.	419	661.01	4.2%
V	VILLAGE	73	64.23	0.4%
TOTALS:		7,275	15,693.19	100.0%

Notes: Areas calculated from mapped polygons. Does not include, roads, rivers, etc., Source: Town of Smithfield, RI 2012

Most of this residential growth will occur in the Town’s five (5) residential zoning districts, which collectively make up about 72% of its land area (see Table H-12 above). Based on current zoning, however, about 88 percent of the future residential construction in these five zones will be single-family detached housing. The only residential zoning district which permits multifamily dwellings is the R-20M Multifamily Residential zone. As stated above, this district was found to have limited potential for expansion of future housing.

Housing Prices – Ownership and Rental

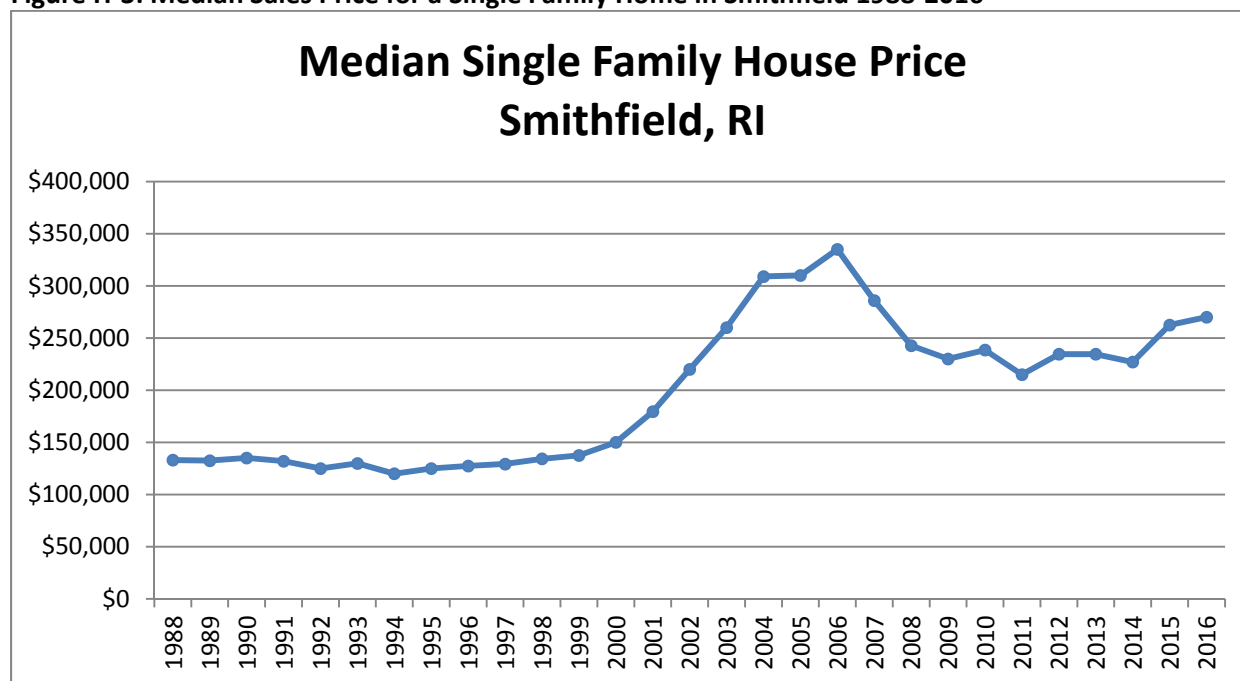
The current trend in housing costs in Smithfield is similar to the trend occurring throughout the region and the State. Data provided by the RI Office of Municipal Affairs, Tax Equalization Section provides a look at the cost of housing in the study area. This section will first present an examination of the cost of buying a home, followed by the cost of renting an apartment or other residence types.

Of the several different types of housing available in the town, single family detached homes on individual lots are by far the most common (68.7% of the total housing stock). Single family attached units, such as condominium townhouses, represent an additional 5.6 percent of all the housing in the town. As shown in Figure H-3, the price of single family housing in Smithfield has risen and fallen in proportion with the national and local economy. In 2000, the median sales price for a single family home was \$150,000.¹⁷ This price increased rapidly to an all-time high of \$335,000 by 2006 due to a national trend of real estate speculation sometimes referred to as the “housing bubble”. When the “bubble” burst, sales prices dropped dramatically, falling back to \$230,000 in 2009 and \$215,000 in 2011. More recently, median sales prices have trended higher, with an increase to \$245,000 in 2015 and further to \$262,500 in 2016, indicative of a trend toward recovery in the local housing market.

¹⁷ Rhode Island Association of Realtors, 2013 (<http://rirealtors.org/RealtorResources/SalesStats/Default.asp>)

The impact of these fluctuations on housing affordability has been dramatic. For example, at 2003 sales prices, a household would have had to pay \$2,298.69 per month to afford a median-priced home in Smithfield. These monthly payments would be affordable to a household making roughly 150% of the median household income, or \$93,941 annually. Less than 30% of the households in Smithfield could have afforded to purchase a home at that price. In 2011, by comparison, the typical monthly cost for a median priced home costing \$215,000 would be \$1,667, which would be affordable to a household making \$66,690 annually, or roughly 90% of median income. This house would be affordable to roughly 60% of the Town’s residents.

Figure H-3: Median Sales Price for a Single Family Home in Smithfield 1988-2016



These estimates are useful as a general guide in determining affordability of housing available for sale in the local market at a specific period in time, and will continue to change periodically with local economic conditions. As illustrated above, the median income household would have had a very difficult time finding a single family home in Smithfield in 2003 or 2004. The 2003 and 2004 median sales prices were over 75 percent higher than the home that the median earner could afford. Although housing prices have come down significantly since that time, so has family income, continuing to make it difficult for the typical family to afford a home in Smithfield. The 30% average private sector monthly wage in Smithfield is sufficient to cover the payment (\$1,851) for the median priced single family home in Smithfield¹⁸. The state’s Consolidated Plan for 2010 – 2015 summarizes the primary dilemma of current housing trends when it states, “On the heels of the historic rise in housing prices, the recent foreclosure crisis coupled with the state’s second-place unemployment ranking at 12.7% (U.S. Bureau of Labor Statistics, November 2009) has placed enormous pressures on the state and its residents to meet housing needs.”¹⁹

¹⁸ 2015 Housing Works RI Fact Book

¹⁹ RI Consolidated Plan, op. cit.

Smithfield renters are faced with a similar problem affording housing in Smithfield. In 2011, monthly gross rent for a two bedroom unit was \$1,195, which is more expensive than the region and the state as a whole (Table H-13). In 2015 the monthly rent for the same two bedroom unit in Smithfield was slightly less than that than the region and the state.

Table H-13: 2011-2015 Rental Rates in Smithfield, Northern RI Market Area, and State of Rhode Island

	Median Monthly Gross Rent		
	Smithfield	Northern RI Market	Rhode Island
2015	\$1,169	\$1,173	\$1,172
2011	\$1,195	\$1,110	\$1,150

Source: Rhode Island Housing (http://www.rhodeislandhousing.org/filelibrary/YE2011_Rent-Survey.pdf), <http://www.housingworksri.org/cities-towns>

Another way to examine the affordability of local rents is to look at the trend in HUD’s Fair Market Rents. Table H-14 summarizes Fair Market Rents for Smithfield as published by HUD from 2000 to 2015. FMRs in this general region have shown a significant increase since 2000, amounting to a 36.8% jump overall. A review of renter-occupied household income (see Table H-17 below) indicates that roughly half of the renter-occupied households in Smithfield and the region are priced out of the FMRs for the area.

Table H-14: Rhode Island Two Bedroom Fair Market Rents FY 2000 - 2015

FMR Region	FY 2000	FY 2010	FY 2011	FY 2012	FY 2015	% Change 2000 - 2015
Smithfield	\$667	\$963	\$977	\$910	\$944	41.5%

Source: HUD, 2013. <http://www.huduser.org/portal/datasets/fmr.html>

The greatest housing needs in Smithfield, like those of the region and the State, come from several subsets within the population. First of all, a principal demand for affordable houses emanates from low and very low income households and families that cannot afford current home ownership and rental prices, even those considered ‘fair market’ by federal standards. A portion of these ‘in need’ population are those families that have participated in the Family Independence Program and are transitioning to workforce and in need of affordable housing.²⁰ These would-be renters seem to be worse off than other households; these households are more likely to be at or below the poverty line than owner-occupied households. In this regard, housing in Smithfield for working class families relying on minimum-wage jobs has been and will continue to be a considerable challenge for the immediate future.

Homeless and special needs populations and the increasing demand for housing and services for them, continue to be of concern for the state and local communities, like Smithfield. Some homeless shelter clients claim Smithfield to be their last place of residence and nearby cities like, Providence and Woonsocket, have significant homeless populations. Similarly, population trends showing increases in the number of disabilities, people living with HIV/AIDS, and transitioning from medical and psychiatric facilities to the community, mean that demand for facilities and housing to serve the needs of these people will continue to increase.

²⁰ Family Independence Program, RI Annual Report 2007 (http://www.dhs.ri.gov/Portals/0/Uploads/Documents/Public/DHS%20Reports/fip_2007.pdf)

Income Data

As reported by the 2010 U.S. Census, the median household income in Smithfield was \$73,352 as compared with the income for the State of Rhode Island as a whole, which was \$55,975. In terms of median household income, Smithfield ranked 17th of the 39 communities in the state. Within the Northern Rhode Island Market area, only North Smithfield’s median household income exceeds Smithfield, by 5.3 percent. With the exception of the City of Woonsocket, all of the Northern RI and Western RI housing market area communities exceeded the state median household income in 2010.

Since 1980, the median household income in Smithfield has increased steadily and on pace with the increases experienced by the region and the State on the whole. Table H-15 below summarizes household income data for 1980 through 2015 for Smithfield, the Northern Market Area and the State of Rhode Island. These data are not adjusted for inflation. Therefore, the percent changes given in Table 15 reflect the increases in actual values for the reported years.

Table H-15: Median Household Income: Smithfield, Northern Market Area, & Rhode Island, 1980-2015

Year	Smithfield	Northern RI Housing Market Area	Rhode Island
1980	\$21,336	\$18,529	\$16,097
1990	\$42,523	\$37,420	\$32,181
2000	\$55,621	\$54,656	\$42,090
2010	\$73,352	\$67,702	\$55,975
2015	\$71,346	\$71,346	\$58,073
% Change 1980-1990	99.3	102	99.9
% Change 1990-2000	30.8	32.3	30.8
% Change 2000-2010	31.9	23.9	33
% Change 2010-2015	-2.8	5.4	3.7
80% of Median	\$57,077	\$57,077	\$46,458
50% of Median	\$35,673	\$35,673	\$29,037
30% of Median	\$21,404	\$21,404	\$17,422

Source: U.S. Census 1980, 1990, 2000, 2010 and 2015 ACS

The U.S. Department of Housing and Urban Development sets income limits to qualify for certain housing programs. These figures provide a context for the income figures for Smithfield in terms of the household income levels that qualify for federal and state subsidies. Table H-16 below summarizes the HUD income limits for the Metropolitan Statistical Area in which Smithfield is located.

Table H-16: Income Limits for Federal Housing Programs established by HUD for the Providence-Fall River-Warwick, RI-MA Metro Statistical Area

FY 2015 Median Family Income: \$74,400				
	1 Person	2 Person	3 Person	4 Person
30% Of Median	\$15,650	\$17,850	\$20,100	\$24,250
Very Low Income	\$26,050	\$29,800	\$33,500	\$37,200
Low-Income	\$41,650	\$47,600	\$53,550	\$59,500

Source: HUD, 2015. <http://www.huduser.org/portal/datasets/il/il2015/2015summary.odn>

According to U.S. Census and HUD data, Smithfield’s household populations include a full range of income levels. Table H-17 summarizes the distribution of income in Smithfield and the state and provides estimations for the number of households falling into the “very low” (Below 30% of Median Household Income (MHI)), “low” (30% to 49% of MHI) and “moderate” (50% to 80% of MHI). These data begin the demonstration of how many households, locally and regionally, could potentially be financially ‘at risk’ and susceptible to living in problematic housing conditions or homelessness.

Table H-17: Income Distribution in Smithfield and Rhode Island 2015

	Smithfield	Smithfield %	Rhode Island	Rhode Island %
Number of Households	7,243	100.00%	410,602	100.00%
Less than \$10,000	317	4.4%	32,277	7.9%
\$10,000-\$14,999	169	2.3%	22,777	5.5%
\$15,000-\$24,999	584	8.1%	40,749	9.9%
\$25,000-\$34,999	607	8.4%	37,280	9.1%
\$35,000-\$49,999	628	8.7%	50,099	12.2%
\$50,000-\$74,999	1582	21.8%	69,145	16.8%
\$75,000-\$99,999	1,024	14.1%	52,869	12.9%
\$100,000-\$149,999	1,015	14.0%	59,721	14.5%
\$150,000-\$199,999	734	10.1%	24,479	6.0%
\$200,000 or more	583	8.0%	21,206	5.2%

Source: American Community Survey 2015

The gap between housing costs and income levels is as large, or even larger, for renters than it is homeowners. Table H-18 below presents household income data for owner-occupied and renter-occupied households for Smithfield and Rhode Island, including the calculations for “moderate income household.” The data reveal a marked difference in incomes between owner-occupied and rental-occupied households. In 2015, the median owner-occupied household income was \$80,376 which is more than two and half times the \$29,235 for renter-occupied households. Similarly, for the state as a whole, owner-occupied household incomes were more than two and a half times those of renter-occupied households. The American Community Survey reported that 4.2 percent of Smithfield residents were living below the poverty level in 2011.²¹

Table H-18: Household Income by Housing Type 2015

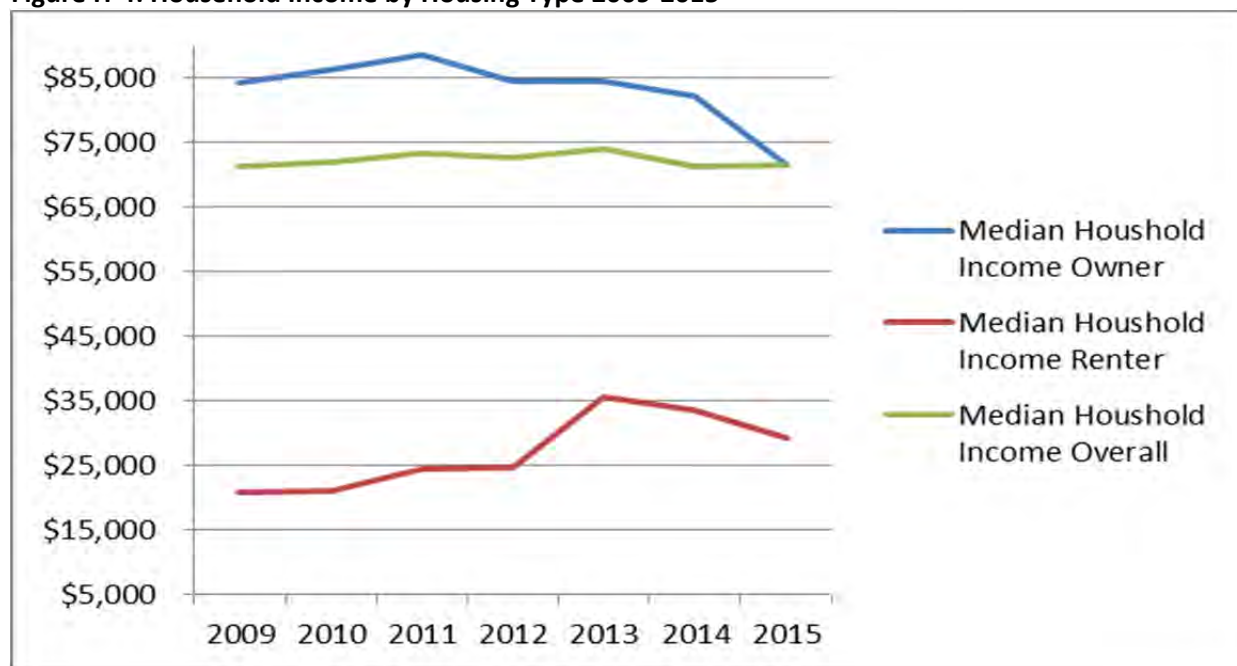
	Smithfield		Rhode Island	
	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied
120% of Median Income	\$96,451	\$35,082	\$96,096	\$37,121
Median Income	\$80,376	\$29,235	\$80,080	\$30,934
80% of Median Income	\$64,301	\$23,388	\$64,064	\$24,747

Source: American Community Survey 2011-2015

Figure H-4 below shows median income for owners and renters over the last 7 years. The increase in renter median income could be attributed to the financial crisis which saw many former home owners being forced into the rental market following foreclosure.

²¹ Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Figure H-4: Household Income by Housing Type 2009-2015



Source: American Community Survey 2011-2015

Local and Regional Job Growth

The Town of Smithfield plays a significant role in the Rhode Island economy. Home to several large employers – Fidelity Investments (1,500+ employees), Dow Chemical (500+), Bryant College (approx. 650) and Uvex Inc. (250+) – Smithfield is a commonly used example of recent successes in attracting new investment to the State. The Smithfield Crossings mall has attracted over a dozen retail chains. Currently, according to the U.S. Census, 11,540 Smithfield residents are in the labor force – over half of the Town’s population and 63% of the population 16 years old or older. Continued presence and expansion of local businesses is expected to bring additional jobs to the community and region.

In September 2002, the Smithfield Economic Development Commission published the results of a survey it conduct of all businesses in the town. Over 790 businesses were surveyed to better understand their opinions of local services, quality of business and life issues and concerns for expansion. Forty percent (40%) of the 90 respondents said that they had plans to expand their businesses in Smithfield. Most of these businesses fell into the manufacturing and retail employment categories.²²

Recent economic recovery and optimistic plans from local business owners suggest that more jobs (and people) will be coming to Smithfield. The majority of these jobs are thought to be in the manufacturing and retail sectors, while some will go to the financial and educational institutions in town. With these new employees will come a demand for new housing for younger employees just entering the workforce and for working families. Given the employment sectors these new people will occupy, income could be estimated to be at or slightly above the State’s minimum wage or, \$9.60 per hour, which amounts to roughly \$20,000 per year. Therefore, future affordable rental and ownership opportunities in Smithfield must consider the financial limitations that these new local employees will have.

²² Smithfield Business Survey, September 2002. Town of Smithfield Economic Development Commission.

Low and Moderate Income Housing in Smithfield

As defined in the Rhode Island Low and Moderate Income Housing Act (R.I. General Laws, 45-53), the term "Low or moderate income housing" means any housing subsidized by the federal or state government under any program to assist the construction or rehabilitation of low or moderate income housing, as defined in the applicable federal or state statute, whether built or operated by any public agency or any nonprofit organization, or by any limited equity housing cooperative or any private developer."

As stated earlier, the Act sets a goal for all Rhode Island municipalities to provide that a certain minimum percentage of the total housing units in the Town qualify as subsidized low and moderate income housing. In Smithfield, this percentage is 10 percent. According to Rhode Island Housing, as of 2017, 5.07 percent of the total housing units in Smithfield met this definition. The Town has established a goal of meeting the 10% threshold. In addition, the Smithfield Housing Authority has fifty-three (53) Section 8 vouchers, but these vouchers do not count toward the 10 percent standard.

Existing Low and Moderate Income Housing Units in the Town

According to the State definition of low and moderate income housing, which requires that units be subsidized, there were a total of 398 low and moderate income housing units in Smithfield as of 2017 (Table H-19).

Table H-19: Low and Moderate Income Housing, Smithfield, RI

Name	Type	Rent/Own	Street Name	# Units
<i>Elderly</i>				
Greenville Manor	Public Housing	Rental	7 Church Street	50
Esmond Village	RIH Section 8	Rental	6 Village Drive	140
Georgiaville Manor	RIH Section 8	Rental	20 Higgins Street	54
McIntosh Estates	HUD 202	Rental	7 Church Street	46
<i>Family</i>				
Dean Pines		Condo	Nicole Circle & Dillon Lane	11
Country Hill Estates	RIH Family	Condo	Country Hill Lane	5
<i>Special Needs</i>				
	Group Home Beds	N/A	Various	92
TOTAL:				398

Sources: Rhode Island Housing Tabulation as of 6/7/2017

Greenville Manor is a 50-unit development located at 7 Church Street and constructed in 1970. This development is operated by the Smithfield Housing Authority and provides 42, 1-bedroom and 8 efficiency apartments for low-income elderly and handicapped residents. The Executive Director indicates that turnover is slow, usually no more than 6 apartments per year and the demand for units is high so that the Authority has a waiting list. Tenants pay no more than 30 percent of their annual income for rents, which range from \$76 to \$610 per month. Preference in the availability of units is first given to disabled veterans and secondly to local residents, or applicants who are working in the Town of Smithfield.

Figure H-5: Photographs of Greenville Manor, Smithfield, RI



Macintosh Estates - In 2007, the Housing Authority completed Macintosh Estates, a complex of 45, 1-bedroom units for low-income elderly and handicapped residents located adjacent to Greenville Manor at 25 Church Street West. Rental rates and unit availability are essentially the same as described above for Greenville Manor.

Figure H-6: Photographs of Greenville Manor & Macintosh Estates, Smithfield, RI



Esmond Village is a 140-unit development located at 6 Village Drive and constructed in 1980 under Rhode Island Housing's Section 8 program. This development is privately owned and managed by Manhattan Housing. It provides 122, 1-bedroom and 18, 2-bedroom apartments for low-income elderly and handicapped residents. Tenants are required to pay rents that are no more than 30 percent of their income. Under the Section 8 program, preference for housing availability cannot be given to local residents.

Figure H-7: Photographs of Esmond Village, Smithfield, RI



Georgiaville Manor is a 54-unit development located at 20 Higgins Street which was constructed in 1984. It was developed and is managed by the same entity as Esmond Village (above). Georgiaville Manor offers 50, one-bedroom and four (4), two-bedroom apartments and is guided by the same income restrictions governing admission to Esmond Village.

Figure H-8: Photographs of Georgiaville Manor, Smithfield, RI



Country Hill Estates is a 12-unit condominium development completed in 2011 represents the Town's first LMI "family" housing. The development's 5 LMI units were subsidized by the Rhode Island Housing Resource Commission's Building Homes Rhode Island Program and received the Town's density bonus established for selected LMI sites identified in Table H- 23 below.

Figure H-9: Photographs of Country Hill Estates, Smithfield, RI



Dean Pines Estates is a 34-unit condominium development which began construction in 2014. The development which has 15 LMI units, received the Town's density bonus established for selected LMI sites identified in Table H- 23 below. To date, eleven (11) of the 15 LMI units had been occupied. Another nine (9) LMI units in the 31-unit second phase of this development will be constructed over the next two years.

Special Needs housing includes Group Home Beds, Transitional Units, and HUD 811 housing units. Group Home Beds are residential facilities licensed by the RI Department of Children, Youth and Family and the RI Mental Health, Retardation and Hospitals agencies.²³ HUD 811 is a funding program for the disabled. At present, the Town of Smithfield has only Group Home Beds as mentioned above.

Affordable Housing Agencies in Smithfield

1. The non-profit Smithfield Housing Authority manages 50 units of subsidized public housing for elderly and handicapped residents at Greenville Manor. The Authority also administers the Town's Section 8 voucher program.
2. The Gemini Housing Corporation is a nonprofit corporation, which consists of a 9-member board. The Corporation was formed in March 2001 by the Smithfield Housing Authority. They received 501(c)3 nonprofit status on June 1, 2003. The purposes of the corporation are:
 - a. To provide safe, decent and affordable housing through specific programs to construct, rehabilitate housing units for rent to families of moderate and low income as defined by the US Department of Housing & Urban Development,
 - b. To accept grants, loans, or entitlements from federal, state, and or local governments, private foundations and private sources to further the purpose of the corporation; and
 - c. To administer, on behalf of government or other corporations, programs that are similar to the purpose of the corporation.

²³ Rhode Island Housing and Mortgage Finance Corporation

The Gemini Housing Corporation helps to promote the design and implementation of selected social, physical, housing, and economic growth programs to benefit persons and families of moderate and lower income in the State of Rhode Island in cooperation with private enterprise, community organizations, public housing authorities, planning commissions, and governmental agencies, with specific emphasis upon moderate and low income housing. The Corporation participates and cooperates with the public authorities in the State of Rhode Island to assist the Authorities in promoting relief of the poor, distressed, and underprivileged; lessening the burdens of governments; eliminating prejudice, and discrimination; and combating community deterioration.

The Gemini Housing Corporation works to implement special purpose programs for which separate funding may be solicited and which may be undertaken on a joint venture basis with other private and public organizations to test the feasibility, cost, procedural and financial aspects of programs to construct, rehabilitate, manage and finance housing of high durability and lower cost for occupancy by lower income persons and families. They completed a 45 unit expansion of Greenville Manor in partnership with the Smithfield Public Housing Authority and are actively seek other opportunities to develop affordable elderly and family housing in Smithfield.

Gemini Housing Corporation is certified by the US Department of Agriculture for the purpose of managing rural development properties.

3. The Town of Smithfield offers several tax exemptions for qualifying residents. Senior citizens, veterans, disabled veterans and legally blind residents may qualify for tax exemption status based on several program criteria. A summary of these tax exemptions are provided below.
 - a. The **Senior Citizen Exemption** is set at \$8,000 annually. Qualified seniors must be 65 years of age by December 31st for the subsequent tax roll; must own and occupy Smithfield real estate (three dwelling units, or less) for five (5) years; and, must apply on or after their birthday, but before December 31st. Seniors may also qualify for a 'tax freeze' on their property only if they meet the requirements of the Senior Citizen Exemption and if they own a single-family dwelling. After application is made, the subsequent property tax rate and valuation is frozen.
 - b. Veterans may qualify for a \$4,000 tax exemption if they have served during particular qualifying Veteran Exemption Service Dates.²⁴ Unmarried widows or widowers of eligible veterans are also eligible for the **Veteran Exemption**. National Guard does not qualify unless they were activated. Smithfield also offers a '**Veterans Disability Exemption**' for any Veteran who is 100% service-connected disabled and unable to work as of December 31, 2002, owns real estate [in Smithfield] and resides therein as of December 31, 2002. A signed statement from the Veteran's Administration stating that the person is 100% disable service-connected, unable to work and the reason for the disability must accompany the application.

²⁴ World War I (4/6/17 to 11/11/18), World War II (12/7/41 to 12/31/46), Korean Campaign (6/27/50 to 1/31/55), Viet Nam (02/28/61 to 5/7/75), actual service and/or campaign ribbon/expeditionary medal in Grenada or Lebanon Conflicts (1983-1984), active service and SW Asia Service Medal awarded during Persian Gulf Conflict (8/2/90 to 5/1/94), Haitian Conflict (8/2/90 to 5/1/94), Somalian Conflict (8/2/90 to 5/1/94), or Bosnian Conflict (8/2/90 to 5/1/94).

Lastly, the Town of Smithfield offers a ‘**Blind Exemption**’ to anyone that is legally blind as certified by an attending eye physician, owns real estate and resides therein.

Smithfield Housing Rehabilitation Program

The Town currently provides funding for homeowners through the Smithfield Housing Rehabilitation Program. This program is funded through the Town’s annual Community Development Block Grant appropriation. It provides income-eligible home owners with funds to complete a variety of home upgrading and improvements, such as renovations, electrical and plumbing upgrading, and improvements to heating systems, etc. Eligibility levels for 2015 are shown in Table H-20 below. The Town should continue this program and expand it if possible.

The primary purpose of the Smithfield Housing Rehabilitation Program is to provide an incentive to private property owners to repair or “rehabilitate” their residential properties in an attempt to meet basic Housing Quality Standards. The Program provides financial assistance to local property owners for the repair and rehabilitation of residential dwelling units. The target area for these activities is located in the Esmond-Georgiaville area of the Town. The anticipated result of the program is that the supply of decent housing for low and moderate income people in the Town of Smithfield will be increased, while at the same time existing housing quality stock is preserved and older neighborhoods are revitalized.

Applicants who have income levels in the lower income range will generally receive 100% rehabilitation funding awards. The program was originally structured to provide persons in the moderate income range with loans ranging from 50%-100% funding. However, the Town has not received sufficient funding to operate a loan program and households in the moderate income range are also eligible for grant awards.

Table H-20: Town of Smithfield Housing Rehabilitation Program Eligibility Criteria - 2015

Household Size	Low Income	Moderate Income
1 person	less than \$26,020	\$26,020-\$41,650
2 persons	less than \$29,800	\$29,800-\$47,600
3 persons	less than \$33,500	\$33,500-\$53,550
4 persons	less than \$37,200	\$37,200-\$59,500
5 persons	less than \$40,200	\$40,200-\$64,300
6 persons	less than \$43,200	\$43,200-\$69,050
7 persons	less than \$46,150	\$46,150-\$73,800
8 persons+	less than \$49,150	\$49,150-\$78,550

Source: HUD FY 015 Income Limits Documentation – Smithfield, RI

A review of minimum housing violations issued by the Building and Zoning Office since 2012 show that housing in Smithfield is generally in good condition. Most violations involved trash and debris accumulation in yards around houses and/or minor violations involving failure to properly maintain exterior siding, trim and decks. However, some more serious violations involving major systems such as electrical, plumbing or structural components were noted. There have been 15 houses demolished in Smithfield since 2004; all but three were replaced with new homes and in 3 instances, more than one home was built in place of the original. Of the 15 demolitions, 11 were demolished at least partially due to the condition/age of the homes. Due to the relative strength of the Smithfield housing market it seems clear that aging and deteriorated homes will either be rehabilitated over time or will be replaced

with new housing. It is also clear based on the number of households on the CDBG rehabilitation program waiting list (20-25 typ.) that this program alone cannot help all those in need at current funding levels.

Table H-21: Smithfield Housing Rehabilitation Program, Grant Funding For the Previous Ten Years

Year	Households Served	Amount
2006	17	\$57,500
2007	0	\$0
2008	0	\$0
2009	5	\$25,000
2010	0	\$0
2011	10	\$36,000
2012	4	\$12,000
2013	14	\$60,000
2014	0	0
2015	2	\$8,230

Rehabilitation of Existing Housing Stock

The Town of Smithfield has a rich history of historic buildings and properties. Over 15 percent of the Town’s housing stock was constructed in 1939 or earlier. Most of the older buildings are located in the Town’s historic villages, especially Esmond, Georgiaville, Greenville and Spragueville. Any housing strategy must recognize the importance of the Town’s historic resources and integrate them into future plans for housing rehabilitation and reuse. Commercial and manufacturing buildings in particular can offer excellent opportunities for conversion to low and moderate housing. Mill complexes in Smithfield are currently in some type of manufacturing, residential or commercial use, such as the Esmond Mill Complex and the Homestead Mill. The Natural and Cultural Resources element of the Comprehensive Plan provides detailed description of these properties.

An inventory of the Town’s mill sites was conducted for this planning effort to estimate the potential build-out of several mills with potential for adaptive re-use as residential properties. Table H-22 below lists these sites and the estimated number of one and two bedroom units for each property. For these structures, both mixed-use redevelopment as well as all-residential strategies should be encouraged by the Town. At the present time no specific development proposals have been made. Future zoning amendments will be adopted to permit residential uses on these properties. The permitted density should be based on net usable floor area as opposed to density based on land area. Zoning incentives will be created to stimulate the production of LMI units in these structures.

Table H-22: Mill Sites in Smithfield, Rhode Island as Potential LMI Housing Developments

Property Name (Plat/Lot)	Status	Floor Area (square feet)	Potential No. of 1-Bedroom Units*	Potential No. of 2-Bedroom Units**
Esmond Mills (AP 25/43,45 and AP 26/35,35A, 35B)	Occupied – Commercial Uses	642,187	513.7	395.2
Mill Falls, Putnam Pike (AP 4/14)	Occupied - Commercial & Light Manufacturing	105,300	84.2	64.8
TOTALS		Gross 750,527		
		Net 600,422	598	460
Estimated Build-out (50% 1-Bdr, 50% 2-Bdr):			299	230
Projected # of LMI Units***			75	58
<p>*Build-out of mill sites assumes that future zoning of the converted mills will allow a density that will accommodate 1-bedroom dwelling units at 1,000 square feet each. A twenty percent (20%) reduction from the gross floor area was taken to determine usable (net) floor area, prior to calculating the residential build-out of each mill structure, to account for utility and other inhabitable spaces.</p> <p>**Assumes that future zoning of the converted mills will allow a density that will accommodate 2-Bedroom Unit per 1,300 square feet</p> <p>***LMI Projection assumes that a minimum of 25% of the net usable floor area in all mill structures identified in this plan will be devoted to LMI Units. Fifty percent will be one-bedroom units, and 50 percent will be two-bedroom units.</p>				

For the purposes of this study, the potential number of units is determined by first assuming that 50% of the residential units constructed will be one-bedroom units and the other 50% will be two-bedroom units. Secondly, it is assumed that a minimum of 25% of the total net floor area in these mill buildings will be devoted to LMI units. Therefore, a total of 133 new LMI units are projected for the build-out of these selected mill sites; 75 of these units will have one-bedroom and 58 of these units will have two-bedrooms.

The Town will proactively guide low and moderate income housing rehabilitation efforts to certain areas that can best accommodate higher densities due to existing public utilities, services and facilities. The Town should work with public, private and non-profit developers to purchase and rehabilitate historic structures and older buildings and convert them to low and moderate income housing. New zoning must be developed to accommodate reasonable densities needed to convert single family units to multiple family units, and still protect neighborhood character, and provide for on-site landscaping and buffering, off-street parking, etc.

Due to the fact that these sites are currently utilized for their commercial and industrial value, it is difficult to say when these economically important properties will become available. However, each building offers the possibility for the creation of future affordable housing developments. And, furthermore, the Smithfield Planning Department, Smithfield Public Housing Authority and the Smithfield Historic Society are committed to working with developers interested in these locations in order to preserve their historic integrity as well as to encourage their use for LMI housing. The Town is also interested in pursuing Low Income Housing Tax Credits for these properties.

Projection of Low and Moderate Income Housing Need

Quantitative Estimates of Future Housing

This section examines the number of low and moderate income housing units needed to achieve the applicable threshold goal for low and moderate income housing in Smithfield. The Act, as amended in 2004, sets a goal of ten percent (10%) of the Town's year-round housing units to qualify as low or moderate income housing. At the present time, the Town has 398 such units. Ten percent (10%) of the Town's 7,845 year-round housing units (RIH Tabulation, 2017) requires a total of 784 units, for a deficit of 389 units. In order to encourage the construction of enough affordable units to reach the ten percent (10%) goal "within a reasonable period of time,"²⁵ the Housing Plan must adopt policies and identify strategies that will, if successfully implemented, put the Town in compliance with the requirements of the Act.

Construction of new housing units in Smithfield over the past 10 years has averaged approximately 50 housing units per year. If new housing is constructed in Smithfield at that rate for the next 20 years, then the total number of housing units in the Town will increase by 1,000 for a total of 8,845 housing units. To meet the 10% goal, 884 of those units would have to be affordable. The number of additional required affordable units would be 389 (the current deficit) plus 100 (10% of 1,000 new units) or 489 units. That would be 48.9%, or roughly half of all new units constructed over the next 20 years.

This percentage of affordable units could affect the ability of the Town to manage the impacts created by the influx of new housing. If constructed over a short period of time, these housing units—both market rate and low/moderate income, would add hundreds of new students to the public school system and increase demands on the Town's recreation, library, public works, utilities and public safety services. The Town must address the impacts of additional new housing construction, including low and moderate income housing as part of its overall growth management program. See discussion under Goal H-4.

As noted above, two of the three subsidized housing projects in the Town (Esmond Village and Georgiaville Manor recently had their sunset dates extended to 2054 and 2047 respectively. Doing so prevented a **net loss of 194 housing units** from the total number that counts towards the 10 percent low/moderate income housing goal set by the Act.,

The Consolidated Plan

Demand for low and moderate income housing must also be examined in terms of meeting local low and moderate income housing needs. The Town must plan its low and moderate income housing strategies so as to encourage production of the types of housing that are most needed in the community. These strategies must also bear a direct relationship with the State's five-year Consolidated Plan. This five-year plan is based on a review of the State's housing market and housing, homeless and community development needs.

The State of Rhode Island Consolidated Plan 2010-2015²⁶ examined housing conditions in the state based on the 2008 Community Survey. Some of the major findings of this study are:

²⁵ Handbook 16, op. cit., p. IV-19.

²⁶ RI Consolidated Plan 2010-2015, op. cit.

- Rhode Island’s homeownership rate continues to be lower than the national average
- Rhode Island has an insufficient number of large rental units
- Rhode Island has an inadequate supply of affordable housing
- The cost of rental housing continues to be a problem for Rhode Island renters
47.1% of Rhode Islanders paid more than 30% of their monthly income toward rent and a quarter of renters paid more than 50% of their income towards rent
- Homelessness continues to be a statewide problem, not restricted only to cities
- There is a need for more permanent supportive housing for Rhode Island’s diverse special needs population

The Plan assigned a high priority to several groups for which housing is needed on a statewide basis. Local communities are required to develop local housing strategies that are in proportion to the unmet local and state housing needs as identified in this Housing Element and in the Consolidated Plan. The Consolidated Plan identifies unmet regional and statewide housing needs as follows:

- Rental Housing
 - Extremely Low-Income Households (0-30% MFI)
 - Families for both small and large related households
 - Elderly, especially frail elderly and extremely low income elderly
- Home Owners
 - Moderate Income (51-80% MFI)
- Homeless
- Special Needs
 - Frail Elderly
 - Disabled Persons
 - People Living with HIV/AIDS
 - People transitioning from institutional care

Local Housing Needs

In order to measure the nature of local housing demand in Smithfield, the information contained in the Comprehensive Housing Affordability Strategy (CHAS) was reviewed. CHAS is required as part of the National Affordability Housing Act of 1991, and is a requirement of agencies such as Rhode Island Housing to receive federal monies to support their programs. The CHAS is now a component of the Consolidated Plan. This information is published by HUD after every Census and provides information on the type of housing problems in a given community. Table H-23 compares Smithfield CHAS data with that of the northern region.

Smithfield households make up just over 14 percent of the households in the region but it has a slightly lower percentage of cost burdened households than the region. Smithfield has similar percentages of cost burdened and LMI households to that of the other suburban communities in the region and, as expected, Woonsocket has higher percentages of cost burdened and LMI households.

Table H-23: Housing Affordability Smithfield and Region

	No. Households	% of Total Households	Region	Smithfield as a % of Region
Total Households	7,243	-	50,743	14.3
Cost Burdened - Household paying >30% for housing	2,335	32.6	17,544	13.3
Severe Cost Burden Household >50% for housing	865	12.1	7,309	11.8
LMI Households ²⁷	2055	28.3	20,199	10.2
		% of LMI Households	Region	Smithfield as a % of Region
LMI Cost – burdened Households	1,395	67.9	12,675	11.0
LMI Cost –Severely Cost-burdened Households	730	35.5	6,680	10.9
Rental LMI Cost-burdened Households - Renting	495	35.5	7,709	6.4
LMI Cost-burdened Households - Owners	900	64.5	4,965	18.1

Source: 2013 American Housing Survey (AHS)

Table H-24: Town of Smithfield’s LMI Housing Needs

Basic Housing Statistics²⁸	
Typical monthly housing payment* for a \$234,500 house	\$1,719
Household income required to afford a \$234,500 house	\$68,764
Average monthly rent for a two-bedroom apartment	\$1,149
Household income required for that rent to be affordable	\$45,960
Average private-sector wage for jobs in Smithfield	\$89,960
Foreclosures in Smithfield	
Actual number of foreclosures 2009-2015	162

²⁷ LMI Households = Households with income <80% of AMI

²⁸ 2015 HousingWorksRI –Community Profile, available at <http://www.housingworksri.org/cities-towns>

Foreclosure Rate	0.07%
Housing Units in Smithfield²⁹	
Number of year-round housing units	7,585
Housing units that qualify as affordable	398
Affordable housing units reserved for the elderly	290
Affordable housing units reserved for families	16
Affordable housing units reserved for persons with special needs	92
Homes funded through Building Homes Rhode Island	2
How much housing is needed?	
Additional housing units necessary to meet the 10% threshold established by the State's Low and Moderate Income Housing Act of 2004	361

Table 24 above shows that the current LMI housing supply in Smithfield amounts to 398 units. There are 290 existing units of elderly household compared to 16 LMI family units and 92 special needs units. Based on this 2015 ACS figure for total year-round housing units of 7,585, the Town has a LMI deficit of 361 units. The deficit increases to 404 units if the 2010 Census figure for year-round housing units plus new units built since 2010 is used. Today's supply of elderly rental and special needs rental housing meets the stated need for both current and estimated future supply of LMI units in those categories. Therefore, LMI housing development for families should be the priority going forward. Circumstances in the community may offer two explanations for these data: 1) home ownership raises greater [financial] challenges than renting because of greater maintenance costs overall and therefore homeowners are more likely to experience housing problems than renters³⁰ and 2) the market generates more demand for rental housing and supply has tried to keep pace with the demand.

Low and Moderate Income Housing Strategies

Recommended Strategies

As required by Handbook 16, the Town has identified specific strategies to attain the ten percent threshold goal for low and moderate income housing. This section presents a detailed explanation of the strategies and how they are employed to further low and moderate income housing development.

These strategies are based on the Town's stated Vision and Goals, and the Policies designed to achieve these Goals as stated in the following section. This section presents quantitative estimates of the number of low and moderate income housing units expected to be generated by each strategy; the parties responsible for implementing each strategy; the timeframe for implementation; and the resources required to achieve them.

²⁹ Rhode Island Housing, Low-and-Moderate Income Homes by Community chart, available at, <http://www.housingworksri.org/affordable-housing/2017>

³⁰ The CHAS data suggest that LMI homeowners are more likely to experience housing problems than LMI renters.

Housing development in the Town must be coordinated with the Town's overall growth plans. The efficient production of low and moderate income housing should be integrated into these growth policies so that the Town's goal of reaching a level of ten percent low/moderate income housing by the year 2050 is not delayed.

STRATEGY 1: Zoning - Apply new zoning provisions to promote low and moderate income housing units in areas with municipal services (See Policy H-4.1).

Several areas of town are better suited for the promotion of low and moderate income housing development. These areas were selected because they meet several conditions based on location:

- Associated with an existing population or growth centers of the community
- Accessibility to the transportation system
- Within the existing service area of a public water supply and wastewater treatment system or easily connected to a system via minor extension
- Proximal to community services and amenities

For the sake of this planning effort, four areas were targeted for further consideration; the existing villages of Esmond, Georgiaville, Greenville, and the region of town along Douglas Pike due south of the intersection of Interstate 295.

Within these areas, the Town has identified potential sites for the location of new low and moderate income housing development projects. These sites include approximately 269 gross acres of land for new housing development. In 2012, the Town conducted a development feasibility analysis of each of these sites, taking into account the presence of wetlands and other land unsuitable for development. These sites have the potential to provide land for between 1,299 and 3,110 additional housing units. When these units are added to the potential number of inclusionary zoning units in new subdivisions, the potential number of new affordable housing units ranges from 400 to 1,630. The majority of these sites are served by public water and sewer. The sites that are not connected to the system are considered to be easily accessible by a water and/or sewer service extension.

In order to calculate build-out estimates for these sites, the following assumptions were made:

1. The actual area of buildable land for each site was calculated to exclude areas unsuitable for development, such as wetlands, steep slopes, etc.
2. All development would be multifamily
3. Public water and sewer service will be provided

Development density was estimated to be between 5 units per acre and 12 units per acre based on housing type.

STRATEGY 2: Select Sites - Identify properties suitable for the approval of LMI Housing projects with special density provisions (See Action H-1.6a).

The Town amended its zoning and other land use regulations to create a review process for LMI housing projects. In an effort to encourage the development of quality low and moderate income housing at reasonable densities, the Town has identified in Table H-25 specific sites that might be appropriate for affordable housing. The allowable density of affordable housing projects at the sites identified in Table

H-23 will vary based on the percentage of LMI units proposed and the type of housing proposed as follows:

1. A maximum density of five (5) units per developable acre may be permitted for any development proposal having at least twenty-five percent (25%), but less than thirty-five percent (35%) low or moderate income housing. The number of affordable housing units in LMI projects shall be established by the Zoning Board based on the most recent 30 year average building rate as detailed in Table H-9 so that the Town may attain the 10% affordability goal by 2050 as outlined herein. As previously stated in this section, about 30 percent of all new units constructed over the next 35 years would have to be affordable in order for the Town to reach the 10% affordability goal.
2. For development proposals in which at least thirty-five percent (35%) but less than fifty percent (50%) of the total units would be low or moderate income housing, a maximum density of eight (8) units per developable acre may be permitted. This will include all housing types (i.e., family, elderly and special needs).
3. For development proposals in which at least fifty percent (50%) of the total units would be low or moderate income housing, a maximum density of twelve (12) units per developable acre may be permitted. This will include all housing types (i.e., family, elderly and special needs).
4. Applications for approval of LMI projects on property identified in **Table H-24: Selected Properties for the Construction of Low and Moderate Income Housing**, will be required to file a Comprehensive Permit application with the Zoning Board of Review sitting as the “Board of Review” and, will be subject to the review process established in *Article 12.5* of the Zoning Ordinance. If Board of Review grants approval, the Planning Board will review the development in the same manner as other Land Development Projects.
5. Properties outside of municipal sewer and water service areas or those which cannot be easily connected to services are not recommended for such development at this time. Development proposals for properties outside of these public service districts may be considered for low and moderate income housing provided the project conforms to the zoning regulations of the district in which the property is located.
6. Housing types other than multifamily, such as mixed use, duplex, or single family housing, may be permitted by the Zoning Board on properties listed in Table H-25 if they contribute to the overall goal of providing low and moderate income housing.
7. For redevelopment strategies, such as conversion of existing mill structures, see Policy H-7e.

The Town will develop and adopt these zoning standards as part of its growth management implementation program. See the Implementation element of this plan for the required actions and timetable for adopting this zoning. The Town may also, at its discretion rezone suitable properties not listed in Table H-24 for development of low and moderate income housing, in the new multifamily zoning district designation, after an amendment to the Comprehensive Plan.

Architectural standards and requirements for building designs that reflect the Town’s vision of community character should be included in the new zoning district language. These guidelines will give control of the aesthetic quality of new low and moderate income housing to the Town.

STRATEGY 3: Inclusionary Zoning - Continue to promote LMI unit development within Major Subdivisions and Land Development Projects as required in the mandatory inclusionary zoning provision of the Zoning Ordinance (See Policy H-5.2) .

Inclusionary zoning is a term that describes a zoning technique that provides incentives or requirements that a certain percentage of the housing constructed in new subdivisions or other land development projects is guaranteed to be affordable. It is a technique that has been applied in other areas of the country, but is relatively new to Rhode Island. The first such ordinances appeared in the early 1970s in California, Maryland and Virginia. However in recent years, inclusionary zoning techniques have spread into many jurisdictions throughout the nation.

As applied in other jurisdictions, inclusionary zoning techniques most often require a certain percentage of the number of lots or dwelling units in a subdivision be restricted to sale to low and moderate income buyers. The courts have been reluctant to approve schemes that require this percentage to be taken out of the number of units that could be built under current zoning densities. This would, in effect require private developers to assume the burden of providing the public benefit of low and moderate income housing at their expense. In order to offset this burden, the most successful inclusionary zoning techniques combine the requirement of providing low and moderate income housing with a density incentive, or bonus. For example, a twenty percent incentive in a 10-lot subdivision would yield 12 units, two of which would be required to be affordable. The Town needs to consider the effectiveness of its density bonus program and consider increasing the density bonus available for LMI units.

For the purposes of this analysis, it is assumed that 20 percent of all units in new subdivisions will be affordable, and that these units will be bonus units provided in addition to the maximum number permitted under current zoning density. This number will vary depending on the rate of growth. For the purposes of this Plan, 5 units per year are included in the projections. See discussion in Table H-26.

Again, architectural standards that reflect the Town's vision of community character should be included in the zoning ordinance. These guidelines will give control of the aesthetic quality of new low and moderate income housing to the Town. When reviewing applications for mixed market-rate and affordable-rate developments, the Town should require that the exterior architectural treatment and the site design to be similar in nature for both types of homes as required by the Low and Moderate Income Act.

STRATEGY 4: Work with non-profit and for-profit developers to rehabilitate existing housing and encourage adaptive re-use of nonresidential properties (See Action H-5.1a).

Low and moderate income housing development should also take place in those areas of Town where older housing is prevalent, and opportunities for infill development are available. Rehabilitation of existing units adds to the supply of low and moderate income housing without significantly increasing the total number of units in the Town. Rehabilitation in the Town's developed areas could include small apartments, duplexes or single family units to provide a larger range of housing options. To begin, the Town's Affordable Housing Advisory Board should create a data base of housing that has experienced code violations, sought rehabilitation loans, or has been changed from single to multi-family use. These units should be evaluated for their potential for acquisition and conversion to low and moderate income housing by nonprofit housing agencies.

As part of its strategy to encourage infill of low and moderate income housing in areas that have adequate infrastructure, the Town will revise its zoning codes to permit increases in density necessary for development of new affordable housing, while protecting neighborhood character and retaining adequate landscaping, buffering and off-street parking. To that end, the R-20 Zoning District should be modified to allow for duplexes that include affordable housing by Special Use Permit.

The Town has also identified several mill sites that have the potential for residential development over time (Table H-21). Adaptive re-use of these properties could yield as many as 299 one bedroom and 230 two bedroom residential units, if these properties are utilized for residential purposes. A reasonable proportion of these units (25%) dedicated to low and moderate housing development would yield as many as 133 new LMI units in this timeframe, taking rounding in to consideration. The Town's Planning Department will promote adaptive re-use of these mill sites by suggesting that developers seek a zone change (i.e., from commercial or industrial to PD and/or multi-family residential) to promote these uses at economically feasible densities in order to maximize the production of residential units at these sites. The Town will mandate that at least 25% of the total number of residential units within the converted mills will be low and moderate income housing, especially for rental opportunities for elderly and special needs households.

STRATEGY 5: Fund rehabilitation and improvements to the existing housing stock (See Policy H-2.1 and Action H-4.1c.)

The Town has developed a Smithfield Housing Rehabilitation Program to provide grants for repair and rehabilitation of low and moderate income housing, including both single and multi-family structures. Funded through CDBG appropriations, this program is typically underfunded, and many worthwhile projects are neglected. The Town should increase the level of funding from its CDBG appropriation, and consider allocating funding through its operating budget for improved code enforcement and inspections.

STRATEGY 6: Historic District - Explore the feasibility of creating a local historic district to protect existing housing units from demolition or inappropriate re-use (See Policy H-2.0 and Action CR-2.1f).

Many of the Town's older homes are located in the traditional historic villages of Esmond, Greenville and Georgiaville. Scattered historic sites and properties are identified in this Comprehensive Plan, including ten sites/districts included on the National Register of Historic Places. Municipal review of changes to historic structures can help to preserve older housing which often serves as low and moderate income housing. The Town will investigate opportunities for using the Low Income Housing Tax Credit Program to rehabilitate eligible properties in these areas. The Town's Policy for this strategy is to produce as many as ten rehabilitated properties within the historic villages in the next 20 years.

STRATEGY 7: Affordable Housing Advisory Board – Appoint new members to the Town's Affordable Housing Advisory Board (See Action H-5.2c).

The Affordable Housing Advisory Board should act as a catalyst for affordable housing and low and moderate income housing initiatives within the Town and assist the Town, the State, and private and nonprofit developers to provide low and moderate income housing in a manner that is consistent with the Comprehensive Community Plan. The Board members are appointed by the Town Council and consist of citizens who represent the housing community, banking, real estate, business, local community organizations and others who have a direct interest in low and moderate income housing in the Town. The Board is advisory in nature, and does not replace or duplicate the duties of the Town Council, Planning Board, Zoning Board or Planning Department.

The general duties and purposes of the Affordable Housing Advisory Board are to:

- Establish short-term and long-term housing goals for the town that include those in this Plan;

- Support and expand the role of non-profit organizations in providing permanent low and moderate income housing in the Town;
- Research properties in the Town that may be sites for low and moderate income housing projects;
- Develop a site inventory of potentially suitable sites for rehabilitation of existing housing and adaptive re-use of nonresidential properties;
- Conduct educational programs regarding low and moderate income housing issues within the community;
- Assist the Town in developing zoning amendments contained in this Plan to encourage low and moderate income housing;
- Research the need and methods of establishing and administering an Affordable Housing Trust Fund;
- Identify funding sources for the production of low and moderate income housing within the Town.

STRATEGY 8: Create an Affordable Housing Trust Fund (See Action H-5.2g).

An Affordable Housing Trust Fund would act as the treasury for funds generated specifically for creation of low and moderate income housing. The Trust Fund would be administered by the Town, acting as the fiduciary agent for all funds generated through impact fees, assessments, grants, state or federal funding programs, private donations, land acquisitions or other sources of funding for low and moderate income housing. The Affordable Housing Advisory Board should advise the Town on the operation of the Trust Fund to ensure that the Fund is accountable to local needs. The Town Council shall approve all disbursements from the fund.

There are several local and national models of ‘housing trusts’ or ‘community trusts’ that Smithfield could emulate. In fact, this year, Grow Smart Rhode Island will be convening a group of experts to examine the possibility of using the structure and mechanisms of traditional land trusts to adopt for the acquisition and development of land and other property for low and moderate income housing.³¹ Depending on the so-called, ‘Housing and Conservation Trust Study Commission’, Smithfield may choose to lead the way by implementing its recommendations. Otherwise, the State of New Jersey has pioneered successful programs that blend inclusionary housing and transfer of housing development credits between metropolitan and non-metro areas.³² Such a system has not been tried in Rhode Island but the legislative environment does not prohibit it at present.

STRATEGY 9: Change the Rules - Encourage the State to revise the Low and Moderate Income Housing Act to make it easier for communities to comply as follows:

- Amend the definition of “low and moderate income housing” to include a wider range of housing types (See Action H-6.1a)
- Amend the minimum percentage of low and moderate income units required in order to be eligible to file for a comprehensive permit from the current twenty-five (25) percent of the total number of units (See Action H-6.1b)

³¹ Handbook on the Local Comprehensive Plan For the Rhode Island Comprehensive Planning and Land Use Regulation Act

³² Buchsbaum, Peter A., Esq. April 26, 2004. Implementing an Inclusionary Housing Program. Greenbaum, Rowe, Smith, Ravin, Davis and Himmel LLP. New Jersey.

- Protections to ensure that municipalities are not overwhelmed by multiple comprehensive permit application in a short period of time (See Policy H-6.2)
- Require developments that file for comprehensive permit applications to locate only in areas identified for such development in a community's comprehensive plan (See Policy H-6.3)
- Require all housing units filed as comprehensive permits to be subject to local impact fees and building permit quota systems, if enacted locally (See Policy H-6.4)

Past Experience with the Strategies

The strategies described above were originally proposed in Smithfield's 2005 Affordable Housing Plan. In the intervening years, none of these strategies has proven particularly effective, not so much due to any intrinsic faults with the strategies themselves, but because of a general decline in housing development locally and nationally. Specific numerical targets for the strategies in the 2005 plan were expressed as ranges, and/or as total potential units that could result from the strategy at buildout. It is therefore difficult to numerically assess the success of individual strategies.

Nevertheless, Smithfield is making progress toward affordable housing goals. According to HousingWorks RI, 491 new housing units were built in Smithfield between 2006 and 2013, a 6.7 percent increase, while the number of affordable units rose from 336 to 396, an increase of 60 units or 17.9%. There are also 81 new affordable housing units in developments that are currently proposed or already approved but not yet constructed (see Table LU-2). Most of these new units are attributable to the strategies of inclusionary zoning and targeting affordable housing projects on designated sites. To date, redevelopment of mill sites for affordable housing and collaboration with local non-profit developers have not proven to be particularly effective, but this seems to be attributable to project delays resulting from market forces affecting the availability of capital, rather than the strategies themselves. These strategies still offer the promise of providing multiple new affordable housing units as the housing market and the availability of credit improve. Other strategies, such as historic district zoning, staffing the affordable housing board, and establishing an affordable housing trust fund have not yet been implemented.

In the light of this past experience, Smithfield has decided to concentrate on the four strategies that appear most likely to yield positive results: inclusionary zoning, targeting affordable housing sites, collaboration with local non-profits, and rehabilitation of mill sites, setting numerical goals for these strategies for the future (see Table H-27 below). Other strategies will continue to be considered, but the town will not rely on them to meet affordable housing goals.

Implementing the Strategies

Reaching the 10 Percent Low and Moderate Income Housing Level

The policies, strategies and actions laid forth in the previous sections will enable Smithfield to provide ten percent of its housing stock for low/moderate income households and to maintain that percentage level as the community grows in the future. As stated previously, this would require an additional 580 housing units, or would require that a substantial percentage (30%) of the future housing constructed in Smithfield be affordable for the next thirtyfive years. The Town would prefer that the Act be amended to permit local low and moderate income housing initiatives to achieve a moderate rate of increase in the levels of affordable units.

The Town of Smithfield has chosen to identify sites in the community where LMI housing development shall be promoted (Strategy 2). Thirty-three sites were selected (Table H-25) and analyzed for the presence of development constraints and available infrastructure. The Smithfield Planning Department completed a site-by-site analysis using GIS to determine the build-out potential of each site. LMI housing development projections were conducted based on several assumed zoning densities according to the Town's elected strategies. Additional assumptions regarding the proportion of the selected parcels that would be developed for a particular household type were also made to generate estimations of the number of units. These assumptions are noted in Table H-26.

The number of units projected in Table H-25 provides a range of possibilities for the Town to meet its LMI production goals. Given the reality that not every one of the selected parcels will be developed for LMI housing, the Town will have several opportunities to work with the owners of the selected properties and apply its LMI production policies while achieving the community's LMI needs. Only the properties listed in Table H-25 are eligible to apply to the Zoning Board for the enhanced densities described herein (See Figure H-10 for LMI Site Locations).

Fig. H-10 :: Selected Properties for the Construction of LMI Housing



Gloucester

Water

Table H-25: Selected Properties for the Construction of Low and Moderate Income Housing

Map ID#	Plat	Lot	Location/Owner	Zoning	Gross Land Area	Buildable Area	Public Water ¹	Public Sewer	Projected # Units at Buildout			Market Rate/LMI Units Proposed/Approved
									5 units / acre ² 25% -34% LMI	8 units / acre 35% -49% LMI	12 units / acre 50% - 100% LMI	
1	51	138	Samowitz- Post Office, Old County Rd/Rte. 104	R-20	1	1	PWS w/Ext	Yes w/Ext	5	8	12	
2	51, 46	125, 145	Conti- Farnum Pike/Old County Road	R-MED	13.98	13	PWS w/Ext	Yes w/Ext	65	104	156	
3	46	76	Pari- Between 264/266 Old County Road	R-Med	8.4	8.4	PWS w/Ext	Yes w/Ext	42	67	101	
4	42	227, 228 & 229	Dean Estates Affordable 5-9 Dillion Ln.	R-80 M	5.95	4.65	PWS	Yes	23	37	56	22/9
5	42	241, 242 & 243	Dean Pines Affordable 4 Dillon Lane	R-20 M	6.19	4.92	PWS	Yes	25	39	59	19/ 15
6	41, 42	1 - 450	Tea Lots- Ridge Road/Rte7	R-MED	52	50.1	Yes	No	251	401	601	
7	25	45	Anthony Lisi/ Caito- 2 Esmond Street	LI	3.8	3.8	PWS	Yes	19	30	46	
8	25	64, 66B	Smithfield /Chapman- 20 Esmond & 7 Oak Street	R-20	1.65	1.4	PWS	Yes	7	11	17	
9	24	89, 91	Pezzelli, TOS- 40 Farnum Pike	R-20	0.77	0.77	PWS	Yes	4	6	9	
10	23	71	Georgiaville Village Green 29 Whipple Road	R-20	6.4	6	SW	Yes	30	48	72	0/42
11	23	19	Interchange Realty- 15 Higgins St.	PD	5.4	5.4	GW w/Ext	Yes w/Ext	27	43	65	
12	24	108	Lebeau- 15 Whipple Rd.	R-20	3.6	3	PWS	Yes	15	24	36	
13	23	61	Whipple Creek- 13 Hill	R-20	1.5	1.5	PWS	Yes	8	12	18	0/16

Smithfield Comprehensive Community Plan

Map ID#	Plat	Lot	Location/Owner	Zoning	Gross Land Area	Buildable Area	Public Water ¹	Public Sewer	Projected # Units at Buildout			Market Rate/LMI Units Proposed/Approved
									5 units / acre ² 25% -34% LMI	8 units / acre 35% -49% LMI	12 units / acre 50% - 100% LMI	
			Street									
14	42	6,7	Point View Properties- 379 & 385 Douglas Pike	C	5	4.6	SW	Yes	23	37	55	
15	42	113, 164, 165	Cardinal Hill.- 426 Douglas Pike	R-80	16	7.6	SW	Yes	38	61	91	14/2
16	45	81	Hainsworth- 495 Douglas Pike	R-80	3.65	3.4	SW	Yes w/Ext	17	27	41	
17	45	80B	Monti- 531 Douglas Pike	R-80	12.2	2.52	SW	Yes w/Ext	13	20	30	
18	45	91	Cavanagh Trust- 561 Douglas Pike	R-80	5.45	1.7	No	Yes	9	14	20	
19	45	92	The Oaks Harris Rd./ Douglas Pike	R-80	16.39	10.7	SW	Yes	54	86	128	28/4
20	20	2	Stillwater Place-300 Stillwater Road	R-MED	9.5	7.9	SW	Yes	40	63	95	32/3
21	46	10	Sand Trace LLC- 8 Mann School Road	R80	54.9	35.4	GW w/Ext	Yes w/Ext	177	283	425	
22	46	9	TOS- Log Rd. Rear	R80	34.9	22.5	GW w/Ext	Yes w/Ext	113	180	270	
23	46	327	TOS- Clarence Thurber Dr.	R-20	4.1	3.2	GW w/Ext	Yes w/Ext	16	26	38	
24	43	21C	A.J. Matteo property- Levi Lane	PD	14	12	GW	Yes	60	96	144	
25	4	14,16	Sal Salamon Mills 707 Putnam Pike	R-20M	21	5	GW	Yes	25	40	60	
26	44	81	Machala- 81 W. Greenville Road	R-80	0.65	0.65	GW	No	3	5	8	

Map ID#	Plat	Lot	Location/Owner	Zoning	Gross Land Area	Buildable Area	Public Water ¹	Public Sewer	Projected # Units at Buildout			Market Rate/LMI Units Proposed/Approved
									5 units / acre ² 25% -34% LMI	8 units / acre 35% -49% LMI	12 units / acre 50% - 100% LMI	
27	7	13	Adler-596 Putnam Pike	V	0.76	0.76	GW	Yes	4	6	9	
28	4	13	Kids Campus Preschool And Daycare- 688 Putnam pike	MU	1.84	1.25	GW	Yes	6	10	15	
29	26	79	Esmond Realty Fourth Street	LI	2.8	1.8	PWS	Yes	9	14	22	
30	29	77	Harrison-15 Adedaide Ave.	R-20	2.6	2	PWS	Yes	10	16	24	
31	29	44	Gillis-20 Ursula Rd.	R-20	6	1.81	PWS	Yes	9	14	22	
32	43	95	Apple Valley Mall, LLC-445 Putnam Pike	PD	11.2	9.4	GW	Yes	47	75	113	
33	32	8	Old County Road	R-Med	22	21	PWS	Yes	105	168	252	79/20
Potential New Multifamily Units									1,299	2,071	3,110	115/91
Total Acreage/Potential New Multifamily Units					269	229						
Total Potential Low/Mod Housing Units									400	800	1,630	
<i>Source: Town of Smithfield, RI, 2004. 1 Codes for Public Water Supply Systems: PWS = Providence Water Supply Board; GW = Greenville Water; SM = Smithfield Water 2 Calculations assume that 25% of the lot/build-out will result in LMI Units. (See Strategy 1 & 2 above) 3 Calculations assume that 100% of the lot/build-out will result in LMI Units. (See Strategy 1 & 2 above)</i>												

The new housing described in Table H-26 below would require the development of approximately 115 to 172 additional units of low and moderate income housing every five to ten years to reach the ten percent standard by the year 2050. These units will be distributed among several different development methods , as prescribed in Table H-27.

Table H-26 details the projected need for housing within the planning period (i.e., by the Year 2050). These data consider existing and future LMI housing in the context of the allowable density based on the percentage of LMI units proposed in Table H-25. By 2050, a total of 949 LMI units must be available assuming the Town grows at a moderate rate and 10% of the year-round housing stock will be affordable to LMI households.

Table H-26: Number of Housing Units Required to Obtain the 10% LMI Housing Standard

Year	Total Year-Round Housing Units	LMI Housing Units (Cumulative)	Additional LMI Units	% of Total Units Built During the Period that are LMI	Percentage Low and Moderate Income
2015	7,956	398			5.05
2025	8,393	546	148	34%	6.5
2035	8,830	662	117	27%	7.5
2045	9,267	834	172	39%	8.5
2050	9,486	949	115	52%	10.0

1. Building rate calculated from most recent Smithfield Building Official data (refer to Table H-9 or, a 20-Year Average of 43.7 units/year was assumed.

Table H-27 below illustrates how new LMI units will be strategically targeted over time to meet these goals. This projection reflects the Town’s dedication to the promotion of housing by promoting LMI housing unit creation through new developments. By the 2050 benchmark, it is predicted that the Town will reach the 10% LMI Goal.

Table H-27: Projection of Low/ Moderate Income Housing Development in Smithfield 2010-2050

	Goal 2035 ⁴	Goal 2050	Percentage of New 35-year LMI Units
Inclusionary Zoning ¹	52	91	16.5%
Residential Multifamily applied to Target Areas ²	162	285	51.7%
Collaboration with Local Non-Profit Developers ³	56	99	17.9%
Rehabilitation Strategies Mill Sites	43	76	13.8.0%
TOTAL NEW LMI UNITS (cumulative)	314	551	100%

Notes:

1. An inclusionary zoning ordinance was adopted in 2009 requiring 20 percent of all units in new subdivision and land development projects larger than 6 units to be constructed as low and moderate income housing. New subdivisions may take up to three years to be planned, reviewed, approved and constructed, and new housing to be built. The average number of new housing starts per year is 43.7. Assuming that 50 percent of those units will be in subdivisions greater than 6 units each, a theoretical 4.37, rounded to 5 inclusionary units per year will be constructed (43.7 x 0.50 x 0.20).

2. The 285 units estimated constitute a reasonable estimation of new LMI units projected in Table H-24. Another 91 units of affordable housing in multi-family developments at various sites have been proposed/approved and are be expected to be constructed and occupied in the near term. 3. Non-profit developers may include the Gemini Housing Corporation, Valley Affordable Housing, and Woonsocket

Neighborhood Development Corporation. Gemini Housing Corporation is seeking opportunities to develop housing that will serve the elderly and frail elderly populations through HUD 202 funding. Gemini Housing Corporation received funding from RI Housing and CDBG for Georgiaville Village Green project 42 LMI family units at the former Foundry property.

Several of the projections are actual numbers of proposed units while others represent plan implementation targets. For example, the actual number of units currently proposed as a housing project are given e.g., Georgiaville Village Green, Whipple Creek and others. Other estimates represent targets or goals the Town will pursue as it implements the plan, i.e. encouraging family ownership housing opportunities through its inclusionary zoning ordinance.

This plan promotes a balanced and practical approach for the promotion of new LMI housing in Smithfield. The chosen strategies will generate both owner- and renter- occupied housing units for all household types but will result in a 'surplus' of LMI units, mainly for renters. Rental opportunities for elderly and special needs households are emphasized instead of ownership opportunities out of consideration for the burden of homeownership and the potential risks and challenges associated with it. The rental unit surplus is also a direct result of the additional units currently proposed in Town and the probability that converted mills will result in rental, rather than ownership, opportunities. Otherwise, the Town will rely considerably on working with the private, for-profit and not-for-profit, development community to build LMI units on the lots it has selected in its plan. By identifying 33 different sites as potentially appropriate for multi-family affordable housing, the Town maintains enough flexibility over time to achieve the 2050 LMI Goal.

Goals, Policies, and Actions

The following sections describe the goals, policies, and actions the Town has considered in light of the low and moderate income housing shortage. These statements summarize the community's policies on how it can respond to local, regional and state needs within a reasonable timeframe. Moreover, these statements represent the Town's dedication to providing for its citizens while maintaining its quality of life and community character.

Goals and Policies of this plan element are based on a series of public work sessions with the Smithfield Town Council, Planning Board and other Town officials that were held in 2003.¹ Additionally, meetings with Town officials, the Smithfield Housing Authority and interviews with state and local housing officials contributed to the development of this Plan. These discussions, along with a review of the 1992 Housing Element and an analysis of existing conditions and trends have all helped to shape this Plan.

The Housing Element of the 2004 Comprehensive Plan update contains the following Vision Statement:

"The vision for housing in the future of Smithfield is to plan for future development to provide for housing that can be afforded by the median income family of Smithfield spending not more than 30 percent of their annual income for housing. The Town should cultivate an understanding of the direction the Town should go in the future, recognizing the availability of utilities, Town facilities and transportation."

This Vision Statement remains a valid statement of the Town's commitment to affordable and low and moderate income housing. The Housing Element also contains 3 Goals (H-1 through H-3) and 15 related policies intended to implement this Vision. The 2004 Housing Plan revised these Goals and Policies in order to more clearly focus on specific actions to:

- Upgrade deteriorating and substandard housing
- Provide new housing opportunities geared to the needs of all segments of the population; and,
- Address the documented need for low and moderate income housing opportunities.

The goals and policies below include the policies (H-1 through H-3) originally articulated in the Housing Element of Town's Comprehensive Plan (H-1 through H-3) and the newer goals and policies (H-4 through H-6) provided by the 2004 Housing Plan as updated to the present.

GOAL H-1:

MAXIMIZE THE QUALITY, ACCESSIBILITY, VARIETY OF RESIDENTIAL STRUCTURES AND NEIGHBORHOODS.

Policy H-1.0 Stimulate development of a variety of housing, in terms of type, cost, size, location and design, to meet the broad range of needs and desires of homeowners and renters, and of all income groups and family sizes.

Policy H-1.1 Support the activities of the Town's Housing Authority to increase its ability to serve its residents, with special emphasis upon meeting the needs of families and elderly citizens.

¹ Meeting dates were September 23, 2003; October 27, 2003 and December 10, 2003.

Policy H-1.2 Support the activities of the Gemini Housing Corporation and other area non-profit housing organizations to secure funding for affordable housing projects.

Policy H-1.3 Continue to require LMI units to be developed on site for all major subdivisions and land development projects.

Policy H-1.4 Work to meet the low and moderate income housing needs of Smithfield residents.

Policy H-1.5 Within the extent allowed by law or by the guidelines of specific funding programs, the Town should prioritize the creation of low and moderate income housing for local residents.

Policy H-1.6 Encourage and support optimum location of new housing in terms of its relationships to transportation, pollution control, water supply, education and other public facilities and services; employment opportunities and commercial and community services; adjacent land uses; and the suitability of the specific site for other land uses, including open space.

Action H-1.6a Update the list and map of properties and/or locations for new low and moderate income housing that would meet acceptable criteria.

Policy H-1.7 Support the activities of the Smithfield Housing Authority toward achieving a mix of affordable rental units which meet the different needs of local families and individuals.

Policy H-1.8 Assist the Smithfield Housing Authority in identifying sites and securing funding for affordable housing projects.

GOAL H-2:

PROMOTE A SAFE, SANITARY AND WELL-CONSTRUCTED HOUSING STOCK THROUGH NEW CONSTRUCTION AND RENOVATION OF EXISTING STRUCTURES.

Policy H-2.0 Encourage and support the optimum use of existing housing stock, existing neighborhoods, and existing structures suitable for residential use, including rehabilitation of historic buildings for housing, when meeting housing needs.

Policy H-2.1 Assist the Smithfield Housing Authority in securing CDBG funding to maintain and improve existing housing units.

Action H-2.1a Fully utilize governmental assistance programs and other available tools to ensure that the quality of the housing stock is maintained.

Policy H-2.2 Provide access to information regarding RIHMFC programs for home ownership.

Action H-2.2a Develop a link to the Rhode Island Housing web site on the Town's Web site.

Policy H-2.3 Encourage and support the continued long-term availability of housing units at Esmond Village and Georgiaville Manor to low and moderate income tenants.

GOAL H-3:

ENCOURAGE SAFE AND DESIRABLE NEIGHBORHOODS.

Policy H-3.1 Encourage and support the protection and improvement of stable neighborhoods and areas and support activities which seek to improve the quality of life and shelter opportunities for all local citizens.

Action H-3.1a Provide for a mix of affordable and market rate units in all developments.

Action H-3.1b Integrate new affordable housing development into existing neighborhoods in a manner that will protect the character and value of these neighborhoods.

Action H-3.1c Distribute new low and moderate income housing developments throughout the Town on scattered sites, in scale with existing neighborhoods, and, except for small single family developments, where public water and sewer service is available.

GOAL H-4:

RELATE THE LOCATION, DENSITY AND NATURE OF NEW HOUSING TO THE TOWN'S LONG-RANGE LAND USE AND GROWTH MANAGEMENT POLICIES.

Policy H-4.1 Continue to apply zoning provisions to promote development of low and moderate income housing units in areas served by public water and public sewers.

Action H-4.1a Adopt specific methods and procedures for the review of low and moderate income housing applications based on the comprehensive permit procedures provided in the Low and Moderate Income Housing Act.

Action H-4.1b Work with non-profit and for-profit developers to rehabilitate existing housing and adaptively re-use nonresidential properties.

Action H-4.1c Fund rehabilitation and improvements to the existing housing stock utilizing the CDBG program and the Low Income Housing Tax Credit Program.

Action H-4.1d Study the feasibility of creating a local historic district to protect existing housing units from demolition or inappropriate re-use.

Action H-4.1e Amend the Zoning Ordinance to allow duplex units in some or all residential zoning districts by special use permit provided one of the units meet the LMI criteria.

Action H-4.1f Investigate the feasibility of rezoning additional Village Districts at appropriate nodes in the Town.

GOAL H-5:

MEET THE HOUSING NEEDS OF THE TOWN'S PRESENT AND FUTURE POPULATION.

Objective H-5.1 Meet and exceed the state's mandated affordable housing requirement.

Action H-5.1a Work with for-profit and non-profit developers to increase the number of LMI housing units through the rehabilitation of existing housing and adaptive re-use of nonresidential properties including mill buildings.

Policy H-5.2 Continue to enforce Inclusionary Housing provisions of the Zoning Ordinance to ensure that all Major residential projects contain at least a 20% LMI component.

Action H-5.2a Revise the fee in-lieu of and density bonus provisions of the Inclusionary Zoning Ordinance to ensure compliance with the Enabling Act and to ensure that LMI housing is constructed.

Action H-5.2b Create programs that actively support low and moderate income housing opportunities in Smithfield.

Action H-5.2c Reestablish the Affordable Housing Advisory Board (AHAB) to act as a catalyst for affordable housing initiatives.

Action H-5.2d Research properties in the Town that may be sites for low and moderate income housing projects.

Action H-5.2e Develop a site inventory of potentially suitable sites for rehabilitation of existing housing and adaptive re-use of nonresidential properties.

Action H-5.2f Conduct educational programs regarding low and moderate income housing issues within the community.

Action H-5.2g Research the need and methods of establishing and administering an Affordable Housing Trust Fund.

GOAL H-6:

SEEK ALTERNATIVES TO THE STATE'S LOW AND MODERATE INCOME HOUSING ACT AS A WAY OF PROVIDING LOW AND MODERATE INCOME HOUSING.

Policy H- 6.1 Encourage the State to revise the Low and Moderate Income Housing Act as follows:

Action H-6.1a Amend the definition of "low and moderate income housing" to include a wider range of housing types.

Action H-6.1b Increase the minimum percentage of low and moderate income units required in order to be eligible to file for a comprehensive permit from the current twenty-five (25) percent of the total number of units.

Policy H-6.2 Continue to enforce the restrictions on the number of LMI projects that can be submitted in a given year.

Policy H-6.3 Continue to require developments that file for comprehensive permit applications to locate only in areas identified for such development in the comprehensive plan.

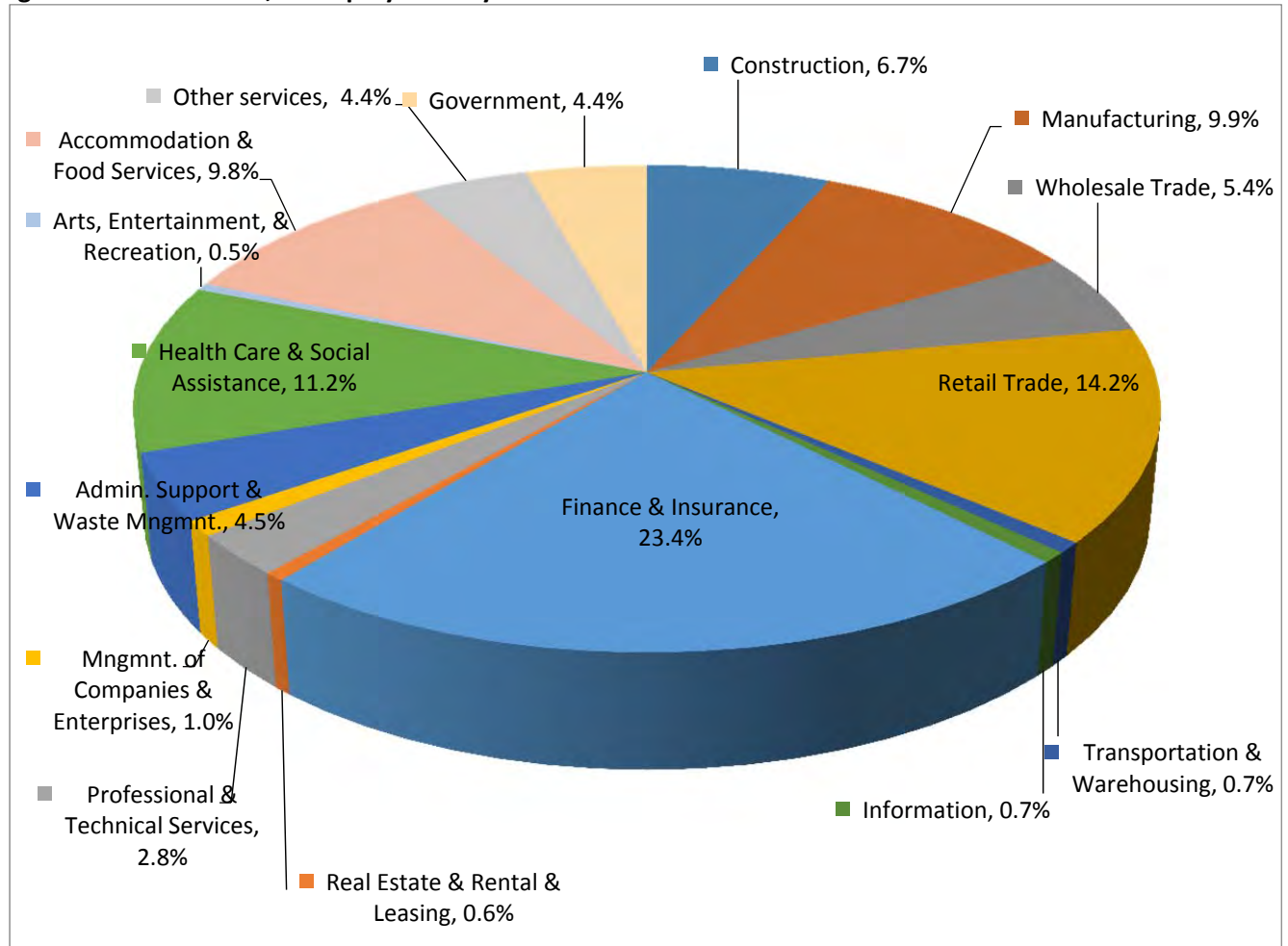
Policy H-6.4 Continue to require that all market rate units approved as part of a comprehensive permit be subject to local impact fees and quotas.

ECONOMIC DEVELOPMENT

Background

Smithfield has changed greatly since its days as an agriculture and textile center. Although still known for its apple orchards, Smithfield has expanded its economic interests into the Financial, Retail Trade, Health Care, Accommodation, and Food Services sectors. The community is also home to Bryant University, a nationally recognized private business school.

Figure ED-1: Smithfield, RI Employment by Economic Sector 2016



Source: Rhode Island Department of Labor & Training, Quarterly Census of U.I.-Covered Employment and Wages, City and Town Report – 2016 Annual

Employment

Figure ED-1 above shows a breakdown of employment in Smithfield by economic sector in 2010 as reported by the U.S. Census. The largest source of employment in Smithfield, 25.6% of all jobs, is in the finance and insurance sector, followed by retail trade (13.5%), health care & social assistance (11%) and

manufacturing (10.7%). Accommodation & Food Services (8.1%), Construction (6.2%) and Wholesale Trade (5.9%) are also important sectors of the local economy.

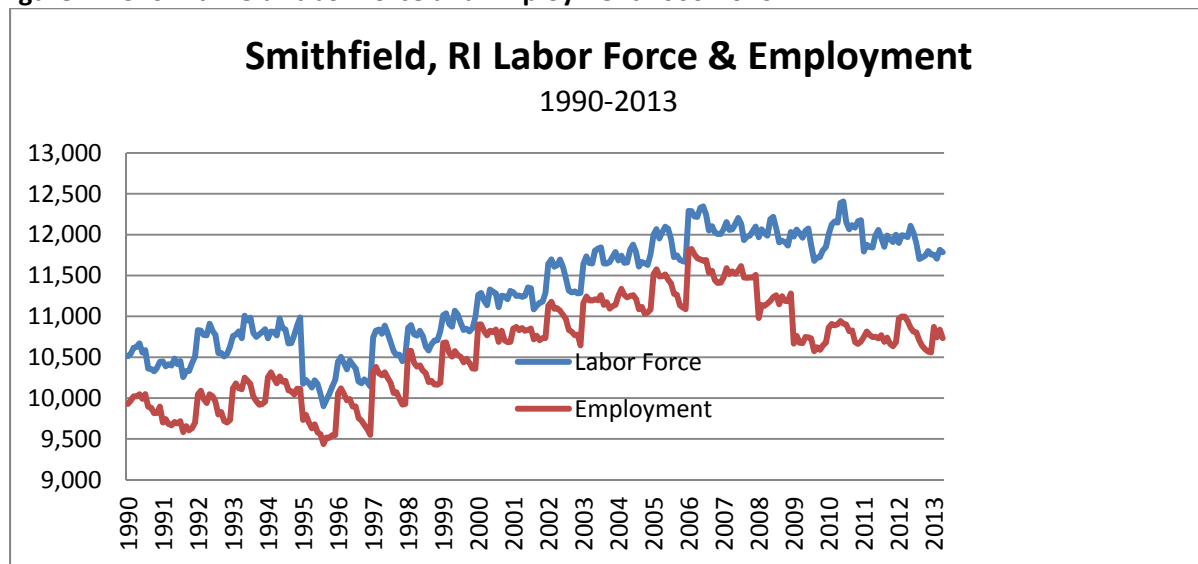
Figure ED-2: Fidelity Investments Headquarters

Figure ED-2: Fidelity Investments Headquarters
 The Town of Smithfield plays a significant role in the Rhode Island economy. Home to several large employers – Fidelity Investments (3,700+ employees), Bryant College (approx. 800), Honeywell (491), FGX (341) and Alexion Pharmaceuticals (280+), Smithfield has been very successful at attracting new investment to the State. Smithfield Crossings, a retail center at Routes 44 and I-295 has attracted and retained over a dozen retail chain stores. Continued presence and expansion of local businesses is expected to bring additional jobs to the community and region as the national economy recovers from the recent downturn.



Smithfield’s labor force and employment from 2000 to 2016 are shown in Figure ED-3 and ED-4. The labor force consisting of unretired adults over the age of 18 has grown from slightly more than 10,000 in the 1990s to close to 11,300 today. The labor force peaked in 2006 at 12,171 declined sharply through 2010 and has leveled out from 2012 through 2016.

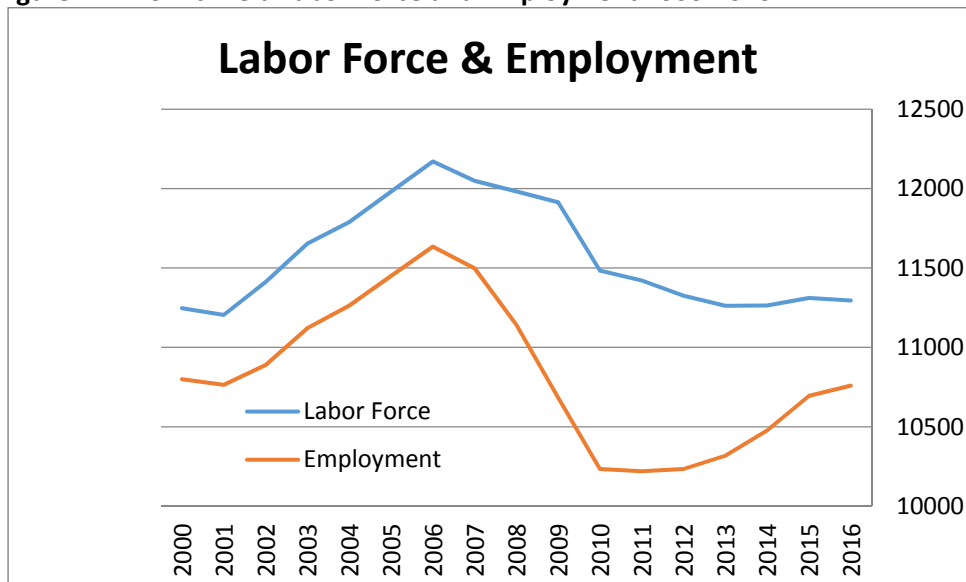
Figure ED-3: Smithfield Labor Force and Employment 2000-2016



Source: Rhode Island Department of Labor and Training

Employment has roughly tracked the size of the labor force. Job growth kept pace with labor force growth from the mid-1990s to the mid-2000s. But, after 2006, employment began to decline, widening the gap between the number of persons available in the labor force and the number of employed persons, despite some shrinkage of the labor force.

Figure ED-4: Smithfield Labor Force and Employment 2000-2016



Businesses

In the past 5 years a number of businesses have moved to Smithfield, added new employees and or expanded facilities in Smithfield. Notable expansion projects include Fidelity (400) new employees, FGX -warehouse/office expansion (90 new employees), Alexion Pharmaceuticals - office/lab space expansion (100 new employees), Hanna Instruments - occupied an existing 35,289 sq.ft. building, DeJana Truck, new 41,000 sq.ft. building, Bryant University- Shu Fang Zhi, cultural center, Physician’s Assistant wing (10,000 sq.ft.), Academic Innovation Building (new 60,000 sq.ft.), Strength & Conditioning Building (new 10,300 sq.ft.). New retail businesses that have located in Town include Dave’s Market 25,000 store in Smithfield Crossings, Starbucks, Planet Fitness, Rumford Pets in the Route 44 area.

Figure ED-5: The Crossings at Smithfield Retail Development



In 2003, the Smithfield Department of Planning and Economic Development began preparing the Smithfield Economic Development Strategy Report. This report found that, based on employment growth and unemployment, Smithfield has had a strong economy, even though recent economic downturns. It appears that Smithfield may be less dependent on highly cyclical industries than the state as a whole.¹ Smithfield also has either retained or expanded jobs more successfully than the state through the various stages of the most recent business cycles.

¹ Smithfield Economic Development Strategy report (draft) 2012

The industrial structure of the Town has changed over the past decade, with a continuing decline in manufacturing counterbalanced by significant increases in Finance, Insurance and Real Estate (FIRE) sectors. The decline of the manufacturing sector is consistent with the trend in the state economy, but Smithfield still has a number of manufacturers with local specializations that have managed to sustain local production despite the national trend of overseas outsourcing in manufacturing. Smithfield also has a number of emerging manufacturers in fields such as Electrical Machinery.

Non-basic industries that produce goods and services for outside consumption in Smithfield occupy a variety of economic sectors, including the emerging Finance, Insurance and Real Estate (FIRE) industry and continued strong performers in manufacturing. Non-Manufacturing Industry Specializations relative to Rhode Island include Food and Kindred Products, Durable Goods and Special Trade Contractors. Other components of the economic base include Services and Commodity Sales (SIC 62) particularly in the FIRE industry sector.

Table ED-1: Wages and Employment, Smithfield 2016

Economic Sector	Number of Units	Average Employment	Total Wages	% of Total Employment	% of Total Wages
Finance & Insurance	46	3278	\$601,329,709	22.0%	52.3%
Retail Trade	114	1986	\$50,909,777	13.3%	4.4%
Health Care & Social Assistance	80	1566	\$47,650,198	10.5%	4.1%
Manufacturing	58	1391	\$89,728,579	9.3%	7.8%
Accommodation & Food Services	76	1377	\$25,582,364	9.2%	2.2%
Construction	129	939	\$59,339,003	6.3%	5.2%
Wholesale Trade	50	762	\$53,849,497	5.1%	4.7%
Administrative Support & Waste	56	627	\$32,636,174	4.2%	2.8%
Government	16	619	\$36,422,699	4.1%	3.2%
Other services (except Public Admin.)	65	611	\$25,486,794	4.1%	2.2%
Professional & Technical Services	112	390	\$28,876,140	2.6%	2.5%
Management of Companies & Enterprises	8	143	\$23,115,650	1.0%	2.0%
Information	10	101	\$5,683,769	0.7%	0.5%
Transportation & Warehousing	13	100	\$6,034,517	0.7%	0.5%
Real Estate & Rental & Leasing	19	78	\$6,457,644	0.5%	0.6%
Arts, Entertainment, & Recreation	14	66	\$1,494,310	0.4%	0.1%
Agriculture, Forestry, Fishing & Hunting	5	*			
Mining	1	*			
Educational Services	9	*			
Utilities	1	*			
Total	874	14,917	\$1,149,181,638		

* Some data are not shown due to the possibility of identifying data of a specific employer.

** Statewide - employment in multiple towns, at unknown locations, or outside RI.

Data compiled July 2016, subject to revision.

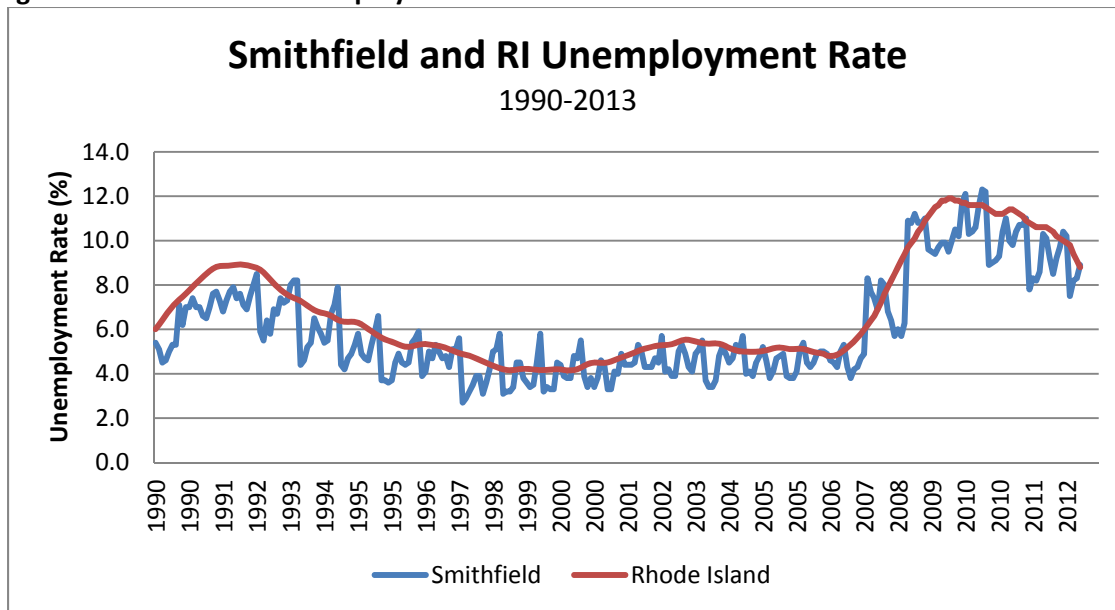
Source: Rhode Island Department of Labor & Training Quarterly Census of U.I.-Covered Employment and Wages City and Town Report - 2016 Annual

Wage levels for the FIRE sector are relatively high, as are those for the manufacturing sector in Smithfield. The Town’s increase in service oriented businesses, mostly along Route 44, suggests not only continuing build out along this major corridor but a shift in employment opportunities and wages as service and retail positions are not traditionally paid as well as FIRE and manufacturing sector employees. To date, employment increases in the FIRE sector have largely been attributable to a few large employers. This has provided opportunities for some of the labor force, but entry level and mid skill level job opportunities continue to stagnate and in some instances decline.

Unemployment

The gap between jobs and workforce is reflected as unemployment. The unemployment rate in Smithfield and in the State of Rhode Island during the same period is shown in Figure ED-6. Smithfield’s rate of unemployment has generally followed the same trend as the State, although the un-employment rate in Smithfield has typically been slightly lower than that for the State as a whole. In the first half of the 2000s, the local unemployment rate hovered around 4 to 5 percent as job growth kept pace with labor force growth.

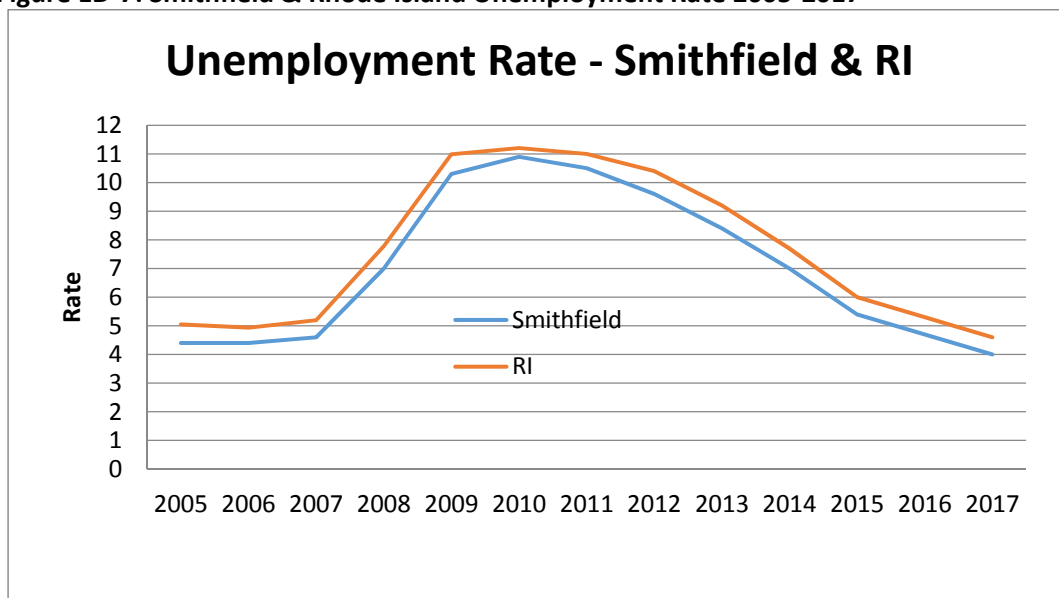
Figure ED-6: Smithfield Unemployment Rate 1990-2013



Source: Rhode Island Department of Labor and Training

As shown in Figure ED-7, after about 2007, the rate jumped sharply, to over 11 percent in 2011, reflecting the sharp decline in employment that resulted from a downturn in the national, regional, and local economy. Since about 2011, the unemployment rate in Smithfield and in the state began to decline more steadily, dropping to pre-recessions levels by 2016 as the economic recovery continued.

Figure ED-7: Smithfield & Rhode Island Unemployment Rate 2005-2017



Source: Rhode Island Department of Labor and Training Labor Force Characteristics

Smithfield is fortunate to have a relatively well educated work force as shown in Table ED-2. Figure ED-8 compares the educational attainment of the workforce in Smithfield, the State of Rhode Island, and the nation as of the 2010 census. Smithfield has a lower percentage of workers that did not complete high school than either the State or the nation. It also has a higher percentage of persons with some college education than the State and a higher percentage of workers who have completed an Associates, Bachelors, or advanced degrees than either the State or the nation.

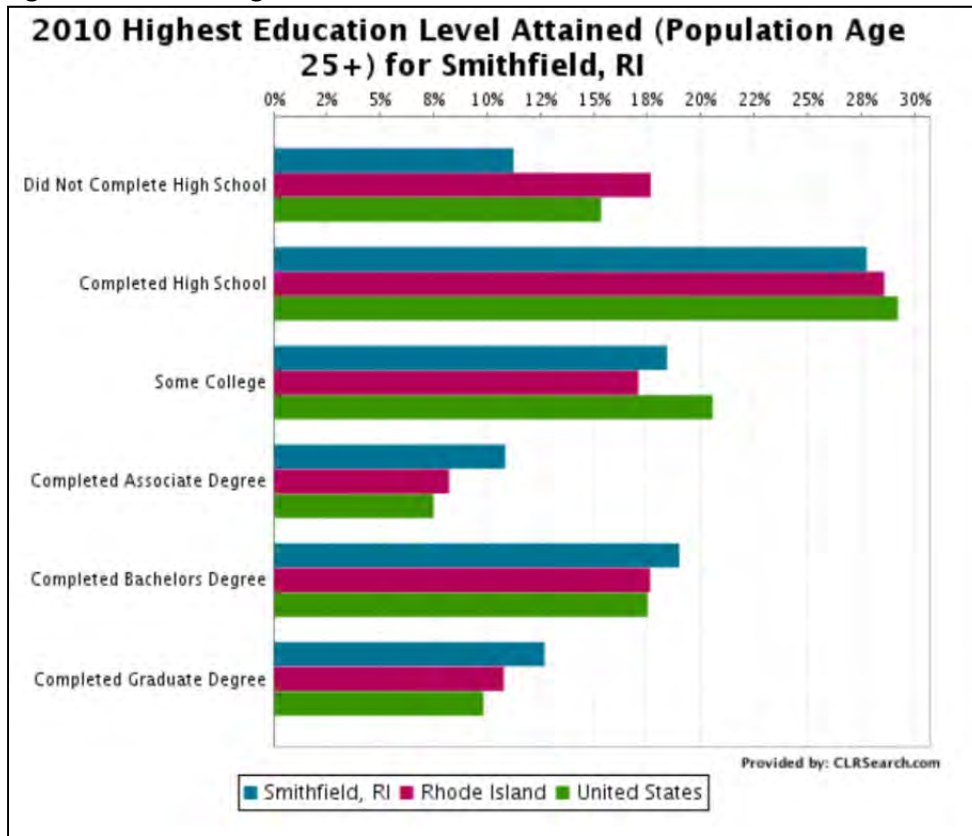
This higher level of educational attainment translates into higher earnings for residents of Smithfield. Table ED-3 shows median household income for Smithfield, the northern market area, and the State as a whole in 1980, 1990, 2000 and 2010 according to the U.S. Census.

Table ED-2: Smithfield Educational Attainment- 2015

EDUCATIONAL ATTAINMENT	POPULATION 25-YEARS & OLDER	% OF POPULATION 25-YEARS & OLDER
Less than 9th grade	291	2.1%
9th to 12th grade, no diploma	770	5.5%
High School Diploma or GED Equivalency	3,689	26.2%
Completed Some College	3,312	23.5%
Associate Degree	1,212	8.6%
Bachelor's Degree	2,917	20.7%
Master's Degree	1,541	10.9%
Professional Degree	183	1.3%
Doctorate Degree	192	1.4%
TOTAL	14,107	

Source: 2015 American Community Survey

Figure ED-8: 2010 Highest Education Level Attained



These data show that household income has consistently been higher in Smithfield than in the surrounding towns and in the State. Income growth has also kept pace with the State and the region and, in the past decade, median income in Smithfield has grown faster than that in the northern region. Smithfield’s large population of well-educated and well paid workers is an important economic asset of the community.

Most of the people who live in Smithfield either work in Smithfield or in a nearby community. According to U.S. Census data on commuting patterns, the median travel time to work in the County is 22.5 minutes (as compared with 22.8 for the State). Most workers in Smithfield, roughly 80% of workers commute to work individually in private automobiles.

Table ED-3 Median Household Income for Smithfield, Northern Market Area and RI 1980-2015

Year	Smithfield	Northern RI Housing Market Area	Rhode Island
1980	\$21,336	\$18,529	\$16,097
1990	\$42,523	\$37,420	\$32,181
2000	\$55,621	\$54,656	\$42,090
2010	\$73,352	\$67,702	\$55,975
2015	\$71,346	\$71,346	\$58,073

Source: U.S. Census 1980, 1990, 2000, 2010 and 2015 ACS

This suggests that efforts to improve automobile access to major employment centers in Smithfield may provide a means to facilitate the marketing and development of growth centers. One approach to

providing such access might be to provide an interchange between I-295 and Route 116 within the PC District. The abundance of land at the location where these two highways cross, and the grade separation between the two provide the potential for construction of ramps at this location in the configuration of a “diamond” interchange.

At the same time, Smithfield must recognize that transportation by single occupancy automobiles is inefficient from an energy perspective and that parking for automobiles occupies land that might otherwise provide additional development potential. Car pooling and use of mass transit can result in significant energy savings, can reduce the amount of land required for parking, and can provide better employment for persons who do not own or cannot operate motor vehicles.

Economic Development Commission

The Town has established an Economic Development Commission (EDC) to support the more than 800 businesses in Smithfield. The role of the EDC is to help those businesses grow toward their full potential and to support the establishment and growth of new businesses consistent with community economic development goals.

The EDC completed a survey of businesses in Smithfield in 2006 to collect opinions about corporate expansion of the Routes 7 and 116 Corridor. A majority of businesses surveyed were in favor of planned corporate expansion within the corridor and a majority indicated that they felt corporate expansion would benefit both their own businesses and the Town.

It has been the mission of Economic Development Commission (EDC) to help create and ultimately execute a master plan for the Routes 7/116 corridor including balanced economic development and job creation; jobs that provide a living wage like those created by such firms as Fidelity, Citizens, Navigant, FGX, Bryant University and others. In 2012, the EDC worked with Bryant University to explore a cluster strategy for the Planned Corporate district (PCD). With the nearby campuses of Bryant University and Fidelity, it could provide a site where similar institutions and corporations could build facilities that would benefit from being in close proximity. While it may be impossible to predict the mix of future uses, a clear master plan for the site can create a unified structure to organize the redevelopment of the area over time. Some steps suggested in the Growth Center Concept Plan include:

- Formally designate the Growth Center in the comprehensive plan.
- Pursue a stakeholder-driven master planning process. Before changing zoning for the site, seek consensus on the desired future uses, the size and shape of the growth center, and the detailed layout of streets, blocks, parks and other elements.
- Revise the zoning ordinances for the growth center that encourages a mix of compatible uses.
- Explore form-based zoning. A form-based zoning approach would take the agreed master plan showing streets, parks, building blocks and parking areas and turn it into a regulating plan.
- Work with the Department of Transportation (DOT) in redesigning the roadway cross section to make it more compatible with a pedestrian-friendly center, as well as helping with planning for public transit improvements.
- Consider establishing a town redevelopment agency that could participate in assembling parcels, developing plans and perhaps most important, issuing bonds to build roads and other infrastructure.

Planned Corporate District (PCD)

The Routes 7 and 116 corridor encompasses approximately 1,500 acres, with about 700 acres of developable land remaining that is zoned as “Planned Corporate”. The Planned Corporate District was established “to provide an area for planned employment uses, including planned office, as well as research and development parks, light industrial development, corporate headquarters, hotel/conference facilities, and related accessory uses to create a coordinated development approach along major corridors designated for non-residential growth in the Comprehensive Plan (Smithfield Zoning Ordinance 1998 as amended).”

The District is intended to facilitate the development of professional office buildings as a principle use. For example, Office Uses as described in Article 4, Section L of the Smithfield Zoning Ordinance identify such uses as office buildings for government, businesses, or professional purposes as permitted uses. Restaurants permitted by right include those “without drive-thru facilities, with or without alcohol, as an accessory use...” There may also be a number of restrictions for permitted uses. For example, restaurants may be permitted by right, but only within a building with a minimum of 60,000 square feet of gross floor area. The PC district also allows for a Planned Park for permitted uses.

In addition, the PC District accommodates more intense office uses through a special use permit. Office Uses allowed under a special use permit include medical or dental offices and offices for health, medical organizations and the “ancillary offices where patients receive medical, dental, surgical, psychiatric, and/or other health related services and care on an out-patient basis only.” The Zoning Ordinance was further amended to include a Planned Corporate District – B (PCDB) to permit by right the manufacture of drugs and pharmaceuticals limited to those permitted in Biological Safety Levels 1 and 2. Alexion Pharmaceuticals occupies a lot that was zoned PCD-B in 2002.

Currently, the Fidelity Investments Campus, Navigant Headquarters, Smithfield Office Center, FGX, CVS Call Center and Honeywell are located in this zone. Approximately 700 acres of developable land remains for new growth and the Town is continuing to work with its partners at the State, Bryant University and in private industry to develop an Economic Development Marketing Strategy for this area. As mentioned herein the Town is looking to formally designate the Route 7/116 Corridor in the heart of the PC District as a Growth Center and adopted the Economic Growth Overlay ordinance that allows for greater diversity of uses to foster a mixed use center with a combination of office, retail, entertainment and residential uses.

Goals, Policies, and Actions

The Smithfield Economic Development Commission together with its partners in the Smithfield Advisory Group (SAG) recognize that in order to ensure continued and sustainable economic growth, it is necessary to both support and promote the health of existing businesses while planning for future growth. The Town must endeavor to fully understand its assets and capabilities as they apply to the local, regional and the expanding global economy. To accomplish this, the implementation of the following Goals and Policies is needed.

GOAL ED-1

ECONOMIC GROWTH AND CONTINUED INDUSTRIAL DEVELOPMENT

Policy ED-1.1 Facilitate the development of strong and emerging industries.

Action ED-1.1a Work with the Economic Development Commission and the Blackstone Valley Tourism Council to promote tourism and recreation-related activities as an integral part of the economic development program.

Policy ED-1.2 Support and promote the economic development of appropriately zoned parcels.

Action ED-1.2a Develop and regularly update an inventory of available commercial/industrial land.

Action ED-1.2b Work with owners of industrial land in promoting appropriate sites for development in the business and industrial parks and throughout the Town.

Action ED-1.2c Work with Commerce RI and Smithfield EDC on developing 'Pad-Ready' sites within the Planned Corporate and Industrial zones to promote Economic Development.

GOAL ED-2

DIVERSIFIED ECONOMIC BASE

Policy ED-2.1 Work to Lessen dependence on any one particular type of industry or a few major employers. Capitalize on the wide range of the Town's resources to build an economic base capable of withstanding fluctuations in the world/national/state economy or in particular industries.

Action ED-2.1a Develop a clear Economic Development Marketing Strategy that looks at attracting diverse industries at the local, state, regional and global scale.

Policy ED-2.2 Support emerging basic Industry performers, and work comprehensively to assist lagging basic and non-basic industry performers.

Policy ED-2.3 Support the creation and development of new, organic small business in Town.

Action ED-2.3a Create a local enterprise facilitation group to encourage and nurture entrepreneurial growth.

GOAL ED-3

“DESIRABLE” GROWTH INDUSTRIES

Seek to attract industries characterized as low energy consuming, high technology, and low- or non-polluting, which, based on past performance and foreseeable trends, are likely to grow at a faster rate than the general economy.

Action ED-3.1a Establish and maintain industry clusters.

Action ED-3.1b Establish a “brand” for Smithfield as recommended in the Bryant Clustering/ Brand Strategy report and promote clustering of related industries in Smithfield

GOAL ED-4

MAINTENANCE OF EXISTING FIRMS

Policy ED-4.1 Increase technical assistance outreach efforts and the availability of business development resources, if available.

Action ED-4.1a Provide technical and monetary support to existing businesses, if available.

Action ED-4.1b Utilize Bryant University resources, to further help focus the Town on appropriate development avenues and business development assistance.

Action ED-4.1c Provide assistance for connecting businesses with loan and grant funding sources and/or offer appropriate incentives.

Action ED-4.1d Evaluate the use of incentives to attract and encourage economic development, including, but not limited to, tax incentives, sewer extensions, job training, loans, grants, and permitting assistance.

Action ED-4.1e Work with state and development community to provide for the building space and expansion needs of existing companies.

GOAL ED-5

INTEGRATED ECONOMIC DEVELOPMENT WITH APPROPRIATE LAND USE POLICIES

Relate economic development to overall land use, including revitalizing old industrial/employment centers, planning business/industrial parks, minimizing commuting distances, and developing industry in accord with sound land use policy.

Action ED-5.1a Establish “Growth Centers” and facilitate development through the application of advanced planning strategies.

Action ED-5.1b Formally designate the Routes 7/116 Corridor as a community “growth center” and seek State and Federal support to enhance and promote development opportunities in the area.

Action ED-5.1c Continue to guide light industrial, office development, and related industries toward the Routes 7/116 industrial/planned corporate areas in the northeast quadrant of the Town, and develop plans that the appropriate infrastructure is available.

Action ED-5.1d Work with RIPTA and major employers to offer reasonable alternatives to transportation by personal automobile for commuters.

Policy ED-5.2 Ensure that commercial, industrial and Planned Corporate developments are designed with consideration for adjacent land uses.

Policy ED-5.3 Support and encourage agriculture, silviculture, aquaculture and other resource-based businesses.

Action ED-5.3a Continue to make efforts to retain farms and agricultural facilities.

Action ED-5.3b Review regulations to ensure that provisions for expansion and development of agriculture, silviculture, and other resource-based business uses are reasonable.

Action ED-5.3c Work with the Rhode Island and U.S. Department of Agriculture in support of programs that promote local produce and bolster farm business.

Action ED-5.3d Study the potential product/supply links to recruit businesses that will support existing businesses in the region. Work with Bryant University experts.

GOAL ED-6

IMPROVED EMPLOYMENT OPPORTUNITIES

Encourage diverse employment opportunities and provide appropriate training programs to upgrade the quality and diversity of jobs available.

Policy ED-6.1 Build the capacity of Town departments for stimulating economic growth, and implementing strategies for economic development, by establishing partnerships with lenders, businesses and State partners.

GOAL ED-7

INCREASED INCOMES

Support opportunities for local workers to earn higher, family-wage incomes.

Policy ED-7.1 Continuously engage local businesses to identify needs for human and capital investments.

Policy ED-7.2 Encourage mixed use retail development in support of industrial and office development in the Route 7/116 Corridor.

Policy ED-7.1 Resist single use retail commercial overdevelopment by limiting retail development areas and by providing preference to businesses and industries that offer better employment and wages than traditionally provided by commercial retail development.

GOAL ED-8

OPTIMAL INFRASTRUCTURE AND BUSINESS SUPPORT SERVICES

Address both tangible needs, such as transportation, utilities, goods, water, energy, and waste processing, and intangible needs – the “business climate” of the locality.

Policy ED-8.1 Take advantage of infrastructure assets and improve the business climate.

Action ED-8.1a Work with the owners of industrial and Planned Corporate District land to find ways to meet infrastructure needs.

Action ED-8.1b Develop and maintain business/industrial park and roadway infrastructure maintenance program to include landscaping and roadway improvements.

Action ED-8.1c Work with RIDOT and RIPTA to improve access to growth centers while ensuring that village character is not adversely affected.

Action ED-8.1d Evaluate alternatives to connect I-295 with Route 116 in Smithfield as a means of providing enhanced access to businesses in the PC District.

Action ED-8.1e Work with RIAC to promote the North Central Airport as a vital transportation link that can benefit the development of the Economic Growth Overlay District.

Policy ED-8.2 Improve village character through streetscape, landscaping and signage improvements. Establish village bounds through a system of identifying signs.

Policy ED-8.3 Explore ways to provide clean, abundant and affordable energy sources for the businesses and citizens of Smithfield.

Action ED-8.3a Develop incentives for businesses that incorporate Green Development Techniques and/or utilize alternative energy.

Action ED-8.3b Investigate ways to promote rooftop solar.

Action ED-8.3c Encourage siting solar projects where forest clearing is not necessary.

Policy ED-8.4 Ensure adequate water supply exists to service projected growth in the Routes 7 and 116 Corridor.

Action ED-8.4a Develop a detailed water use/availability plan for the Routes 7/116 Corridor. Include quantity and delivery issues and estimate costs and timeline necessary to achieve needed capacity at buildout.

GOAL ED-9

IMPROVE LINKAGES AMONG TOWN, STATE & REGIONAL PLANNING DOCUMENTS

Policy ED-9.1 Make explicit, in all planning documents, the need for a coordinated approach towards economic development in order to maximize economic development goals and Policies.

Action 9.1a Work with neighboring communities to develop a regional economic development plan that takes advantage of each community’s unique assets and capabilities.

COMMUNITY SERVICES AND FACILITIES

Introduction

The Town of Smithfield provides a range of community services to local residents. Key services include police patrols, fire protection, emergency response, public education, and, in many parts of the Town, water and sewer service. To deliver these services, the Town relies on a network of community facilities including both buildings and structures such as police and fire stations, schools, libraries, recreational facilities (addressed in open space and recreation) and roads and streets (addressed in the circulation element). These facilities provide the framework for servicing the community (water, sewer) and because land use and changes created by land use impact the demand for services and facilities. Development tends to follow the location and quantity of public services, and advance planning of facilities should be coordinated with economic development, housing, transportation, open space and land use Policies. Information for this plan element was developed through personal interviews of department heads, program directors, and others.

Police and Public Safety

Police protection, fire protection, and emergency medical services (rescue) are Town-funded and operated departments in Smithfield.

Police

The Police Department is headquartered in a two story facility on a four-acre site at 215 Pleasant View Avenue overlooking the Stillwater Reservoir. The facility is centrally located, and response time is three to five minutes to any incident within Town boundaries. The department is staffed by 41 uniformed officers and 19 civilian staff running three shifts. The Department's administrative, uniform, detective, training, record and computer divisions are all housed in the same building along with traffic services, a training division, a three-cell, lock-up facility and a full-service police maintenance garage. The Department is nationally accredited, with computerized dispatching and reporting and communication links to the Rhode Island State Police (RILETS) and the FBI (NCIC). The Department has a reputation for excellence in law enforcement and is known for serving the needs of the public through pro-active, community based policing.

Issues/Needs Assessment – Public Safety

The following issues/needs have been identified at the Police Department:

Facility - Smithfield Police headquarters is nearly 50 years old and in need of repairs, particularly repairs to exposed masonry. Additional space will also be required to accommodate projected staffing levels. All daily functions of the department are carried out through this facility, including maintenance of police vehicles. When the building was completed in November of 1972, it housed 25 people. It now serves a staff of 60.

Figure SF-1: Smithfield Police Station



Recognizing the need for an expanded facility, the Department worked with Saccocio & Associates, to review earlier facility assessments and concept plans with an eye to reducing projected project costs of \$9 to \$10 million. Saccocio (2012) recommended a scaled down project, sufficient to meet needs for a projected 15-20 year period that would reduce overall project cost by roughly \$2 million. The Department moved forward with that concept plan and the proposed bond issue for the expansion of the facility passed in 2014.

The newly renovated and expanded police headquarters, dedicated in the summer of 2017 includes upgraded locker room facilities for male and female officers, ADA compliant restroom facilities for employees and the general public, an expanded lobby, dispatch center, and records division, a 50-seat meeting & training room, and increased space for evidence and property

Equipment - Vehicles are replaced after logging approximately 100,000-125,000 miles, and may be recycled for other municipal purposes or traded in. The department employs one full-time mechanic for day-to-day maintenance functions. Major maintenance is contracted out to a local repair establishment. This system appears to be working well and should be continued.

The Department has plans to replace older firearms with updated equipment and plans to equip all patrol officers with tasers by purchasing additional 20-25 units within the next few years.

Staffing - There are currently 36 uniformed personnel in the department. Numerous factors come into play when considering the size of a Police Department including local crime rates, workload, geography, population and development. The growth and development patterns of the community are important factors in considering future staffing levels of the Department, particularly as the more rural parts of the community are developed.



According to the Chief of Police, the Department is currently understaffed. This need for additional staff is driven by development, growth in population, and traffic. Traffic in particular has affected staffing demands, not only due to development within Smithfield, but also due to development in adjacent towns to the north and west whose residents rely on Smithfield roads for commuting. The Department is taking internal steps to realign its forces and reduce the need for additional staff.

At present, traffic incidents are handled by patrol officers, reducing coverage while incidents are being addressed. The Department proposes to form a traffic division to separate the traffic and patrol functions, ensuring that traffic incidents can be adequately addressed without affecting patrol coverage.

The Detective division is also understaffed and having difficulty keeping up with the workload. Detectives have been compelled to take more and more responsibility in the law enforcement process, participating not only in investigations, but also must undertake crime scene processing, evidence and property control, fingerprint and DNA testing, monitoring of sex offenders, assisting the prosecution and providing court testimony. These all place major demands on time. The Department has proposed to reduce these demands by employing a Criminalist, a civilian employee, who can assist the Detective Division. Criminologists are personnel trained in law enforcement, often retired police officers, who assist detectives with crime scene processing, property control, and preparing testimony. The Department has been seeking to add a Criminalist position for the past several years and anticipates that a Criminalist could conceivably take the place of an additional uniformed detective.

Training – The Smithfield Police Department conducts numerous training events every year and Smithfield police personnel attend State, regional, and national training events as well. The Department is justifiably proud of the high level of training and readiness of its personnel.

However, there are some issues in ensuring continued adherence to this high standard. One is firearms training. Every officer is required to undertake fall and spring training with side arms. In the past, the Smithfield Police have made use of a range on Manville Road in Woonsocket to complete that training, but that facility is deteriorated and no longer operational. At present, there are only two shooting ranges to meet that training need in Rhode Island, the City of Providence range in Scituate, and the Cranston Police range in Cranston. Because of the demand for training, it is becoming increasingly difficult to meet all of the State’s firearms training needs at these locations and an additional range is required to meet local and regional firearms training needs.

There are two possible approaches to meeting this need. One is for Smithfield, in cooperation with other nearby towns, to take over and rehabilitate the range in Woonsocket. The Department has had some preliminary discussions with officials in Woonsocket that suggest this alternative might be workable, but no plans are presently underway. The other is for Smithfield, in cooperation with other nearby towns, to construct a new range on a new location. Rhode Island Solid Waste Management Corporation (RISWMC) property in Johnston has been previously discussed as a suitable location for such a regional training facility although there is no agreement in place at present for such a facility. The Police Department should continue to pursue these options to determine which has the best potential to result in a cost-effective facility and implement an option that meets Smithfield’s training needs.

Animal control – Animal Control is responsibility of the Police Department, largely because it is the Police Department that is called when stray dogs and cats or other animals cause problems in Smithfield. The Department operates the Municipal Animal Shelter and Animal Control Division. The shelter is staffed by 2 Animal Control Officers, 1-2 volunteers and 1 Veterinarian Technologist. The shelter is also serviced by 2 Rhode Island Veterinarian's, the Greenville Animal Hospital, and the Warren Animal Hospital. The building, located at 3 Spragueville Road, is a masonry structure that was not originally designed as an animal shelter. It has been damaged by differential settling, is rapidly deteriorating, and is in critical need of replacement. The Department is considering alternatives to replace the shelter, including demolishing the existing structure and constructing a new shelter on the existing site and the alternative of working with North Smithfield to develop a regional shelter at an alternative location

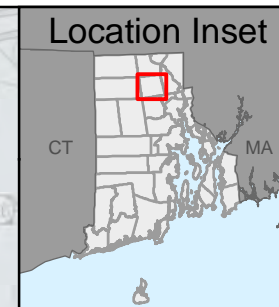
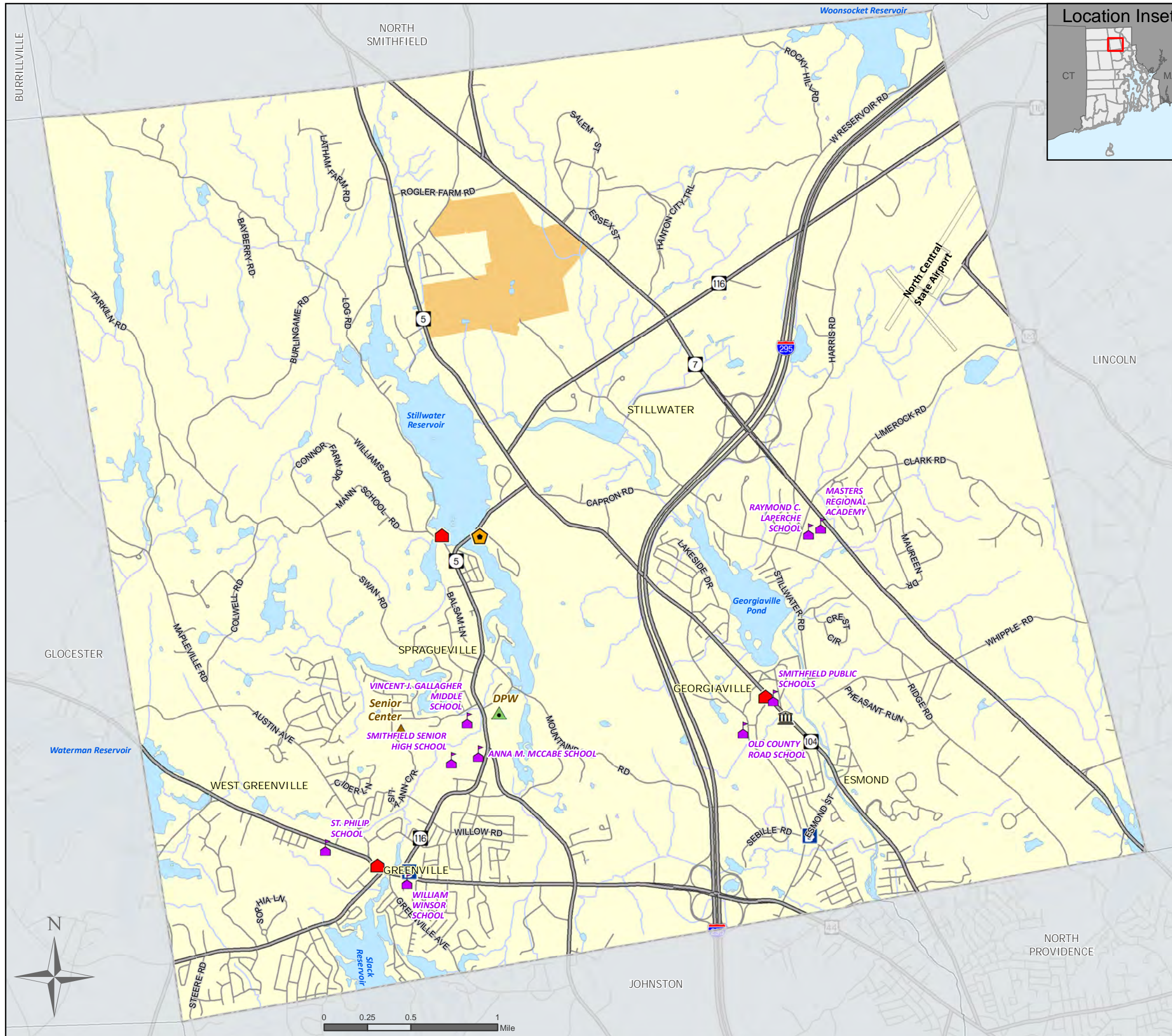


Fig SF-2 :: COMMUNITY FACILITIES

TOWN OF SMITHFIELD RHODE ISLAND Comprehensive Plan



Map Legend

- DPW & Animal Control Shelter
- Senior Center
- Town Hall
- Public Library
- Police Department
- Fire Station
- Schools
- Bryant College

- | Features | Boundaries |
|----------|--------------|
| Highways | Smithfield |
| Roads | RI Municipal |
| Water | Other States |
| Streams | |

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

Fire and Rescue Services

According to Chief Robert Seltzer, the Fire Department is staffed by 54 career members providing administrative, emergency fire services and emergency medical services to the Town residents and the large number of visitors to the town of Smithfield on a daily basis. The Fire Prevention Division is the Department's proactive division, performing plan reviews and code enforcement inspections for new construction, as well as existing residential and commercial occupancies. The Fire Prevention Division also provides public education to schools, community groups, nursing homes, senior citizens, and the business community in Smithfield. The Emergency Medical Services (EMS) Division of the Department is responsible for providing advanced life support care as well as education regarding health awareness to all aspects of the community. Special operations of the fire department include underwater dive operations, response to hazardous materials emergencies, confined space rescue, response to weapons of mass destruction incidents, extrication of entrapped victims and technical rescue. There were 4,396 calls for Firefighters and EMS personnel service in 2012.

There are three fire stations in Smithfield:

Station 1 serves as Fire and Rescue Headquarters. Located at 607 Putnam Pike in Greenville, it was built in 1939 by the Greenville Volunteer Fire Company. It is staffed by 2 officers and 3 firefighters, and its apparatus consists of Engine 1, Engine 4 (reserve), Rescue 1, and Boat 1. Rescue 1 is an Advanced Life Support (ALS) vehicle.

Station 2 is located at 66 Farnum Pike, adjacent to the Town Hall. It was built in 1938 by the Georgiaville Volunteer Fire Company and is staffed by 1 officer and 2 firefighters. Apparatus at Station 2 includes Engine 2, Engine 3 (Reserve), Rescue 2 (ALS) and Boat 2.

Station 3 is located at 55 Log Road. It was built in 1960 by the Greenville Volunteer Fire Company. Station 3 is staffed by an Officer and a firefighter and is equipped with Rescue 3 (ALS), Boat 3, and Ladder 1.



Issues/Needs Assessment – Fire and Rescue

Staffing - As the population of Smithfield has grown, the Fire Department has attempted to grow as well. However, the Fire Department's services to the community are also growing as the traditional firefighting role has expanded to include such services as emergency medical services, fire prevention, code enforcement, public education, specialized rescue, hazardous materials response, and even anti-terrorism programs. It is essential that the Department's staff be allowed to increase education and staffing as needed to meet its responsibilities for providing public protection.

Smithfield participates in a mutual aid agreement with adjacent towns whereby emergency response personnel assist one another in responding to emergencies when needed. Most of the Fire Department's emergency calls are emergency medical distress calls, which occur around the clock, but a more significant number of them occur during the day-time hours. When Smithfield's two rescue units are already out of service on emergency medical calls, mutual aid from out of town rescues is required to avoid delayed response times to Smithfield residents and visitors.

In a three-month period, January through March 2013, the number of out of town rescues responding to Smithfield for mutual aid was 91. The estimated annual use of out of town rescues is 260 for 2013 and during calendar year 2012, the number of out of town rescues used by Smithfield was 217. This reliance upon outside resources is an indication of a local need. Continued reliance on mutual aid to address that need has caused delayed response times for a rescue to arrive at the homes of Smithfield residents, to the point where some wait times have reached 16 minutes. In comparison, the typical response time for a Smithfield rescue, housed at a Smithfield fire station, ranges between 2 to 6 minutes. The Town should consider hiring additional personnel to staff an additional rescue to reduce these delayed response times. In addition, usage of rescue services moving forward should be monitored for acceptable response times and staffing of rescue vehicles should be adjusted accordingly.

According to the Chief, the Department particularly needs additional EMS capacity. The Department presently has 2 EMS units with one reserve but requires a 3rd unit to keep up with the volume of calls. In 2016, there were approximately 4,224 calls, up by 336 from 2009. The Department attributes this to two influences. The first influence is growth in Towns to the west, which increases the volume of commuter traffic on the highways through Smithfield, and therefore the volume of commuter hour traffic incidents that require fire department and rescue response.

The second is population change. While Smithfield functions largely as a suburban “bedroom” community at night, in the daytime its population swells significantly with a population of students, such as those at Bryant College and workers at major employers such as Fidelity Investments. This increases the daytime population in the northeast quadrant of the Town, the area furthest from existing fire stations, and increases the demand for fire and rescue services. On the southeast area of the town the influx of employees working at local businesses and customers shopping at the various retail outlets has contributed to the increased “business hours” activity in Smithfield.

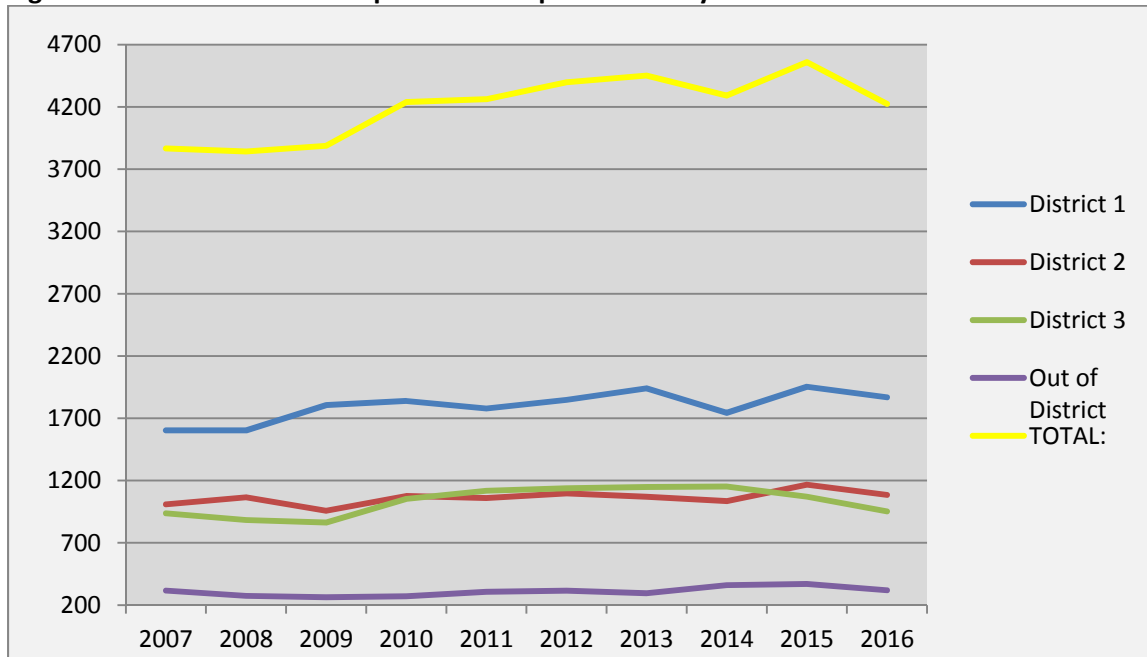
Table SF-1: Summary of Fire Department Annual Response Activity from 2007 - 2016

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
District 1	1603	1620	1806	1839	1779	1848	1940	1744	1953	1868
District 2	1009	1065	957	1076	1059	1096	1069	1035	1167	1085
District 3	937	883	862	1053	1118	1137	1148	1152	1071	952
Out of District	317	274	263	270	306	315	295	360	369	319
TOTAL:	3866	3842	3888	4238	4262	4398	4452	4291	4560	4224

Table SF-2: Annual Number of Alarms Smithfield Fire Department, 2004 – 2012

Year	Annual Total Alarms	Mutual Aid Given	Mutual Aid Received
2004	3514	214	148
2005	3769	269	201
2006	3672	282	171
2007	3866	317	134
2008	3842	274	131
2009	3888	263	145
2010	4238	270	132
2011	4262	306	160
2012	4398	315	207

Figure SF-3: Smithfield Fire Department Response Activity 2007 to 2016



Population increases and expanding economic development especially in the northeast will continue to place demands on the Fire Department and the Town should ensure that Fire Department growth keeps pace with the needs of its population. Discussions of options to address increasing demand for fire and rescue services in the northeast quadrant are ongoing.

Facilities - The Fire Chief feels that additional space for modern equipment, office space and personnel is also needed and the Department needs to construct a new station/headquarters in the immediate future. The proposed fire station constitutes a significant capital improvement for the Smithfield Fire Department. It would serve as the Department’s headquarters and would enhance service for the northeast section of Town, which includes the areas of Albion, Jenckes Hill Road, West Reservoir Road and Rocky Hill Road. Currently, these areas are served from Station #2 located on Farnum Pike. Response times from Station #2 to these areas are typically 8 to 12 minutes.

Figure SF-4: Fire Department Headquarters



Several major concerns underscore the Department's stated need for this proposed station and headquarters. Extended response times, crowded fire houses, inadequate administrative offices and lack of ADA-compliant buildings are the principal reasons cited by the Fire Department. The Department is experiencing increasing service demands based on the number of calls and simultaneous alarms annually.

These indicators reflect a problem first predicted in a 1990 Fire Prevention Facilities Report conducted for the Town by Keyes Associates and later recognized by the 'Community Services and Facilities Element' of the Town's 2001 Comprehensive Plan. The Smithfield Fire Department's current facilities are simply not adequate to serve the demand on fire and rescue services of the Town. In fact, both the Town's 2001 and 2007 Comprehensive Plans called for a new station to meet growing demands and reduce response times, especially in the northeast quadrant of the Town.¹

Figure SF-5: Station 2 at 68 Farnum Pike



The Fire Department also needs to upgrade its existing stations. All existing stations require retrofits for handicap accessibility. Stations 1 and 2 are small, outdated, and approaching the limit of their useful lives. As the Town continues to grow, these stations will become increasingly obsolete. The Department has already had to restrict equipment sizes to accommodate door clearance and floor bearing capacity limitations in Station 1. With some modifications, Stations 1 and 2 can be made into sub-stations to service future needs in their districts, but only with major apparatus support from another location. Station 2 floors were redone this year. Also, for Station

No. 1 to function properly, the headquarters function should be relocated to another site. The major concerns would be to address any structural problems that may have been caused by increased floor loading, provide adequate ventilation and fire separation and address any other code requirements.

Station No. 3, is in a good location for both Fire Fighting training and water rescue, but has little to offer insofar as protection capabilities and accessibility. The station was constructed largely by volunteers and developed on an incremental basis. It is poorly planned for the functions it houses and the additions have been done on an as need basis. The site is littered with temporary structures that are used for various purposes. The Fire Chief suggests that this facility be demolished and removed from the site, and that a new facility be built on the same site.

Equipment - Firefighting apparatus must be constantly maintained and updated. According to the Smithfield Fire Chief, rescue vehicles are routinely replaced on an average of five (5) to seven (7) years and fire engines every ten (10) years depending on their level of service activity. Over the next ten years, it is expected that one engine will require replacement, rescue vehicles should be replaced, and an additional engine may be required, depending upon the changes in facilities. Within the next five

¹ Town of Smithfield Comprehensive Community Plan, adopted June 1992, amended February 24, 2004. Pages VI-44 to VI-46.

years, it is anticipated that a new hazardous materials/heavy rescue vehicle will be needed; rescue and staff cars will need replacement. The Fire Department is supportive of a centralized municipal vehicle maintenance facility, as is the Police Department.

Public Education

Smithfield currently has six school buildings: four elementary, one middle school and one high school. Table SF-3 lists Smithfield public schools, their ages and their current enrollment. The oldest school is William Winsor, built in 1933. The newest is the Gallagher Middle School, built in 1976.

Table SF-3: Smithfield Public Schools- 2015-16

	School Name	Enrollment 2015-2016	Grades
1.	ANNA M. MCCABE SCHOOL 100 Pleasant View Avenue, Smithfield, RI 02917	337	PK-5
2.	OLD COUNTY ROAD SCHOOL 200 Old County Road, Smithfield, RI 02917	256	KG-5
3.	RAYMOND LAPERCHE SCHOOL 11 Limerock Road, Smithfield, RI 02917	240	KG-5
4.	SMITHFIELD HIGH SCHOOL 90 Pleasant View Avenue, Smithfield, RI 02917	742	9-12
5.	VINCENT J. GALLAGHER MIDDLE 10 Indian Run Trail, Smithfield, RI 02917	549	6-8
6.	WILLIAM WINSOR SCHOOL 562 Putnam Pike, Smithfield, RI 02828	261	KG-5

Anna McCabe and Old County Road schools were built in 1955 and 1957 respectively while LaPerche and the High School were built in 1964 and 1967. Smithfield’s schools have historically been well maintained and, although not without repair needs, are in generally good condition for their ages.

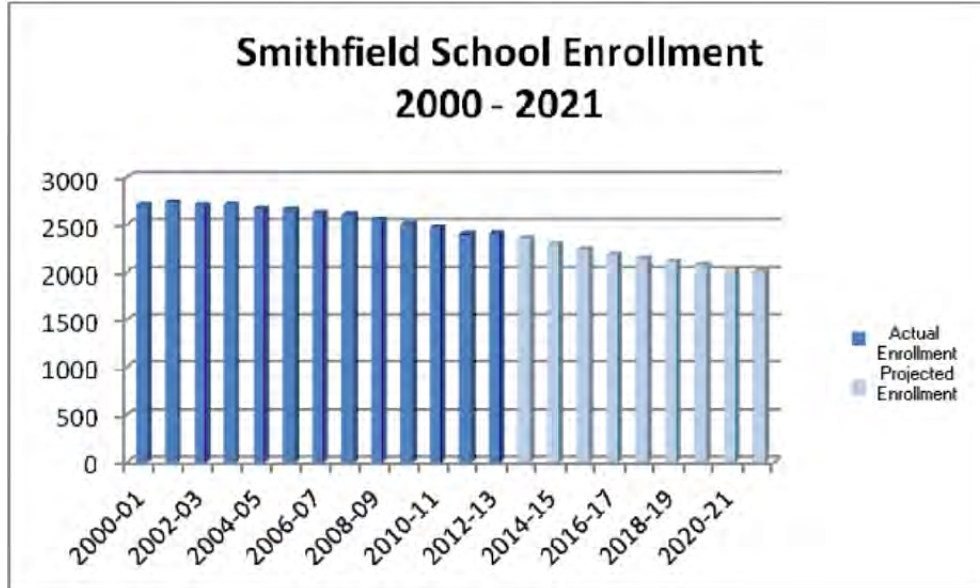
According to the Superintendent of Schools, the school system is currently operating within its overall capacity despite space constraints on some programs.² The Rhode Island Department of Elementary and Secondary Education has prepared projections of enrollment through the 2021-22 school year.³ These projections reflect a dwindling school age population, due to a maturing population, population declines statewide, and the availability of charter schools and other alternatives to public school education. The projections anticipate a continued decline in school enrollment over the next 20 years, from 2,400 students in the 2011-12 school year to 2,181 in 2016-17 and then to 2,004 by 2021-22; a decrease of 16.5% below existing enrollment. These projections indicate that Smithfield has sufficient school capacity to provide for future enrollment and they imply that the School Department may be able to meet future space needs for specialized programs by reallocating and reconfiguring existing space.

These projections can also be influenced by economic conditions and other outside factors so that actual enrollment may vary. Recent trends, for example show that elementary school enrollment has leveled off or is rising slightly while enrollment in the higher grades continues to decline.

² Robert O’Brien, Superintendent of Schools, personal communication, December 2012.

³ Rhode Island Department of Elementary and Secondary Education, *Public Schoolhouse Assessment*, June 2012

Figure SF-6: Smithfield School Enrollment 2000-2021



Source: Historical enrollment from Smithfield Public Schools and Projections by RI Department of Elementary and Secondary Education

Smithfield schools are high performing. As of the 2011-12 school year, 89% of 4th graders and 92% of 8th graders scored at or above the reading proficiency level. These compare to 71% and 77% of 4th and 8th graders in the State as a whole. Also, 88% of 4th graders and 75% of 8th graders scored at or above the math proficiency level as compared with 65% and 58% State wide. The High School attendance rate was 95% as compared to the State’s overall 92% and the graduation rate was 92% as compared to the State’s 77%. The Town has recently implemented a pre-K program at McCabe School.

Issues and Needs Assessment

School Buildings and Grounds

While space in school buildings is adequate to meet projected needs, there are still issues with the school buildings. The Department has received about \$250,000 in capital budget each year for the past several years. Carefully managed, this has been adequate to accomplish several important projects. However, mounting building and facilities needs may exceed the Department’s capital budget in the near future. Substandard underground storage tanks at McCabe, Gallagher and Old County Road schools must be removed and replaced as per Rhode Island Underground Storage Tank (UST) regulations. Alternatively, the school heating systems could be converted to gas. If the school heating systems are converted to gas, then the tanks must be removed. If not, then the tanks must be replaced with compliant tanks and monitoring systems must be provided for boiler stack gases from the school heating plants.

The roofs of the High School, the Middle School, and School Dept. office building have exceeded their life expectancies and will need replacement. Several school parking lots and driveways also presently require repaving and replacement of deteriorated curbing. School lots and driveways are not included in the Town’s pavement management program (PMP). They are maintained and replaced with School

Department funds, not through the Department of Public Works. Outdoor basketball courts at Anna McCabe and Old County Road Schools are also deteriorated and require upgrading and resurfacing.

Despite routine maintenance, the track at the High School has deteriorated to the point that it can no longer be used for competition and the playing field is so heavily used that it is no longer practical to maintain it as grass. The School Superintendent feels that the High School needs a new track facility. Consideration should be given to a replacing the grass field with a new turf field to withstand heavy usage levels. Better drainage and an irrigation system are also necessary to keep the Middle School Field in playable condition. The High School, Old County Elementary and the Middle School need ADA compliant bleachers to replace older bleachers that were never accessible and therefore are no longer acceptable for public use. In the meantime, the Department is proceeding with its program to safely remove asbestos from all school buildings and replace worn out classroom furniture.

Figure SF-7: William Winsor School



Other Facilities

Numerous studies have documented the benefits of pre-K and full day kindergarten programs for child development and learning.⁴ Funding for a full day kindergarten program is included in the FY 2015 budget. One way to provide a community-wide, full-day kindergarten program would be to establish an early learning center to serve pre-K and Kindergarten students throughout the Town from a central location.

Program Improvements

Other improvements are centered on staff and the teaching program. For example, the Town presently offers 6 Advanced Placement (AP) courses that allow High School honors students to obtain college credit within the High School. The Department would like to provide more program choices within Advanced Placement Program to meet high demand and increase the number of offering to 8. Funding for additional AP course offerings is included in the FY 2015 budget.

Industrial technology and vocational education is increasingly popular throughout the region, but the Smithfield Public Schools compete with Davies VocTech and other private programs for students. Upgrades of space, technology, and staff would be needed to provide an industrial technology program that would include training for skills in engineering woodworking and metal working to address vocational/technical program needs.

Finally, the educational environment has been rapidly changing to incorporate rapidly improving technology. Blended learning is a formal education program in which a student learns both at school and, at least in part, through online delivery of content and instruction with some element of student control over time, place, path, and/or pace. The Smithfield Public Schools should consider establishing a blended learning (i.e. technology in the classroom) program. This will require providing professional development and training for staff, upgrading school electrical systems to support digital system

⁴ http://www.earlylearningri.org/sites/default/files/images/FINAL_Kindergarten_Brief.pdf

demands, providing high speed broad-band wireless internet in all schools and acquiring sufficient computers and related equipment to meet learning demand and testing requirements through grants, donations, and State lease buyout programs.

Library Services

Smithfield has two independent public libraries, the Greenville Public Library at 573 Putnam Pike and the East Smithfield Public Library at 50 Esmond Street (the former Dame Elementary School) (Table SF-4). The library system is funded by the Town, State and private donations, and library activities are overseen by separate Boards of Trustees. Municipal funding comprises 94 percent of the East Smithfield Library budget and 79 percent of the Greenville Library budget.

The Greenville Public Library has approximately 15,000 square feet of floor space, having been expanded in 1991 with the addition of 8,000 square feet. In addition to the children's, young adult, adult and reference sections, the library includes two meeting rooms, kitchen facilities, two quiet study areas and administration work areas.

The East Smithfield Public Library has approximately 5,100 square feet of floor space on the first floor and an additional 5,000 +/- square feet on the second floor. Its space includes shelving for adult and children's fiction and nonfiction collections, reference, videos, periodicals and other materials, administrative offices, circulation space, a conference room, kitchen facilities and limited study space. There have been consistent increases in library circulation in both libraries over the past decade and audio, video, and digital offerings have been a growing proportion of that circulation. Both libraries offer computer terminals with internet access to users and a wide variety of programs for seniors, adults, teens and children.

Table SF-4: Characteristics of Smithfield's Public Libraries

Characteristic	Greenville Library		East Smithfield Library	
Hours	Mon, Tue, Wed, Thurs 10am-8pm Friday and Saturday 10am-5pm Sunday (Sept-May) 1-5pm		Mon, Tues, Thurs 10am-9pm Wednesday and Friday 10am-7pm Saturday 10am-3pm (except July & August)	
Hours Open Per Week	58		56	
Funding (2012)				
Municipal Funding	\$778,702		\$504,377	
State Funding	\$154,528		\$115,001	
Other Income	\$84,811		\$5,464	
Total Operating Income	\$1,283,079		\$623,679	
Expenses	Amount	% of Total	Amount	% of Total
Staff	\$724,866	56.4	\$473,515	75.9
Materials	\$ 102,620	11.1	\$ 56,460	9.7
Other	\$ 182,213	19.7	\$ 80,308	13.8
Total	\$924,798		\$572,846	
Materials and Circulation				
Total Collection	88,268		68,120	
Circulation	191,539		90,586	
Reference	16,246		2,874	

Transactions		
Library Visits	120,045	91,379
Public Service Hours	2,856	2,872
Borrowers		
Adult	132,262	64,316
Juvenile	49,246	24,458

Source: 2012 Annual Report Survey Data, RI Department of State Library Services.

Issues and Needs Assessment

Both libraries feel they need to increase the size of their collections to keep up with growth in population and demand for library services. Both also are seeking to increase the number of hours during which they are opened as per the recommendations of a recent community charrette on Library Services. Both libraries have reached the limit of their available shelf space. Despite shuffling and condensed materials to use space as efficiently as possible, both libraries are now essentially out of shelf space. Once a library reaches the limit of shelving capacity, it becomes necessary to remove one item from the collection for each new item obtained. This makes it difficult to keep the library's collection up to date and impossible to expand the library's collection to keep up with increasing demand. Both libraries also need additional program space and function rooms to keep up with public demand for these spaces.

Greenville Library

The Greenville Library's children's services room is too small. The library needs larger function rooms, a meeting space and tutoring spaces to meet increasing demand for these spaces. There are two function rooms in the existing building, but both rooms are small and existing parking is insufficient for both rooms to be used simultaneously. Additional parking is necessary to meet the needs of library patrons. High traffic volumes on Route 44 also make access to and egress from the library difficult, especially during peak traffic hours. It can be especially difficult to enter or exit the library eastbound, which requires crossing two lanes of on-coming traffic.

Figure SF-8: Greenville Public Library



The Greenville Library has already completed plans for an addition and has acquired land adjacent to the Library for the purpose of library expansion. State funding is available to cover 50% of the expansion cost, but the balance would have to come from local sources. The land that has already been purchased is adequate to accommodate both the proposed addition and to provide the necessary additional parking spaces for existing and proposed facilities. The property also has frontage on Route 116 at 9 Pleasant View Avenue. This frontage could be used to provide a second library entrance, relieving congestion at the main entrance and providing an alternative to the existing single entrance on busy Route 44.

East Smithfield Library

Figure SF-9: East Smithfield Library



The East Smithfield Library is housed in a converted school building. The building was built as a school, not as a library and shelf space has been maximized within the layout and structural capacity limits of the building. East Smithfield has not yet

developed plans for a library expansion. However, the East Smithfield Library also requires both additional shelf space and additional meeting space. Meeting space is in increased demand. Meeting rooms are typically occupied until 9:00 at night whenever the library is open and wait times can be as long as six months in advance to book a meeting room for evening use.

The East Smithfield Library is an old school structure and is in constant need of preventative maintenance. The roof is patched and the wiring system is outdated and inadequate for current electrical requirements. Utilities costs and staffing costs have increased steadily while the library has faced a decrease in available funding from Grants in Aid, and has received the same level of funding annually from the Town for the past several years. These factors are placing a fiscal “squeeze” on the library.

A facilities study is needed to determine the future need for space at the East Smithfield Library and to establish the best way to meet the projected space needs. The building has a basement, but the basement is unfinished, was not designed for public use, and appears to be too damp for long term storage of library materials.

Other Library System Needs

Although they both receive some Town funding, the two libraries are both private organizations. The Town has, in the past, considered consolidating these libraries in pursuit of economies of scale. The two libraries cooperate in a number of ways. The Library Directors, Board President, and others meet twice annually to coordinate their programs. Both libraries serve both the entire Town and the general public. In addition, due to the geography and development pattern of the Town, each library also serves a different primary clientele. The Greenville Library is located on a major thoroughfare (Route 44) where it serves mostly residents of Greenville and the suburban developments on the west side of Wolf Hill (I-295). The East Smithfield Library is located in the heart of one of the Town’s historic villages (Esmond) and serves mostly the population in the villages along the east side of Wolf Hill (I-295). Each Library provides an essential service to an important part of the community.

This is not to say that the libraries do not share common needs. In addition to the space requirements discussed above, both libraries are concerned about the level of funding that will be available to them in the future at both the State and local level. Both libraries have expressed the need for additional funding to sustain and expand their programs. Both libraries have expressed a desire to expand public awareness of library services through continued public relations events, interactions with the media, meetings with Town officials and enhanced interlibrary coordination. Both libraries have plans to expand their collections to keep pace with community growth and to modernize their collections to keep pace with changing technologies. Both expressed a desire to increase operating hours to meet local demand, and both requested grant writing assistance to help them obtain necessary funding for materials, equipment, supplies and capital improvements. Continued cooperation between the two independent Libraries will be needed to help meet both of their long term goals and to continue to provide a high quality of service to their patrons.

Senior Services

Smithfield maintains a Senior Center, centrally located at 1 William J. Hawkins Trail, adjacent to Deerfield Park. The Smithfield Senior Center provides a variety of services to Senior Citizens. The Center acts as a source for senior services and as a resource for individuals seeking information on all aspects of senior services. The department works closely with the Department of Elderly Affairs, Smithfield Police Department, local agency Tri-Town and Northwest Health care services. The Center strives to meet the needs and desires of the greatest number of seniors in creating organized activities and workshop areas. The Center also operates a meal site for senior citizens, and provides meals on wheels to a large number of individuals within the community.

Figure SF-10: Senior Center



The membership fee is \$10 for Smithfield residents and \$13 for non-residents. The Center provides the following services to members on site:

Table SF-5: Services available to members of the Smithfield, Senior Center

Computer Classes	Bocce	Quilting	Billiards
High Low Jack	Needlework	Hand & Foot	Indoor Bocce (seasonal)
Line Dancing	Bridge	Ping Pong	Bingo
Cribbage	Cardio Strength Training	Walking Club	Sunshine Club
Special Events	Holiday Parties	Trips	Blood Pressure Tests
Rummikub	Military Whist	Canasta	Monthly Book Club
Scrabble	Zumba Gold	Manicures	Pedicures
Singing Group	Yoga	Yoga Dance	

Source: Senior Services Director

Bowling and swimming are also available at outside locations. Most of these services are provided to members free of charge, although there is a small charge for services that require a paid instructor.

Food service is available on site, with free coffee and hot drinks, and snacks are also available for purchase. The Center includes a full kitchen with 5 steam tables, a 6 burner stove with dual ovens, a dish washer, refrigerator and freezer, as well as a clothes washer and dryer within the building. Van transportation is available to and from the center as well as to local hairdressers, bingo games, nursing homes, grocery stores, banks, and pharmacies.

The Center is run by Professional Director assisted by a Program and Activities Coordinator, two Senior Assistants, a part-time Kitchen Aid, Community Information Specialist and a Van Driver. All of the employees wear many hats and consistently provide “hands-on” efforts to operate and maintain the facility in many ways. The Center also has an Advisory Committee consisting of 13 members from the Senior Center and the staff. These members advise the Director regarding proposed activities, programs, functions, special events, etc. They also forward any issues, complaints, concerns and other situations to the Director from the general membership. The Advisory Committee is highly motivated to address the needs of the Center and to quickly and effectively resolve problems and situations as

they develop. It also serves as a sounding board to help improve the Center and provide the staff and the community with insight into the seniors' needs and desires.

In addition to the Senior Center, the Town of Smithfield offers tax exemptions for qualifying residents. Senior citizens, veterans, disabled veterans and legally blind residents may qualify for tax exemption status based on several program criteria. The Senior Citizen Exemption is set at \$8,000 annually. Qualified seniors must be 65 years of age by December 31st for the subsequent tax roll; must own and occupy Smithfield real estate (three dwelling units, or less) for ten (10) years; and, must apply on or after their 65th birthday, but before December 31st. Seniors may also qualify for a 'tax freeze' on their property if they meet the requirements of the Senior Citizen Exemption and if they own a single-family dwelling. After application is made, the subsequent property tax rate is frozen.

Issues / Needs Assessment

Current population projections (see Land Use Element) forecast significant growth in the population of seniors in Smithfield, largely as a result of the maturing of the "baby boom" generation. Total population over 65 is projected to increase from 3,012 in 2010 to 4,920 in 2030, an increase of 1,908 or 63% over 20 years. The largest increases are projected in the 65-69 age cohort, expected to increase by 72%, and the 70-74 cohort, projected to increase by 108% over the next 20 years. The increase is likely to place increasing demand on senior services in Smithfield. The Town should consider expanding both the Senior Center and its programs to cope with an aging population.

An interim solution would be to relocate the food pantry currently occupying three (3) rooms at the Senior Center. This would make additional space available at the Senior Center and make it possible to relocate the food pantry to a location on an active bus route.

Municipal Government

Administrative Functions

Smithfield's local government is comprised of the following administrative offices/departments:

- Board of Canvassers;
- Building Official/Zoning Enforcement;
- Council Office;
- Environmental Affairs (Town Engineer);
- Planning Department;
- Public Welfare Office;
- Recreation Department;
- Tax Assessor;
- Town Clerk;
- Town Manager; and,
- Treasurer/Tax Collector.

Figure SF-11: Smithfield Town Hall



The administrative functions of these departments are typical for a suburban Rhode Island community. The Town adopted the Town Manager form of Government in 1994. The Manager serves as the

administrative head of the government and is responsible for all departments except the school department.

Town Hall

The Smithfield Town Hall is located at 64 Farnum Pike. Built around 1939, it was expanded by an addition in 1998 to add a mixture of office, meeting, and storage space equaling roughly one-half the size of the original facility. The addition solved a space problem that had grown acute, but it did so at the expense of parking spaces. Some new parking was provided when the addition was built, to replace the spaces lost to the addition, but total amount of available parking was not increased adequately to serve the larger structure. Parking at the site is still very limited, with approximately 24 +/- spaces in the lot to the rear of the building and around the front driveway.

Since the addition was completed, the Town acquired additional adjacent property. Part of this property should be used to increase available parking and help relieve the parking shortage on the property.

Public Works

The Department of Public Works (DPW) is located on Spragueville Road, off Pleasant View Avenue. The Department maintains the town's public rights of way and all infrastructure included within the Town except sanitary sewers. The Department is responsible for road reconstruction, resurfacing, crack filling, pot-hole repairs; resetting and replacement of curbs, bridges, culverts, drainage ditches; sedimentation traps, detention and retention basins; roadside mowing, brush cutting, vegetative control and forestry operations; and street sweeping. Weather related winter operations include snow and ice removal and seasonal operation of a sand screening plant. Environmental programs include administering the Town's solid waste collection and recycling programs, operation of an oil recycling igloo, collection of leaf and yard waste and Christmas tree pick-up programs.

Issues and Needs Assessment – Public Works

The DPW site includes a 3-4 bay garage, a small office for the DPW director, recycling coordinator and clerical staff and a fenced in yard for equipment storage. The DPW site appears to be adequate for the functions provide by the DPW, but the facilities on the site have become increasingly inadequate. The office space provided at this location is currently inadequate to serve the Department's needs in terms of space, heating and ventilation. Additional vehicle maintenance space is required along with storage for white goods, trash and recycling containers, and DPW equipment and Supplies. Consideration should be given to expanding the office and meeting space at this site. This site may also be appropriate for a centralized municipal equipment and vehicle maintenance program.

The DPW is responsible for maintaining all Town owned roads in Smithfield and, in cooperation with the Town Engineer, undertakes projects to help maintain and improve Town drainage systems. The DPW has a Pavement Management System (PMS) program to assist in planning for roadway maintenance, but the software requires updating and the data are no longer current. Absence of good information regarding community roadway needs makes it difficult for the Department to properly budget adequate funds for roadway maintenance (see discussion in the Circulation element of this Comprehensive Plan).

The Animal Control Warden and animal shelter is also located on DPW property although Animal Control is managed by the Police Department. The animal shelter is outdated and structurally unsound. Although there have been several attempts made to repair the shelter they have been unable to halt the deterioration. It appears that it will be necessary in the near future to tear down the existing structure and replace it.

Figure SF-12: Smithfield Animal Shelter



Town Engineer

The Town Engineer's Office acts as the technical branch of the Town's government reporting to the Town Manager. The Department is presently staffed by the Town Engineer, Assistant Town Engineer, an Engineering Inspector and an administrative assistant. The main responsibilities of the Town Engineer include: Plan review, permitting and enforcement of the Soil Erosion, Earth Removal, Stump Removal, Landscape and Sewer ordinances. The Engineer also administers flood plain map interpretation for citizens and Town departments, provides engineering design, drafting, cost estimates, specifications and construction inspection for various Town projects, and reviews all zoning site plans in conformance with the Town's Zoning Ordinance. The engineer provides inspections for all subdivisions and developments requiring soil erosion approvals, performs topographical surveys for Public Works related projects, prepares requests for Proposals (RFP) and bid documents for professional services and construction projects and provides construction management on projects assigned by the Town Manager.

The Town Engineer reviews plans for all road-opening permits on State highways, reviews and comments on all RIDOT road plans and formal RIDEM permit applications on projects Town wide. The office also prepares and submits wetland applications to RI DEM for in-house design projects. The Town Engineer manages the administration of the Sewer Authority Office, authorizes all sewer permits and reviews sewer proposals. The Engineer conducts capital improvements planning for Engineering and Sewer Department projects, is responsible for compliance with the Town's storm water management program, including public education and involvement and annual reports to RI DEM on storm water compliance. The Department pursues, secures and administers grant funds in support of Public Works projects and maintains accurate records of land development projects for public records.

Issues and Needs Assessment – Town Engineer

Major construction projects, such as major roadway improvements, wastewater treatment plant upgrades, and storm water system improvements, require full-time or nearly full-time inspection, leaving the Engineer's office understaffed. The Town might consider adding a field engineer or construction inspector to the Engineer's staff to provide supervision of construction projects and free up the Engineer and Assistant Engineer for other responsibilities.

As noted above, the Engineer's office is responsible for Storm water Management in Smithfield. New State and Federal government requirements for Phase II storm water discharge permits will place increasing demands on both staff and funding in the Engineer's office. The Town is required to implement new Phase II storm water management requirements as a condition of State permits to discharge to the waters of the State. Additional resources may be required in the Engineer's office to comply with these new requirements.

Funds for storm water management may be provided from general tax revenues or the Town may choose to establish a storm water utility. A Smithfield storm water utility could be established with the authority to assess user fees for discharges to the Town's drainage system. Funds generated by user fees would be used to maintain and upgrade the drainage system. User fees could be based on actual flow measurements or could be assessed based on impervious surface area. Programs that assess fees based on impervious area provide a strong incentive to minimize paving and thereby reduce storm water flows.

The Town Engineer is also responsible for dam and watershed management in the Town. Most of the dams in the Town were constructed over 100 years ago to create storage for water powered industrial development on the Woonasquatucket and Stillwater rivers. To reduce the risks of loss of life and property damage from dam failures, dam owners are required to have Emergency Action Plans (EAPs) for all high hazard and significant hazard dams. As noted in the Natural Hazards section of this Plan, there are 12 high hazard or significant hazard dams in Smithfield. The Town should consider providing the Engineer's office with the resources to assess each of the dams on the list and establish Emergency Action Plans as needed. An alternative may be to seek funding to remove some dams that are no longer necessary now that the water is not needed for industrial power.

Water Supply

The Town of Smithfield is presently served by three distinct water providers. Two of these providers are independent water districts operating under the provisions of RI state law as quasi-municipal corporations, while the third is a department of the Town of Smithfield itself, operating as an Enterprise Fund Agency. The three water suppliers are:

1. **The Smithfield Water Supply Board**, the only water provider controlled and operated directly by the Town of Smithfield itself.
2. **East Smithfield Water District** - one of two quasi-municipal corporations providing service to portions of the Town of Smithfield.
3. **Greenville Water District** – the other quasi-municipal corporation providing service to portions of the Town of Smithfield.

Collectively, these three entities deliver potable water to over 84% of the residents of, and the majority of commercial and industrial entities in, Smithfield (see Map Atlas). The following table provides general information about the three (3) water providers which currently service different portions of the Town of Smithfield. The majority of the information provided herein is derived from the individual water supply system management plans (WSSMP's) for each provider; the full WSSMP reports are available from the water suppliers.

Smithfield recognizes the importance of an adequate, consistent supply of high-quality potable water from these service providers to the well-being and quality of life of its residents and businesses, and this Plan identifies and promotes appropriate actions which will be undertaken by the Town to insure the sustenance of that supply.

Table SF-6: Characteristics of Water Supply Providers in Smithfield, RI

Water District:	Smithfield Water Supply Board	East Smithfield Water District	Greenville Water District
General Information			
Service Location	Central Smithfield / East Smithfield Water District Portion of North Providence	Eastern Smithfield / Portion of North Providence	Southwestern Smithfield / Portion of Johnston
Service Area (sq. mi.)	13.2	3	7.8
Year of Inception	1963	1934	1955
Water Source(s)/Supplier(s)	Providence Water Supply Board	Providence Water Supply Board / Smithfield Water Supply Board	Providence Water Supply Board
Number of Accounts			
Residential	1,240	2,341	3,219
Commercial/Industrial	123	60	249
Total	1,363	2,401	3,468
System Capacity and Demand			
System Capacity (MGD)	1.97	1.22	1.73
Current System Flow Demand (Most Recent Year Available)			
Average Daily Demand (MGD)	0.948 (2007)	0.608 (2012)	0.921 (2012)
Annual Demand (MG)	364.13 (2014)	216.3 (2013)	330.6 (2012)
Projected System Flow Demand (Year of Projected Demand)			
Average Daily Demand (MGD)	1.7 (2034)	.617 (2033)	1.25 (2032)
Annual Demand (MG)	627(2034)	225.2 (2033)	396 (2025)
Estimated Available (MG)	717.2 (2034)	532.9 (2033)	514.65 (2032)
System Infrastructure			
Pipe (Materials)			
Asbestos Cement	Y	Y	Y
Cast Iron	Y	Y	None
Ductile Iron	Y	Y	Y
PVC	Y	Y	Y
Other	None	N	None
Storage Facilities	Three Elevated Storage Tanks	None	Two Storage Tanks, 1.5M and 1.0M
Pump Stations	3 (Boosters)	2 (Boosters)	3 (1 Primary, 2 Boosters)
Treatment Facilities	None	None	None
Other	Two PRV's, Hydrants, Valves, Meters	Two PRV's, Hydrants, Valves, Meters	Hydrants, Valves, Meters
Administration & Finances			
Management/Operational Structure	Executive Board (Smithfield Town Council) Water System Superintendent (DPW Dir.)	Elected Executive Board (7 Members) Water District Manager	Elected Executive Board (7 Members) Water District Superintendent

Meeting Future Demand

As the Table SF-6 shows the projected water supply for all three water districts exceed the projected demand for available water. Recent development proposals in the Route 7/116 corridor have increased the demand for water in excess of available supply in the Smithfield Water District . A number of different solutions are being discussed with the Greenville Water District, the Town of Lincoln and the Providence Water Supply Board that has recently taken over the East Smithfield Water District.

Issue and Needs Assessment – Water Systems

Smithfield/East Smithfield Merger

The Town of Smithfield and the East Smithfield Water District had been discussing a merger of the two separate entities into a single water supplier. These discussions were in response to a number of factors affecting one or both of the suppliers including:

1. **Staffing Concerns** (East Smithfield) – The East Smithfield Water District currently employs four (4) full-time personnel; a general manager/treasurer, an office administrator, and two field personnel responsible for the routine maintenance and upkeep of the water system. The absences of any one of these staff members can negatively impact the capability of the District to perform its required functions. It is anticipated that the larger consolidated district will have a greater number of employees, and thus a measure of protection from the adverse effect(s) caused by the occasional absence of personnel.
2. **Administrative Concerns** (Smithfield) – The current management structure, under which the Smithfield Town Council serves as the Board of Water Commissioners and the Director of the Department of Public Works serves as the Water Superintendent, makes it difficult to provide the proper level of planning and oversight needed to effectively manage and administer the water district. Town Council members and the DPW director have numerous other obligations and responsibilities which take precedence over the water district, restricting the amount of attention that they can devote to managing the district. As demand in the district continues to grow, and as the system continues to age, the need for dedicated and specific planning, oversight and management will become more pronounced. It is anticipated that the larger consolidated district, and the district board and manager associated specifically therewith, will be better able to focus on management and oversight of the water district.
3. **Broader Revenue Pool/Improved Economy of Scale** (Both) – The consolidation of the two small districts into a single medium-sized district will likely provide economic benefits to both; the combined funding pool will allow the consolidated district to perform capital improvements which might not be possible (or practicable) for either one of the districts to perform individually. In addition, by performing system-wide capital improvement projects of a larger scale than either individual district might be capable of performing, the consolidated district will likely realize economy of scale cost savings from vendors and/or contractors.

The proposed merger would have created a water district servicing approximately 13,200 people in portions of Smithfield and North Providence; the name of the new entity will be the “Smithfield Consolidated Water District.” At this time, the proposed management structure will consist of an

elected seven (7) member executive board, four of whom will be residents of Smithfield, two of whom will be residents of North Providence, and a final member whose residency will be undesignated (either Smithfield or North Providence). The merger was contingent on General Assembly authorization and approval of the voters of both districts.

The creation of the Smithfield Consolidated Water District will have significant beneficial effects on the Town's responsibilities and role in water management in the Town; most significantly, it will remove the Town Council and town personnel from direct involvement in the operation and management of a public water supply system, and will create a body specifically tasked with the responsibility for and authority over the water distribution system which will service over half the town.

This merger plan fell through and in 2016 The Providence Water Supply Board took over the East Smithfield Water District.

Communication/Collaboration/Cooperation with Water Suppliers

Communication – Water system infrastructure, like most underground utilities, is typically located within Town-owned right-of-ways, and more specifically beneath roadways. Therefore, work performed on either the water system within the roadways or on the roadways themselves presents the opportunity to perform necessary work on both infrastructure elements simultaneously, resulting in 1) cost-savings related to the performance of the work, and 2) avoidance of unnecessary and costly duplication of effort. Therefore, to achieve the most efficient planning of water system and/or roadway improvements, the Town should actively communicate on a regular basis (e.g. meeting semi-annually) with both water districts, specifically for each entity to identify upcoming capital improvement projects (be they related to roads or water), so that both the Town and the water districts have an opportunity to coordinate their efforts.

Collaboration – As stated above, there is significant interaction between Town roads and water system infrastructure; therefore, as a logical extension of the communication with the water districts, the Town should seek opportunities to collaborate on capital improvement projects with the water districts. This may consist of including water system work under road repair projects (or vice-versa), developing cost-sharing agreements for said work, altering construction schedules to accommodate simultaneous work on roads and water infrastructure, etc.

Cooperation – The Town of Smithfield has numerous in-house resources (personnel and equipment) at its disposal capable of performing infrastructure-related construction tasks. Presently, infrastructure construction work is often performed for the water districts by private contractors at labor and equipment rates which are higher than those which may be available using Town labor and equipment.

Therefore, the Town should consider cooperating with the water districts by developing labor and equipment-use agreements, which will allow the districts to access Town labor and equipment for at-cost rates. This would allow the water districts to more cost-effectively perform necessary infrastructure improvement work, thus resulting in cost savings for the districts and lower water costs overall for the rate-paying residents of the Town.

An example of inter-system cooperation is the recent agreement between the Smithfield Water District Town and the Greenville Water District for the development of a new 1 million gallon water tank on Burlingame Road adjacent to the Smithfield Water tank. As part of the agreement, Greenville Water

would extend a new water line up Colwell Road and Burlingame Road and service 12 residences formerly served by the Smithfield Water District. The addition of the new tank provides needed pressure and capacity in the Greenville system.

Internal Water Management Policies

The Water Conservation Program (WCP) is administered by the Smithfield Water Supply Board (specifically the Water Commissioner who is presently the DPW Director). The creation of the Smithfield Consolidated Water District will relieve the Town's DPW Director of the responsibility for the administration of the WCP among all entities serviced by the Smithfield Water Supply Board (whether public or private); however, the Town will still need to operate internally in accordance with the WCP, and/or modify its operations to conform to the WCP elements developed and implemented by the respective water districts serving the Town's buildings and facilities.

Water Conservation - Public Outreach & Education

Water Conservation – As stated above, the Town currently administers a WCP through the Smithfield Water Supply Board. Subsequent to the creation of the Smithfield Consolidated Water District, the Town will continue to make available information on the benefits and importance of water conservation for Town Departments/Entities. The Town currently has a program designed to promote water conservation to the general public, and must continue to take reasonable, practicable steps to promote the WCP's of the respective water districts.

Information about Costs of Water Supply – As elements of the various water systems age, the need for significant capital improvements for repairs to and/or replacements of water pipes and appurtenances is continuing to grow, often at a rate which far outpaces the ability of the water districts to meet through rate increases alone. In addition, the successful implementation of water conservation measures, while beneficial from the standpoint of preserving water supplies, has significantly reduced water demand; therefore, revenues tied directly and exclusively to water consumption have been steadily dropping. Absent grants and/or other "free" funding sources for capital improvements, water districts will be unable to keep pace with the increasing capital improvement costs. Therefore, if current levels of service to water consumers are to be maintained, it is anticipated that water rates will need to be increased soon.

Therefore, in addition to promoting water conservation, the Town (in collaboration with the water districts) should develop and distribute information to the general public related to the comprehensive costs associated with the provision of clean potable water (including capital upgrades to aging infrastructure). This will serve to educate the public on the need for rate increases, with the goal of achieving buy-in of water consumers that rate increases for water system infrastructure improvements are necessary and justifiable.

Links to Water Suppliers – The Town should maintain on its web site direct links to the web sites of the water districts providing service within the Town, and shall also cooperate with the water districts to periodically provide notice of important information from the districts to Town residents through the various media outlets at its disposal.

Water Supply Management Plans (WSMP)

The overall goal of a Water Supply System Management Plan (WSSMP), prepared for each of the water districts, is to provide a document that complies with the provisions of the Water Supply System Management Act by providing a comprehensive analysis of the past in order to establish the needs of the future. These documents are intended to comply with the provisions of the latest edition of the Rules and Procedures for Water Supply System Management Planning, dated October 2002. These rules were promulgated in accordance with Chapter 42-35 pursuant to Chapter 46-15.3 of the Rhode Island General Laws.

The primary Policy of the each water district is to operate a water system for the benefit of, and to meet the legitimate needs of, the customers in its service area. In accordance with that Policy, the specific goals are to:

1. Promote the efficient use of water through:
 - Conservation and efficient operation of the system in accordance with industry and State standards;
 - Efficient use of water by the customers through effective metering and public information programs that encourage water conservation.
2. Comply with all applicable laws and regulations.
3. Protect the integrity of its existing source of supply connections to the Providence Water Supply Board (Providence Water) and the Smithfield Water Supply Board (SWSB).
4. Cooperate with the overall goals of the Town of Smithfield and the Town of North Providence as outlined in their respective Comprehensive Plans.
5. Provide for service to all locations within its service area.
6. Conform to the overall goals for water suppliers established in State Guide Plan Element No. 721 – Rhode Island Water 2030.

The Water Supply Management Plans (WSMP) for each of the water districts has been recently updated and the Executive Summary from each of the plans is found in Appendix A.

Water Emergency Response and Drought Management Planning

Smithfield will promote efficient use of water and implement programs to mitigate the impacts of drought in accordance with State Guide Plan Element *RI Water 2030*. Each of the Town's water suppliers has a current Water Supply Management Plan which includes Emergency and Drought Management Procedures. These plans describe in detail the processes for responding to water related emergencies, including drought. The districts will continue to update their plans regularly and the Town will continue cooperate with the districts to ensure appropriate drought response and ensure water service is maintained.

Promotion of Water System Improvements

While the Town will no longer have a direct role in developing and implementing water system improvements subsequent to the merger, it should remain active in the process of same by providing appropriate and reasonable support to the water districts whenever possible.

Asset Database & CIP Plans – The first step in developing an accurate water system Capital Improvement Plan (CIP) is developing a comprehensive, detailed and current asset management database, which is

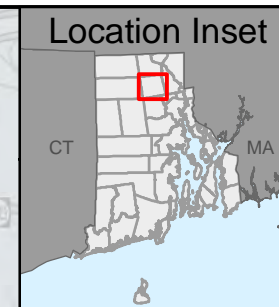
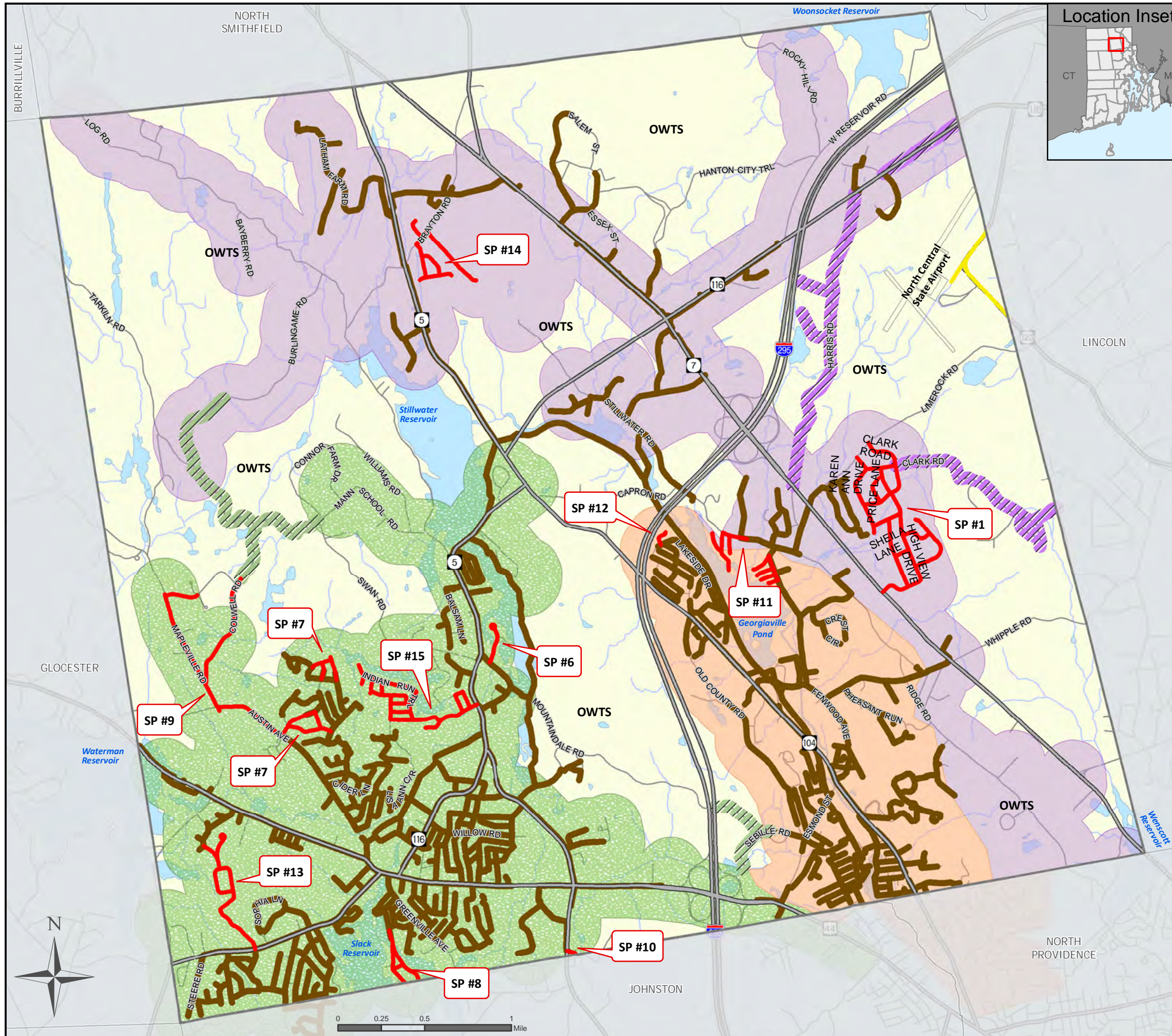


Fig. SF-13 :: PUBLIC SEWER and PUBLIC WATER AREAS - EXISTING and PROPOSED



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

OWTS On-site Wastewater Treatment Systems

- Public Sewers ***
- Sewer Project - Proposed **
 - Lincoln Water Commission - Existing
 - Sewer Located - Existing
 - ▨ Greenville Water District - Expansion
 - ▨ Smithfield Water System Future - Expansion

- Water District / Supplier ***
- ▨ East Smithfield Water District - Existing
 - ▨ Greenville Water District - Existing
 - ▨ Smithfield Water District - Existing

- | Features | Boundaries |
|----------|--------------|
| Highways | Smithfield |
| Roads | RI Municipal |
| Water | Other States |
| Streams | |

* Source: Smithfield Engineering Department, 2014
 ** See Table SF-7 for FY 2015 Project Priority List

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

then used as the planning tool for timely and efficient infrastructure improvements. The Town should participate in the development of such a database as part of the merger between Smithfield and East Smithfield, and then subsequently assist the Smithfield Consolidated Water District with the ongoing maintenance to the extent practical.

The Town should also participate in the initial establishment of a sustainable water rate system for the Smithfield Consolidated District, based on both the operational and maintenance costs of the district as well as long-term CIP funding needs, as part of the merger.

Finally, the Town should endorse the performance of rate structure analyses by both water districts on five-year cycles; the rate structure analyses should be based on updated asset management databases and water demand totals, and should be the justification for adjusting rate structures to insure that capital improvement costs can be met.

System Interconnections –The Town is pursuing opportunities to establish emergency connections between neighboring water suppliers such as the Town of Lincoln in compliance with State Guide Plan Element 723: Water Emergency Response Plan. Interconnections between suppliers could provide emergency back-up supplies to Smithfield residents in the event of a catastrophic incident at the Scituate Reservoir which provides water to all three Smithfield Water Districts.

System Component Upgrades – The Town should endorse and promote the implementation of water system upgrades by the water districts as needed to maintain or improve water service to residents.

Development of Alternative/Independent Water Supplies – The Town should endorse and promote the location, study, development and implementation of alternative (i.e. suppliers other than Providence Water Supply Board) or independent (i.e., district owned/operated surface or groundwater) water supplies by the water districts, if and when such alternative or independent supplies will improve the quality of water provided to Town residents, will reduce the cost of supplying water to Town residents, or both.

Town Role & Resource Demands

It is anticipated that the Town’s role in the implementation of the preceding will generally consist of:

- Providing coordination between various local, state and quasi-public agencies;
- Providing Town-collected/maintained information (census data, zoning and land-use information, roadway CIP information, etc.) to the local water districts and/or other entities;
- Providing administrative support for various programs, initiatives and projects related to the water systems;
- Acting as a clearinghouse for information from and about the water districts and their various programs and projects.

As the majority of the actual work will be performed by the individual water districts, the Town’s role will be limited to general support. These support tasks shall be intermittent and not typically excessively time-consuming for Town personnel. Therefore, it is not anticipated that additional staffing will be required as part of this element of the comprehensive plan.

Wastewater Treatment and Disposal

Sewer System

The Town of Smithfield owns and operates a municipal wastewater system which collects, conveys, and provides treatment of the wastewater generated by approximately 60% of the residential, commercial and industrial entities in Smithfield. The majority of the service area is located in the southern and central sections of Town; the developed parcels in the areas of Town not serviced by the municipal wastewater system discharge their wastewater to onsite wastewater treatment systems (OWTS) (commonly known as septic systems), which are regulated exclusively by the Rhode Island Department of Environmental Management (RIDEM).

Figure SF-14: Smithfield Water Pollution Control Facility
(photo by Wright Pierce)



Smithfield recognizes the critical importance of proper wastewater management to preserving public health, safety & welfare and the natural environment, and further understands the necessity of developing and maintaining a properly-sized wastewater collection, conveyance and treatment system to provide that management. Smithfield also understands the significant role that the wastewater system plays in the further residential, commercial and industrial development of the community. This Plan identifies and promotes appropriate actions which will be undertaken by the Town to insure that its wastewater system continues to meet the wastewater management and development needs as the Town continues to grow.

Table SF-7 provides general information about the Town of Smithfield’s wastewater system. The majority of the information provided herein is derived from the Wastewater Facilities Plan (WWFP) which was recently updated and re-affirmed; the full WWFP is available from the Town Engineer.

Table SF-7: Characteristics of Sewer System in Smithfield, RI

General Information	
Service Location	Central & Southern Smithfield / Portion of Gloucester and Johnston
Service Area (sq. mi.)	16
Year of Inception	1978
Number of Accounts	
Residential	4,699 Accounts; 5,377 Units
Commercial / Industrial	357 Accounts; 3,086 Units
TOTAL:	5,056 Accounts; 8,463 Units
Treatment Plant Capacity & Demand	
System Capacity (MGD)	3.50
Current System Flow (2013)	
Average Daily (MGD)	1.89 MG (07/01/2012-06/30/2013)
Peak Hourly (MG)	5 MG (2013 Max measurable)
Projected System Flow (2025)	

Average Daily (MGD)	2.20 MG (2025 *estimated)
Peak Hourly (MG)	5 MG (2025 Max measurable)
System Infrastructure	
Pipe (Materials)	
Asbestos Cement	Y
Cast Iron	Y
Ductile Iron	Y
PVC	Y
Other	Clay
Pump Stations	12
Treatment Facilities	One Tertiary Treatment Plant; Discharges to Woonasquatucket River
Administrative Structure	
Management Operational Structure	Wastewater System Superintendent (Smithfield Town Engineer)

The most significant recent improvement made to the wastewater system is the upgrade of the Wastewater Treatment Plant to provide tertiary (i.e. nutrient removal) treatment. This upgrade was mandated by EPA/RIDEM regulations, and will be completed in July of 2014. Upon completion, the Wastewater Treatment Plant will be in full compliance with all current regulations and discharge limits established by RIDEM. The plant upgrade has been a significant project, and has depleted nearly all of the Wastewater Capital Fund.

Sewer System Expansion

The Wastewater System 20-Year Capital Improvements Plan¹ completed in 2008 contains an analysis of the wastewater system including the collection system, pump station and treatment plant and CIP development. The analysis accounts for future growth by incorporating planned projects with a total residential unit count of approximately 1,200 which would account for about 25 years of development potential. A model simulating buildout conditions was run and revealed that the number of stressed pipes² in the collection system increased marginally in dry weather periods but increased significantly during typical wet weather periods due to groundwater infiltration into the system. The study recommends the implementation of an Infiltration and Inflow Remediation Program to reduce demand on the collection and treatment facilities, suggests upgrades to the Wastewater Treatment Plant and that the expansion of the collection system be done subject to a more detailed capacity analysis.

The estimated costs to conduct all of the recommended improvements included in the 2008 report were prepared and are summarized below:

- Collection System Improvements \$5,900,000
 - Pump Station Improvements \$5,100,000
 - Wastewater Treatment Plant Improvements \$2,295,000
- Total System \$13,295,000

To fund the completion of these improvements utilizing the current rate structure would require a 62% rate increase from \$265 per year for the average residential bill to \$430 dollars.

¹ Town of Smithfield Rhode Island – Wastewater Systems 20-year Capital Improvements Plan, February 2008, Prepared by CDM

² Pipes estimated to be at 85% of capacity are considered “stressed”.

Table SF-8 identifies a number of possible sewer extension projects that are being planned for and provides projected project dates and preliminary cost estimates. Currently, residents requesting a sewer extension must successfully petition the neighborhood with a 2/3 majority required for the project to proceed. Residents then share in all the costs, and repay the Town over time. Figure SF-13 shows the extent of the existing sewer collection system and identifies the potential sewer expansion projects shown in Table SF-7.

Table SF-8: FY 2015 Project Priority

Project No.	Project Name	Projected Construction Date	Estimated Cost
1	Highview Hilldale Estates	FY 2016- 2020	\$3,775,000
2	Richard Street & Hazel Point	FY 2016	\$565,000
3	Cortland, Ln., Baldwin Dr., Kimberly Ann Rd., Cragapple Lane	FY 2016- 2020	\$1,500,000
4	Green Lake & Ruff Stone Dr.	FY 2017	\$855,000
5	Austin Ave., Mapleville, Colwell Rd.	FY 2018	\$2,420,000
6	Elmgrove Ave.	FY 2018	\$720,000
7	Friendship Lane, Domin Ave., Potter, & Rawson Ave.	FY 2016- 2020	
8	Sydney & Myers Street, Ridge Rd.	FY 2018	\$1,235,000
9	North Candy Court	FY 2018	\$160,000
10	Fanning Lane (area)	FY 2025	\$2,850,000
11	Levesque, Jambray & Elna Dr., Dongay, John Mowry & Brayton Rd.	FY 2023	\$3,450,000
12	Lower Sprague Reservoir (area), Indian Run Plat, Totem Pole Tr.	FY 2020	\$5,000,000

Source: Smithfield Engineering Department

Individual Sewage Disposal Systems

On-site wastewater treatment systems (OWTS) are a reliable means of disposing wastewater if they are properly sited, designed, and installed. On-site wastewater treatment and disposal is an ancient practice with a design technology evolved to reflect the experience gained through the use of on-site disposal under varying environmental and disposal conditions.

The Rhode Island Department of Environmental Management regulates the design and installation of new systems, system repairs, and alterations. The critical design criteria are the volume of wastewater which, for residential development, is based on the number of bedrooms per dwelling unit, the percolation rate of the soil, the depth to groundwater and the depth to bedrock. Where there are limiting factors of poorly drained soils, i.e. a slow rate at which water can percolate through the soil, and shallow depth to groundwater and/or bedrock, large areas of land are necessary to accommodate an OWTS. The engineering requirements for leaching fields to dispose of wastewater on-site can result in substantial clearing and filling of the land.

OWTS repairs and alterations are a normal part of system maintenance. High densities or frequencies of repair can be indicators of potential problem areas for on-site sewage disposal in existing built up areas of a community. The repair or alteration of a system may involve fixing an older unit that was installed prior to the adoption of the present design standards and rules and regulations governing OWTS. The

systems in need of repairs may be sited on small house lots and this can make it difficult for repair or replacement utilizing current design technology and standards.

Extensions of the municipal sewer system may be needed to service areas where on site systems cannot be effectively repaired or brought up to current standards. New developments should be designed and constructed to comply with OWTS requirements wherever possible. In areas with larger lots and good soil and groundwater conditions where on-site systems can be used they are far and away the most cost effective and environmentally sound means of wastewater disposal available.

Issues and Needs Assessment - Wastewater Disposal

The following are the most significant issues currently facing the wastewater system:

Asset Management/Proactive Capital Planning

The Town of Smithfield currently has no comprehensive asset management system (AMS) to track its wastewater assets and provide guidance and planning for wastewater infrastructure 1) operation and maintenance (O&M) expenses, and 2) capital improvement projects (CIP's) such as system upgrades and replacements (the Town's need for an AMS for all of its facilities and infrastructure networks is discussed in the Facilities - General section of this document). As a result, the Town is unable to set wastewater rate structures with a sufficient degree of accuracy and precision to provide adequate O&M and CIP funding.

Depletion of Wastewater Capital Fund

As stated above, the recent upgrade of the Wastewater Treatment Plant has nearly exhausted the Wastewater Capital Fund. As CIP's for the wastewater system are paid for exclusively by this fund, any such projects (collection system improvements, pump station upgrades, etc.) will be unable to be implemented until the fund is sufficiently replenished. Furthermore, any necessary emergency work on the wastewater system (also funded from this source) would need to be funded from other Town contingency funds, requiring future CIP funds to be used for repayment of the contingency funds and further delaying the implementation of non-emergency (but equally important) CIP's.

System Infiltration & Inflow

It is estimated that approximately 1/3 of the flow received at the wastewater treatment plant is not wastewater, but is instead a combination of groundwater and surface-generated stormwater runoff introduced to the sanitary sewer system by either infiltration (entrance of groundwater to leaky pipes and/or structures in the wastewater collection system) or inflow (entrance of surface stormwater runoff from stormwater pipes directly connected to the wastewater collection system).

Infiltration and inflow (I/I) are significant problems for many wastewater systems, particularly older systems with deteriorated collection system elements which were constructed prior to current policies or ordinances which prohibit the discharge of stormwater to the wastewater system. Unnecessary conveyance and treatment of I/I flows are costly, accelerate the deterioration of pump stations and treatment plants, and in many instances contribute to treatment plant overflows during wet weather events.

Current Sewer Extension Policy

The current Sewer Extension Policy mandates that any entity seeking to extend sewer lines to its property must provide connection points to all non-sewered properties adjacent to the path of the extension, at the entity's sole expense. While this policy is generally standard and sound practice from a construction and infrastructure standpoint (avoiding the need for future cuts into the wastewater piping or structures and associated disturbance to roadways), it can be a disincentive to development, as entities may not be willing (or able) to afford the full expense of the sewer extension, only to have other entities along the route of the extension directly benefit from the free (from the infrastructure installation standpoint) availability of sanitary sewers. The Town might consider allowing the developer to receive some compensation from those who connect to the system they construct.

In addition, the current Sewer Extension Policy mandates that private developers "shall" (i.e. must) connect to sanitary sewers if available, regardless of whether or not the connection is necessary to the proposed development. Many developers cannot afford the impact and usage fees associated with connecting to the sanitary sewer system, and because there is no flexibility in the sewer extension policy for the Town Engineer to evaluate and adjudicate each development individually, the connection mandate can be a disincentive to development. The Town might consider exceptions to the policy in appropriate cases.

Industrial Pretreatment Program

Industrial entities have the potential to generate wastewater flows with chemical characteristics which are significantly different from those of standard residential wastewater. These industrial flows can have significant adverse effects on the operation of both the wastewater collection system and the wastewater treatment plant itself, which is designed to receive and treat wastewater of a fairly consistent chemical composition. Deviation from this wastewater composition can upset the chemical balance in the treatment plant, resulting in violations of the RIDEM-mandated discharge limits for which the Town is responsible.

Industrial wastewater generators are therefore typically required to provide pretreatment of their wastewater to prescribed chemical limits before it is released into the municipal system; failure to do so results in the assessment of fines or penalties against the generator.

Need for On-site Wastewater System Management Program

As noted above, an OWTS can provide the most cost effective and environmentally sound means of wastewater disposal available, but only if it is properly designed, installed and maintained. Unlike citizens served by public sewers, citizens served by OWTS cannot call a utility for assistance when they experience wastewater disposal problems. Homeowners are often ill equipped to cope either technically or financially with problems caused by OWTS failure. The result can be chronic system failure due to lack of repair and maintenance. Chronic failure can cause adverse water quality and public health consequences in the community and can create pressures to extend the sewer system unnecessarily. Smithfield should consider an OWTS management program that can offer financial and technical assistance to small businesses and homeowners facing OWTS problems. Such a program could provide assistance to correct OWTS problems while avoiding costly and un-necessary sewer extensions.

The Town prepared a Draft On-site Wastewater Management Plan 2003.³ The purpose of the plan was to establish goals and direction for the proper management of on-site wastewater disposal systems throughout Town. The plan presents cost-effective alternatives to meet water quality and public health Policies, while recognizing environmental and other non-monetary factors.

The Plan makes the following recommendations:

- The creation of a Wastewater Management District, to include promulgation of Rules and Regulations;
- Extension of Sewer Service to 9 most problematic areas;
- Development of a financial assistance program for homeowners; and
- Development of an educational program for homeowners

The Town is currently in the process of implementing this plan.

Stormwater Management

Numerous studies have illustrated the significant and adverse impacts of pollutants (sediment, nutrients and pathogens) contained in untreated or insufficiently treated stormwater on natural water bodies and related natural resources. As a result, stormwater management has, in recent years, evolved from being primarily focused on hydraulic management (i.e. controlling stormwater runoff flow rates & providing flood prevention) to a more balanced focus which promotes the quality of stormwater runoff as an equal, if not greater, criterion of concern.

In 2003, the US Environmental Protection Agency (EPA) issued its Construction General Permit (CGP) which initiated Phase II of its National Pollutant Discharge Elimination System (NPDES) program; here in Rhode Island, authority over NPDES Phase II was delegated to the Rhode Island Department of Environmental Management (RIDEM), which developed the RIPDES program as the statewide entity responsible for stormwater management. Specifically, Phase II mandated that all municipalities with a population of over 10,000 people which own and/or operate Municipal Separate Storm Sewer Systems (MS4's) must develop and implement Stormwater Management Plans (SWMP's). The goals of the SWMP's were generally to include:

- Location, identification, and monitoring of all elements of the stormwater management infrastructure;
- Development and implementation of modifications to the stormwater management infrastructure which achieve improvements to overall stormwater quality;
- Creation and implementation of local policies, rules and regulations which promote low-impact development and sound construction and post-construction period stormwater management;
- Promotion of public awareness of the importance of managing and treating stormwater before it is released into the environment;
- Engagement of public participation in issues related to stormwater management.

Smithfield, in accordance with the RIPDES program, developed a SWMP through its Engineering Department, and continues to administer it through the joint efforts of Engineering and the Department

³ Draft On-site Sewage Disposal Wastewater Management Plan, Smithfield, RI by: BETA, 2003. Available on the Planning Department page of the Town's web site at <http://smithfieldri.com>

of Public Works. The SWMP articulates the specific policies, goals and Policies of the Town as they relate to stormwater management. The full Smithfield SWMP⁴ is available from the Engineering Department.

Issues and Needs Assessment - Stormwater Management

The Town of Smithfield's overall stormwater management ("drainage") system is typical of most municipal stormwater systems. It consists of a number of separate storm drainage systems which serve specific watersheds (some as small as individual streets, some encompassing multiple neighborhoods); these systems consist of catch basins and other inlet structures, drain manholes, connecting drainage pipes of varying sizes and materials, and outfalls to water bodies or other natural resource areas (e.g. wetlands). The majority of these stormwater systems were designed and constructed prior to the advent of Phase II (and its greater focus on water quality treatment); therefore, the design criteria for these systems prioritized hydraulic stormwater management (i.e. provision of adequate flow rate capacity of inlets and pipes to avoid or minimize flooding during rain events).

Because of this, the existing stormwater system in many instances does not include dedicated or even incidental water quality treatment measures; as a result, stormwater runoff (along with the pollutants contained therein) is often discharged to water bodies or associated natural resources with little or no treatment.

Similar to the stormwater systems themselves, most of Smithfield was developed prior to the advent of Phase II. As a result, neighborhoods were designed and constructed without the benefit of low-impact development (LID) standards, which are an integral part of Phase II. Basically, LID attempts to improve stormwater quality by limiting the volume of stormwater runoff (and pollutants associated therewith) generated by new development; typical LID measures include minimizing the creation of new impervious area and providing de-centralized stormwater management/water quality treatment on a site-by-site basis.

Solid Waste and Recycling

Smithfield contracts with a private trash disposal company to collect residential household rubbish weekly at curbside. Residents of the Town pay for this service through the municipal tax structure. The waste is disposed of at the Rhode Island Central Landfill, operated by the RI Resource Recovery Corporation. According to the Rhode Island Resource Recovery Corporation⁵, Smithfield presently generates 0.66 tons of solid waste each year per household served in the collection program. In 2012, the Town disposed of 6,074.68 tons of solid waste at the Central Landfill.

The Town has implemented mandatory recycling and solid waste will not be picked up at the curb unless at least one recycling bin has been placed on the curb with the waste container. Large metals items such as refrigerators, gas grills, ranges, etc. (aka "white goods") may be dropped off at the DPW site or will be picked up by the Town on request. Residents are allowed disposal of one bulky item per

⁴ Town of Smithfield, Phase II Storm Water Management Plan, March 2006, Maguire Group with the Northern Rhode Island Conservation District.

⁵ RIRRC Municipal Customer Summary – Smithfield, October 2012

collection along with their rubbish collection. White goods are stored at the DPW site and, when a sufficient amount has accumulated, the town sells them as scrap metal to a private metals recycler.

The Town employs a recycling coordinator under the general supervision of the Director of Public Works. The Recycling Coordinator provides coordinative and administrative support for Town recycling programs and projects, including providing liaison with the general public, school system, community groups, Town businesses and other local government agencies; developing informational materials, assisting the Director in the overseeing of daily residential curbside operations; and performing related duties. Essential functions are to monitor private haulers for contract compliance; receive and resolve citizen complaints; coordinate development and research of solid waste reduction activities and increase & implement public awareness and participation in recycling programs. Current projects include monitoring residential curbside pick-up, increasing participation in the corrugated cardboard recycling program, implementing strategies for local commercial/industrial recycling, and designing and implementing environmental education programs. The Department also conducts or coordinates several special events during the year oriented toward collection and disposal or recycling of special wastes such as household hazardous waste, leaf and yard waste, electrical waste (televisions, video equipment, computers, etc.), tires, and leaf and yard waste.

The State of RI has set a two-part goal for its 39 municipalities in RIGL § 23-18.9-1. Beginning July 1, 2012 every city or town that enters into a contract with the Rhode Island Resource Recovery Corporation to dispose of solid waste is required to recycle a minimum of thirty-five percent (35%) of its solid waste and to divert a minimum of fifty percent (50%) of its solid waste. Smithfield recycles 25.2% of its waste via the mandatory recycling program. With composting of leaf and yard waste, the current recycling rate is 33.8% and the rate of overall diversion from the landfill is 34.1%.

Issues and Needs Assessment – Solid Waste

Rising recycling rates over the past decade indicate that the Department has been very effective at promoting recycling. However, Smithfield still has not quite reached the mandatory 35% recycling and 50% diversion goals set by the State. In order to reach these goals the Department needs to teach more people about the need to reduce/reuse/recycle by expanding public education programs in schools and businesses.



Recycling of appliances and large metal objects can be enhanced by establishing a formal facility for drop-off and storage of white goods at the DPW site. A drop-off and storage facility could also serve to prevent exposure of stockpiled white goods to rainfall reducing the potential for corrosion of the metal and protecting the quality of the stormwater runoff.

Oil recycling could be enhanced by replacing the existing oil igloo. The igloo was an innovation in its day, but is now outdated and inadequate to serve the needs of Smithfield's population. It sits in a locked shed on the DPW site and is opened on request. A new oil recycling facility would provide more convenient drop off, better spill protection, and a larger storage capacity. It would also provide separate facilities for drop off of spent crankcase oil and drop-off of used vegetable oils. With more convenient drop off and a larger capacity for storage, a new facility would require emptying less frequently and would provide more of an incentive for oil recyclers to collect the waste oils.

The Department should develop a ticket and response program for service scheduling and complaint handling or participate in a larger such ticket and response program for all DPW calls. Some communities have implemented this via a 311 phone program and/or via website forms. A ticket and response program allows a caller (or browser) to report a concern and receive a ticket number. Ticket numbers are then tied to responses, ensuring that concerns are appropriately addressed. With a ticket and response program, it would be possible to change the bulky item program from the current program, one item per week with the trash, to a separate bulky pick-up by appointment. This would facilitate pick up and disposal of mattresses, tires, carpets and other large items that won't fit in a normal trash bin but aren't recyclable "white goods".

The Department needs drop-off and storage space for recycling containers (and eventually trash containers) including both new containers and those that are damaged or outdated. Citizens should be able to turn in worn out or damaged bins at the Department and pick up new replacement bins so a small quantity of both new and old bins should be kept temporarily at the DPW site. The Town has phased out user supplied trash cans and recycle buckets in favor of a program with provided bins that can be automatically lifted and emptied by the equipment operator. As noted under the discussion of the Department of Public Works above, there is a need for expansion of the facilities at the Public Works site. Storage of white goods, replacement of the oil igloo, bin storage, and office space needs for the recycling coordinator should all be considered in planning those facilities.

The amount of work required to expand public education program, manage the solid waste collection and disposal program, conduct programs for collection of special waste, schedule community clean-ups manage bulky waste pick-up and address citizen concerns relative to solid waste is more than a part-time job. The position of part-time recycling coordinator should be changed to a full-time coordinator for recycling and solid waste programs. Expanding the hours of recycling and solid waste coordinator from part-time to full-time can take place as program expands and as needed to facilitate conversion to bins and compliance with the States mandatory 35% recycling and 50% diversion goals.

Energy Conservation

The Town of Smithfield completed an HVAC control upgrade at Town Hall in 2011. Funding for the project was provided through an Energy Efficiency and Conservation Block Grant (EECBG) administered by the Rhode Island Office of Energy Resources (RIOER). A total of \$216,000 was spent to upgrade HVAC controls, replace obsolete AC condensers and malfunctioning valves and install an energy monitoring computer program in hopes of improving energy efficiency at Town Hall. The Town also completed an energy efficiency project at the Smithfield Wastewater Treatment facility involving retrofitting lighting in a number of buildings including the administration building, incineration room and primary effluent pump building. The project was funded through a \$32,000 grant from the Energy Efficiency Wastewater Treatment Facility Program administered by RIOER.

The Town is participating in the Rhode Island Public Energy Partnership (PEP), an energy conservation project funded by the U.S. Department of Energy. The PEP is a three (3) year collaborative effort between municipalities, RIOER and National Grid to achieve deep energy savings in state and municipal facilities and build a sustained, effective infrastructure for ongoing savings. The Town has completed the first step in the program which is to establish the energy usage baseline for all municipal facilities as shown in Table SF-9. RIOER and National Grid will hire qualified energy experts to provide the Town an energy audit that will identify potential cost-efficiency measures and available incentives to implement specific measures.

Table SF-9 Smithfield Energy Use and Expenditure Summary											
Building	Utility Type	Energy Unit	Square Footage	2010 Energy Use	2011 Energy Use	2012 Energy Use	2010 Energy Expenditure *	2011 Energy Expend.	2012 Energy Expend.	Ave. EUI (kBtu/S QFT/yr)	Ave. Cost /SQF T
FD Station #1	E	kWh		94,850	97,074	92,000	\$14,147	\$14,808	\$11,258		
FD Station #1 Total		kBTU	5,978	323,628	331,216	313,904	\$14,147	\$14,808	\$11,258	54.02	\$2.24
FD Station #2	E	kWh		34,701	34,979	33,083	\$5,495	\$5,590	\$4,244		
FD Station #2 Total		kBTU	5,347	118,400	119,348	112,879	\$5,495	\$5,590	\$4,244	21.86	\$0.96
FD Station #3	E	kWh		36,381	38,043	40,896	\$5,761	\$6,074	\$5,219		
FD Station #3	G	Therms		15	17	15	\$257	\$256	\$252		
FD Station #3 Total		kBTU	4,828	125,675	131,551	141,071	\$6,018	\$6,330	\$5,471	27.50	\$1.23
Ice Rink	E	kWh		5,904	4,169	2,500	\$1,262	\$845	\$520		
Ice Rink (also listed as water pump station)	E	kWh		725,600	734,600	723,400	\$88,825	\$85,094	\$82,077		
Ice Rink	G	Therms		5,685	6,899	8,608	\$8,371	\$3,761	\$9,382		
Ice Rink Total		kBTU	29,320	3,064,345	3,210,626	3,337,558	\$98,458	\$89,700	\$91,979	109.28	\$3.18
Police Station	E	kWh		224,240	231,680	218,800	\$31,583	\$33,198	\$24,319		
Police Station	G	Therms		3,865	3,730	2,376	\$5,525	\$4,998	\$4,649		
Police Station Total		kBTU	7,620	1,151,620	1,163,506	984,131	\$37,108	\$38,196	\$28,969	144.32	\$4.56
Public Works	E	kWh		69,201	74,550	67,114	\$10,808	\$11,881	\$8,748		
Public Works	G	Therms		4,878	6,090	4,308	\$7,844	\$3,072	\$5,661		
Public Works Garage											
Public Works & Garage Total		kBTU	18,250	723,933	863,365	659,821	\$18,653	\$14,953	\$14,409	41.04	\$0.88
Senior Center (also listed as water pump)	E	kWh		102,800	100,880	102,960	\$18,474	\$18,980	\$16,045		
Senior Center	G	Therms		<i>requested from Ngrid; waiting on data</i>							
Senior Center Total		kBTU	11,526	350,754	344,203	351,300	\$18,474	\$18,980	\$16,045	30.26	\$1.55
Town Hall	E	kWh		147,998	150,500	151,446	\$22,490	\$24,122	\$19,171		
Town Hall	G	Therms		6,368	7,018	5,150	\$8,174	\$3,695	\$6,186		
Town Hall Total		kBTU	14,661	1,141,755	1,215,261	1,031,754	\$30,663	\$27,816	\$25,357	77.05	\$1.91
Wastewater Treatment Facility (E	kWh		107,530	101,287	106,168	\$13,984	\$13,343	\$13,104		
Wastewater Treatment Facility Total		kBTU	NA	366,892	345,591	362,245	\$13,984	\$13,343	\$13,104		

Wind Power

In 2009, the town established the Energy Review Commission to review the Town's energy needs and develop a plan to reduce overall energy costs. The early success of the Portsmouth wind project led the commission to investigate the possibility of developing a turbine in Town. The Town funded a pre-feasibility study to identify sites that might be suitable for the installation of one or more wind turbines. The study completed in spring of 2010, identified a number of potential sites that the Town should consider. The report recommended that the Town pick the highest rated site and develop a more detailed study that would look at wind data for the site over an extended period of time. One of the first steps in the detailed study was to determine if any regulatory barriers existed. As it turned out the highest rated site was in the glide path of a runway at the North Central State airport, and any structure in the area would be limited to a height of about 100 feet, well below the height needed to capture the necessary wind energy for the turbine. It was found that the other sites had limiting characteristics which disqualified them from consideration for a municipal project.

Water Power

The Rhode Island Department of Environmental Management, Dam Safety Program lists 27 dams in Smithfield. These dams are listed and described in detail in the Natural Hazards section of this Plan. Most were constructed to provide water to power local mills. Some are potentially suitable for electrical power generation with modifications. Recent improvements in the application of Archimedes screw technology have enhanced the viability of low head hydro generation projects with a great deal of promise for power generation in New England. Although hydro power facilities currently generate less than .01% of the energy used in Rhode Island, a study released this year by the state Renewable Energy Siting Partnership estimated that Rhode Island could generate as much as 15 megawatts of power from small hydro facilities on the Pawtuxet, Blackstone, Ten Mile, Wood-Pawcatuck and Woonasquatucket rivers; enough power for 22,000 typical homes.

In the 2013 legislative session, the General Assembly expanded the state's distribution generation program to include small hydropower projects. The program sets ceiling prices for different types of renewable energy, such as solar and wind power, and requires National Grid to negotiate 15-year power purchase agreements with developers, providing them with a guaranteed revenue stream. The price ceiling for hydropower has not yet been established, but is expected to fall between the cost of fossil fuel power and the ceiling set for wind and solar energy. Although no hydropower projects have yet been proposed in Smithfield, the combination of technological advances and a favorable ceiling price are likely to lead to proposals in the near term to mid-term. Smithfield is very supportive of hydropower as a source of alternative energy. The Town will encourage and support projects that make effective use of dams to generate electricity while also protecting public safety, water quality, and historic resources.

Solar Power

The Town is considering a proposal by Mainline Solar that would result in the Town buying energy credits for a solar project proposed in neighboring North Smithfield. Rhode Island's new renewable energy requirements allow for the construction of a utility-scale PV solar plant that can support the sale of discounted electricity to local communities. National Grid would purchase the project's Solar Renewable Energy Credits for a >15 year term, and the Town could, with Town Council approval, enter into a 20 year Power Purchase Agreement (PPA). The electricity generated at the North Smithfield location would feed to National Grid's transmission lines. The electricity will be virtually credited via

National Grid's net-metering service to the electric meters in Smithfield and other participating communities directly off-setting kWh usage. The benefit may be that the Town could purchase the projects' energy at a long term fixed rate with predictable savings every year.

The Town has investigated a number of sites in Town for a potential solar project, including the former Ridge Road landfill adjacent to the North Providence Town-line, and town property adjacent to Town Hall. Potential exists for a roof top PV project at the High School.

Broadband Internet

The federal government, through the National Telecommunications & Information Administration (NTIA), has granted Rhode Island \$27.8 million for broadband infrastructure, access, digital literacy, and organizational capacity building during 2010-2014 to give more Rhode Islanders the opportunity to participate in the digital age. Rhode Island is ranked among the top three states in the nation in broadband speed and coverage, with the technical infrastructure in place to connect nearly every Rhode Islander to high-speed internet. The Rhode Island Commerce Corporation is administering the NTIA grant funds. Part of the funds went to establish the Broadband RI (BBRI) initiative within the RIEDC. BBRI works to create new opportunities by expanding broadband use and digital literacy across Rhode Island. BBRI programs address public awareness and education about broadband and develop plans to increase broadband adoption and usage.

Smithfield has a very high level of broadband internet service available to all residents through private providers. The entire Town has full coverage available for wireless, cable modem (DOCSIS3.0), optical fiber, and terrestrial mobile wireless internet. Data switched line (DSL) service is also available in most of the Town, except the more rural areas. Two small areas are also served by other copper wire internet service.

There are 11 internet providers in Smithfield. These are listed in Table SF-10 along with an indication of the bandwidth (e.g. "speed") presently offered by each. Nine of these providers offer true broadband speeds approaching 100 megabits per second (Mbps). Smithfield is fortunate in that most of its residents not only have access to broadband internet, but most actually have a choice between at least two different providers.

Table SF-10: Broadband Service Providers in Smithfield, RI

Broadband Provider	Advertised Download Speed	Advertised Upload Speed	Typical Download Speed	Typical Upload Speed
AT&T Mobility LLC	10 – 25	3.0 – 6.0	n/a – n/a	n/a – n/a
CellCo Partnership	10 – 25	3.0 – 6.0	6.0 – 10	3.0 – 6.0
CoxCom Inc.	50 – 100	3.0 – 6.0	0.7 – 1.5	0.2 – 0.7
Hughes Network Systems, LLC	50 – 100	10 – 25	50 – 100	50 – 100
Lightower Fiber Networks	50 – 100	10 – 25	50 – 100	50 – 100
Skycasters	50 – 100	25 – 50	50 – 100	50 – 100
Sprint Nextel Corporation	50 – 100	25 – 50	50 – 100	50 – 100
StarBand Communications, Inc.	50 – 100	25 – 50	50 – 100	50 – 100
T-Mobile USA, Inc.	50 – 100	25 – 50	50 – 100	50 – 100
Verizon New England Inc.	50 – 100	25 – 50	50 – 100	50 – 100
ViaSat	50 – 100	25 – 50	50 – 100	50 – 100

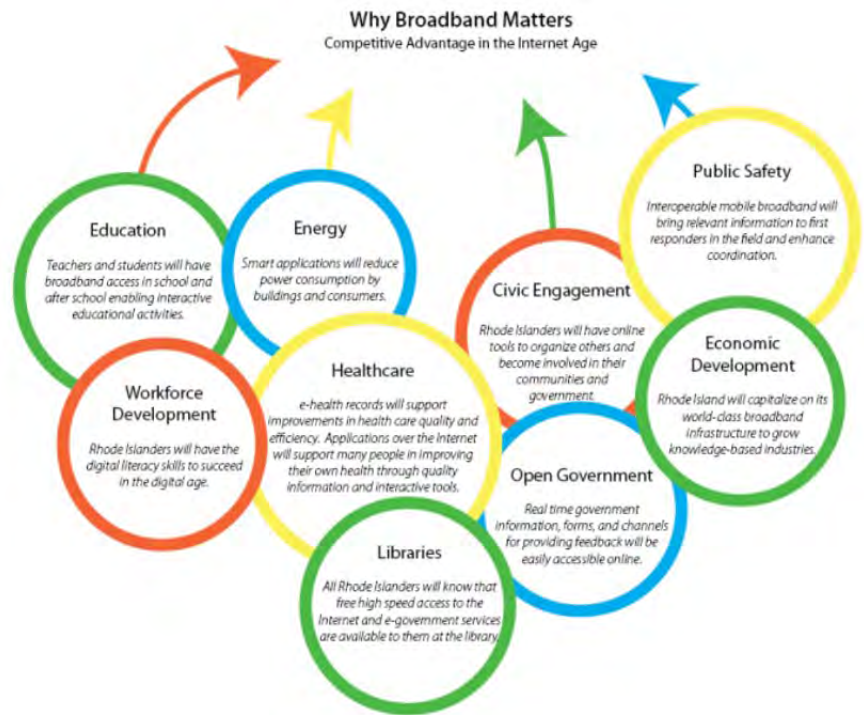
Source: BroadbandRI.gov

Issues and Needs Assessment – Broadband Internet

Like Rhode Island as a whole, Smithfield is fortunate to have a high degree of access to the internet in terms of infrastructure and providers. However, this availability unfortunately does not transfer directly to high levels of internet usage. In 2012, Rhode Island ranked first among the 50 States in terms of broadband speed and 3rd among the 50 states in broadband coverage.¹ However, the State ranked 20th in terms of broadband adoption and only 38th in terms of implementation of e-government.

Smithfield has a very effective web site that provides access to many Town services. However, there are multiple opportunities for the Town to improve productivity and citizen response through the enhanced use of broadband internet services. Examples include instituting an on-line program for logging and responding to citizens’

Figure SF-15: Why Broadband Matters
(from Broadband Policy for Rhode Island 2012)



¹ BBRI, *Broadband Policy for Rhode Island* January 2012

concerns as described under Public Works above and instituting a blended learning program within the public schools as described under Education above. The Town should continue to aggressively pursue opportunities to provide e-government services to make it easier for citizens to interact with government and improve the efficiency of government service delivery.

Also, the physical availability of affordable access to the Internet does not necessarily mean that everyone is connecting to the available services and using them to increase productivity and competitiveness. In fact, BBRI estimates that 29 percent of Rhode Island adults don't use the Internet at all and lack basic digital literacy skills that would allow them to post resumés, search for jobs, apply for unemployment benefits and perform basic online functions. There appears to be a direct correlation between broadband adoption and certain social indicators including ethnicity, income, education, age and household size. Nationwide, 68% white persons use the internet regularly while only 50% of black persons and 48% of Hispanic persons do. Similarly 84% of college graduates are regular internet users while only 30% of those with some high school education are. This discrepancy is known as the "digital divide".

Smithfield should work with RIEDC and BBRI to encourage Public points of access in libraries and community anchor institutions, advocate for private carriers to offer low cost basic plans to low-income households in Smithfield, and provide digital literacy education to help people access education, employment resources, and other public services on-line.

Asset Management

Facilities and infrastructure assets – buildings, roadways, traffic management systems and utilities – are the circulatory systems of every municipality; healthy facilities and infrastructure are a necessity for a healthy community. Therefore, one of the primary functions of any municipality is to efficiently operate and maintain the various facilities and infrastructure assets which are used by its residents and visitors on a daily basis.

As the costs associated with facilities and infrastructure construction, upgrades and maintenance increase, the funding with which to perform such work is often decreasing. This puts even more emphasis on the need for comprehensive planning to achieve the most efficient use of funds (i.e. performing proactive work encompassing all facilities and infrastructure assets simultaneously, rather than piecemeal and reactionary efforts on one element at a time). This requires an accurate and consistently current inventory of all elements of all facilities and infrastructure assets for which the municipality is responsible.

The Town of Smithfield has direct responsibility for multiple facilities and infrastructure assets, including roads, sanitary sewers, storm drains, water, and numerous buildings. Plans, records and data for these assets currently exist in different formats, are stored in different locations, and are inconsistently maintained. In addition, records for these assets are typically independent of records for other facilities or infrastructure networks. This presents a significant challenge to the various municipal departments charged with planning and executing regular maintenance and capital improvements of the many assets; without a unified clearinghouse for data, it is nearly impossible to effectively administer maintenance and capital improvement plans.

The Town of Smithfield therefore recognizes the need to develop a comprehensive Asset Management System: a complete, detailed and readily-accessible database with graphical capabilities which contains

easily-updateable information about all elements of the various facilities and infrastructure networks. Such a database will allow Smithfield to efficiently operate and maintain its various assets through proactive and comprehensive planning, thus extending facility and infrastructure life cycles and making the most efficient use of limited funds.

Issues and Needs Assessment - Asset Management

The Town of Smithfield currently has a pavement management program known as MicroPaver. This program is an electronic database which contains detailed information on roadway elements, and which allows for data projections, report and graphics generation, and other tools useful for management and operation of roads. The initial roadway data collection and database set-up was performed in 2003; unfortunately, it has not been consistently updated since 2004, and therefore much of the data are no longer applicable.

Aside from MicroPaver, there currently appear to be no dedicated asset management databases being used by Smithfield to track and manage its other facilities and infrastructure networks. Instead, information on each asset is stored in a variety of forms, some digital, some paper, and some both. In addition, these sources of information are generally mutually exclusive; information on the buildings, sanitary sewer, water and storm drainage systems are not readily accessible to either MicroPaver or to one another.

Finance

At a time when some Rhode Island communities are teetering on the brink of bankruptcy and at least one has been placed in receivership, Smithfield is fortunate to be in very sound financial condition. Tight budgeting and good fiscal management policies have allowed Smithfield to meet its financial obligations while maintaining a balanced budget despite the national economic downturn. During 2011, Moody's Investors Service, a national rating agency, upgraded the Town of Smithfield's bond rating from an Aa3 to Aa2. In addition Standard and Poor's Rating Service, a national rating agency, also upgraded Smithfield to an "AA" from an "AA-" reflecting the Town's healthy financial position due to consistent conservative budgeting, maintaining healthy reserves, and keeping tight fiscal control.

The Smithfield budget is approved at a Financial Town Meeting held annually in June. The Town Manager submits a proposed budget in April of every year based on requests submitted by Town departments and municipally supported agencies. The Town Council then conducts a hearing on the proposed budget in May, makes modifications as needed, and places a recommended budget before the Financial Town Meeting in June. At the Financial Town Meeting, eligible Smithfield residents and registered voters determine the tax levy for the coming fiscal year by voting on the proposed municipal budget. Each activity in the budget may be debated and voted upon. An 80% favorable vote is required to open discussion on an increase in the Council recommended budget (commonly referred to as the "80% Rule"). Following discussion, the increase may be approved by a simple majority. Budget reductions require a simple majority to discuss or to authorize.

Table SF-11 below summarizes the Smithfield Town budget from 2011 to 2014. The budget has remained very stable over the past several years as Smithfield has maintained level funding for budget line items wherever possible during the economic downturn. The FY 2012 expenditures increased by

1.4% over 2011, the 2013 budget increased by 3.8% over 2012 expenditures and the 2014 adopted budget is 4.8% above the 2013 budget.

Table SF-11: Smithfield, RI Budget Summary				
	Fiscal Year Audited 2011	Fiscal Year Audited 2012	Fiscal Year Adopted 2013	Fiscal Year Adopted 2014
General Fund:				
Municipal Fund	\$27,104,443	\$27,929,392	\$29,467,438	\$31,229,492 \$
School Fund	<u>\$32,437,157</u>	<u>\$32,587,390</u>	<u>\$32,581,004</u>	<u>\$33,997,806 \$</u>
Total General Fund	\$59,541,600	\$60,516,782	\$62,048,442	\$64,785,731 \$
Enterprise Fund:				
Sewer Fund	\$3,807,152	\$3,741,654	\$4,639,888	\$4,296,066 \$
Water Fund	\$1,414,814	\$1,427,768	\$1,425,000	\$2,066,257 \$
Ice Rink Fund	<u>\$617,141</u>	<u>\$613,405</u>	<u>\$725,069</u>	<u>\$716,110 \$</u>
Total Enterprise Fund	\$5,839,106	\$5,782,827	\$6,789,956	\$7,078,433 \$
Total All Funds	\$65,380,706	\$66,299,609	\$68,838,398	\$72,142,588 \$

Source: 2013-2014 Adopted Budget

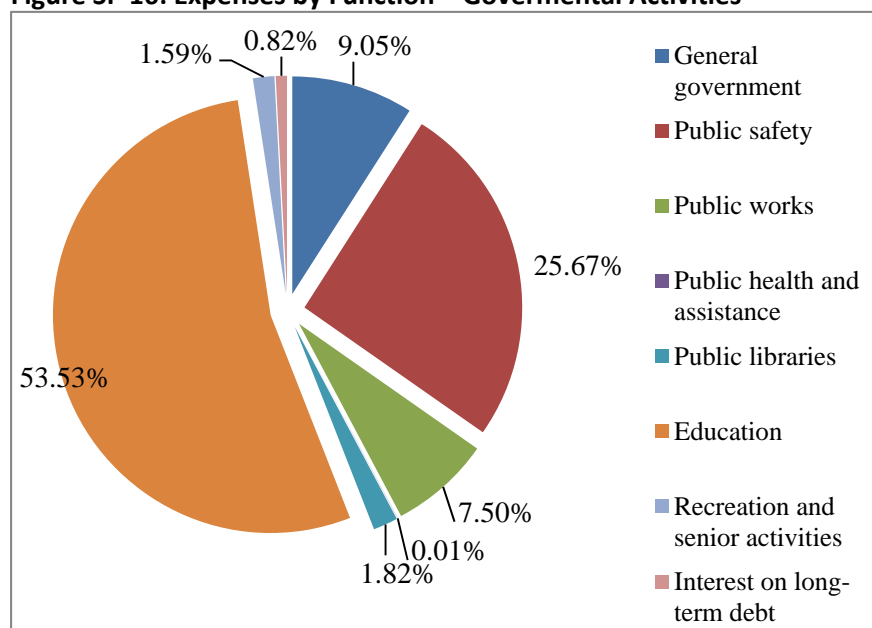
Table SF-12 Anticipated Revenue 2013-2014

Town of Smithfield Anticipated Revenue FY 2013-2014		
	Amount	Percent
State Revenues	\$1,965,987	3.06%
Federal Aid Revenues	\$ 2,000	0.01%
Local Non-Property Tax	\$2,010,000	3.13%
Capital and Operations	\$2,679,182	4.17%
School State Aid	\$4,927,615	7.67%
Tax Levy	<u>\$52,639,440</u>	<u>81.96%</u>
Total Revenue	\$64,224,224	

As with most suburban communities, the bulk of the budget in Smithfield is devoted to education. The school fund amounts to 51.4% of the budget. Municipal operating expenses are 43.0%. Capital improvements are 2.6% and debt service is 3.0%.

Figure SF-16 below shows that the largest expenditure in the General Fund budget is for the School Department, followed by System-wide Municipal obligations, the Fire Department, Police Department and Municipal Debt Service.

Figure SF-16: Expenses by Function – Governmental Activities²



Revenues

The breakdown of revenue sources is shown in Table SF-12 above. The Town gets most of its revenue (81.96%) from the property tax levy with the balance coming from the State (10.73%), from capital and operations revenues (4.17%) and from local non-property tax revenue (3.13%).

The percentage of revenue obtained from the State has declined significantly in Smithfield, and in other

Rhode Island communities, as the State has made dramatic cutbacks in financial aid to cities and towns. Smithfield has seen a reduction of over \$5.2 million in various State Aid programs over the past five years. The Town has been compelled to compensate for these reductions with other revenue sources in order to maintain the same level of service for residents.

Capital Improvement Program

The Town’s capital improvement program (CIP) for the 2015-2020 fiscal years was approved by the Town Council in December 2013. The CIP is conceptual and not a binding decision to fund all the listed improvements. The most current approved capital budget, for the fiscal year 2015-20 is presented in Table SF-13 below. Major possible capital expenditures include school renovations, improvements and repairs (\$7.5 million) and police headquarters expansion (\$6.8 million).

Table SF-13 Smithfield Capital Improvement Plan - 2015

Project Name	Fiscal Year
	2015
Police Headquarters Expansion & Renovations	6,400,000
Vehicle Replacement	130,000
Police Headquarters Building Repairs & Renovations	25,000
Replacement of Furnishings	20,000
Dispatch Renovations	200,000
Totals - Police Department	6,775,000
Administrative Vehicle Replacement	35,000
Vehicular Radio Repairs	30,000

Town of Smithfield Rhode Island Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014, Randy R. Rossi, Finance Director/Treasurer

Smithfield Comprehensive Community Plan

Turnout Gear Replacement	32,000
New Sub-Fire Station	4,000,000
Headquarter Station Upgrade	600,000
Training Site / Station #3 Upgrade	100,000
Totals - Fire Department	4,797,000
Utility Vehicle Replacement	60,000
Totals - Emergency Management Agency	60,000
Equipment Storage Garage Repairs	45,000
4x4 Dump Truck with Plow	58,000
6-8 Cubic Yard Dump Bodies	42,000
Snow Plows	27,000
Totals - Public Works Department	172,000
Refuse and Recycling Containers	30,000
Deerfield Garage Rehabilitation	15,000
Whipple Field Handicap Parking	22,000
Totals - Parks Department	67,000
Roof and Building Repairs	56,000
Furnace Replacement	25,000
Senior Van	27,000
Totals - Senior Center	108,000
Administration Building, Renovations, Improvements and Repairs	407,319
Smithfield High School, Renovations, Improvements and Repairs	4,138,710
Gallagher Middle School, Renovations, Improvements and Repairs	1,719,908
LaPerche Elementary School, Renovations, Improvements and Repairs	526,902
McCabe Elementary School, Renovations, Improvements and Repairs	246,904
Old County Road Elementary School, Renovations, Improvements and Repairs	216,526
Winsor Elementary School, Renovations, Improvements and Repairs	271,903
Totals - School Department	7,528,172
Greenville Public Library Expansion	9,636,562
Totals - Greenville Public Library	9,636,562
Land Purchase	700,000
Technology Upgrades	55,000
GIS Mapping	65,000
Town Hall Renovations	40,000
Rehabilitation of Driveway & Parking Areas	175,000
Town Hall Scanner/Copier/Printer	20,000
Totals - Town Hall & Town Administration	1,055,000
Stillwater Pedestrian Bridge Replacement	93,500
RIPDES Storm Water Program	30,000
Mountaindale Road Bridge Replacement	50,000
Esmond Mill Drive Bridge Replacement	75,000
Totals - Engineering Department	248,500

Smithfield Comprehensive Community Plan

Repainting of Roof Support Beams & Low E Ceiling	165,000
Totals - Ice Rink	165,000
Burlingame Road Pump Station Generator	11,000
WWTF Primary Tank Cover	40,000
Interceptor Cleaning Programs	100,000
Sanitary Sewer Evaluation Study	290,000
Influent/Effluent Sampler Refrigerator	12,000
General Pump Station Upgrades	50,000
Pump Station Electrical & Communication	80,000
Totals - Sewer Authority	583,000
Upgrades to Island Woods Water Tank	85,000
Totals - Water Supply Board	85,000
OVERALL TOTALS	<u>31,280,234</u>

Issues and Needs Assessment

For the past several years the Financial Town Meetings have proposed and approved level or near level budgets in Smithfield. Every effort has been made to restrict budget increases to the absolute minimum. Smithfield has effectively weathered the economic downturn by “doing more with less” each year to maintain consistent budgets. However, the time has arrived whereby the maintenance of current services requires adjustments in the proposed budget. Costs are continuing to rise and the community cannot continue to maintain the level of service for its residents without modest budget increases. In particular, labor costs have risen significantly. The Town has attempted to compensate for rising costs by not replacing personnel lost to retirement and attrition. As of this writing, five full-time positions have gone unfilled. These types of staff reductions cannot be continued without adversely affecting the functions of Town government. The need for additional revenues to meet rising costs is a problem faced not only by Smithfield, but by most other Rhode Island communities.

This need will be further exacerbated by the impact of an aging population on tax revenues in Smithfield. The Town offers tax exemptions for qualifying residents including senior citizens, veterans, disabled veterans and legally blind residents. The Senior Citizen Exemption is set at \$8,000 annually. Qualified seniors must be 65 years of age by December 31st for the subsequent tax roll; must own and occupy Smithfield real estate (three dwelling units, or less) for five (5) years; and, must apply on or after their 65th birthday, but before December 31st. Seniors may also qualify for a ‘tax freeze’ on their property if they meet the necessary requirements. After an application is approved, the subsequent property tax is frozen for the life of the applicant.

As noted in the discussion of the Senior Center needs elsewhere in this Plan Element, population projections forecast significant growth in the population of seniors in Smithfield, largely as a result of the maturing of the “baby boom” generation. Total population over 65 is projected to increase by 63% over 20 years, from 3,012 in 2010 to 4,920 in 2030. The largest increases are projected in the 65-69 age cohort, expected to increase by 72%, and the 70-74 cohort, projected to increase by 108% over the next 20 years. One of the impacts of the increases will be an increasing number of local residents that qualify for the Senior Citizen Exemption and/or tax freeze within the community, affecting available tax revenues. At present, Smithfield has no income limitations on the exemption and freeze programs. One

option to reduce the impact of these programs would be to institute income criteria to link the tax relief with an indicator of ability to pay such as an income index.

Another concern is the proposal to merge the Smithfield and East Smithfield water departments into one, quasi-public water utility. The resulting merged entity will then assume the management of both water systems. While this will reduce the burden on the Department of Public Works (DPW) associated with the water system it will also deprive the Town of approximately \$200,000 in annual revenue contributed by the water company to offset the DPW's costs. The Town will need to make adjustments to the DPW budget and staffing to adjust to this revenue change.

The Town is continuing to explore ways to save in the operation and capital budgets. Declining school populations might make it possible to consolidate school system operations and perhaps close one of the older elementary schools. Centralized purchasing for all Town Departments may make possible economies of scale and provide greater control over purchasing to save money. Increased cooperation between the Town's libraries might reduce library administration and operations costs. Establishing a centralized vehicle maintenance facility for all Town vehicles may make it possible to reduce some redundancy between maintenance divisions with the various departments of Town government.

Similarly, the Town may be able to realize cost savings by participating in regional programs for service delivery. For example, over the longer term, it may be possible to consolidate wastewater transmission and treatment facilities into regional facilities such as those owned and operated by the Narragansett Bay Commission. By participating in a regional system, the Town may be able to realize savings in sewer system operations and capital costs and avoid uncertainties associated with ever tightening federal and state water quality standards. At this time, these savings remain highly speculative and, for the present, it is safe to assume that the Town will require additional revenue to maintain operations over the mid to long term. Over the long term, as the Town's population continues to grow, the demand for government services will continue to increase and it is probable that the cost of those services will also increase.

Growth will bring revenue as well as costs. On the revenue side, there are several actions that the Town may choose to take to enhance revenue. The optimum means to address the need for additional revenue is to increase the tax base within the community. This can be done by encouraging the types of new development and redevelopment that will result in net revenue gains to the Town. Single family residential development has resulted in a net drain on town finances because the cost of educating the children living in the homes has far exceeded the amount of taxes paid by homeowners. In contrast, well planned commercial, corporate office, and industrial development has the potential to significantly enhance the Town's tax base by contributing more in tax revenues than the Town is required to spend for support of those developments. Non-residential development offers the best potential to enable reasonable growth in revenues without increasing the tax rate (see also the *Economic Development* element of this Plan.)

At present, the Town has only one tax rate and it is applied to all real estate. As the Town continues to develop, this "one size fits all" tax rate may require reconsideration. Some communities apply different rates to different types of property, with separate rates for owner occupied housing, rental housing, and commercial or industrial properties. Over the long term, Smithfield may want to explore this possibility as a way of assigning tax burden according to service needs, incentivizing growth, and enabling revenues to keep pace with population growth.

Goals, Policies, and Actions

GOAL SF-1

ENSURE DELIVERY OF QUALITY POLICE SERVICES WHICH EFFICIENTLY MEET SMITHFIELD'S EXISTING AND FUTURE PUBLIC SAFETY NEEDS.

Policy SF-1.1 Provide police facilities which allow the department to carry out its functions in an efficient and safe manner.

Action SF-1.1a Repair and Maintain Police Headquarters

Restore and maintain the structural integrity of police headquarters through repair, regular maintenance and upkeep.

Action SF-1.1b Renovate Police Headquarters

If a bond issue is approved, expand and renovate the Smithfield Police Department Building to make more effective use of space based on the recommendations of the recently completed Space Needs Assessment.

Policy SF-1.2 Ensure that the police department has adequate vehicles and equipment to operate in an efficient and safe manner.

Action SF-1.2a Replace Police Vehicles

Continue program of replacing police vehicles at approximately 100,000-125,000 miles, and recycling vehicles for other municipal purposes as appropriate.

Action SF-1.2b Upgrade Police Equipment

Continue to regularly upgrade firearms, computers, and communications equipment.

Policy SF-1.3 Capital Improvement Program

Continue police department participation in detailed, long term capital improvements programming for vehicles, equipment and physical plant.

Policy SF-1.4 Centralized Vehicle Maintenance

Continue to explore creation of, or participation in, a centralized community vehicle maintenance program.

Policy SF-1.5 Promote good communications between the police department, other municipal offices and the public.

Policy SF-1.6 School and Community Education

Continue departmental participation in school and community educational programs.

Policy SF-1.7 Ensure that the Police Department staff keeps pace with the needs of the population of the Town to ensure adequate police coverage of all shifts and all areas.

Action SF-1.7a Study the Staffing of Sworn Officers

Study the Police Department's complement of sworn officers over the next decade, adding additional officers as needed.

Action SF-1.7b Criminalist

Establish and fill the position of Criminalist to assist the Detective Division and make more efficient use of Detective Division personnel.

Policy SF-1.8 Ensure that all Smithfield Police Personnel are appropriately trained for their work.

Action SF-1.8a Provide Routine Training

Provide all Commissioned Officers with training in contemporary police management and/or Executive Development Training.

Action SF-1.8b Provide Enhanced Tactical Training

Acquire additional Patrol Rifles and train all sworn officers in their use, as an additional resource to officers in tactical, lethal force situations.

Action SF-1.8c Establish Police Firing Range

Establish a Police Firing Range within the Town or through cooperation with neighboring communities to ensure that all officers can fulfill compulsory firearms training requirements.

Policy SF-1.9 Ensure that Smithfield animal control requirements can be fulfilled in a humane and cost-effective manner

Action SF-1.9a Replace Animal Shelter

Replace the existing deteriorated animal shelter with a new animal control facility.

GOAL SF-2

ENSURE DELIVERY OF EFFECTIVE FIRE PREVENTION AND EMERGENCY MEDICAL SERVICES TO MEET SMITHFIELD'S EXISTING AND FUTURE FIRE SAFETY NEEDS.

Policy SF-2.1 Ensure that fire department facilities is safe, functional and up-to-date in terms of meeting population growth and density.

Action SF-2.1a New Fire Station

Develop plans for a new, fourth fire station in the northeast quadrant of the Town to serve the northeast part of the community and also house the headquarters function.

Action SF-2.1b Restructure Existing Stations

- Study restructuring the use, manpower, and apparatus types at the three existing fire stations as follows:
- Use Fire Stations Nos. 1 and 2 as sub-stations with major apparatus support from Station 4.
- Relocate the headquarters function from Station 1 to Station 4.
- Implement plan to address floor loading structural problems in Stations Nos. 1 and 2, provide adequate ventilation and fire separation in both stations and address compliance with other code requirements.
- Maintain Station No. 3 as a sub-station over the short term, with a longer term plan to demolish the existing structure and replace it on the same site.

Policy SF-2.2 Ensure that firefighting and emergency services staff is adequate to meet the needs of the Town's residents and businesses.

Action SF-2.2a Assess Fire Department staffing to ensure it is commensurate with the Town's population, land use and density patterns, gradually add additional staff as needed.

Action SF-2.2b Third Emergency Medical Services Unit
Add a third Emergency Medical Services (EMS) unit to meet increasing demand and reduce dependence on intercommunity cooperative agreements.

Policy SF-2.3 Ensure that firefighting and emergency services equipment is up-to-date, well-maintained, meets necessary accreditation requirements and adequate to perform basic emergency service functions.

Policy SF-2.4 Capital Improvement Program

Continue fire department participation in detailed, long term capital improvements programming for firefighting and emergency service apparatus. Investigate purchase of a new pump truck for Station #4 and a third EMS vehicle. Continue to replace EMS vehicles at approximately 5 year intervals and other equipment as needed.

Action SF-2.4a Upgrade Communications and Technology
Upgrade communications systems to replace outdated, broken and deteriorated equipment and to deploy new technologies for communications, fire detection, fire prevention, and emergency response.

Policy SF-2.5 Centralized Vehicle Maintenance

Consider participating in or establishing a centralized municipal vehicle maintenance facility.

GOAL SF-3

WORK TO PROVIDE THE HIGHEST QUALITY EDUCATION FOR ALL SCHOOL AGE RESIDENTS OF SMITHFIELD.

Policy SF-3.1 Work to provide adequate school facilities to accommodate existing and future school enrollment with space for associated mandatory programs.

Action SF-3.1a Early Learning Center
Study the feasibility of establishing a centralized early learning center for pre-K and Kindergarten with a full day kindergarten program.

Action SF-3.1b Facilities Improvements

Undertake facility improvements at existing schools, as needed:

- Remove or replace substandard underground storage tanks
- Provide for monitoring of stack gas emissions on boiler systems
- Complete asbestos abatement program
- Repave school parking lots and driveways, replace deteriorated curbing and include school lots and driveways in Town pavement management program (PMP)
- Replace and upgrade deteriorated outdoor basketball courts at Anna McCabe and Old County Road Schools

- Replace roofs at High School, Middle School, and School Dept. Buildings
- Replace worn out classroom furniture
- Replace dilapidated High School track with new track and sports field
- Replace bleachers at High School and Middle School with ADA compliant bleachers
- Provide drainage and irrigation at Middle School Field

Policy SF-3.2 Ensure that Smithfield Public School programs can continue to meet federal and state educational requirements while remaining at the forefront in public education.

Action SF-3.2a Advanced Placement

Evaluate providing additional program choices within Advanced Placement Program to expand this successful program and meet high demand.

Action SF-3.2b Vocational/Technical Program

Study the feasibility of providing space, technology, staff and equipment to support an industrial technology program teaching skills in engineering, wood, and metal to address vocational/technical program needs

Action SF-3.2c

Evaluate the Feasibility of a Blended Learning Program to include the following:

- Implementing 21st century learning by establishing a blended learning (i.e. technology in the classroom) program.
- Providing professional development and training for staff.
- Upgrading school electrical systems to support digital system demands
- Providing high speed broad-band wireless internet in all schools
- Acquiring sufficient computers to meet learning demand and testing requirements through State lease buyout program

Policy SF-3.3 Explore options to increase the cost-efficiency of providing educational services while maintaining the high quality of the Town's school system.

Action SF-3.3a School Finance

Collaborate with State and other districts exploring alternatives to financing education.

Action SF-3.3b Capital Improvement Planning

Determine the capital needs of the school system based upon the conditions of existing public school facilities on a short and long term basis and develop a capital improvement program for integration into the Town's capital budget planning.

GOAL SF-4

SUPPORT AND ENCOURAGE USE OF THE TOWN'S LIBRARY SYSTEM AS AN IMPORTANT CULTURAL AND COMMUNITY RESOURCE.

Policy SF-4.1 Maintain and strive to improve the existing quality of the Town's library facilities.

Action SF-4.1a Library Support

Provide Town financial support to both independent public libraries for operation and maintenance expenses as long as they remain separate entities.

Policy SF-4.2 Interlibrary Cooperation

Maintain the independent library system as separate from Town Government and require both libraries to continue to work together on joint programs that will help them realize economies of scale and more effectively achieve common goals as long as they remain separate entities.

Action SF-4.2a Evaluate Hours of Operation

Review library hours of operation as per the recommendations of the Town charrette on library services.

Action SF-4.2b Expand Collections and Improve Technology

Continue assisting both libraries in expanding their collections, expanding their facilities, and upgrading their technology to keep pace with technological change and meet future community needs as long as they remain separate entities.

Policy SF-4.3 Improve the capability of both public libraries to serve the public.

Action SF-4.3a Study Expanding the Greenville Library

Assist the Greenville Library with studying the feasibility of constructing an addition, using 50% state funding, on property already obtained for the addition and in accordance with construction plans already prepared for the library.

Action SF-4.3b Determine the Necessity of Greenville Parking and Access Improvements

Review reconfiguring the access and parking at the Greenville Library to add additional parking spaces on land already acquired by the library for that purpose and to provide a second access to the library parking lot via property at 9 Pleasant View Avenue already acquired by the library for that purpose.

Action SF-4.3c Assess the Need for East Smithfield Library Renovations

Provide additional funding to the East Smithfield Library to undertake further repair and renovation of the former school building that houses the library. Repair and renovation may include eventual replacement of the roof, modernizing of the electrical system, and other code compliance and technology improvements as required.

Action SF-4.3d Study Expansion of East Smithfield Library

Undertake a study of the facilities needs at East Smithfield and prepare plans for an addition to the Library on adjacent property already owned by the Town.

Action SF-4.3e Assess Parking at East Smithfield

Assess reconfiguring parking at the East Smithfield Library to determine the necessity of increasing parking and replacing spaces lost for construction of an addition on the library site.

GOAL SF-5

ENSURE THAT AGING SMITHFIELD RESIDENTS ARE PROVIDED WITH HUMAN RESOURCE SERVICES TO MEET THEIR DIVERSE NEEDS.

Policy SF-5.1 Promote the social, physical and emotional wellbeing of Smithfield seniors by implementing and maintaining quality education, recreational and wellness programs and activities through the Senior Center.

Action SF-5.1a Staff Support

Determine whether to eliminate the position of Assistant Director and add additional hours (5 hours per week) to the position of the Kitchen Manager and van driver to recognize their roles in assisting the Director.

Action SF-5.1b Evening Activities

Evaluate developing a program of evening activities to reach seniors who work during the day, especially evening exercise programs.

Action SF-5.1c Grant Assistance

Collaborate with the Director and Staff of the Senior Center to actively pursue funds for expansion and improvement of Senior Center facilities and programs.

Action SF-5.1d Senior Center Nurse

Evaluate ways to expand the Center's role in first alert and health problem detection by contracting with a licensed health care agency for a part-time nurse to provide periodic health screening and medical review services for Senior citizens at the Senior Center.

Policy SF-5.2 Ensure that the facilities of the Senior Center will remain up to date and will continue to meet current and future program needs.

Action SF-5.2a Green Initiative

Implement a "green" initiative within the Senior Center to improve lighting and reduce lighting costs. Replace existing lighting with more energy efficient (e.g. LED) fixtures and bulbs.

Action SF-5.2b Replace existing antiquated heating, ventilation and air condition (HVAC) system with a more modern, energy efficient system.

Action SF-5.2c

Study the need for expansion of the Senior Citizens Center to provide more year-round program space and the need to enlarge the activities room by enclosing the Bocce court along with the multi-purpose space between the Bocce court and existing building.

Action SF-5.2d Equipment Replacement

Evaluate the budget for a replacement Senior Transportation Van every five years, or as needed to ensure continued van service and avoid loss of transportation service due to breakdowns.

GOAL SF-6

ENSURE AN ADEQUATE, CONSISTENT SUPPLY OF HIGH-QUALITY POTABLE WATER FOR RESIDENTS AND BUSINESSES.

Policy SF-6.1 Continue to support, aid and assistance to the water companies in meeting the water needs of the community and support the goals and recommendations of the Water Supply System Management Plans (WSSMPs) of each of the water companies serving Smithfield.

Action SF-6.1a Communicate with Water Suppliers Regularly

To achieve the most efficient planning of water system and roadway improvements, the Town should actively communicate on a regular basis with both water districts so that each entity can identify upcoming capital improvement projects related to roads or water and both the Town and the water districts will have an opportunity to coordinate their efforts. Water system infrastructure, like most underground utilities, is typically located within Town-owned right-of-ways, and more specifically beneath roadways. Therefore, work performed on either the water system within the roadways or on the roadways themselves presents the opportunity to perform necessary work on both infrastructure elements simultaneously, resulting in 1) cost-savings related to the performance of the work, and 2) avoidance of unnecessary and costly duplication of effort.

Action SF-6.1b Collaborate with Water Companies to plan mutually beneficial joint projects

Seek opportunities to collaborate on capital improvement projects with the water districts. There is significant interaction between Town roads and water system infrastructure; therefore, as a logical extension of the communication with the water districts, the Town should seek to work with the water systems including water system work under road repair projects (or vice-versa), developing cost-sharing agreements for work, altering construction schedules to accommodate simultaneous work on roads and water infrastructure, etc.

Action SF-6.1c Collaborate with Water Companies in building mutually beneficial projects

The Town of Smithfield has numerous in-house resources (personnel and equipment) at its disposal capable of performing infrastructure-related construction tasks. Presently, infrastructure construction work is often performed for the water districts by private contractors at labor and equipment rates which are higher than those which may be available using Town labor and equipment.

Therefore, the Town should seek opportunities to cooperate with the water districts by developing labor and equipment-use agreements, which will allow the districts to access Town labor and equipment for at-cost rates. This would allow the water districts to more cost-effectively perform necessary infrastructure improvement work, thus resulting in cost savings for the districts and lower water costs overall for the rate-paying residents of the Town.

Policy SF-6.2 Promote water conservation and encourage public understanding of the costs associated with providing potable water supplies.

Action SF-6.2a Implement the Water Conservation program for Town Departments/Entities

The Town currently has a Water Conservation Program (WCP), which is administered by the Smithfield Water Supply Board (specifically the Water Commissioner/DPW Director). The creation of the Smithfield Consolidated Water District will relieve the Town's DPW Director of the responsibility for the administration of the WCP among all entities serviced by the Smithfield Water Supply Board (whether public or private). However, the Town should still operate internally in accordance with the WCP, and/or should modify its operations to conform to the

specific WCP's developed and implemented by the respective water districts servicing the Town's buildings and facilities.

Action SF-6.2b Institute Public Outreach & Education for Water Conservation

Water Conservation – As stated above, the Town currently administers a WCP through the Smithfield Water Supply Board. Subsequent to the creation of the Smithfield Consolidated Water District, the Town should continue to make available information on the benefits and importance of water conservation to the general public, and should take reasonable, practicable steps to promote the WCP's of the respective water districts.

Action SF-6.2c Distribute Information about Costs of Water Supply

As elements of the various water systems age, the need for significant capital improvements for repairs to and/or replacements of water pipes and appurtenances is continuing to grow, often at a rate which far outpaces the ability of the water districts to meet through rate increases alone. In addition, the successful implementation of water conservation measures, while beneficial from the standpoint of preserving water supplies, has significantly reduced water demand; therefore, revenues tied directly and exclusively to water consumption have been steadily dropping. Absent grants and/or other "free" funding sources for capital improvements, water districts will be unable to keep pace with the increasing capital improvement costs. Therefore, if current levels of service to water consumers are to be maintained, it is anticipated that water rates will need to be increased soon.

In addition to promoting water conservation, the Town (in collaboration with the water districts) shall develop and distribute information to the general public related to the comprehensive costs associated with the provision of clean potable water (including capital upgrades to aging infrastructure). This will serve to educate the public on the need for rate increases, with the goal of achieving buy-in of water consumers that rate increases for water system infrastructure improvements are necessary and justifiable.

Action SF-6.2d Provide Internet and Media Links to Water Suppliers

The Town shall maintain on its web site direct links to the web sites of the water districts providing service within the Town, and shall also cooperate with the water districts to periodically provide notice of important information from the districts to Town residents through the various media outlets at its disposal.

Policy 6.3 Encourage and assist water suppliers to make water system improvements that will assist the Town in meeting the needs of residents and businesses over the long term while maintaining an abundant and high quality water supply. Although the Town will no longer have a direct role in developing and implementing water system improvements subsequent to the merger, the Town must remain active in the process by providing appropriate and reasonable support to the water districts whenever possible.

Action 6.3a Develop Asset Database & Capital Improvement Program (CIP) Planning

Developing an accurate water system Capital Improvement Plan (CIP) requires developing a comprehensive, detailed and current asset management database, which is then used as the planning tool for timely and efficient infrastructure improvements. Therefore, the Town should participate in the development of such a database as part of the merger between Smithfield and

East Smithfield, and should subsequently assist the Smithfield Consolidated Water District with the ongoing maintenance of same to the extent practical.

Action 6.3b Work with water districts to establish sustainable water rates

Participate in the initial establishment of a sustainable water rate system for the Smithfield Consolidated District based on both the operational and maintenance costs of the district as well as long-term CIP funding needs, as part of the merger.

Action 6.3c Work with water districts to establish a Rate Structure Analysis

Endorse rate structure analyses by both water districts on five-year cycles, with the rate structure analyses to be based on updated asset management databases and water demand totals, and provide the justification for adjusting rate structures to insure that capital improvement costs can be met.

Action 6.3d Study the feasibility of water system interconnections

Endorse and promote the development of water system interconnections among all the water districts within the Town, as well as between these districts and other outside entities provided that said interconnections are endorsed by the various local, state and quasi-public entities/agencies with jurisdiction over public water supply.

Action 6.3e Institute System Component Upgrades

Endorse and promote the implementation of water system upgrades by the water districts as needed to maintain or improve water service to residents.

Action 6.3f Investigate the development of Alternative/Independent Water Supplies

Promote the location, study, development and implementation of alternative (i.e. suppliers other than Providence Water Supply Board) or independent (i.e. district owned/operated surface or groundwater) water supplies by the water districts, if and when such alternative or independent supplies will improve the quality of water provided to Town residents, will reduce the cost of supplying water to Town residents, or both.

GOAL SF-7

ACHIEVE TANGIBLE IMPROVEMENTS TO WATER QUALITY THROUGHOUT THE TOWN BY REDUCING POLLUTANTS IN STORMWATER RUNOFF DISCHARGED TO SMITHFIELD WATERS.

Action SF-7.1a Update the Smithfield Storm Water Management Plan (SWMP) in accordance with state and federal regulations. The initial NPDES Construction General Permit (CGP) for Phase II was issued in 2003, and had a five-year term. Therefore, the CGP has technically been expired since 2008, although EPA and RIDEM have continued to work under the provisions of the initial permit. The issuance of the new CGP is supposed to take place in the near future, and it is anticipated that it will contain requirements for MS4 operators (like Smithfield) to implement capital stormwater management improvements such as water quality retrofits to existing stormwater systems.

Therefore, the Town should be prepared to update the current SWMP to conform to the terms, conditions and requirements of the new CGP when it is issued, and should anticipate the need to fund mandated capital improvements to its stormwater infrastructure.

Action SF-7.1b: Implement the provisions of the SWMP which require proper and efficient maintenance of existing stormwater management infrastructure, as well as the provision of new water quality treatment measures within the stormwater management system.

Action SF-7.1c Implement Stormwater Management Policies/Practices -Erosion

The SWMP contains guidance on preventing erosion of and sedimentation from construction sites, including use of appropriate erosion and sedimentation control and good housekeeping. The Town should insure that both internal (Town) departments and external entities performing construction activities for or within the Town adhere to the applicable Soil Erosion/Good Housekeeping elements of the SWMP.

Action SF-7.1d Implement Stormwater Management Policies/Practices – Asset Management

The SWMP contains guidance on the proper maintenance (and frequency of maintenance) of existing stormwater infrastructure, such as routine cleaning of catch basins and drain pipes, stormwater basins, swales, etc. which the Town has been implementing. The Town should continue to perform these maintenance activities, with the additional element of tracking more specific details of the maintenance activities in an electronic asset management database (i.e. location and frequency of cleaning, volume and nature of material removed, etc.). This specific information can then be used to create a targeted maintenance plan which directs additional attention and resources to chronic problem areas, while reducing frequency of maintenance in areas with lower pollutant loadings.

The Town should also use this information to identify the most beneficial locations for stormwater system upgrades and/or retrofits (e.g. dedicated water quality treatment Best Management Practices (BMP's), implementation of source control measures, etc.), and should develop and implement same to the maximum extent practicable, contingent upon available funding (e.g. Town capital funds, stormwater grant funding from EPA/RIDEM, etc.).

Policy SF-7.2 Promote the use of LID design standards in new development and redevelopment to reduce the volume of stormwater generated by new development.

Action SF-7.2a Implement LID Standards for New Development

As stated previously, LID standards are an integral part of current stormwater management practices; by reducing development impacts through incorporation of LID practices, the volume of stormwater runoff and associated pollutants can be significantly reduced without the need for the construction, operation and maintenance of stormwater management BMP's.

Therefore, the Town should continue to develop, promote and implement LID strategies, both for its internal development projects as well as in its development standards for private developments. LID strategies can and should be applied both to new development projects as well as redevelopment projects, to the maximum extent practicable.

Policy SF-7.3 Continue to educate residents and businesses on the importance of comprehensive stormwater management, and engage them as active participants in the management process.

Action SF-7.3a Develop a public outreach, education & participation program to increase awareness of stormwater management issues. Public awareness and endorsement is a key

factor in the success of any significant and broad-ranging program such as Phase II stormwater management; only with broad-based public support and participation can many elements and goals of the program be achieved.

Action SF-7.3b Develop and distribute informational and educational materials to local residents about stormwater management, its importance to the natural environment and the community's overall quality of life, and ways that the public can become active participants in the process of improving the quality of stormwater runoff.

Policy SF-7.4 Address new Phase III RIPDES stormwater permit requirements and implement a program Town-wide to comply with these requirements

Policy SF-7.5 Consider establishing a Stormwater Utility to fund required drainage system maintenance and upgrades through user charges for Town provided drainage systems.

Action SF-7.5a Determine whether to assess fees for use of Town drainage facilities based on extent of impervious surfaces, encouraging property owners to reduce stormwater flows by minimizing impervious surfaces.

Action SF-7.5b Investigate whether to provide an assistant to the Town Engineer to help manage the stormwater utility, maintain the stormwater system, and oversee compliance with Phase III stormwater regulations.

GOAL SF-8

DEVELOP AND MAINTAIN A PROPERLY-SIZED WASTEWATER COLLECTION, CONVEYANCE AND TREATMENT SYSTEM (INCLUDING PERFORMING ASSOCIATED ADMINISTRATIVE TASKS AND ENACTING ASSOCIATED POLICIES AND ORDINANCES) WHICH PRESERVES PUBLIC HEALTH, SAFETY & WELFARE AND THE NATURAL ENVIRONMENT, AND WHICH PROMOTES THE FURTHER RESIDENTIAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENT OF THE COMMUNITY.

Action SF-8.1a Replenish the Wastewater Capital Fund to a level sufficient to meet the anticipated CIP needs of the wastewater system, including reasonable contingency funds for emergencies.

Action SF-8.1b Wastewater Asset Management
Perform wastewater asset inventory and valuation on a routine and reasonably frequent (e.g. five-year) basis.

Action SF-8.1c Conduct a Capital Improvement Needs Assessment
Project wastewater asset depreciation and develop CIP needs assessments and funding requirements for the upgrade or replacement of wastewater assets.

Action SF-8.1d Perform a Rate Structure Evaluation
Perform rate structure evaluations to verify that the CIP funding requirements (as determined by the CIP needs assessment) will be met by the usage fees paid by entities connected to the wastewater system, and should adjust the usage fees as needed to insure that the funding requirements continue to be met.

Policy SF-8.2 Work to eliminate or reduce to the maximum extent practicable the entrance of infiltration/inflow (I/I) into the wastewater system.

Action 8.2a Initiate a Source Identification and Quantification

Initiate a system-wide program to locate, identify and quantify sources of inflow and infiltration (field investigations, record plan research, flow monitoring, etc.). The program should be carried out in the most expedient and cost-effective manner possible (i.e. in-house personnel, outside consultants, or a combination thereof) such that the program is completed for the entire wastewater system within 3 years.

Action 8.2b Develop & Implement Capital Improvement Projects for I/I Removal

The Town of Smithfield will develop and implement an infiltration and inflow (I/I) elimination plan consisting of CIP's which will remove identified I/I sources from the wastewater system. The plan will prioritize high-volume low-cost projects to eliminate the greatest volume of I/I in the shortest possible time, thus eliminating unnecessary conveyance and treatment costs as soon as possible and extending the life cycles of affected wastewater elements (pump stations, treatment plant).

Action 8.2c Develop an I/I Removal Cost Evaluation/Impact Fee Structure

The Town of Smithfield will determine the average cost (on a per gallon basis) of I/I removal from the wastewater system. This cost will then be used as the basis for the impact fees paid by new entities connecting to the wastewater system; the impact fee for the additional wastewater volume to be generated by the new entities shall equate to the cost of removing an equivalent volume of I/I from the wastewater system.

Objective SF-8.3 Assess modifying the current Sewer Extension Policy to allow for greater flexibility and fairness, thus promoting development of the Town's commercial and industrial base.

Action 8.3a Update the Sewer Extension Development Reimbursement Policy

Evaluate modifications to the current sewer extension policy to equitably share sewer extension construction costs among all benefitting parties.

For example, this could be achieved by allowing the entity installing the sewer extension to retain ownership rights over the new extension for a finite period of time after the extension is complete and activated; the entity would establish pro-rated connection fees (to be approved by the Town and independent of any Town impact fees) which would need to be paid by any entities wishing to connect to the extension.

Action 8.3b Update the Mandatory Sewer Connection Policy

The Town of Smithfield will evaluate modifications to the current sewer connection policy to encourage development by allowing the Town Engineer and any Board or Commission with jurisdiction over the project to waive the requirement to connect to the wastewater system in cases where it is appropriate and beneficial to the Town to do so.

Policy SF-8.4 Consider the development and implementation of an Industrial Wastewater Pretreatment Policy and Program which 1) protects the wastewater system from potentially damaging industrial wastewater, and 2) establishes fines or penalties for non-compliance with the program.

Action SF-8.4a Develop an Industrial Wastewater Pretreatment Policy

The Town of Smithfield will develop and enact an ordinance which 1) stipulates the maximum allowable discharge limits from industrial wastewater generators, 2) mandates appropriate pretreatment to be provided by each industrial wastewater generator (as determined by the nature and volume of the industrial wastewater from each generator), and 3) establishes a system of fines or penalties for failure to comply with the discharge limits.

Action SF-8.4b

Implement the Industrial Pretreatment Program

Hire adequate staffing to manage and implement the Industrial Pretreatment Program, and provide all tools, equipment and incidentals needed for the Industrial Pretreatment Program staff to carry out their duties.

Policy SF-8.5 Consider a program to assist property owners not served by public sewers in the maintenance and operation of on-site wastewater treatment systems (OWTS).

Action SF-8.5a Evaluate establishing an On-site Wastewater Treatment System (OWTS) management program to provide technical and financial assistance to property owners, not served by public sewers, when their OWTS systems fail and require repair or replacement.

GOAL SF-9

PREVENT LOSS OF LIFE AND MINIMIZE THE POTENTIAL FOR LOSS OF LIFE AND PROPERTY DAMAGE DUE TO FLOODING AND DAM FAILURE IN SMITHFIELD.

Policy SF-9.1 Improve the management of high hazard and significant hazard dams in Smithfield to reduce the potential for flood damage, for loss of life, property damage, and other adverse consequences of flooding and dam failure.

Action SF- 9.1a Dam Management Program and EAP

Undertake a comprehensive dam management program for all 12 high hazard and significant hazard dams in Smithfield to include preparation of a dam management plan for each dam, development of an Emergency Action Plan (EAP) each dam, and incorporation of the EAPs into the Town's Multi Hazard Mitigation Plan.

Action SF-9.1b Develop plans for Dam Removal

Develop plans and seek funding assistance to remove dams that no longer provide a useful function in order to improve public safety and restore fish and wildlife habitat by restoring free flow to rivers and streams in Smithfield. Priority should be given to high hazard and significant hazard dams such as Capron Dam and Stillwater Pond dam.

GOAL SF-10

MAINTAIN SMITHFIELD'S PUBLIC SPACES, PUBLIC ROADS AND DRAINAGE SYSTEMS AND EFFECTIVELY PROVIDE ESSENTIAL SUPPORT SERVICES FOR SMITHFIELD RESIDENTS AND BUSINESSES.

Policy SF-10.1 Ensure that the Department of Public Works has the facilities necessary to properly serve the needs of the community.

Action SF-10.1a Develop plans for DPW Site Improvements

Develop plans and seek funding to make more effective use of the DPW site on Pleasant View Avenue. This should include consideration of storage for bulky metal (“white goods”), solid waste and recycling bins, expanded storage for equipment and supplies, expanded and upgraded office and meeting spaces, replacement of the oil igloo, and possibly additional vehicle maintenance space for centralized community vehicle maintenance.

GOAL SF-11

ENSURE THAT SMITHFIELD HAS AN EFFICIENT SOLID WASTE MANAGEMENT SYSTEM THAT MEETS THE COLLECTION REQUIREMENTS OF THE COMMUNITY WHILE ADVANCING LOCAL AND ACHIEVES (AT A MINIMUM) THE 35% RECCYCLING AND 50% DIVERSION GOALS OF THE GUIDE PLAN STATEWIDE ENVIRONMENTAL GOALS AND POLICYS FOR SOLID WASTE DISPOSAL.

Policy SF-11.1 Meet the State’s mandatory requirements for recycling 35% of the waste stream and diverting 50% of the waste stream from State disposal facilities.

Action SF-11.1a Implement Curbside Collection Improvements

Continue and upgrade the municipal program of weekly curbside residential solid waste and recyclables collection while requiring commercial and industrial establishments to contract privately with waste disposal companies. Ensure that all residents and businesses recycle to the maximum extent practical by maintaining mandatory recycling and refusing to pick-up solid waste without recycling. Improve efficiencies in the collection of waste and recyclables by updating contracts and equipment.

Action SF-11.1b Expanded Recycling

Reduce the volume and weight of the solid waste stream that must be disposed at the Central Landfill by designing and implementing an expanded program of collecting mixed recyclables, backed by a public education campaign consisting of outreach to grade schools, direct mail to residents and collaboration with local businesses.

Action SF-11.1c Replace Oil Recycling “Igloo”

Encourage recycling of waste oils by providing an updated oil recycling facility that is larger, easier to access, and provides separate storage for petroleum oils and cooking oils.

Action SF-11.1d Study the feasibility of developing a Town Composting Facility

Study a composting program of leaf, foodand yard waste from Smithfield residents by constructing and utilizing a new composting facility at the DPW site, by utilizing a facility at some other nearby location, or by cooperating with nearby Towns to develop a regional composting facility.

GOAL SF-12

MEET 15% OF SMITHFIELD’S ENERGY NEEDS THROUGH ALTERNATIVE POWER SOURCES.

Policy SF-12.1 Encourage public and private projects that will generate power from alternative sources

Action SF-12.1a Inventory dams in the community that might be suitable for alternative power generation using Archimedes screw or other technology.

Action SF-12.1b Explore the feasibility of using Town owned dams for power generation projects.

Action SF-12.1c Identify and implement energy efficiency projects at Town facilities.

Action SF-12.1d Identify municipal and school sites suitable for solar projects.

GOAL SF-13

ENSURE THAT ALL SMITHFIELD RESIDENTS HAVE ACCESS TO GOVERNMENT, EDUCATION, AND COMMUNITY SERVICES VIA BROADBAND INTERNET

Policy SF-13.1 Make it as simple as possible for Smithfield residents to obtain government information, participate in Town government, register for Town programs and request Town services via the Internet.

Action SF-13.1a E-Government Planning and Implementation

Plan and develop enhanced programs for e-government access using the Town's website as a starting point. In addition to facilitating retrieval of government records, these might also include such functions as participating in Town government, reporting damaged or malfunctioning Town infrastructure, requesting DPW services (such as bulky waste pickup), service request "ticket" response monitoring and tracking, registration for Town sponsored recreational, educational, and cultural programs, and others.

Action SF-13.1b Work with RIEDC and BBRI to increase the availability of Public points of access in libraries and community anchor institutions, advocate for private carriers to offer low cost basic plans to low-income households in Smithfield, and provide digital literacy education to help people access education, employment resources, and other public services on-line.

GOAL SF-14

ACHIEVE, THROUGH COHESIVE PLANNING AND EXECUTION, THE MOST EFFICIENT USE OF CAPITAL AND OPERATIONAL FUNDS FOR FACILITIES CONSTRUCTION AND MAINTENANCE OF ALL THE FACILITIES AND INFRASTRUCTURE NETWORKS FOR WHICH THE TOWN OF SMITHFIELD IS RESPONSIBLE.

Action SF-14.1a Develop and maintain a single unified digital Asset Management System (AMS) capable of integrating comprehensive information about all elements of the Town's facilities and infrastructure networks.

Action SF-14.1b Select & Deploy AMS

Investigate currently available AMS's, and select one which best serves the Asset Management goals and policies of the Town. Ideally, the selected AMS will be non-proprietary (i.e. no user or license fees/limitations on the number of users), simple to install and operate, and customizable to the Town's current and future needs. Procure the funds to purchase the AMS, and populate it with information in the most expedient and cost-effective manner possible (i.e. using in-house personnel, outside consultants, or a combination thereof) such that the system is complete for all facilities/infrastructure networks within 3 years.

Policy SF-14.2 Maintain Asset Management System

The Town of Smithfield should insure that the AMS, once established, is maintained on a consistent basis of adequate frequency; the frequency of inspections/updates will likely vary by the type of infrastructure (roads may require more frequent inspections, sewer and storm drainage less frequent). As with the initial development of the AMS, the inspections and updates should be performed in the most expedient and cost-effective manner possible (i.e. in-house personnel, outside consultants, or a combination thereof), and adequate staffing and/or funding should be provided to carry out the work.

Policy SF-14.3 Determine the appropriate funding levels and provide adequate funding to maintain the condition of town facilities and infrastructure networks.

Action SF-14.3a Establish Operation and Maintenance (O&M) Funding Levels

Use the AMS to determine the levels of funding necessary to operate and maintain Town facilities and infrastructure assets in a manner which will 1) maximize their life cycles, and 2) minimize the need for capital improvements (upgrades and/or replacements) that would result from the deterioration of the assets past the point where routine maintenance can preserve the full function of the asset. Provide (to the maximum extent possible) the annual O&M funding to meet the needs determined by the AMS.

Policy SF-14.4 Determine future capital funding needs for facilities and infrastructure networks, so that the town can plan for the provision of that funding in a timely fashion.

Action SF-14.4a Infrastructure Capital Improvement Planning

Use the AMS to generate projections of facilities and infrastructure conditions (accounting for regular deterioration resulting from age and use), and use these projections to develop and plan for capital budget required for infrastructure upgrade and/or replacement.

GOAL SF-15

EXPLORE OPPORTUNITIES TO COORDINATE AND EXECUTE PROJECTS AMONG THE VARIOUS INTERRELATED FACILITIES AND INFRASTRUCTURE NETWORKS CONCURRENTLY, AND AVOID DUPLICATION OF EFFORT WHICH WOULD OCCUR BY PERFORMING WORK ON DIFFERENT FACILITIES OR INFRASTRUCTURE ELEMENTS IN THE SAME LOCATION SEPARATELY.

Policy SF-15.1 Coordinate Facilities & Infrastructure Capital Improvements

Action SF-15.1a Use the AMS to identify opportunities to coordinate simultaneous facilities and infrastructure capital upgrades and/or replacements (e.g. acceleration of replacement of aging sewer/storm drainage in a roadway slated for reconstruction, or deference of the roadway reconstruction when the sewer/storm drainage is not yet close to the end of its useful life cycle). Separate departments can then collaborate and plan to implement the capital improvements simultaneously to the maximum extent practicable.

GOAL SF-16

SEEK TO PROVIDE EFFICIENT AND PROFESSIONAL MANAGEMENT OF MUNICIPAL FINANCES.

Policy SF-16.1 Continue to update the Town's financial management procedures.

Action SF-16.1a Establish a centralized purchasing system for all Town departments.

Action SF-16.1b Study the feasibility of establishing a centralized municipal equipment and vehicle maintenance system.

Policy SF-16.2 Consider revising the Town's method of budget preparation from the Town Financial Meeting to an alternative format.

Policy SF-16.3 Work toward reducing the Town's reliance on residential property as the primary source of tax revenue.

Action SF-16.3a Working with the Planning Board, Town Council, Economic Development Commission and others, review, and provide technical and other assistance where necessary to encourage expansion of the industrial and corporate tax base especially in the PCD.

Action SF-16.3b Study the feasibility of options such as shared and regionalization of services such as schools, fire, police, and public works.

NATURAL RESOURCES

Introduction

The natural resources element is intended to evaluate and address environmental resources by inventorying and analyzing both the components of the environment which affect how the Town may develop (e.g. wetlands, slopes, soils, floodplains) and the environmental factors which contribute to the Town's distinctiveness (e.g. farmlands, outstanding views, habitats of threatened or endangered species). Also addressed are the impact the Town's current regulations have on the environment, the ability of its natural resources to support future development, and how its significant resources can be best protected.

According to data from the 2010 Rhode Island Census, Smithfield has a moderate population density. The town has approximately 806 people per square mile, compared to Glocester with 178, Johnston with 1,214, North Providence with 5,628, Woonsocket with 5,349, Lincoln with 1,160, and North Smithfield with 499. Of Rhode Island's 39 cities and towns, Smithfield had the 17th largest population, 21,430 people, in 2010. Smithfield is the 18th largest town geographically, with approximately 26.6 square miles of land area. The RIGIS Land Use and Cover Map of 2003-04 indicated that about a third of the Town's area is comprised of residential, commercial, industrial, transportation, or other developed land. The remaining two thirds is currently undeveloped and occupied by forests, wetlands, successional areas, farmlands, and water bodies.

The increase in development in recent years has occurred almost entirely at the expense of forested lands. This is consistent with the transition from development of agricultural land to development of forested land noted in previous versions of this Comprehensive Plan. Land development in general slowed considerably since the downturn in the housing market and the subsequent recession in 2007.

In Smithfield, large areas of lightly developed or undeveloped landscape remain, particularly in the northwestern and central parts of the community. Proper use and protection of these resources may require initial expense, but it is generally far less costly to anticipate environmental problems and take measures to avoid them, rather than to correct past mistakes.

Community Natural Resources

Topography

The scouring effect of glaciers and subsequent periods of erosion resulted in the Town's irregular topography and smooth hilltops. Several parts of Town attain elevations of more than 450 feet above sea level. The hills, dispersed in an irregular pattern throughout the Town, provide for a diversified, scenic topography, but the rugged slopes and rock outcrops have also acted as a deterrent to settlement. The Town's highest elevation is 568 feet above sea level, in the northwest corner of Town, and the lowest elevation, 200 feet above sea level, is along the Woonasquatucket River where it leaves Smithfield.

Topography has played an important role in the Town's development. The rough topography has discouraged and precluded farming in many areas, as well as deterring residential development. The

Town's land form also contributes significantly to its visual character. Views from higher elevations provide encompassing views of the rivers and valleys below.

Topography is currently considered in the land regulation process within the Soil Erosion and Sediment Control Ordinance and the site plan review requirements of the Zoning Ordinance.

Soils

In the recent geologic past, continental glaciers covered Smithfield, carrying large quantities of soil and boulders which were deposited indiscriminately over the land when the ice sheet melted about 11,000 years ago. This material, which is a mixture of unsorted soil and rocks commonly, known as till, covers most of Smithfield. Outwash deposits are found in the valleys along rivers and other low-lying areas. Outwash is stratified sand and gravel produced by glaciers and carried, sorted, and deposited by water that originated mainly from the melting of glacial ice. The outwash deposits in Smithfield tend to hold larger volumes of water and have the best potential as groundwater sources.

An assessment of Smithfield's soil types is important when considering future development potential. The Rhode Island Geographic Information System (RIGIS) 2013 Soil Survey Geographic (SSURGO) Soil Polygons data identify 53 different soil types, excluding "Water", in Smithfield. A 1988 Wetland Inventory Study performed by The Environmental Scientific Corporation identified 49 types of soil.

The soils analysis performed during the 1988 Wetland Inventory defined four constraint categories: severe, moderate, slight-moderate and slight. The constraint categories were defined by soil characteristics including depth to water table, flooding, slope, shrink-swell potential, fraction, depth to bedrock, permeability, susceptibility to frost action, AASHTO (American Association of State Highway and Transportation Officials) classification, risk of corrosion of uncoated steel, concrete and hydrologic group. These soil characteristics were then analyzed for the following potential limitations to eight types of development: septic tank absorption fields, dwellings with basements, dwellings without basements, and local roads and streets. Limitations to development were combined into six groups, as follows:

- Stones;
- Drainage;
- Erosion and slope;
- Presence of water;
- Low strength; and
- Sandy texture.

Presence of large stones increases the difficulty of excavation and grading, as does the presence of many smaller stones. Stoniness also tends to increase soil drainage beyond limits suitable for septic tank absorption fields. Rapid drainage can be caused by stoniness as well as high sand content. When drainage is too rapid, soils are less suitable for standard on-site sewage disposal systems.

Slope is an indicator of the susceptibility of a site to erosion. Areas with slopes under three percent are essentially flat, and are suitable for a wide variety of uses. Areas with 3 to 8 percent slopes are easy grades presenting little constraint to road or residential development. Sites with greater than 15 percent slopes require more involved construction procedures to install home foundations, roads and

utility connections, leading to increased costs for site development. Areas with slopes greater than 25 percent pose severe problems in terms of soil erosion control, and construction procedures are more complex and more expensive.

Soil erosion will occur whenever vegetative cover is removed from slopes of 8 percent or greater and mitigative steps are not taken. Smithfield's Soil Erosion and Sediment Control Ordinance recognizes the importance of limiting erosion and lists a wide variety of measures to mitigate erosion.

Presence of water presents a variety of development limitations - frequent or prolonged periods of flooding offer obvious constraints. Water in the soil may adversely impact operation of on-site septic disposal systems. High water tables may also affect soil strength and cutbank stability. Soils with low strength may be unable to support foundations and are likely to have cave-ins. Sandy soils present constraints to recreational development and landscaping, including high erosion potential and droughtiness.

Twenty-seven soil types had severe constraints to development, covering 33.1 percent of the Town's total area. The severe constraint soils covering the largest area (1,580 acres) included Ridgebury, Whitman and Leicester extremely fine sandy loams. Eight soil types had moderate constraints to development, covering 7.6 percent of the Town. Five soils had slight-moderate constraints to development, covering 37.3 percent of the Town, and five soils had slight constraints to development, covering 9.9 percent. Another seven percent of the Town (1,234.8 acres) were not ranked according to severity of constraint as they required on-site inspection to determine the severity of limitations.

Twenty-one soils were listed by the SCS as being Farmland of Statewide Importance, all having a sandy loam texture. Farmland of Statewide Importance are soils that have the potential to economically produce high yields of crops when treated and managed according to modern farming methods. These soils have been identified and mapped, and the Town may want to consider measures to preserve a percentage of these areas.

Surficial Bedrock Geology

Surficial geological features in Smithfield contain both consolidated and unconsolidated materials. Consolidated materials are dense, compact and generally have a low porosity. Unconsolidated materials include outwash deposits, till, and alluvium and swamp deposits. These generally yield sizable quantities of groundwater.

Bedrock outcrops are the only surficial consolidated deposits in Smithfield. They are most frequently found in areas of ground moraine, largely in the northwest, south-central and northeast parts of the community. Bedrock outcrops are considered to be a high constraint to development, as a result of its density and consolidation.

Smithfield is largely underlain by till deposits, generally ground moraine. Glacial till is a heterogeneous mixture of clay, silt, sand and rock fragments that is general unstratified, unsorted and highly compacted. Only an upper loose sandy till exists surficially in Smithfield, as the upper layer of ground moraine. It is generally smooth and even, although it can occasionally be irregular and hummocky. Development constraints posed by this material are generally low to moderate. Most of the historical development in Smithfield (including Greenville, Esmond and Georgiaville villages) has occurred over kame terraces, composed of a fairly well-sorted mixture of pebble to cobble gravel and sand.

Bedrock Geology

Bedrock types in Smithfield are included in two categories - metasedimentary and igneous. Metasedimentary rocks include the Absalona formation (underlies 15 percent of the Town), Bellingham conglomerate (underlies 20 percent of the Town), Nipsachuck gneiss (underlies 5 percent of the Town) and the Woonasquatucket formation (underlies 5 percent of the Town). Igneous rocks include Mussy Brook schist (underlies 5 +/- percent of the Town), Esmond granite (underlies 40 percent of the Town), fine-grained granite and Scituate granite gneiss (underlies 10 percent of the Town).

Water yields from bedrock are typically low but variable, and are affected by the relative concentration of lithologic types. Formations consisting primarily of quartz have the highest yields, followed by granite rock etc. None of Smithfield's bedrock types have water yields of more than 25 gallons per minute.

Wetlands

In their public outreach document, "What's the Scoop on Wetlands?" The Rhode Island Department of Environmental Management (RIDEM) generally describes wetlands as "areas where water covers the soil or is near the surface of the soil for varying periods of time during the year". These areas have the proper hydrology to support wetland vegetation and to form hydric soils. Many wetlands occur between uplands and open water bodies, though they also exist as separate and isolated features in the landscape.

Wetlands provide several important functions and values for the community, including:

- Flood Control – reduction of flood velocity, storage of flood waters, stabilization of sediments and shorelines;
- Ecological Benefits – wildlife, fish, and shellfish habitat, nutrient export, and vegetative diversity; and
- Groundwater Protection – recharge and discharge of groundwater, sediment and toxicant retention, nutrient removal, retention, and transformation;
- Community Benefits - passive and active recreation, educational and scientific values, aesthetic appeal, uniqueness and heritage;

In 1988, a Wetland Survey of the town identified 202 wetlands, encompassing 2,856.5 acres of which 80+ percent were considered wetlands and 19 + percent were classified as lakes (deep open water). Wetlands and lakes together comprised 16 percent of the Town's total area. Most of the wetlands would be considered "swamp" per the Rhode Island Freshwater Wetlands Act, including the palustrine and scrub/shrub wetlands (See Table 5-1). The majority of the remainder would be classified as "marsh".

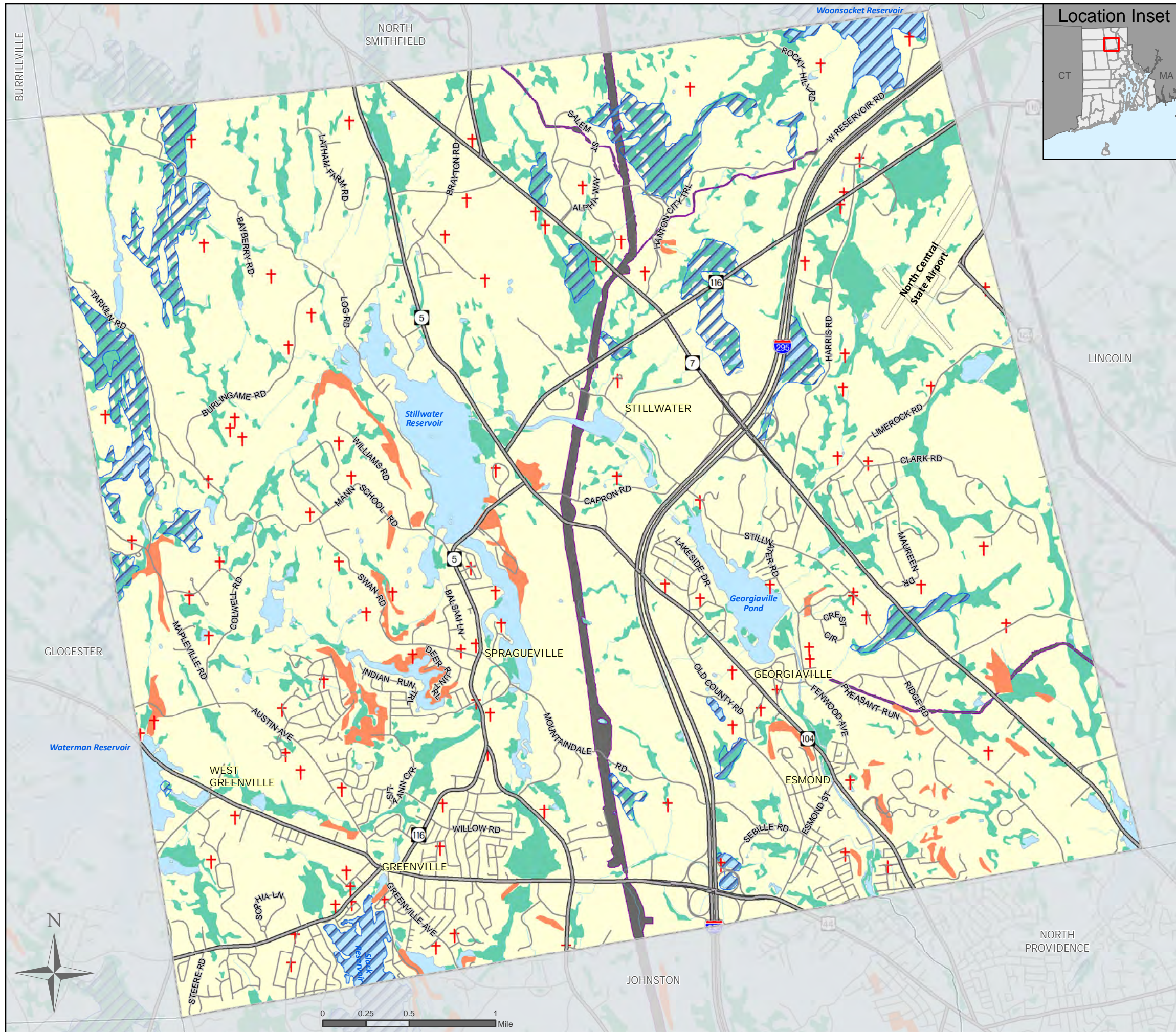


Fig. NR-1 :: AREAS WITH DEVELOPMENT CONSTRAINTS



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- Cemeteries (courtesy RIGIS, 2012)
- Slope Constraints (> 15%)
- 100 Yr Flood Zone ("A")
- Major Transmission Line
- Wetlands

Features

- Highways
- Roads
- Water
- Streams

Boundaries

- Smithfield
- RI Municipal
- Other States

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

National Wetlands Inventory

The U.S. Fish and Wildlife Service classifies the wetlands and water bodies of Rhode Island as part of the National Wetlands Inventory (NWI) based on Classification of Wetlands and Deepwater Habitats of the United States by Cowardin, et al.

This system groups wetlands by ecological system and subsystem, then further defines wetlands based on substrate, flooding, or vegetation. The three systems of wetlands mapped in Smithfield are Palustrine (vegetated), Lacustrine (lakes), and Riverine (rivers). Figure NR-1: Areas with Development Constraints shows the extent of each type of wetland in Smithfield as listed in Table NR-1.

Table NR-1: Summary of Wetland Types in Smithfield

Wetland Type	Total Acreage	% of Total Wetland Acreage	% of Total Town Acreage
Palustrine/Forested			
Broad-leaved deciduous	1,545.0	67.1	8.7
Needle-leaved evergreen	172.3	7.5	1.0
Dead	2.1	0.1	<0.1
Palustrine/Scrub-Shrub			
Broad-leaved deciduous	171.3	7.4	1.0
Broad-leaved evergreen	5.8	0.2	<0.1
Palustrine/Emergent			
Persistent	112.5	4.9	0.6
Non-persistent	17.4	0.8	0.1
Palustrine/Open Water	277.9	12.1	1.6
Lacustrine/Deep Open Water	552.2		3.1
Total	2,856.5	100.1	16.1
<i>Source: Wetland Inventory Study, Smithfield, Rhode Island, The Environmental Scientific Corporation, April, 1988.</i>			

Palustrine wetlands are the dominant type in Smithfield, and most commonly occur as forested wetland. Smithfield’s forested wetlands are typically vegetated with broad-leaved deciduous trees such as red maples, gum, oak and others. Another common wetland type in the town is scrub/shrub wetland, characterized by a dominance of shrubs or tree saplings less than 20 feet tall, broad-leaved shrubs and other low growing plants including bottombush, sweetgale, highbush blueberry, swamp azalea, winterberries, and many others. Emergent wetlands also occur in Smithfield, and are vegetated by non-persistent grasses, rushes, sedges, and other herbaceous or grass-like plants. Emergent wetlands are often associated with the shrub/scrub or wooded wetlands (See Development Constraints Map).

Rhode Island Freshwater Wetlands Act

This act requires that a permit be obtained from RIDEM Freshwater Wetlands Section before any freshwater wetland is altered in any way. Filling, grading, clearing of vegetation and construction are all considered wetland alteration.

The Act protects land that is clearly wet, such as ponds, rivers, marshes, streams and bogs, as well as those areas which may seem dry for much of the year, such as wooded swamps, where water is not observed on the surface, and areas subject to storm flowage and flooding. The law also considers as

wetlands certain areas which might be dry all year round, such as the area 50 feet around ponds, marshes, swamps and bogs, along with the area 100 feet from flowing bodies of water less than 10 feet in width and the area 200 feet from flowing bodies of water greater than 10 feet in width. The Town adopted a structure setback regulation that requires significant structures to be setback 100 feet from the wetland edge.

Hydrology

Drainage basins, or watersheds, are defined by topography which governs the path that water follows as it moves from higher to lower elevations. Precipitation falling in any of these basins either runs off over the surface and enters a surface water body or percolates through the soil and becomes part of a groundwater system. The Town is included almost entirely within the Woonasquatucket River Basin, and is divided into 11 major watersheds, as follows:

- Scituate Reservoir;
- Stillwater Reservoir;
- Nine-foot Brook and Waterman Reservoir;
- Sprague Reservoir;
- Slack Reservoir;
- Mountindale Reservoir;
- Woonsocket Reservoir
- Woonasquatucket River;
- Georgiaville Pond;
- Town Line Swamp; and
- West River.

The following describes each drainage basin's characteristics as well as hydrologic constraints to development. Such development constraints include flood hazards, aquifers, wells for municipal, industrial and park systems, point source pollution sites and areas with potential for non-compliance with water use class standards.

Stillwater Reservoir Watershed

The second largest of Smithfield's watersheds (4,854.7 acres), this basin is located in the north, central and southwest portions of the Town and contains the Stillwater and Woonasquatucket Rivers, Latham Brook, Stillwater Reservoir (Stump Pond), Lower Stillwater Reservoir and Nipsachuck Swamp. Lakes and wetlands within this watershed comprise 34.3 percent of all those found throughout the Town.

Flood hazards constraints consistent of a 100-year flood zone adjacent to the Stillwater Reservoir and along the Stillwater River and its tributary. High development constraints exist in areas with extensive water-bearing deposits (groundwater), much of which has already been developed. There is some risk for contamination of the Greenville Water District wells (not currently used, but maintained on a standby basis). Three hazardous waste sites, Davis Liquid Waste, Smithfield Chemical Industrial Dump and D&S Screw are located within or adjacent to the watershed, and pose significant threats to groundwater and surface water quality. Nonpoint pollution loadings which are contaminants carried into surface and ground water by stormwater runoff were estimated to be high for this watershed.

Nine-Foot Brook and Waterman Reservoir Watershed

At 1,032.2 acres, this watershed is the fourth largest in the Town. It is located along the western edge of the Town, and contains Nine-Foot Brook, which drains south into Waterman Reservoir. Lakes and wetlands within this watershed represent nearly 8 percent of all wet areas in the Town.

Aquifers, two hazardous waste sites and non-point source loading into Waterman Reservoir present high constraints to development in this watershed. Aquifers along Nine-Foot Brook and Waterman Reservoir are at risk of contamination, and, although remediation efforts have significantly reduced contamination at the Davis Landfill and Davis Liquid Waste Site, there is still some residual contamination at that location. Although non-point pollutant loads were generally low, Rhode Island Fish and Wildlife recommends limiting development around the Waterman Reservoir to maintain its existing water quality classification (Class B)

Sprague Reservoir Watershed

Located in the southwestern part of Town, this watershed contains the Upper and Lower Sprague Reservoirs (948 + acres). Wetlands within this watershed comprise nearly 6 percent of all wetlands within the Town (15 wetlands, 165.8 acres).

An aquifer which occupies the eastern third of this watershed, and excessive non-point source pollution resulting from high nitrogen and phosphorus loads are the hydrologic development constraints in this area.

Slack Reservoir Watershed

This watershed is the ninth largest of Smithfield's 11 major watersheds (522 + acres), and is located in the southwest, along the Town's southern boundary. Eight wetlands were identified within this basin, comprising 3 percent of wet areas in the Town.

High transmissivity of the groundwater aquifer within this watershed presents a high risk of contamination. Slack Reservoir presents the second hydrologic development constraint, the features of which include a 100-year flood zone, and elevated non-point source loadings and ISDS contamination have resulted in eutrophic conditions at this water body.

Mountindale Reservoir Watershed

The seventh largest watershed in Smithfield, this area abuts the southern boundary in the central portion of the Town (728 + acres). Six wetlands were identified, most of which belong to a chain of wetlands, where surface water flows north into Mountindale Reservoir and eventually, Stillwater Reservoir.

Reaper Brook and Mountindale Reservoir have high development constraints due to adjoining 100-year flood zones. The watershed is underlain by an aquifer with a high potential water yield, which is at risk of contamination. Three standby wells for the Greenville Water District draw from this aquifer. The eutrophic condition of Hawkins Pond results in high development constraints to ensure compliance with water use standards.

Georgiaville Pond Watershed

The largest of the 11 major watersheds at 5,224.2 acres, this basin is located completely within the Town boundaries, occupying most of the central to eastern-central acreage. The watershed contains Georgiaville Pond, Stillwater Pond, Capron Pond and Harris Pond. The two main rivers in the watershed are the Woonasquatucket River (linking three of the four ponds) and Harris Brook (which drains Harris Pond). The outlet of this watershed is the Woonasquatucket, where it flows out of the dam on Georgiaville Pond. Over one quarter of all wetland and lake acreage in Smithfield is found in this watershed, a total of 639 acres.

Flood zones around Harris River and Harris Pond, and narrow flood zones along the Woonasquatucket River and associated water bodies present high development constraints. An aquifer along the Woonasquatucket River Valley presents groundwater contamination risks, and ranks as a high development constraint. Point sources, including New England Container Company hazardous waste site and salt storage piles pose threats to groundwater quality. The Georgiaville Pond area was assigned a high development constraint due to potential non-compliance of Class B water use standards resulting from high non-point source pollutant loadings.

Woonsocket Reservoir Watershed

At 528+/-acres, this entire watershed was assigned high development constraints to ensure water quality protection of this drinking water supply reservoir.

Woonasquatucket River Watershed

This watershed is the third largest drainage basin in Smithfield, comprising 2,463.8 acres, of which 109.2 areas are wet. It is located in the south-central portion of the Town, much of it along the Town's southern boundary. The main drainage for this watershed is the Woonasquatucket River, which flows toward the City of Providence. Hawkins Brook, which drains Sebille Pond, flows into the Woonasquatucket River.

An aquifer underlies the developed area of this watershed, and holds high potential for groundwater contamination. The area located near the North Providence boundary, in the vicinity of a former landfill and the North Providence landfill contains potential risks to groundwater and surface water quality degradation. The Woonasquatucket River has high potential for non-compliance with its water use class standards due to high loadings of lead and hydrocarbons, and Rhode Island Pollutant Discharge Elimination System (RIPDES) dischargers located on the river.

Town Line Swamp Watershed

The second smallest watershed in the Town at 409.2 acres, this basin is found in the northeast corner of the Town, along its eastern boundary. Three wetlands are located in this watershed, comprising a total of 52.5 acres and representing two percent of the lakes and wetlands within the Town. High constraint areas imposed by hydrology include two small aquifers and a hazardous waste site at the New England Container company.

West River Watershed

The fifth largest of the 11 watersheds (997.0 acres) is located along the eastern boundary and southeast corner of the Town. The West River is the main drainage channel of this watershed, flowing south into the Wenscott Reservoir. Lakes and wetlands in this watershed represent 5.6 percent of all those found within the Town. Two areas have high constraints imposed by hydrology, including the area adjacent to a hazardous waste site located at the North Central Industrial Air Park in Lincoln, and the North Providence landfill.

Groundwater

The area beneath the land surface can be divided into two zones. In the upper, unsaturated zone, open fractures in rocks or open spaces between soil particles are only partially filled with water. Beneath this zone all the open spaces are filled with water. This lower, completely filled zone is the saturated zone. Water within this zone is called groundwater, and its upper boundary is known as the water table.

Swamps, streams, ponds and wetlands are places where the land surface intersects or comes close to the water table. Wells penetrate the saturated groundwater zone some distance below the water table and intercept this slow moving resource before it reaches natural points of discharge, such as wetlands and streams.

Two types of water sources, direct and indirect recharge, replenish stratified drift aquifers. The major source of direct recharge is precipitation that falls directly on and infiltrates into the ground, flows through the unsaturated zone to the water table, and then down the hydraulic gradient to streams and ponds. Under natural conditions, groundwater will move from the aquifer to the stream. If a pumping well is located near the stream, the water table gradient may be reversed and water from the stream may infiltrate the aquifer and flow toward the center of the pumping, and is defined as indirect or induced recharge.

Stratified drift is unconsolidated, sorted sediment composed of layers of sand, gravel, silt or clay, deposited by meltwater from glaciers. Coarse-grained stratified drift contains space between the gravel and sand particles which can hold large amounts of water without restricting its flow. Stratified drift deposits with a saturated thickness of greater than 40 feet, and which have a transmissivity of 4,000 feet per day are considered to be groundwater reservoirs and have an excellent chance of yielding large quantities of water.

Aquifers

Many of the developed areas in Town are underlain by aquifers. For example, Greenville and Esmond are situated primarily on aquifers. The Mountindale and Stillwater watersheds are of particular concern because of the thick stratified drift deposits, which have the greatest water-bearing capacity and supply the Greenville Water District. Contamination of groundwater from hazardous waste sites is a primary concern. There are six known hazardous waste sites within or adjacent to the Town. Two of these sites are Superfund sites, the Davis Landfill and the Davis Liquid waste site. Contamination of private wells within a half mile radius of many of these hazardous sites has been observed. Salt storage piles and other former landfills also have potential for groundwater contamination.

Wellhead Protection Program

This is a program developed by the Groundwater Section of RIDEM to prevent contamination of groundwater resources that are used by public drinking water systems. It applies to public wells which provide drinking water to 15 or more service connections, or regularly serves an average of at least 25 individuals daily, at least 60 days of the year. This includes community wells that serve resident populations such as trailer parks, nursing homes, major municipal wells, and non-community wells that serve hotels, restaurants, schools, etc. This program may apply to the standby wells in Smithfield.

RIDEM provides water suppliers with wellhead protection area delineations, made using a combined modeling and hydro-geologic mapping method, and other technical assistance, and reviews local protection programs. The Town is responsible for developing the wellhead protection plan, including potential pollution source inventories, protection strategies and contingency plans. The water suppliers may work with the Town to develop and implement strategies. Management options include public education, land acquisition, groundwater monitoring, groundwater amendments to local zoning ordinances and local regulations for design and operating standards.

Potential Sources of Groundwater Contamination

Known or potential sources of groundwater pollution have been identified by the Rhode Island Department of Environmental Management. RIDEM includes landfills, underground storage tanks, salt piles and surface impoundments in its mapping of those known or potential sources. The Department of Labor also maintains a list of those businesses and industries which store or use hazardous materials, information which is available through the Town's Fire Department under the Hazardous Materials Right-to-Know Law. In Smithfield, identified sites of potential groundwater pollution, and their current status include:

- Davis Liquid Waste Dump; 2010 RAWP, 2012 ESS Work Plan
- Davis GSR Landfill; Last of the tires removed in 2000.
- Old Smithfield Chemical site, Pleasant View Avenue (inactive hazardous waste); Deerfield Park Remediated
- Spragueville Road salt storage garage; Covered
- Narragansett Gray Iron Foundry, (surface impoundment); Remediation Plan accepted
- Aiello Construction, (salt storage);
- Smithfield Peat Company, Douglas Pike
- Jibco, Douglas Pike (injection well); no listed violations
- N.E. Stone Industries, Douglas Pike (injection well);
- North Providence Landfill, (North Providence);
- Smithfield Landfill, (at North Providence line); closed
- Smithfield Diesel, (injection well);
- Cabot Electronic Ceramics, Putnam Pike, (injection well);
- Routes 7 and 116 salt storage area Town owned State operated and to be relocated, and;
- Paterson/Churchill & Banks, 125 Sebille Road, solid waste dumping, release of hazardous substances to soils (petroleum and lead) possible groundwater involvement.

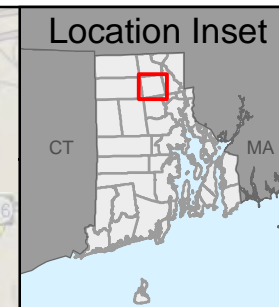
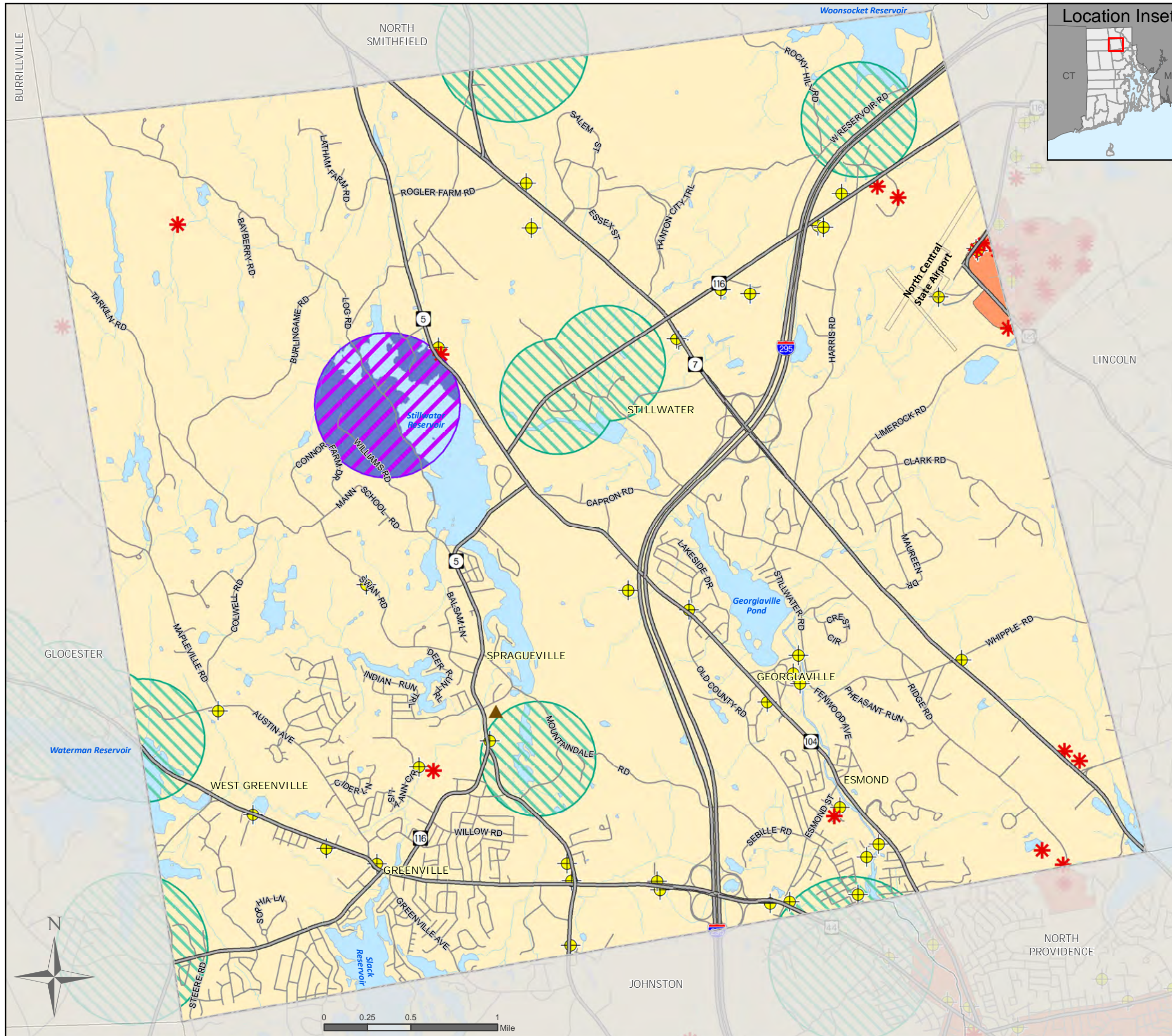


Fig. NR-2 :: GROUNDWATER RESOURCES & THREATS



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- Salt Barn
- Groundwater Threats**
 - CERCLIS (Hazardous Material Sites)
 - Leaking Underground Storage Tanks
- Groundwater Protection Areas**
 - Community Wellhead Protection Area
 - Non-Community Wellhead Protection Area
- Groundwater Classification**
 - GA
 - GAA
 - GB
- Features**
 - Highways
 - Roads
 - Water
 - Streams
- Boundaries**
 - Smithfield
 - RI Municipal
 - Other States

This map is not the product of a Professional Land Survey. It was created by Mapping and Planning Services 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. Mapping and Planning Services and the Town of Smithfield makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

In addition to these identified sources, others may exist which present an equal or greater threat for pollution to the Town's water systems (See Groundwater Resources & Threats Map).

Stormwater Management

The Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES), Phase II Rules Interpretation requires "small Municipal Separate Stormwater Sewer Systems or MS4's" to obtain permits and establish a storm water management program that is intended to improve waterbodies by reducing the quantity of pollutants entering storm sewer systems.

The State Department of Environmental Management (RIDEM) mandated that all MS4's adopt Stormwater Management Plans (SMP) that prescribes various goals, policies and actions related to minimizing stormwater contaminants as well as attenuating stormwater runoff.

SMP's address stormwater management using six minimum control measures including: #1 Public Education and Outreach; #2 Public Involvement/Participation; #3 Illicit Discharge Detection and Elimination; #4 Construction Site Storm Water Runoff Control; #5 Post Construction Stormwater Management In New Development And Redevelopment, and; #6 Pollution Prevention And Good Housekeeping In Municipal Operations.

The Town is in Year 9 of the program and has concentrated its efforts on identifying and sampling stormwater outfalls. The Engineering Department to date has located, mapped and sampled 239 outfalls within the Town. The purpose of sampling outfalls is to identify illicit discharges that contribute pollution to receiving waters. The Town adopted an Illicit Discharges and Connections ordinance in 2011 and has not had to bring any enforcement actions to date.

Eroded sediments from construction projects and improperly designed developments can be a major source of pollution in receiving waters. The pollutant that Minimum Control Measures #4- Construction Site Storm Water Runoff Control and #5 Post Construction Stormwater Management In New Development And Redevelopment seek to address is eroded soils. The Town of Smithfield has been very proactive in addressing this pollutant by establishing one of the first Soil Erosion Ordinances in the State and one of the only Soil Erosion Committees, which receives staff support and recommendations from the Engineering Department on just about every development project proposed in the community.

Flood and Floodplains

Floods in Smithfield occur in every season of the year. Extensive flooding, triggered by heavy rainfall associated with seasonal storms, occurs in the floodplains and adjacent low and swampy areas along the major water courses, specifically along the Woonasquatucket and Stillwater Rivers. Minor flooding also occurs along some smaller tributaries to these rivers and swampy areas adjacent to them. Much of the flooding that occurs in Smithfield is minor, due to the effect of the numerous swamps and dams which tend to desynchronize peak discharges in the upper watershed. The Town is a participant in the National Flood Insurance Program and has incorporated floodplain management regulations in local ordinances to help minimize future damages and related hazards.

The Federal Emergency Management Agency has designated zones where flooding is likely to occur. Zones A and AE are inundated by the 1-percent-annual-chance ("100 year") flood. Zone X is inundated

by the 0.2-percent-annual-chance (“500-year”) flood. Zone X also contains some areas outside of the 100-year and 500-year floodplain.

Areas in flood hazard zones A and AE exist along most of the major rivers, brooks, swamps, and ponds in Smithfield. The broadest areas of land subject to flooding are found in the floodplains of the Woonasquatucket and Stillwater Rivers. Many homes, streets, and other types of development are located in these areas and discussion of Natural Hazards below). Flooding during the March-April 2010 storm along the Woonasquatucket River south of the Georgiaville Pond dam reached the predicted 100 year flood elevation, affecting many homes and businesses in these areas (See Development Constraints Map.

Air Quality

The Clean Air Act requires that air quality must meet standards designed to protect human health and welfare. The Environmental Protection Agency (EPA) sets these standards based on information contained in its air quality criteria documents, which are summaries of the latest information on the sources, chemistry and deleterious effects of a particular pollutant. Rhode Island has adopted these standards. Areas that do not meet air quality standards are called nonattainment areas. In 2013 the State adopted the 8-Hour Ozone National Ambient Air Quality Standard. Previously, the entire State was considered nonattainment for ozone, but was in attainment for other standards, including sulfur dioxide (largely from stationary source coal and oil combustion), total suspended particulates (dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, etc.), carbon monoxide (largely from transportation sources), lead precipitation pH, oxides of nitrogen, PM-10 and gross beta activity (for Millstone nuclear reactor and Narragansett RIAEC Research Reactor). Apart from carbon monoxide, air quality concerns are regional in nature and data for individual communities has not been compiled.

Vegetation and Wildlife

The 1988 Wetland Inventory presented information on local habitats and land uses based on historical research. The study was conducted through interpretation of aerial photographs and found that, at that time, hardwood forests covered 6,737.1 acres of the Town. Mixed and softwood forests added 1,475.9 acres and 435.1 acres respectively, to attain a total forest cover of 48.8 percent (8,647.1 acres). Wetlands at that time constituted approximately 11.4 percent of the Town’s land area. Today forests are still the dominant habitat type in Smithfield, but some forest acreage has been replaced by development during the past 25 years, as has agricultural acreage.

Each habitat type defined in the 1988 study was assigned a development constraint, ranging from low to high (Table NR-2). Nearly 60 percent of the Town’s land area was considered to have low constraints to development, 18 percent had medium constraints and 19 percent had high constraints. Low constraint areas were primarily undeveloped lands, predominantly hardwood and mixed forests. Wetland comprised most of the high constraint areas, with the majority occurring in the Stillwater and Georgiaville Pond watersheds.

Table NR-2: Habitats and Their Constraints to Development

Habitat	Subhabitat	Description	Constraints to Development
Forest		All land with greater than 30 percent cover dominated by woody vegetation greater than 20 feet in height	
	Hardwood Forest	Forest habitat dominated by greater than 80 percent deciduous species.	Low
	Mixed Forest	Forest habitat with neither hardwood nor softwood species alone dominating greater than 80 percent of the site	Low
	Softwood Forest	Forest habitat dominated by greater than 80 percent evergreen species.	Low
Successional		Nonagricultural lands with less than 30 percent cover of woody vegetation less than 20 percent.	
	Late Succession	Old abandoned open space dominated by tree and shrub saplings less than 20 feet in height. Grasses and herbaceous plants abundant and but subdominant.	Low
	Early Succession	Recently abandoned open space dominated by grasses and other herbaceous plants	Low
	Successional Powerline	Powerline rights-of-way greater than 100 feet in width. Unmaintained areas may be typed as the land use permitted under then.	High
Agricultural		Open space which has recently been farmed for agricultural crops including pastures for hay, nurseries and orchards.	
	Agricultural/tilled	Tilled or tillable crop land which has recently been subject to intensive farm practices.	Low
	Agricultural/orchard	Productive fruit land.	Low
	Agricultural/nursery	Land dedicated to cultivation of landscaping / ornamental plants.	Low
Wetland		Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.	
	Wetlands/emergent	Wetlands dominated by erect, rooted, herbaceous hydrophytes excluding mosses and lichens.	High
	Wetlands/shrub swamp	Wetlands dominated by woody vegetation greater than 20 feet in height.	High
	Wetlands/forested	Wetlands dominated by woody vegetation greater than 20 feet in height.	High
	Open water	Open water bodies including both ponds (less than 6.5 feet deep) and deep water habitats (greater than 6.5 feet deep).	High

Source: Wetland Inventory Study, Smithfield, RI, Environmental Scientific Corporation, 1988

Wildlife

Forested areas, even though they are surrounded by urban development, support a variety of wildlife including pheasants, wild turkey, quail, redtail hawks, American kestrel, doves, and woodcock. In addition to avian species, these areas are also inhabited by a number of mammals typical of Rhode Island, including fox, rabbit, skunk, woodchuck, deer, and others. Wetlands and the surrounding land provide another valuable type of wildlife habitat. Animals utilizing these habitats include wood ducks, black ducks, mallards, snipe, rails, herons, kingfishers, marsh hawks, muskrat, mink, fisher, and otter. Wildlife preservation requires larger expanses of undeveloped land within which species can form territories. This is possible in Smithfield, as large open spaces still remain. Recent sightings of black bear and even mountain lions in Rhode Island show that animals of this type are being forced into areas where they are not typically found due to loss of habitat in other areas of the region.

Rare and Endangered Species and Habitats and Noteworthy Natural Areas

The historical and current status of species of plants and animals suspected of being rare or declining has been monitored for the past decade by the Rhode Island Natural Heritage Program (NHP). According to the NHP (as of October, 1990), records for 30 rare species have been documented for Smithfield. Most of these occurrences are known historically only and have not been relocated in recent years. They are shown in Table 5-2.

The term "State Endangered" indicates a native species in imminent danger of extirpation from Rhode Island. State threatened denotes native species which are likely to become state endangered in the future if current trends in habitat loss or other detrimental factors remain unchanged. Species of State Interest are those native species not considered State Endangered or Threatened at the present time, but occur in 6 to 10 sites in the State. Species of concern are native species which do not apply under the above categories but are additionally listed by the Natural Heritage Program due to various factors of rarity and/or vulnerability, or for which status information is presently not well known. Species listed as State Historical are those which have been documented for the State during the last 100 years, but for which no current occurrences are known.

The following unique natural areas have been identified in Smithfield:

- Reaper Brook Wetland - contains a good quality Atlantic white cedar swamp, a community type considered significant in Rhode Island. The wetland is also known for a historical occurrence of Black Spruce, a rare species in Rhode Island. This tree has not been found at the site in recent years, but the habitat is still suitable and further fieldwork may reveal its presence.
- Old Forge road Conservation Area - an area owned and managed by the Town. The slight ledges on this property support a small population of a State-listed plant.
- White Cedar Swamp - an area west of Route 5, north and south of Route 44, which used to be frequented by botanists for unusual vegetation found in the swamp.
- YMCA Camp Shepard - rock outcrops, Sprague Reservoir area, vegetation species of State Interest identified in the area.
- Islands in Georgiaville Pond - Town-owned.

- Nipsachuck Swamp and Esker - in the northwest corner of the Town, a good example of a glacial esker although a portion has been developed.
- Mann School Road, north of - A Town-owned steeply sloped rock outcrop containing beryl crystals -.
- Woonsocket Reservoir Watershed.
- Wionkheige Ledges - Massive rocks and ledges with rare minerals, forested.
- Large white oak - off Farnum Pike, south of Route 295 over pass
- Harris Pond - a small pond with unusual plant and wildlife value; adjacent to Route 295.
- No Force Rock - extensive ledge outcrops and woodland vegetation on the north side of Upper Sprague Reservoir.
- Threshing Rock - large rock in the middle of forested area in northern Smithfield. Unusual shape and location are evidence that it was once used by local farmers to thresh grains.
- Greenville Center - about 2 acres starting at the Slack's Pond dam and continuing north across Putnam Pike to just south of South Glen Drive.
- Waterman Reservoir - about 30 acres just south of the Putnam Pike on the shore of Waterman Reservoir.
- Cranberry Trail - about 120 acres extending northerly from the junction of Colwell Road and Mann School Road along the valley but including high ridges to Log Road.
- Ridge Road Swamp - about 20 acres between Ridge Road and the Douglas Pike. A continuation of this area would extend along the stream to the West River which continues to the Wenscott Reservoir.
- Gould Pond - about 5 acres including Gould Pond located off the Douglas Pike north of the Wenscott Reservoir.
- Bell Farm Swamp - about 20 acres starting east of the Douglas Pike and following the wetlands and stream in a westerly direction past Ridge Road through a 27 acre Land Trust conservation area to the Whipple Field Recreation Area.
- Georgiaville Pond/Spillway - about 2 acres on the east side of the gorge south of the dam. Intention is to preserve a unique scenic area and ensure access to maintain spillway flow.
- Douglas Pike - Tyler Brook - about 10 acres including the small remaining area around small ponds on the Douglas Pike south of Limerock Road and following the stream westerly past Ridge Road and Stillwater Road to Georgiaville Pond.
- Capron Pond - about 12 acres including Capron Pond along Capron Road and continuing upstream to Stillwater Pond.

- Railroad Right-of-Way - former railroad right-of-way which extends from the North Providence line in Esmond about 7 miles to the North Smithfield line near Douglas Pike. The original bed ran from Providence, through North Providence and Smithfield, into a small section of North Smithfield and terminated in the Pascoag Village in Burrillville. In many areas it follows waterways and is subject to use for utility easements including sewer lines.
- Nine Foot Brook - about 170 acres on the western boundary of the Town along a brook that flows into Waterman Reservoir in Glocester. This includes a drainage area of the former Smithfield-Glocester Sanitary Landfill.
- North Branch Woonasquatucket River - Land extending along the river along Farnum Pike to the North Smithfield line. This extends north from Stump Pond and would expand the Mowry Conservation Area.
- Aldrich Trail (Hanton City Trail) - about 300 acres of wetlands in an area northwest of the Douglas Pike in conjunction with the Washington Highway.
- Sleboda Area - about 20 acres off Whipple Road near the Lincoln line including a stream of the West River which continues to the Wenscott Reservoir, includes an old quarry area.
- Wolf Hill - About 500 acres on the ridge between the southern section of Stillwater Reservoir (Stump Pond) and Route 295, north of Mountindale Road.
- Other sites identified in the Wetlands Inventory Study include areas where unusual species have been sighted, including porcupine, yellow bullhead, and red shouldered hawks.

Table NR-3: Rare Species Occurring either Currently or Historically in Smithfield

1.	Long-beaked Bald Rush	State Endangered
2.	Pod-grass	State Endangered
3.	Wild Senna	State Threatened
4.	Pink Tickseed	State Threatened
5.	Large yellow lady's slipper	State Threatened
6.	One-flowered Wintergreen	State Threatened
7.	Smooth Gooseberry	State Threatened
8.	Seamp Saxifrage	State Threatened
9.	Reticulated Nut-rush	State Threatened
10.	Long Beech fern	State Threatened
11.	Purple Trillium	State Threatened
12.	Long-fruited Anemone	State Interest
13.	Large Coralroot	State Interest
14.	Creeping Snowberry	State Interest
15.	Featherfoil	State Interest
16.	Climbing Fern	State Interest
17.	Yellow Water-crowfoot	State Interest
18.	Goat's Rue	State Interest
19.	Maidenhair Spleenwort	Species of Concern
20.	Large-leaved Aster	Species of Concern

21.	Squaw Root	Species of Concern
22.	Woodland Horsetail	Species of Concern
23.	Hepatica	Species of Concern
24.	Black Spruce	Species of Concern
25.	Small Purple Fringed Orchid	Species of Concern
26.	Early Saxifrage	Species of Concern
27.	Golden Alexanders	Species of Concern
28.	Snakeroot	State Historical
29.	Riverweed	State Historical
30.	Yellow Pimpernel	State Historical

Source: *Rare Native Plants of Rhode Island*, R. Enser, 2007.

Heritage Landscapes

The Smithfield Reconnaissance Report¹ prepared as part of the Blackstone Valley Heritage Landscape Inventory worked with Smithfield residents to compile a list of the town's heritage landscapes. They listed 52 landscape features for analysis. Then, in a series of visits and workshops, they assessed the value of each landscape and identified preservation issues relative to each one.

The landscapes identified represent a range of scales and types of resources from individual properties to an entire mill village. Several include areas that have multiple layers. For example a mill village that is considered a heritage landscape may also include specific features that are individually recognized as heritage landscapes. Such layering shows the complexity and interdependence that are characteristic of most heritage landscapes.

After careful analysis, the report identified seven areas in Smithfield as “Priority Heritage Landscapes” including:

- **Austin Avenue Agricultural Area** – a collection of contiguous farms surrounding Austin Avenue that evoke the agrarian heritage of Smithfield,
- **Whipple Road Agricultural Area** – large fields, stone walls, historic cemetery associated with the former Arnold Farm.
- **Camp Shepard** – 125 acres of property on Colwell Road, including the 23.4 acre Upper Sprague Reservoir, owned and used for summer day camp by the Greater Providence YMCA.
- **Captain Elisha Steere Farm** - a farm in the southwest corner of Smithfield, between West Greenville Rd. and Waterman Reservoir, owned by the same family for over 200 years.
- **Esmond Village** – Originally Allenville, then Enfield, then Esmond, an early mill village on the Woonasquatucket River in the southeast part of Smithfield.
- **George Washington Grove** – 16 acres of wooded land and former CCC picnic area overlooking the Woonasquatucket River next to Stillwater Park that is held by RIDOT as surplus land.
- **Greenville** – The largest of Smithfield’s mill villages and a civic and institutional center.
- **Nipsachuck Battle Area** – Roughly 8,000 acres of property in Smithfield and North Smithfield including Nipsachuck Swamp, scene of a battle in King Philip’s War (1675-76).

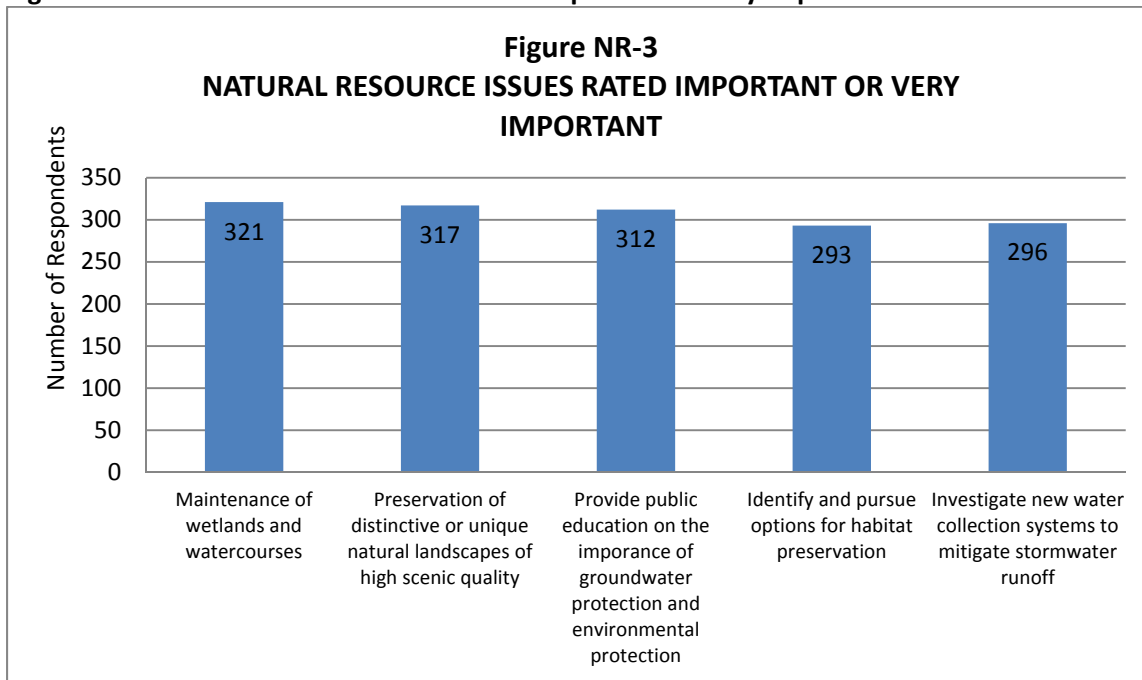
¹ RI Historic Preservation and Heritage Commission et. Al. November, 2010. Available on the Planning Department page of the Town’s web site, www.smithfieldri.com.

Participants in the inventory process felt that preservation of these heritage landscapes is particularly important for the future of the community. The Inventory Report provides specific recommendations for each area. Many of these landscapes also include districts, sites, buildings, structures, and objects that are listed on, or eligible for listing on, the National Register of Historic Places. Historic and cultural resource values are discussed further in the “Cultural Resources” Element of this Comprehensive Plan.

Current Conditions and Issues

Smithfield citizens care deeply about the Town’s natural resources. This is evident in the results of a 2003 Community Survey conducted by the Planning Department. Each of the five issues concerning natural resources was rated Very Important or Important by 82% or more of respondents. “Maintenance of Wetlands and Watercourses” was rated most highly, with 89% of respondents considering it Very Important or Important.

Figure NR-3: Natural Resource Issues Rated Important or Very Important



The Goals, Policies, and Actions of this Comprehensive Plan further reflect the importance that the citizens of Smithfield put on the Natural Resources.

The value the citizens of Smithfield place on natural resources is also evident in the Town government’s actions. In 2004, the Town voters approved a \$5 million dollar bond to protect farm, forest and open space several large parcels of land have been protected using these bond funds and Land Trust funds including the Judson Farm, Mowry Farm, Booker/Steere Farm West Greenville Road, Blackbird Farm, and Limerock Road. The Town adopted a buffer policy in its zoning ordinances that places a 100 foot buffer on all wetlands. No primary structures are allowed within this buffer. The town has also developed a Conservation Development Ordinance and a Woodland Conservation Ordinance.

A healthy environment is one of the key elements in providing a high quality of life. Smithfield citizens and government officials have engaged in several key projects and initiatives over the years to ensure that its resources are protected.

Woonasquatucket Watershed Council

In 1998, hundreds of watershed residents joined in the successful effort to have the Woonasquatucket River designated as one of fourteen American Heritage Rivers. This important federal designation honors the historic, cultural, economic and environmental significance of the river. The 18-mile-long Woonasquatucket River flows through 6 cities and towns in Rhode Island including Glocester, North Smithfield, Smithfield, Johnston, North Providence and Providence, where it flows into the Providence River and out into Narragansett Bay. Since the Woonasquatucket River was designated an American Heritage River many groups have taken an interest in revitalizing the river and the watershed that it runs through.

The Woonasquatucket River Watershed Council formed shortly after the American Heritage River designation. The group, organized by staff of the Woonasquatucket River Greenway Project, is composed of residents, representatives of local and state government, and local non-profits and works to improve the environmental, recreational and economic assets of the Woonasquatucket watershed. The Council works with the Rhode Island Department of Environmental Management (RI DEM) and other state and federal agencies to design and implement projects in the watershed. The watershed has been chosen as a pilot for the RI DEM's Watershed Approach. The Woonasquatucket River Greenway Project is now a program of the Woonasquatucket River Watershed Council.

Restoration and Identification Projects

1988: Wetland Inventory Study, Smithfield, RI; The Environmental Scientific Corporation

This project was an in-depth resource inventory for the Town of Smithfield to gather baseline data concerning the location, quantity and quality of the Town's natural resources.

2001: Woonasquatucket River Riparian Buffer Restoration Project; RIDEM, Kleinschmidt Associates

This project identified potential restoration opportunities along rivers and streams in the watershed. 11 sites were identified in Smithfield.

2002: Wetland Restoration Plan for the Woonasquatucket River Watershed, RI; RIDEM, Golet et. al.

This project identified potential wetland restoration sites throughout the watershed. 31 sites were identified in Smithfield.

2004: Woonasquatucket Greenspace Protection Strategy; RIDEM, Dodson Associates

This project mapped the Town's natural and cultural resources and laid out a plan to preserve and protect those areas. This plan includes the digitization into the GIS of all of the 212 sites identified in the 1992 "Historic and Architectural Resources of Smithfield, RI. Preliminary Survey Report", by Rhode Island Historical Preservation.

2008: The Deerfield Park Riparian Restoration Project The purpose of this restoration project is to substantially improve the water quality of the Stillwater River as well as to restore valuable habitat through the restoration of a headwater stream to the Woonasquatucket River. In addition, the excellent location of this restoration project, being in a public park and directly adjacent with walking access to

two schools, will provide an extremely valuable outdoor classroom experience for Town students and will be incorporated into the science curriculum.

2010: Blackstone Valley Heritage Landscape Inventory The primary goal of this program was to help communities identify a wide range of landscape resources, particularly those that are significant and unprotected. The focus was on connecting landscapes to show how they are part of the larger heritage landscape that is the defining character of a community and to provide communities with strategies for preserving important heritage landscapes.

The products of these projects provide a wealth of information and recommendations towards the Town achieving its preservation, protection and restoration goals.

Protected Lands

Over the last decade the amount of protected open space in Town has increased significantly. The 2001 Comprehensive Plan noted that there were approximately 354.8 acres of Town-owned conservation land, in addition to approximately 400 acres of State and 434 acres of privately-held conservation land. In 2013, 1,654 acres of Town-owned conservation land, 505 acres of State owned open space and 704 acres of privately-held conservation land was counted. The total area of conservation land increased from an estimated 1,538 acres in 2004 to 2,843 acres in 2015. Much of the credit goes to the Smithfield Land Trust which has been very active in acquiring key parcels throughout the Town with a focus on protecting farmland. Some the key acquisitions include the fee simple acquisition of the Matteo Farm on Swan Road, Judson Farm on Williams Road, Mary Mowry Farm on Old Forge Road/Farnum Pike, and the acquisition of conservation easements on the Jim Steere Orchard on Austin Avenue, Blackbird Farm on Limerock Road, Booker/Elisha Steere Farm on West Greenville Road and the Hyde Tree Farm on Mann School Road. Based on a current population estimate of 21,430, this represents an existing standard of approximately .13 acres of open space land per person. This figure represents approximately 16 percent of the Town’s total land area of 17,699 acres (including wetlands and water bodies). See the conservation properties Table NR-4 which lists conservation and recreation properties in Smithfield and the corresponding map Figure NR-4 .

The 2001 Comprehensive Plan suggested using the recommended standard/ goal to conserve a minimum of 15% of the Town’s total land area for open space and conservation purposes. The 2006 Comprehensive Plan Update target date of December 31, 2015 to achieve the 15% open space goal, has been met.

Table NR-4: Conservation/ Open Space & Recreation Properties in Smithfield

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
1	Powder Mill Ledges	Sanderson Road	87	Audubon Property	Audubon Property
2	Unnamed	Ledgemont Drive	20	Audubon Property	Audubon Property
3	Unnamed Hanton City/Rocky Hill Rd	Hanton City Trail	174	Audubon Property	Audubon Property
4	Unnamed Tarkiln Road	181 Tarkiln Road	70.2	Audubon Property	Audubon Property

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
5	Woonsocket Reservoir	Rocky Hill & West Reservoir Rd	107.76	Other Private Open Space	City of Woonsocket
6	Connors Farm Assoc.	Connors Farm Drive	10	Other Private Open Space	HO Assoc.
7	Wionkhedge Homeowners Assoc.	Burlingame Road	16	Other Private Open Space	HO Assoc.
8	Deerhill Homeowners Assoc.	Deerhill Drive	24.4	Other Private Open Space	HO Assoc.
9	Greenville Terrace	Sophia Lane	5	Other Private Open Space	HO Assoc.
10	Mowry Farms	Mowry Farms Lane	10.3	Conservation Development	HO Assoc.
11	Village in The Woods	Aspen Lane/Austin Ave.	26.5	Other Private Open Space	HO Assoc.
12	Sleepy Acres	Tristan Court	25.5	Subdivision Donations in Process	HO Assoc.
13	Pheasant Run	Pheasant Run	50.8	Other Private Open Space	HO Assoc.
14	Village at Summerfield	Cambridge Circle	50.8	Other Private Open Space	HO Assoc.
15	Waterman Reservoir	44-6, 44-76	6.9	Other Private Open Space	HO Assoc.
16	Stillwater Pond/dam	300 Stillwater Road	25.5	Land Development Donation	Lighthouse Preservation
17	Judson Farm	Williams Road	55.6	Active Conservation	Land Trust
18	Mowry Homestead & Farm	Old Forge Road	24.8	Active Conservation	Land Trust
19	Shipman Purchase	Burlingame Road	42.6	Smithfield Land Trust	Land Trust
20	Hyde Tree Farm	Mann School Road	60	Conservation Easement	Land Trust
21	Matteo Farm	Swan Road	51.29	Farmland Conservation	Land Trust
22	Blackbird Farm	Limerock Road	57	Ag & Forestland Conservation	Land Trust
23	Booker/Steere Farm	West Greenville Road	5	Farmland Conservation	Land Trust
24	Steere Orchard	Austin Avenue	20.46	Farmland Easement	Land Trust
25	Burlingame Estates	Latham Farm Road	123	Unimproved Conservation	Land Trust
27	Hanton City	Hanton City Trail	15.5	Unimproved Conservation	Land Trust
28	Hanton City	Hanton City Trail	80.4	Unimproved Conservation	Land Trust

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
29	Cavanagh	251 Log Road	11.35	Conservation Easement	Land Trust
30	Pavao	Evans Road	6.49	Subdivision Donation	Land Trust
31	Dangelo	Old County Road	15.4	Farmland Conservation Easement	Land Trust
32	High Ridge/Gallo	Ridge Road/Crest Circle	30.85	Active Conservation	Land Trust
33	Angel Farm/Clark Road	Clark Road/Victoria Drive	8.8	Subdivision Donation	Land Trust
34	Sophia Lane	Smith Ave/Sophia Lane	28.33	Subdivision Donation	Land Trust
35	Wolf Hill Forest Preserve	Mountindale Road/Carlton's Way	291	Smithfield Land Trust	Land Trust
36	Mowry Fly Fishing Area	6 Industrial Dr. So.	3.01	State Conservation Property	State of RI
37	Washington Grove	Route 116/Route 104	100	State Conservation Property	State of RI
38	Stillwater – Fishermen’s Access	Log Road	4	State Conservation Property	State of RI
39	Stillwater Reservoir Dam	320 Farnum Pike	16	State Conservation Property	State of RI
40	Stillwater/Mountindale Reservoir	Pleasant View Ave/Rte 104/Mountindale Rd.	358.28	State Conservation Property	State of RI
41	Harris Farm	141 Harris Road	38	Farmland Conservation Easement	State Airport Corp.
42	Stillwater Scenic Trail	Farnum Pike/Capron Rd.	12.96	Active Conservation	Lease by Town
43	Deerfield Park	Blackhawk Trail	97.2	Active Conservation/Rec.	Town
44	La Perche Recreation Area	Limerock Road	12.9	Rec Field W/ OS	Town
45	High School/Middle School	Pleasant View Ave.	30.3	Rec Field W/ OS	Town
46	Burgess Field	Douglas Circle	6.22	Conservation/Rec.	Town
47	Mowry Conservation Area	Old forge Road	46	Active Conservation	Town
48	Cascade Brook	Mapleville Road (Pig Road)	27.28	Active Conservation	Town
49	Esmond Park	Farnum Pike@Esmond St.	4.85	Active Conservation	Town
50	Connors Farm Conservation Area	Connors Farm Drive	56.8	Active Conservation	Town

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
51	Mercer Lookout	Wolf Hill Road	24	Active Conservation	Town
52	Georgiaville Dam & Gorge & Islands	Stillwater Road	12.2	Active Conservation	Town
53	Leo Bouchard Conservation Center	5 Waterview Drive	2	Active Conservation	Town
54	Wenscott Conservation Area	Douglas Pike	7.6	Unimproved Conservation	Town
55	Hanson Property	13 Wadsworth Drive	16.42	Unimproved Conservation	Town
56	Summerfield Donation	Between 209 & 223 Ridge Road	28.55	Unimproved Conservation	Town
57	Mendes Field/Town Hall	64 Farnum Pike	6.7	Unimproved Conservation	Town
58	Ridge Road	Between 265 & 275 Ridge Road	22.6	Unimproved Conservation	Town
59	Washington Grove/Appian Way	100 Washington Highway	1.76	Unimproved Conservation	Town
60	Sprague Village	Baldwin Drive	41.2	Subdivision Donations	Town
61	Nipsachuck/Laurelwoods Sub.	19 Laurelwoods Drive	32.1	Subdivision Donation	Town
62	Comet Farms- Clark Road	89 Clark Road	5	Subdivision Donations in Process	Town
63	Sleboda Farm	Whipple Rd. Route 7	61.0	Conservation Easement	Land Trust
64	Whipple Field Conservation Area	Fenwood Avenue	8	Unimproved Conservation	Town
65	Circle Drive Lot	12 Russell Lane	2.3	Unimproved Conservation	Town
66	Rogler Farm/Farnum Pike Lots	39, 40 Rogler Farm Road	5.6	Unimproved Conservation	Town
67	Hilldale/Highview Lots	Redfern, Karen Ann & Forestwood Dr.	24.4	Unimproved Conservation	Town
68	Stillwater/Thurber Blvd. Lot	277 Stillwater	4	Unimproved Conservation	Town
69	Old County School Lot	200 Old County Road	21.5	Unimproved Conservation	Town
70	Wolf Hill- Mountaindale Road	Mountaindale Road/Carlton's Way	13.58	Subdivision Donation in Process	Town
71	Harris Pond	Ryan Court	5.6	Subdivision Donations	Town
72	Willow Field	Willow Road	15	Rec Field W/ OS	Town
73	Mapleville Highlands	Kristen Dr./Colwell Rd.	5.2	Conservation Easement	Town

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
74	Route 44 @ Gloucester Town Line		0.5	unknown	Town
75	Slacks Beach	Greenlake Drive	.6	Town Beach	Town
76	Winsor School Lot	Route 44, Greenville	0.7	School Play Lot	Town
77	Sasso	145, 146 Mann School Road	23.3	Conservation Easement	Land Trust
	TOTAL		2,843		

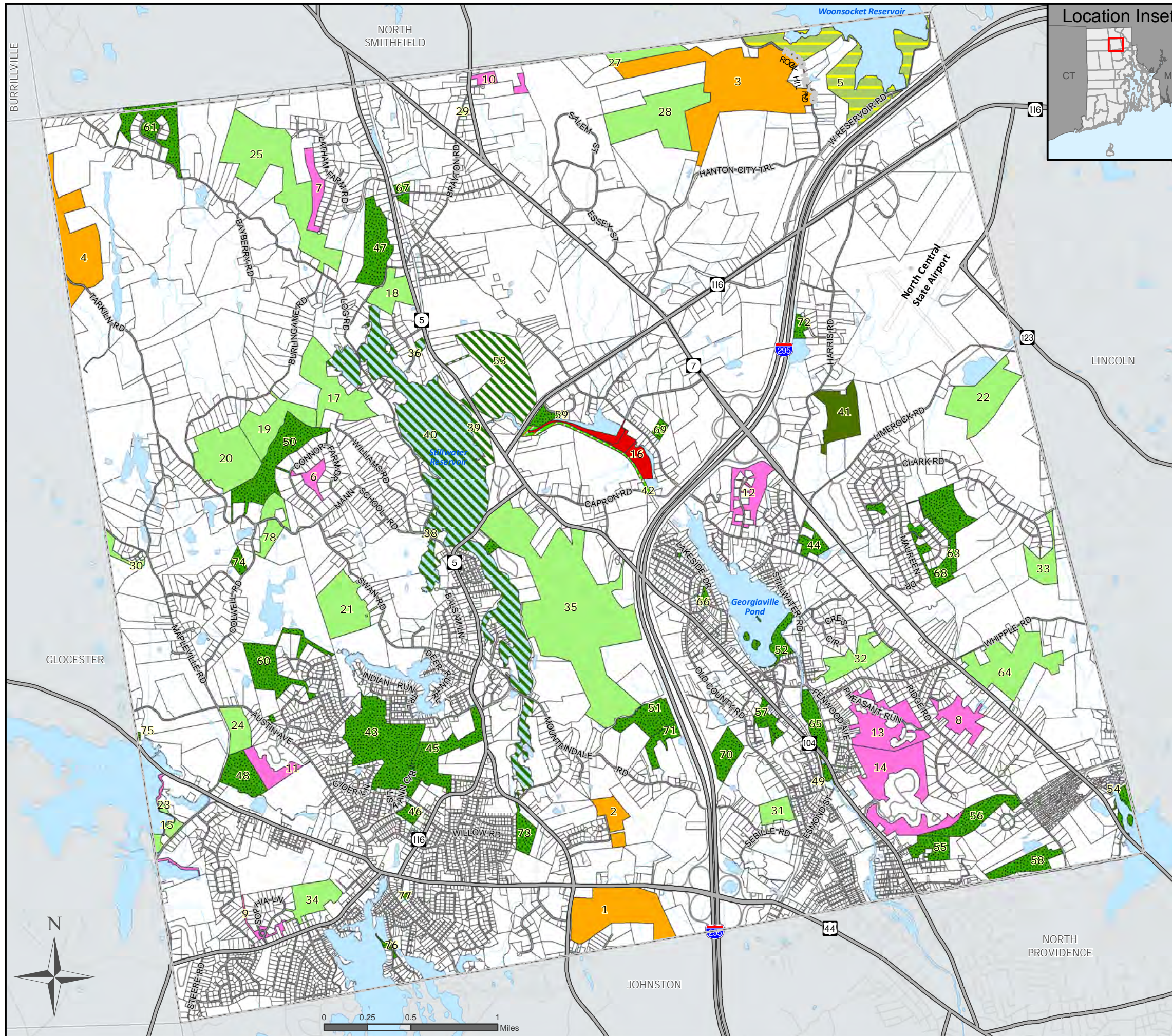












Fig. NR-4 :: CONSERVATION, OPEN SPACE & RECREATION

**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- Ownership ***
-  State of Rhode Island
 -  State Airport Corp.
 -  Town of Smithfield
 -  City of Woonsocket
 -  Smithfield Land Trust
 -  Audubon Society of Rhode Island
 -  Lighthouse Preservation
 -  Home Owners Assoc.
 -  Lease by Town

- | | |
|--|--|
| Features | Boundaries |
|  Highways |  Parcels 2012 |
|  Roads |  RI Municipal |
|  Water |  Other States |
|  Streams | |

* Note: See Table RC-1 for details of Site IDs (1,2,3, etc)
 Source: Smithfield Planning Department, September 2016

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Several of the Town's Conservation areas offer public access for the purpose of low impact recreation (walking, jogging, fishing). These include:

1. Mowry Conservation Area – a 44 acre retreat featuring a lively trout stream, towering hemlocks and pines, a scenic footbridge, picnic tables, a walking trail and the remains of a stone dam.
2. Cascade Brook Conservation Area – a 27 acre property featuring a seasonal brook and small waterfall, immense boulders and rock outcroppings, a walking trail, tall trees and a fireplace chimney from another era.
3. Esmond Park – a 4 acre park featuring an arching bridge, small waterfall, picnic tables, benches, river, cattail marsh, walking path and World War I monuments.
4. Stillwater Scenic Trail – a former railroad bed featuring excellent river and pond views, forest views, rocky slopes and open fields, fishing spots, water birds and songbirds, two dams, and the remains of the old Stillwater Mill.
5. Connors Farm Conservation Area – a 155 acres featuring a walking trail, pond, brook, dams, an old stone bridge, beech groves and rugged glacial ledges.
6. Georgiaville Town Beach, Dam & Gorge – a 92 acre pond surrounded by beach area, boat ramp, fishing, walking trail along a high earthen dam that ends at a spillway and a scenic gorge.
7. Mercer Lookout – a 24 acre property featuring quiet woodland trails, second growth forest, blueberry bushes and a panoramic view of the Providence skyline.

GIS Database

The Town has invested a great deal in the development of its GIS. Moving forward, the Town will continue to add to and improve upon available data. Some proposed additions include:

- An updated Land Use/Land Cover data set.
- Digital Conversion of the Wetlands Inventory data into the Town GIS.
- Update of the database to show changes in landscape.
- Buildable Lands data set (development constraints)
- Headwater Streams mapping and verification
- Provide GIS online for the Town board members and public use.

These new or updated datasets will provide the information necessary to guide development and accomplish future planning efforts.

Natural Hazards

Natural hazards have the potential to impact the natural resources, built environment, property, and people of Smithfield. The goal of this section is to create a safer community by identifying natural hazards and encouraging planning to reduce or eliminate the threats they pose to life and property.

Threats

The Town of Smithfield lies in Providence County, Rhode Island, within the northeastern climate region. National Oceanic and Atmospheric Administration (NOAA) data from 1981-2010 shows that Providence County averages 52.56 inches of precipitation per year, including an average annual snowfall of 46.65

inches. NOAA records also indicate that the average annual temperature for Providence County is 49.2 degrees Fahrenheit. Smithfield has no coastline, but many streams, ponds, wetlands and dams exist within the town.

Flooding

Smithfield contains approximately 380 acres of Federal Emergency Management Agency (FEMA) flood zone, 10.3% of the entire area of Smithfield. This flood zone is generally associated with the rivers within the Town, the Woonasquatucket River and the Stillwater River, and their tributaries. Much of this floodplain is developed and therefore at particular risk due to flooding (See Natural Hazards Map).

The Town's older mills and associated villages such as Esmond, Georgiaville, Stillwater, Spragueville and Greenville were all located close to the river for access to water power and at low elevation, where they are very vulnerable to flooding. Several residential neighborhoods were also developed prior to the adoption of restrictions on construction in floodplains and are also vulnerable. In particular, homes in the vicinity of the Woonasquatucket River in Esmond and Georgiaville have experienced problematic flooding. In March of 2010, heavy rainfall caused flooding in several of these parts of the Town. However, damage was minimal and only a few residents were temporarily displaced by this flood event. The Homestead Mill in Georgiaville, a 125-unit condominium development had minor impacts from the 2010 flood event. A number of residential structures along the River west of Waterman Avenue are located on the edge of the floodplain as well, but none were not seriously impacted.

Flooding along Woonasquatucket River in Geogriaville



Approximately 10 residences located south of Deerfield Park on Douglas Circle and Lisa Ann Circle are on the edge of the floodplain associated with the Stillwater River. No major damage was reported in this area during 2010 flood event. Less than .2% of the Towns housing stock is located within the 100-year Floodplain.

The Rhode Island Department of Environmental Management, Dam Safety Program lists 27 dams in Smithfield. Table NR-5 provides a list of these dams. Their locations are

shown on Figure NR-5: Natural Hazards. Six of these, the Hopkins Pond, Slack Reservoir, Sprague Upper and Lower Reservoir, Stillwater Reservoir and Georgiaville Pond dams, are classified as high hazard dams.

A dam is a High Hazard dam if failure or mis-operation may cause loss of life. Two dams, Hawkins Pond and Stillwater Pond, are listed as "Significant Hazard" dams. Significant hazard means a dam where failure or mis-operation would not be likely to lead to loss of human life but would cause major economic loss, disruption of lifeline facilities or other impacts detrimental to the public's health, safety

or welfare. Examples of such impacts include severing of State or Interstate highways, isolation of residential areas, or damage to other critical infrastructure. The other nineteen dams listed are all Low Hazard dams. Failure or mis-operation of Low Hazard dams would result in no loss of human life and low economic losses.

Two of the dams in Smithfield, Dam #109 Stillwater Pond and Dam # 123, Hawkins dam, have been cited as unsafe.¹ An unsafe dam is a High or significant hazard dam whose condition is such that an unreasonable risk of failure exists. Both these dams have embankments that are in poor condition. In addition, an engineering consultant to RIDEM inspected the Stillwater dam in May of 2010 and forwarded a report to RIDEM in September of 2010. The report indicated that the low level outlet was inoperable, vegetation and inadequate lighting in an adjacent building prevented a complete dam inspection, and vegetation in the spillway discharge channel inhibited flow. RIDEM issued a Notice of Violation (NOV) to the owner (Breakwater Nature Conservancy) in March 2011 for unsafe conditions. The owner did not request a hearing on the NOV and, as of 2011, had made little progress toward resolution. The case was therefore placed by RIDEM on a list of cases requiring action in Superior Court.

Table NR-5: Dams in Smithfield

State ID	Waterbody	Dam Name	Hazard Level
116	Slack Reservoir Brook	Hopkins Pond	High
115	Stillwater River-Tributary	Slack Reservoir	High
120	Stillwater River-Tributary	Sprague Upper Reservoir	High
115	Stillwater River-Tributary	Slack Reservoir	High
120	Stillwater River-Tributary	Sprague Upper Reservoir	High
121	Stillwater River-Tributary	Sprague Lower Reservoir	High
108	Woonasquatucket River	Stillwater Reservoir	High
126	Woonasquatucket River	Georgiaville Pond	High
068	Woonsocket Reservoir #3	Woonsocket Reservoir #3	High
111	Waterman Reservoir/Stillwater River	Waterman Reservoir	High
123	Reaper Brook	Hawkins Pond	Significant
109	Woonasquatucket River	Stillwater Pond	Significant
122	Reaper Brook	Granite Mill Pond	Significant
125	Reaper Brook	Mountindale Reservoir	Low
117	Slack Reservoir Brook	Mowry Pond	Low
112	Stillwater River	Greenville Mill Pond	Low
113	Stillwater River	Knight Mill Pond	Low
114	Stillwater River	Stillwater Mill Pond	Low
435	Stillwater River-Tributary	Connetti Farm Pond	Low
456	Stillwater River-Tributary	Lockwood Farm Pond	Low
520	Stillwater River-Tributary	Adler's Farm Pond #1	Low
096	West River	Gould Pond	Low
110	Woonasquatucket River	Capron Pond	Low

² RIDEM Office of Compliance and Inspection 2015 <http://www.dem.ri.gov/programs/benviron/compinsp/pdf/damrpt15.pdf>

128	Woonasquatucket River	Esmond Mill Upper Pond	Low
129	Woonasquatucket River	Esmond Mill Middle Pond	Low
130	Woonasquatucket River	Esmond Mill Lower Pond	Low
428	Woonasquatucket River-Trib	Comstock Farm Pond	Low
451	Woonasquatucket River-Trib	Connor's Farm Pond	Low
628	Woonasquatucket River-Trib	Goulds	Low
629	Woonasquatucket River-Trib	Wolf Hill Road Pond	Low
142	Harris Brook	Harris Pond	Low
119	Hawkins Brook	Sebille Pond	Low
737	Nine Foot Brook	Jim Evans Road Pond	Low

Source: RIDEM: <http://www.dem.ri.gov/programs/benviron/compinsp/pdf/damlist.pdf>

Dam #123, Hawkins Dam was inspected in 2010 and DEM issued an NOV to the owner in 2011. In 2015, the assumed owner submitted a visual inspection report of the vegetated area of the dam and no unsafe conditions were found. Ownership issues have since hampered the issuance of an NOV for the inoperable low level outlet.

The 2015 Dam Safety Report lists three dams in Smithfield, Hopkins Pond (#116), Sprague Lower Reservoir (#121), and Hawkins Pond (#123), as "orphan" dams because no owner has been identified and notified through the registration process. RIDEM legal counsel attempts to identify owners of orphan dams as time allows.

In addition, there are four dams on the Woonasquatucket River in North Smithfield, up gradient of Smithfield. All four of these dams, Primrose, Mingola, Cesario and Gardiner Farm dams, are classified as low hazard dams, but failure or mis-operation of any one of them would be likely to cause flooding of the Woonasquatucket River in Smithfield.

An Emergency Action Plan (EAP) is required for all High or Significant hazard dams pursuant to R.I.G.L. 46-19-9. An EAP was prepared by the State for the Stillwater Reservoir Dam #108 and the Rhode Island Emergency Management Agency in conjunction with the Town and RIDEM have completed draft EAPs for the Georgiaville Pond Dam (#126), Capron Pond Dam (#110), Mowry Pond Dam (#117), Sprague Upper Reservoir (#120) and the Waterman Reservoir Dam (#111).

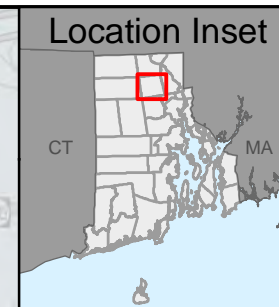
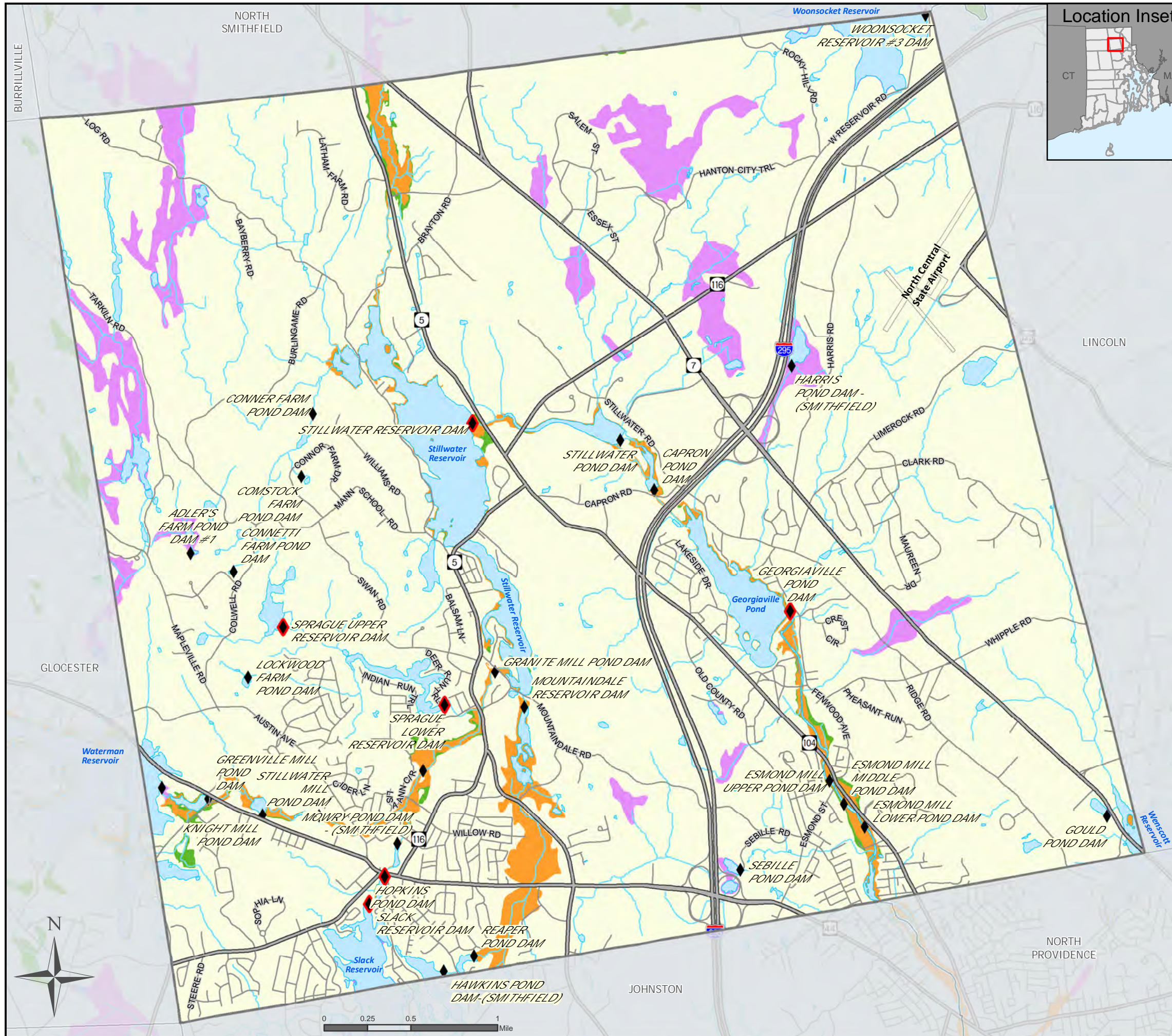


Fig. NR-5 :: NATURAL HAZARDS

**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- Dams with High Hazard Level
- Dams

Flood Hazard Zone

- 'A' Flood Zone
- 'AE' Flood Zone
- 0.2 Pct Annual Chance Flood

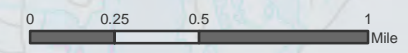
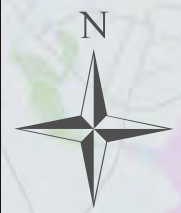
Note: There are no 1% storm events mapped by FEMA for Smithfield

Features

- Highways
- Roads
- Water
- Streams

Boundaries

- Smithfield
- RI Municipal
- Other States



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The Town cooperates with RIDEM and FEMA to prepare for and respond to flooding events. To mitigate adverse impacts of flooding, the Town restricts development within floodplains. Older developments, particularly industrial developments that relied on water power, were often located in floodplain areas and are therefore especially vulnerable to flood impacts. The Town's policy is that all development and redevelopment projects in floodplains must be designed to reduce the potential for flooding, reduce the frequency of damage resulting from flooding events, and reduce the cost of flood damage to the maximum practical extent.

Hurricanes & Tornadoes

Although Smithfield is not a coastal community, hurricanes still pose hazards due to high winds and heavy rainfall. High winds can be particularly damaging to trees, utility lines, and structures. Wind-borne debris presents a hazard to health and safety as well as to property. Heavy rainfall associated with hurricanes can cause flooding. Though relatively rare, tornadoes can also occur in the area and cause damage due to high winds and wind-borne debris.

Hurricanes affect Smithfield almost every year. In 2012, hurricane Sandy left much of the population without electricity. It was several days before power could be fully restored throughout the Town. In 2011, hurricane Irene brought heavy rain and wind gusts up to 71 miles per hour. It caused widespread flooding and numerous power outages. In 2010 Earl brought even more rain, although not as much wind. Most storms cause heavy rainfall, localized flooding and high winds which bring down trees, block roadways and damage power lines.

Most of the electrical and communications transmission facilities in Smithfield are above ground on poles, where they are particularly vulnerable to storm damage. To minimize damages, Smithfield encourages citizens to make storm preparations when hurricane conditions threaten. Smithfield cooperates with State officials and with neighboring towns to warn citizens of impending storms, make preparations for hurricanes, and respond to emergencies during and after hurricanes.

Winter Storms

Winter storms can result in heavy ice and snow accumulation, the weight of which can damage buildings, utility lines, and trees. In extreme cases, this accumulation can even cause buildings to collapse. Often, these storms are accompanied by high winds, which can create hazards similar to those of hurricanes. Winter storms also pose a hazard because they often restrict or prevent travel along roadways. When snow and ice melts, flooding can be a problem. In particular, flooding can be made worse by ice jams, which block natural drainage and occur most often at constrictions along rivers.

The "Blizzard of '78" is perhaps the most memorable example of winter storm damage in Smithfield, but there have been more recent incidents as well. In 1993, a massive spring storm¹ that became known as "the storm of the century*" brought 13 inches of snow to Smithfield in mid-March, bringing the community, the state and most of the eastern seaboard to a standstill. Heavy snow accumulations so late in the season are rare, but the Town typically experiences several significant winter storms each year.

¹ New York Times: March 14, 1993 THE BLIZZARD OF '93: The Overview; STORM PARALYZES EAST COAST; SNOW COVERS SOUTH; 33 KILLED

The Town makes preparations for these winter storms by stockpiling sand and salt and securing personnel and equipment for snow removal. Road and parking surfaces are treated before winter storms and all major roads are kept clear during winter storms for safety and emergency response.

Drought

Drought occurs when there is an extended period of consistently below-average rainfall. This can have negative effects on natural resources, such as vegetation, waterbodies, and wetlands. It can also negatively impact public and private drinking water supplies. Agricultural businesses, golf courses, private lawns, and town sports fields can be damaged by prolonged drought.

Drought has threatened Smithfield as recently as spring of 2012, when below normal rainfall for three successive months caused stream flows to drop near record lows in April.² The year before, in March of 2011³, the lack of winter precipitation threatened water supplies and severe drought appeared imminent. Fortunately, early summer rains alleviated both these drought conditions within the following few months. However, recurrence of drought is inevitable.

To mitigate impacts of drought, the Town Manager and the DPW take an active role in the drought management process and coordinate municipal government efforts during stages of drought preparation, water conservation and water emergencies. The Town has local ordinances to provide guidance and regulations to manage drought at the community level. Municipal officials enforce local regulations/restrictions and state emergency orders, including watering restrictions as needed. The Town also coordinates with the water providers, state officials and other municipalities to ensure that the Water Supply System Management Plans (WSSMPs) properly address drought and emergency preparedness and are incorporated into the Community Comprehensive Plan.

Extreme Temperatures

Extreme heat, often referred to as a “heat wave”, is caused when high atmospheric pressure moves into an area and increases temperature, inhibits winds, and prevents cloud formation - resulting in additional heating from intense sunlight. Periods of extreme high heat typically last two or more days and can have significant effects on human health. Heat stroke and hyperthermia caused by extreme high temperatures can result in death, particularly among the elderly and infirm. Heat waves can also be accompanied by or exacerbate droughts, causing additional hazards as described above. Heat waves can also tax power systems as people run air conditioners which can overload power circuits causing brown outs and/or power failure.

A heat wave, meaning daily maximum temperatures reaching or exceeding 90°F for three days in a row, affected the Town in of July 2010. Surface temperatures approaching 100°F were experienced in Smithfield while Boston, Providence and Philadelphia all saw temperatures in the 100s that broke records.⁴ Health advisories were issued encouraging residents, especially the elderly and the sick, to reduce activity and urging them to find air conditioned spaces wherever possible.

² http://www.wpri.com/dpp/on_air/green_team/taunton-lack-of-rainfall-pushing-southern-new-england-into-a-drought

³ <http://www.ncdc.noaa.gov/sotc/drought/2011/3>

⁴ http://www.nytimes.com/2010/07/07/nyregion/07heat.html?pagewanted=all&_r=0

Extreme cold, often associated with winter storms, also presents a hazard to human health. Hypothermia and frostbite can occur if precautions are not taken to stay warm during periods of extreme cold temperature. Outdoor workers, users of public transportation who must wait outside and lower-income citizens without access to sufficient warm winter clothing or heating fuel are particularly at risk. Damage can occur to roadways and building foundations due to frost heaving. Frozen pipes can cause damage to utility infrastructure and buildings.

The Town experiences a few weeks of extreme cold in most winters and a few weeks of extreme heat in most summers. The Town works with Tri-Town Community Action Agency to make information, heating assistance and related services available to the elderly and to persons in need during very hot and very cold weather. The Town also maintains public buildings that provide climate controlled places for citizens during the day.

Earthquakes

Earthquakes are relatively rare and of minor severity in Rhode Island, but have been known to occur. Typically they cause little to no damage, but can frighten citizens, rattle windows, and shift objects and furnishings. The most recent earthquake that could be felt in Smithfield was a magnitude 4.5 quake that occurred near Hollis Center, ME on October 16th 2012. Effects of the quake were felt throughout New England. The quake caused no damage in Smithfield.

Climate Change

Research shows that climate change will have far-reaching impacts for Rhode Island. Some changes Smithfield should anticipate include:

- **Hotter, drier summers:** Increases in temperature and more frequent days above 100 degrees Fahrenheit can increase the risks of health problems such as heat stroke.
- **Warmer, wetter winters with more rainfall:** While snowfall may decrease, wetter winter storms can cause flooding and potentially damage structures, infrastructure, and dams.
- **Higher intensity storms:** Increased rainfall per storm can cause problems with flooding; intense electrical storms can damage utility lines and trees, cause fires, and pose a health risk; increased wind can damage trees, utility lines, and buildings and increase the damage done by wind-borne debris.
- **More frequent droughts:** As mentioned above, droughts have the potential to negatively impact natural resources, drinking water supplies, and land uses dependent upon healthy vegetation.

It is not likely that there will be significant displacement of residents due to natural hazards as there are relatively few residential structures within flood zones in Smithfield.

Vulnerable Resources

Each of the natural hazards described above affects a different type of area. Resources that are vulnerable to each type of natural hazard are summarized in Table NR-6 below.

Table NR-6: Resources Vulnerable to Natural Hazards

Natural Hazard	Vulnerable Resources
Flooding	Floodplains, dams, older mill buildings, residential areas, storm sewers, sanitary sewers
Hurricanes & Tornadoes	Flood prone areas, Power and communications networks, roads, bridges and dams
Winter Storms	Power, communications and transportation networks
Drought	Water supply system, population, plant and animal communities,
Extreme Temperatures	Elderly, persons with health problems, energy system
Earthquakes	Buildings, structures, utilities
Climate Change	As described above

Hazard Prioritization

Of the hazards described above, flooding is the one most likely to cause the most significant harm in the near term. Therefore the Town’s highest priority should be reducing the potential for flooding, the frequency of flooding, and increasing resilience to flooding events. Flood events are relatively infrequent compared to some other natural hazards listed, but the damage floods can do is much more serious with potential longer term consequences. In addition to flood control and response for weather related flooding, the Town needs to consider in more detail the potential for dam failure on the Woonasquatucket River and must cooperate with State officials to both reduce that potential and to prepare suitable responses to resultant flooding.

Hurricanes are the next most serious hazard, again occurring relatively infrequently, but with a significant potential for adverse impacts. Hurricanes often cause flooding, with the attendant impacts described above, but they also cause road blockages and outages of power and communications networks which can leave parts of the population isolated. The Town needs to be prepared for hurricane events and should encourage improvements in power and communications networks (such as underground systems) that will make them less vulnerable to outages.

Other natural hazards described above are less likely to result in serious harm in Smithfield. The Town has developed effective mechanisms to respond to winter storms, drought, and extreme temperatures. Climate change remains a persistent global problem with causes and impacts that are still not fully understood. The Town needs to continue to evaluate climate change and assess its potential impacts further.

Goals, Policies, and Actions

Our vision for the Town of Smithfield is that the same high quality of life that Smithfield residents enjoy today is preserved for future generations; by protecting the natural environment, maintaining and improving open space resources, preserving land to be kept in its natural state, and by ensuring that future development is sensitive to the Town’s natural resources.

GOAL NR-1

PROTECT, PRESERVE AND RESTORE NATURAL RESOURCES.

Policy NR – 1.1 Require developers to provide additional information on the potential environmental impacts of large scale residential and nonresidential projects for both on and off-site resources and identify all existing on-site contamination.

Action NR – 1.1a Work with federal, state and local watershed and environmental organizations to maintain and improve the quality of all water bodies in Town.

Action NR – 1.1b Institute community service activities to clean up river banks.

Action NR – 1.1c Implement the actions identified in the Town Phase II Stormwater Management Plan.

Action NR – 1.1d Work with the City of Woonsocket and the Towns of Lincoln and North Smithfield to protect the water quality of Woonsocket Reservoir.

Policy NR – 1.2 Protect and restore wetlands and riparian buffers as critical elements of groundwater recharge, wildlife habitat, flood storage and for their recreational value.

Policy NR – 1.3 Maintain and improve the quality of groundwater in Smithfield.

Policy NR – 1.4 Protect Flood Zones from intensive development for the safety and protection of residents and the environment.

Action NR – 1.4a Work with RIDEM and EPA to ensure clean-up of existing contaminated sites.

Action NR – 1.4b Adopt a “Contaminated Groundwater Overlay District” to prevent the use of groundwater in the vicinity of the Davis Liquid Waste Superfund Site.

GOAL NR-2

ENSURE NEW LAND DEVELOPMENTS ARE DESIGNED TO PROTECT ENVIRONMENT OF THEIR SURROUNDINGS.

Policy NR – 2.1 Promote land development which is sympathetic to the surrounding environment.

Action NR – 2.1a Amend local ordinances and regulations to ensure that development designs are more sensitive to the surrounding environment, conserve woodlands, preserve stone walls, and work with existing topography.

GOAL NR-3

MAINTAIN AIR QUALITY IN SMITHFIELD THAT IS ABOVE NATIONAL AMBIENT AIR QUALITY STANDARDS.

Policy NR – 3.1 Maintain and improve the existing high level of air quality within the Town’s boundaries by preventing open burning of leaves and debris, requiring dust control at construction sites, and ensuring the free flow of motor vehicle traffic.

Action NR – 3.1a Adopt an access management ordinance aimed at reducing traffic congestion on all arterial roadways.

Policy NR – 3.2 Maintain an awareness of potential air quality problems in adjacent communities which could impact Smithfield’s air quality such as emissions from the State Central Landfill and or airborne dust from construction projects and gravel banks.

GOAL NR-4

PRESERVE BIOLOGICAL DIVERSITY

Policy NR – 4.1 Preserve large contiguous tracts of open space for wildlife habitat. Acquisitions, Easements and Conservation Development Techniques shall be used.

Action NR – 4.1a Identify and pursue options for habitat preservation, preferably larger parcels, and those adjacent to other publicly-owned land.

Action NR – 4.1b Amend zoning designation of large contiguous parcels to match the level of development constraint.

Policy NR – 4.2 Ensure that unique natural areas are afforded some form of protection from future development.

Policy NR – 4.3 Protect and manage State and Federally listed rare species habitat areas and ecologically significant natural communities.

Policy NR – 4.4 Coordinate with the Rhode Island Natural Heritage Program on a regular basis to determine sensitive habitat locations.

Action NR – 4.4a

Pursue funding to develop and implement habitat management plans for Town owned properties

Policy NR – 4.4 Preserve existing active farmland, particularly the orchards, and forestland, as important contributors to the maintenance of the overall quality of life in Smithfield.

Policy NR – 4.5 Encourage continued farm participation in the Farm, Forest and Open Space Act program.

GOAL NR-5

ENSURE THAT THE TOWN HAS STRONG REGULATIONS IN PLACE TO PRESERVE NATURAL RESOURCES THAT ARE ACCESSIBLE TO THE PUBLIC.

Policy NR – 5.1 Utilize the Zoning Ordinance and Subdivision Regulations to protect environmentally sensitive land and conserve community forest resources within developments and to provide recreational land where needed.

Action NR – 5.1a Acquire/protect lands which protect wetlands’ biological and hydrological integrity, provide opportunities for public access and usage, and enhance the proper management of wetland systems.

Action NR – 5.1b Make judicious use of the special provisions of the Town’s Land Development Regulations enabling the Town to reserve suitable open space for recreation and conservation opportunities in larger subdivisions.

Action NR – 5.1c Refine provisions within the Zoning Ordinance and Land Development Regulations to encourage conservation development and to protect woodlands and other natural resources.

GOAL NR-6

REVERSE THE LOCAL DECLINE IN FARMING BY REDUCING ECONOMIC PRESSURES FOR FARMLAND CONVERSION AND BY ASSISTING LOCAL FARMERS TO SUSTAIN AND IMPROVE AGRICULTURAL OPERATIONS.

Action NR – 6.1a Reduce pressure for farmland conversion by developing a voluntary farm, forest, and open space tax incentive program.

Action NR – 6.1b Work with farmers, the RI Department of Environmental Management (RIDEM) and the U.S. Natural Resource Conservation Service (NRCS) to develop and implement programs that will improve yields, enhance farm revenues, and promote the practice of agriculture and silviculture in Smithfield.

Policy NR – 6.2 Support programs for local sourcing of food such as Rhody Fresh, Community Supported Agriculture (CSA), and local farmers markets by purchasing food locally, sharing publicity, permitting the use of town facilities for agricultural fairs, festivals and farmer’s markets when appropriate, and sponsoring and participating in events promoting local agriculture.

Policy NR – 6.3 Continue to promote participation in the Farm Land Preservation Act as a measure to encourage the continued maintenance of the historic landscape of Smithfield.

GOAL NR-7

PRESERVE EXISTING ACTIVE FARMLAND, PARTICULARLY THE ORCHARDS, AND FORESTLAND, AS IMPORTANT CONTRIBUTORS TO THE MAINTENANCE OF THE OVERALL QUALITY OF LIFE IN SMITHFIELD.

Policy NR-7.1 Encourage continued participation by local farmers in the Farm, Forest and Open Space Act use value assessment program. (Property assessment is based on current undeveloped value of the land rather than the highest and best use).

Action NR-7.1a Educate property owners eligible for the Farm, Forest and Open Space Act use value assessment program about the programs availability, and the existence of others as appropriate.

Action NR-7.1b Pursue other options for farmland and forestland preservation as appropriate, including, but not limited to: conservation developments on farmland; farmland preservation

fund (land trust); purchase of farmland in fee simple (purchase and leaseback to farmer, purchase and resale with covenants); purchase of development rights or conservation easements (Town purchases development rights to a parcel, difference between agricultural value and appraised commercial value); donation of farmland.

GOAL NR-8

ENSURE THAT THE TOWN IS RESILIENT AND RESISTANT TO ADVERSE IMPACTS OF FLOODING AND OTHER NATURAL HAZARDS.

Policy NR-8.1: Ensure that new critical public facilities shall not be sited in areas that are subject to flooding or other natural hazards unless there is no practicable alternative.

Policy NR-8.2: Ensure that all critical public facilities are capable of functioning effectively to protect public health and safety in hazard and disaster situations.

Action NR 8.2a Formally adopt the Town's draft Hazard Mitigation Plan.

Action NR 8.2b Implement procedures recommended by the Hazard Mitigation Plan to ensure that the Town can adequately respond to natural disasters, protect infrastructure from natural hazards, and make adaptations to reduce vulnerability to natural disasters.

Action NR 8.2c Work to reduce global climate change through implementation of sustainable transportation options, utilization of renewable energy sources, requiring "green" building techniques and implementing water and energy conservation measures.

CULTURAL RESOURCES

Each phase of Smithfield’s past development has left physical evidence of itself in historic districts, buildings, structures, sites and objects. Smithfield is a beautiful and historic Town whose old farms and villages contribute significantly to a special character and vitality. This rich heritage should be recognized and appreciated for its present-day value. Smithfield’s historic resources are important to an understanding of local history and to the continued character of the community. Therefore, they deserve special consideration in planning and future development.

Smithfield’s historical settlement patterns have been shaped by the Town’s accessibility to Providence, transportation routes and patterns, geography and topography. Glaciation sculpted the surface of the community, rounding the tops of the hills and dumping massive volumes of unstratified till and boulders into the spaces between them. Glacial melt waters carved out the valley of the Woonasquatucket River and established the watersheds of its many tributaries throughout the Town. The rivers and streams became transportation routes for the native peoples who used them to gain access to the rugged lands and fertile floodplains of the interior.

Smithfield History

Early Occupation

Native American hunters and gatherers were present in the area now known as Smithfield for thousands of years before the arrival of European settlers in the 18th century. Native Americans hunted and fished, gathered fruits and nuts, and probably planted crops in clearings in the forests. At the time of the first European settlement, Smithfield was common ground shared by the Narragansetts, whose center of activity was in southern Rhode Island, the Wampanogs, whose territory included eastern Rhode Island and southeastern Massachusetts, and the Nipmuc who lived primarily in northern Rhode Island and Central Massachusetts.

The native peoples referred to a large part of the area now called Smithfield as Wayonkeke or Wionkheige meaning “place at the bend”¹ and referring to the hill which now retains that name along with the surrounding meadow and marshes. Other key landscape features referenced in the language of native peoples are found in early property deeds for the area and include the following:²

- **Mattateconit** – “at the great spring (or distant spring)” referring to the meadows and swamp in the area now known as Mattity near the North Smithfield / Smithfield line;
- **Nipsachuk** – “the waters near the hill” referring to the large hill and associated wetlands in the northwestern part of Smithfield and southwestern part of North Smithfield;
- **Pamechipsk** – “crosswise rocks; transverse rocks (rocks across the trail)” referring to the ridge of land serving as the eastern boundary of Wayonkeke now known as Wolf Hill;
- **Toyasqut** – “place of the bridge” referring to the vicinity of Tarkiln Brook near the Smithfield / North Smithfield border;

¹ American Indian Place Names in Rhode Island Past and Present: Rootsweb
<http://www.rootsweb.ancestry.com/~rigenweb/IndianPlaceNames9.html#W>

² Placenames are taken from Nebiker, *Imprint of European Man Upon North Smithfield, RI 1974* while translations are taken from *American Indian Placenames in Rhode Island: Past and Present*
<http://www.rootsweb.ancestry.com/~rigenweb/IndianPlaceNames6.html#P>

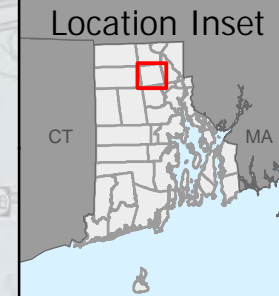
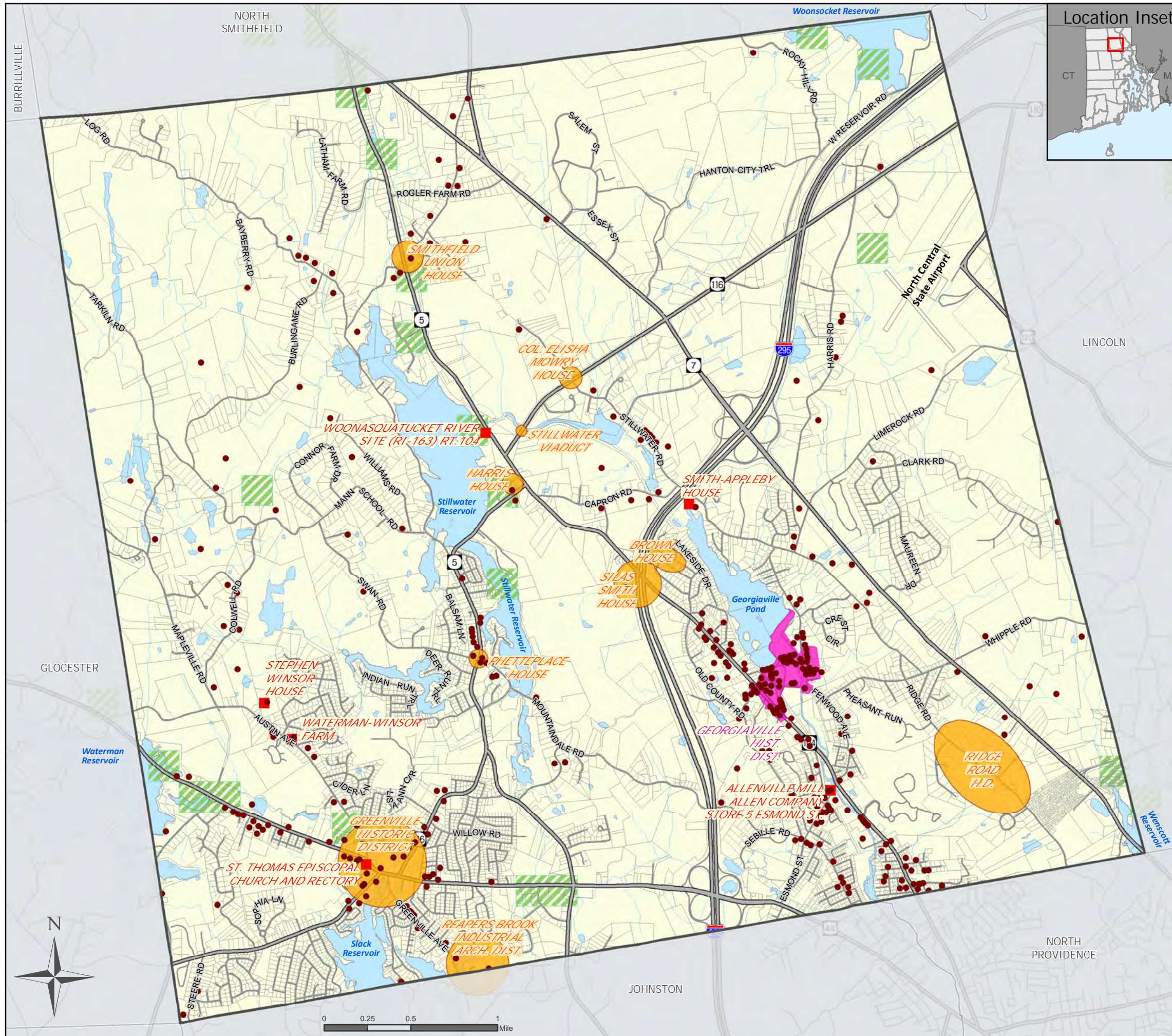


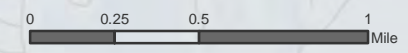
Fig. CR-1 :: HISTORICAL and CULTURAL RESOURCES

**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

- Map Legend*
- Historic and Cultural Resources*
- Town's Historic Inventory of "Properties for Consideration" (count 374)
 - Historic Buildings, Historic Sites (RIHPC, 1995)
 - ⊕ National Register Historic District (RIHPC, 1995)
 - ⊕ National Historic District Candidate (RIHPC, 1992)
 - ▨ Archeological Sites (masked to 20-acre cell)

- | | |
|-----------------|-------------------|
| <i>Features</i> | <i>Boundaries</i> |
| ⚡ Highways | ⊕ Smithfield |
| ⚡ Roads | ⊕ RI Municipal |
| 💧 Water | ⊕ Other States |
| 🌊 Streams | |

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- **Wasquadomesit** – “at the edge of the hill” or “place of walnut trees” and referring to the hill now called Sayles Hill, the associated spring, and the headwaters of what is now known as Crook Fall Brook;
- **Woonasquatucket** – “at the head of the tidal river” a reference to the major river flowing through Smithfield and the extensive tidal marshes once located near its outlet in Providence.

Within the ancestral territories of the Narragansett, Nipmuc and Wampanoag Tribes, including the area now known as the Town of Smithfield, there are landscapes and ceremonial stone structures which are of particular cultural significance to the Tribes.¹ For thousands of years before the emigration of Europeans, Tribal ancestors used these sacred stone structures and landscapes to sustain their Tribal people’s reliance on the earth and to maintain balance and harmony of spirit. These stone structures and landscapes remain of significant spiritual and cultural value today. They are referred to in federal parlance as “Traditional Cultural Properties” and are protected by federal legislation and regulations. Examples include prominent geographic features as well as stone structures such as standing stones (e.g. “Manitou Stones”), propped boulders, stone piles, cairns, effigies, walls, platforms, shelters, and other similar features.²

During and following Colonial occupation of Rhode Island, many cultural and ceremonial practices, including ceremonial use of stones, stone structures, and stone landscapes were suppressed. Many of the stone landscapes and structures considered sacred to the Tribes are now located on privately owned lands where their continued existence is threatened by land alteration and development activities. Absent guidance from Tribal experts, important stone landscapes and structures are easily mistaken for random products of glaciations, or misinterpreted as the results of early agricultural activities. The Tribes have made some efforts to inventory stone landscapes and stone structures, but their resources and their access to private land for that purpose are very limited.

Federal laws, policies and regulations, including Section 106 of the National Historic Preservation Act (NHPA) as amended, 36 CFR Part 800; the American Indian Religious Freedom Act, Executive Order 13007, and other related laws, rules regulations and executive orders support the rights of federally recognized Indian Tribes to continue their religious practices within the territory of the United States. While these rules and regulations protecting Tribal Traditional Cultural Properties (TCPs) apply primarily to undertakings of the federal government, they have encouraged some states and other jurisdictions to also extend similar protections to TCPs for state and local actions. Smithfield is currently in the process of considering appropriate measures to protect TCPs at the local level and is evaluating alternative approaches to providing such protection.

European Settlement

The Town of Smithfield has a long and varied history of European settlement. For nearly a century after initial European settlement in Rhode Island, Smithfield was an outlying area settled by a small number of pioneering farmers. Then, in the nineteenth century, villages were created as the Town’s rivers became the scene of major industrial development. By the early years of the twentieth century, Smithfield was an important textile-producing town, also known for its apple orchards. In the second half of the twentieth century, the Town became part of the suburban ring surrounding Providence.

¹ United South and Eastern Tribes Inc. 2007:037 http://www.usetinc.org/media/2007037._633818646391178750.pdf

² Gage, Mary: A Guide to New England Stone Structures – January 2006

Seventeenth and Eighteenth Century

The original European settlement of what is now Smithfield was made possible by several purchases of lands from the native occupants in the mid seventeenth century. In 1636, Roger Williams had acquired land use rights to the land that became Providence from the Narragansett sachems Canonicus and Miantonomi. In 1661, Thomas Olney Sr., John Brown, and Roger Williams sought to extend English settlement beyond Providence and purchased the land between Wayunckeke (Wionkhiege) and Pamechipsk (Wolf Hill), from the Nipmuc sachem Wuttiashant. In March of 1661, it was ordered “that three men shall be chosen by the Town to go and view the lands about Wayunkeake to see where it will be convenient to go and place a town”.³ Thomas Olney Sr., William Carpenter and John Browne were chosen for this task. From then on, most of the land now known as Smithfield was administered as part of the Town of Providence. Land grants were given to citizens willing to move out into the new territory and establish farms.

Subsequently, in 1666, Edward Inman and John Mowry purchased 2,000 acres of land from William Minnion of Punkapoag, chief sachem of the Massachusetts Indians. In May 1669, Inman purchased another 500 acres from William Minnion in a deed ratified by King Philip, Joseph Minnion's widow, Keapam and William Minnion's uncle, Jeffrey. The deeds covered a part of what is now Smithfield and most of North Smithfield. Subsequent deeds show that 3,500 acres in North Smithfield and Smithfield became a part of what was known as the Inman Plantation or Inman's Purchase at that time.

In September 1666, Edward Inman sold his house and eleven acres of land in Providence to Stephen Paine of Rehoboth, Mass., establishing his family at Wasquadomesit on what is now known as Sayles Hill in North Smithfield. By April 1668 Nathaniel Mowry, Thomas Walling, and John Steere had become partners of Edward Inman and John Mowry. In 1672 James Blackmar, William Buckman, and John Buckman of Rehoboth also bought land in the Purchase from Edward Inman and John Mowry. From 1666 to 1682 the major land purchases in most of North Smithfield were controlled by Edward Inman and his associates. The boundary between the Inman lands and the Providence lands was unclear and remained unsettled until after King Philips War.

During the last decades of the seventeenth century, a trickle of newcomers continued to move westward and establish farmsteads in Smithfield, the Wilkinsons, Waternam, Winsor and Hawkins families among them. Typically, early farms included a residence, barn, sheds, privies, corn cribs, and a few other outbuildings. The stones that lay in abundance over the land were used to erect stone fences as the land was cleared for farming. Many of these stone walls still run through Smithfield's second and third-growth woodlands today. Although some minor industries were established at an early date, for well over a century after the area's initial settlement, the majority of its inhabitants earned a livelihood from the land, raising cattle, growing garden vegetables, and corn, and establishing orchards for growing fruit, particularly apples for which the area would eventually become well known.

None of Smithfield's seventeenth and early eighteenth-century houses has survived in its original form. The Mowry House on Old Forge road along with the Arnold Farm House and the Smith Appleby House may be the earliest examples. Several later eighteenth-century residences survive; most of which are former farmhouses located on small country roads through the town. Later Federal-era farmhouses continued the early building tradition and have much in common with their colonial predecessors.

³ Root, James Pierce, *Steere Genealogy: A Record of the Descendents of John Steer*, Riverside Press 1890

Dispersed throughout the Town, they are evidence that agriculture continued to be an important economic activity in Smithfield well into the nineteenth century.

Nineteenth Century

In the nineteenth-century, the Industrial Revolution brought major changes to the visual character of Smithfield. The Town's landscape was transformed from a large rural area, dotted by farming homesteads and small mills, to a cluster of manufacturing villages, each centered on a new textile factory located at a water power site. The Woonasquatucket River, and the Stillwater River, its major tributary in the southwestern part of town, became the focus of intensive industrial developments in the form of "Factory Villages", establishing Smithfield's basic settlement pattern.

In addition to the mills and the mill housing, the early nineteenth-century saw the construction of the first buildings in Smithfield to be used solely for education. In 1826, a school was erected in the Mann District in the northwest section of Town, and in 1832 a schoolhouse was built on Harris Road near the Douglas Pike. Both of these survive, though heavily altered, as residences.

Many of Smithfield's nineteenth-century houses survive in well-preserved condition and provide important insight into the Town's development, testifying to the growing importance of industrialism. A few early mill houses survive. Among the most interesting are the c. 1813 stone houses on Stillwater Road in Georgiaville.

During the second half of the nineteenth-century, the most dramatic change in Smithfield was the great growth of the villages, especially Georgiaville and Greenville. New stores, banks, post offices, schools, churches, and other institutions served the needs of the villagers and gave form and identity to the villages.

Most of Smithfield's important and interesting buildings were erected at this time. While many of these were plain structures, meant to provide basic shelter, others were built to reflect popular architectural styles. One interesting structure is the octagonal residence at 108 Farnum Pike in Georgiaville. Although it is altered by modern composition siding, it is a rare example of a then-popular building type. Furthermore, Greek Revival style commercial and public buildings, dominant between about 1830 and 1860, were constructed in the villages, the areas of largest population growth during this period.

In the late nineteenth-century, the most sophisticated houses in Smithfield were those built for the mill owners and leading merchants. Two outstanding examples are located in Greenville; a fine Italianate house at 93 Austin Avenue, and the Queen Anne style Richard Waterhouse house at 649 Putnam Pike, then the most elaborate residence in Town.

Many of Smithfield's ponds and reservoirs were created during the nineteenth century in response to manufacturers' needs for a reliable source of water to power the textile mills. The largest impoundments were built along the Woonasquatucket and include Stillwater Reservoir and Stillwater Pond. Waterman Reservoir, Slack Reservoir, and Hawkins Pond, in the southwestern corner of town, were created in the early nineteenth century to store water for textile mill operations. Woonsocket Reservoir Number 3, in the northeastern corner of town, and extending into North Smithfield, was constructed in the late nineteenth century and is an important source of water for the city of Woonsocket.

Twentieth Century

At the beginning of the twentieth century; Smithfield was a quiet and economically healthy Town. Georgiaville and Greenville continued to prosper, and new municipal buildings - the present Town Hall (1939), The Irving S. Cook Elementary School, (1925), the William Winsor Memorial School (1930), and two new fire stations were built in these villages.

The development of the automobile and the rapid growth of the motoring public since the 1940's played a large role in the twentieth-century suburban development of the Town. New residential building has consisted primarily of detached single-family ranch, split level, and Cape Cod houses on moderately-sized lots in large, single-use tracts. In the 1940's and 1950's, most suburban development occurred in the southern part of Town, near Esmond, Georgiaville, and Greenville. In the 1970's, after the construction of Route I-295 brought new access, development started to shift toward the Limerock and Bryant College areas. Newer residential development also included some multi-family residences and condominiums, particularly in the southwest corner of Town and near the Stillwater Reservoir. The process of suburbanization continued until most of the open spaces between mill villages were at least partially filled by development. Despite the rapid pace of development, the stony hilltops and the northwestern part of the Town still remain sparsely settled.

The process of suburbanization has affected commercial, educational, and industrial construction as well. Strip commercial development has been characteristic of retail development and is concentrated along the major highways, especially Douglas, Farnum and Putnam Pikes. Commercial and educational centers were also built, such as the Apple Valley Mall the Bryant College campus, and the Crossings at Smithfield. New industries were located in flatter, more open areas, along Farnum Pike and especially at the industrial park in the north central part of Town.

Existing Historic Resources

The Rhode Island Historic Preservation and Heritage Commission (RIHPHC) completed a Preliminary Survey of historical properties in Smithfield in 1987 to identify properties potentially eligible for listing on the National Register of Historic Places. Since that time, the Historic Preservation Commission has been completing a more comprehensive evaluation of known historic properties in the Town for the Smithfield Historic Inventory. Other lists of historically significant properties are found in additional sources, including the National and State Register of Historic Places, RIHPHC records, and Historical Society files.

The RIHPHC Report was intended primarily for informational purposes. It contains a listing of sites including historic structures, municipal properties, parks, historic districts, houses of worship, and cemeteries. National Register and State Register sites are listed in the Inventory as are other properties that may be eligible for nomination to the National Register or which may be considered for local historic zoning.

National Register of Historic Places

The National Register of Historic Places includes the State's most important historic places, and is the nation's official list of significant historic properties worthy of preservation. The benefits of being on the National Register include official recognition of the property's importance by the federal and state governments; eligibility to apply for federal planning and restoration grants when funds are available;

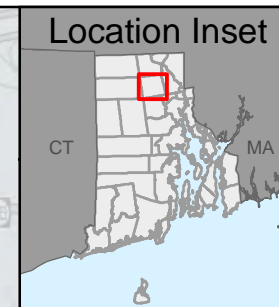
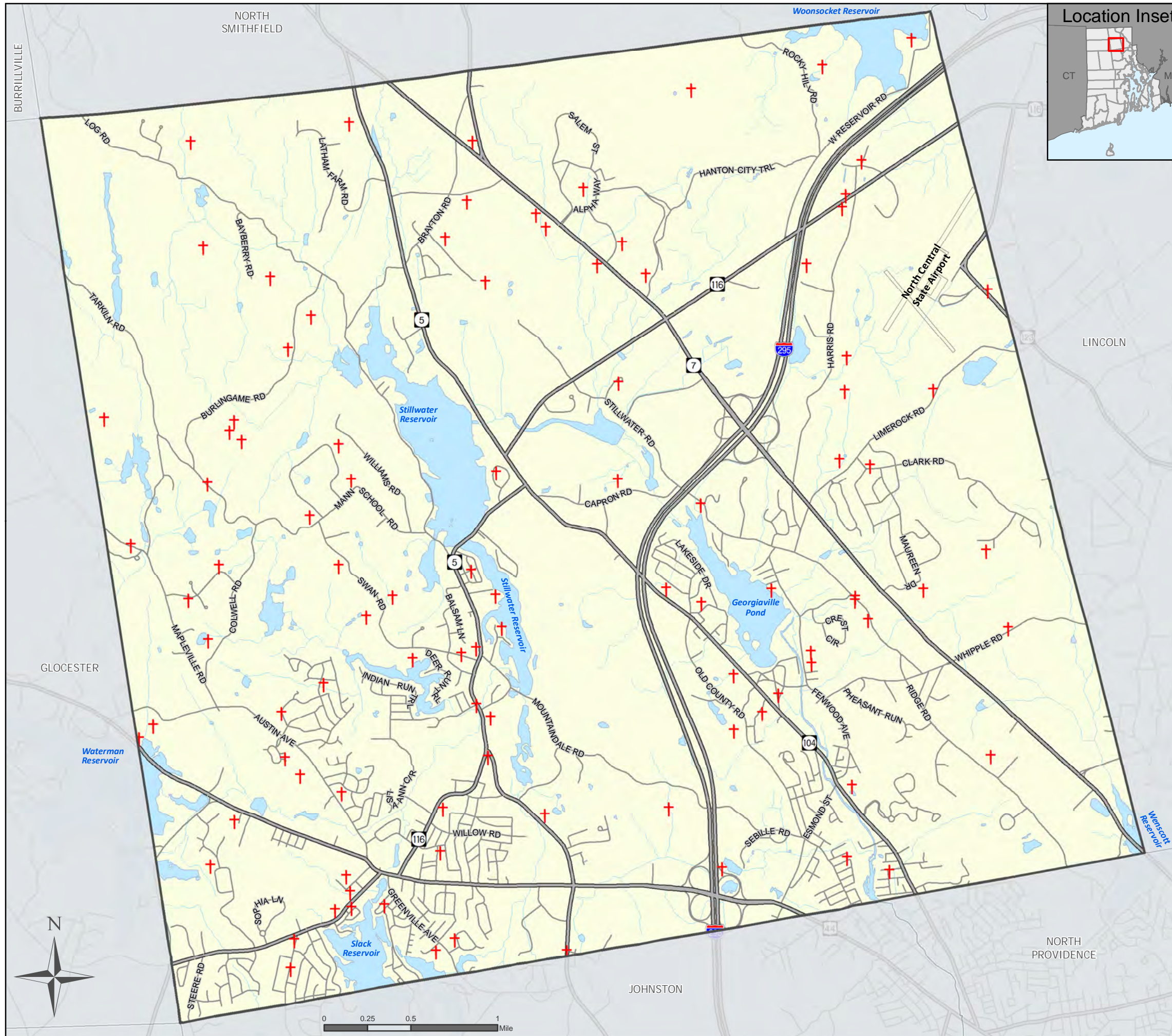


Fig. CR-2 :: CEMETERIES

TOWN OF SMITHFIELD RHODE ISLAND Comprehensive Plan

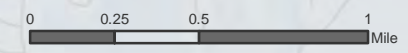


Map Legend

Historic and Cultural Resources

- + Cemeteries (courtesy RIGIS, 2012 and Smithfield Planning Dept, 2014)

Features	Boundaries
Highways	Smithfield
Roads	RI Municipal
Water	Other States
Streams	



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eligibility for federal investment tax credits for certified substantial rehabilitations of income-producing properties; and protection from the adverse effects of State or Federally funded or licensed projects through a review and assessment program. Listing on the Register does not require the owner to preserve or maintain the property. Unless an owner applies for and receives special Federal or State benefits, an owner can do anything with the property which is permitted by local Ordinances.

Several sites and districts in Smithfield are included on the National Register of Historic Places:¹

- Allenville Mill Storehouse, 1813, 5 Esmond Street;
- Georgiaville Historic District, 1813 et seq., bounded roughly by Farnum Pike, Stillwater Road, Cross Street and Whipple Avenue;
- Waterman - Winsor Farm, 79 Austin Avenue;
- St. Thomas Episcopal Church and Rectory, 1851 et seq., Putnam Pike and Smith Avenue, Greenville;
- Woonasquatucket River Archaeological site, 578 Farnum Pike;
- Stephen Winsor House, Mid-19th century, 93 Austin Avenue;
- Smith Appleby Farm, 1713 et seq., Pole 67, Stillwater Road;
- Smithfield Exchange Bank/Resolved Waterman Tavern Ell, 1822, 599 Putnam Pike;
- Angell-Ballou House. 1800, 49 Ridge Road and,
- Ira B. Sweet House 38 Esmond Street.

RIHPHC has also prepared a list of properties which may be eligible for listing on the National Register or the State Register. These properties along with others proposed by SHPC require additional research and documentation to determine whether they fall within the National Register guidelines. They are shown in Table CR-1.

Archaeological Sites

Archaeological sites contain information about the State's pre-history beginning with the first arrival of human settlers between 10,000 and 12,000 years ago and extending through the periods of European exploration, colonization and settlement, to 19th century industrialization.

The RIHPHC has identified 21 archaeological sites in Smithfield which may be eligible for listing on the National Register. The general locations of these sites are shown on Figure 5-5. Archaeological investigations at these sites have revealed evidence of stone tool manufacturing and hunting activities in Smithfield first occurring sometime between 2500 and 1000 BC.

¹ Historical and Architectural Resources of Smithfield, Rhode Island: Rhode Island Historical Preservation Commission, 1992

Table CR-1: Sites Potentially Eligible for Listing on the National or State Register of Historic Places

	District/Structure/Site	Address
1.	Richard Waterman House, c. 1900	Pole 187, Putnam Pike, Greenville
2.	Ballou-Phetaplace House	Pleasant View Avenue
3.	Daniel Winsor House, Redwood Farm c. 1739-49	107 Austin Avenue
4.	Captain Andrew Waterman/Jesse Foster House, pre-1750	Pole 57, Austin Avenue
5.	Stephen Steere House, 1825-50	Pole 17, Capron Road
6.	Tucker-Steere-Colwell House, 1815	Pole 77, Colwell Road
8.	Silas Smith House, early 19th century	Pole 125, Farnum Pike
9.	Harris House, 1841	Pole 24, Harris Avenue
10.	Mowry House, 1701 et seq.	5 John Mowry Road
11.	Col. Elisha Mowry House, 1759	Pole 113, John Mowry Road
12.	Asahel Angell House, 1780	Pole 2, Limerock Road
13.	Daniel Angell House, Mid-19th century	Pole 9, Limerock Road
14.	Ebenezer Stephens House, c. 1801	185 Old County Road
15.	Joseph Farnum-Brown House, c 1770	243 Old County Road
16.	Steere-Harris House, c. 1760	Pole 113, Pleasant View Avenue
17.	Hopkins Farm, early 19th century	Pole 9, Branch Pike
18.	Mathewson House, early 19th century	35 Steere Road
19.	Evans House, 1805	Pole 2, Tarkiln Road
20.	Thomas Waterman-Capt. Steere Farm, 1810	30 West Greenville Road
21.	Windy Brow Farm	81Williams Road
22.	Greenville Common	Putnam Pike
23.	Arnold Farm House	130 Whipple Road
24.	Sprague Farm, early 19 th century	659 Putnam Pike

John H. Chaffee Blackstone River Valley National Heritage Corridor (JHCBRVNHC)

Smithfield is one of twenty four communities in the corridor which totals over 400,000 acres. This region extends from Worcester Massachusetts’s Blackstone River to Narragansett Bay, Rhode Island. It was established by the United States Congress in 1986 for the purpose of "preserving and interpreting for the educational and inspirational benefit of the present and future generations the unique and significant contributions to our national heritage of certain historic and cultural lands, waterways and structures" within this area. Since 2011, the JHCBRVNHC has not been under a federal commission. It is currently run by a non-profit commission that still receives federal funding. This 501 (c) (3) nonprofit raises funds for and assists in carrying out the work of the Commission. By leveraging public funds with private dollars, Blackstone Heritage Corridor, Inc. enables the Corridor to take on larger, more by far reaching projects and to achieve greater results.

In 2015, the John H. Chaffee Blackstone River Valley National Heritage Corridor became a National Park. The National Park Service (NPS) is presently conducting a management program for the new National Park, including working with the states and municipalities. Other initiatives of note include the effort to complete the Blackstone River Bikeway, and to secure funds and awareness for the preservation of historic structures complementing the Park’s creation.

Unlike other National Parks, the Federal government owns and manages only a few parcels in the National Park. The NPS instead is working in partnership with the state governments of Rhode Island and Massachusetts, local municipalities, businesses, nonprofit historical and environmental organizations, educational institutions, many private citizens, and the Corridor Commission to protect the Valley's special identity and prepare for its future.

Heritage Landscapes

In 2010, RIHPHC, in association with the then Blackstone River Valley National Heritage Corridor Commission, prepared the *Smithfield Reconnaissance Report*² a reconnaissance report on heritage landscapes within the Town of Smithfield. Heritage landscapes are special places created by human interaction with the natural environment that help define the character of a community and reflect its past. They are dynamic and evolving; they reflect the region's history and provide a sense of place; they include the natural ecology that influenced land use patterns; and they often have scenic qualities. The inventory team worked with Smithfield residents to compile a list of the town's heritage landscapes. They listed 52 landscape features for analysis. Then, in a series of visits and workshops, they assessed the value of each landscape and identified preservation issues relative to each one.

The landscapes identified represent a range of scales and types of resources from individual properties to an entire mill village. Several include areas that have multiple layers. For example a mill village that is considered a heritage landscape may also include specific features that are individually recognized as heritage landscapes. Such layering shows the complexity and interdependence that are characteristic of most heritage landscapes.

The Report identified seven areas in Smithfield as "Priority Heritage Landscapes" including:

- **Austin Avenue Agricultural Area** – a collection of contiguous farms surrounding Austin Avenue that evoke the agrarian heritage of Smithfield.
- **Whipple Road Agricultural Area** – large fields, stone walls, and historic cemetery associated with the former Arnold Farm, one of last remaining agricultural areas left in Smithfield.
- **Camp Shepard** – 125 acres of property on Colwell Road, including the 23.4 acre Upper Sprague Reservoir, owned and used for summer day camp by the Greater Providence YMCA.
- **Captain Elisha Steere Farm** – a farm in the southwest corner of Smithfield, between West Greenville Rd. and Waterman Reservoir, owned by the same family for over 200 years.
- **Esmond Village** – Originally Allenville, then Enfield, then Esmond, an early mill village on the Woonasquatucket River in the southeast part of Smithfield.
- **George Washington Grove** – 16 acres of wooded land and former CCC picnic area overlooking the Woonasquatucket River next to Stillwater Park that is held by RIDOT as surplus land.
- **Greenville Village** – The largest of Smithfield's mill villages and a civic and institutional center.
- **Nipsachuck Battle Area** – Roughly 8,000 acres of property in Smithfield and North Smithfield including Nipsachuck Swamp, scene of a battle in King Philip's War (1675-76).

Each of these priority landscapes is highly valued, contributes to community character and is not permanently protected or preserved. Participants in the inventory process felt that preservation of these heritage landscapes is particularly important for the future of the community. The Inventory Report provides specific recommendations for each area. Many of these landscapes also include

² RI Historic Preservation and Heritage Commission et. Al. November, 2010

districts, sites, buildings, structures, and objects that are listed on, or eligible for listing on, the National Register of Historic Places. Historic and cultural resource values are discussed further in the “Cultural Resources” Element of this Comprehensive Plan.

The 52 landscapes identified as being of importance to the character of the community are listed in the Appendix of the Report. The team identified seven key issues of regional importance in the preservation of cultural resources and community character that are represented by the 52 sites. The resources associated with these regional issues include the following:

- Agricultural Landscapes
- Burial Grounds
- Civic and Institutional Properties
- Lakes, Ponds and Reservoirs
- Local Scenic Roads
- Mill Villages
- Stone Walls

The Report provides a series of recommendations addressing each of the Priority Heritage Landscapes and key issues listed above. Recommendations range from more detailed inventory of the resources identified to specific funding mechanisms for preservation of heritage landscapes in Smithfield. It is the intention of the Town to proceed with implementation of these recommendations and to continue the process of addressing these issues and protecting the Town’s heritage landscapes.

The effectiveness of preservation activities may be gauged by the inclusiveness of the resource inventory and the extent to which historic districts, buildings and sites are protected from deterioration, demolition and unsympathetic renovation. Preservation activities in Smithfield have primarily been directed by the Historic Preservation Commission, individuals, the State HPC and the Smithfield Historical Society.

The Smithfield Historical Society is a non-profit organization established in the 1930’s and has a membership of around 120 +/- . Its primary activities revolve around the upkeep of the Smith-Appleby Homestead, as well as educational programs and activities primarily developed around the homestead.

The Smithfield Historic Preservation Society is another non-profit established in January of 2006 and has been active in preservation work within the community, particularly the preservation and restoration of the Waterman Tavern in Greenville.

The Smithfield Historic Preservation Commission was formed in 2009 by Chapter 46 of the Town Code. According to the Code, the Commission has the following powers and duties:

- A. Establish criteria for evaluating historical, architectural or cultural sites, buildings, places, landmarks or areas to determine their historic value in terms of the national, state or local importance;
- B. Conduct and maintain a comprehensive inventory of historic resources within the boundaries of the Town of Smithfield known as the Smithfield Historic Inventory, and publicize and periodically update the inventory. Properties listed on the inventory are recorded on official zoning records with an “HI”

(for historic inventory designation). This designation does not change or modify the underlying zoning classification;

- C. Maintain the Smithfield Register of Historic Places. This official register is compiled of buildings, structures, sites and objects which are included on the Smithfield Historic Inventory and which are identified by the Commission as having historic significance worthy of recognition and protection by the Town of Smithfield. The Commission, where possible, encourages and assists efforts by owners to maintain, rehabilitate, and preserve these properties;
- D. Review nominations to the Smithfield Register of Historic Places according to criteria and standards which the Commission adopts as part of its rules;
- E. Review proposals to demolish historic structures as defined herein;
- F. Participate in, promote and conduct public information, educational and interpretive programs pertaining to Smithfield's historic resources;
- G. Establish liaison support, communication and cooperation with federal, state, and other local government entities which will further historic preservation Policies, including public education within the town of Smithfield;
- H. Advise the Town Council and the Town's Boards, Commissions and officials on matters of Smithfield history and historic preservation;
- I. Perform other related functions assigned to the Commission by the Town Council;
- J. Review nominations of Smithfield properties to the State and National Registers of Historic Places.

The Commission has successfully acted to stop the burning and/or demolition of historic buildings by establishing a Town ordinance prohibiting demolition without prior review and by working with the Planning Department, Building and Zoning to identify historic properties for protection. The Smithfield HPC has adopted the list of properties identified by RIHPHC and is now in the process of evaluating these properties, and other potential historic districts, buildings, structures, sites and objects in the Town to complete the Historic Inventory. As noted above, resources that are included in the Inventory will be marked on the Town Assessor's plat maps as HI. Any proposed projects with a potential to affect HI resources will be reviewed by the Commission. The Commission is also developing procedures for the review of these properties to encourage project proponents to incorporate measures to protect and enhance cultural resources within the project.

Goals, Policies, and Actions

GOAL CR-1

EDUCATE THE CITIZENS OF SMITHFIELD ABOUT THE IMPORTANCE OF CULTURAL RESOURCES.

Policy CR-1.1a Provide support through funding for public education on historic and cultural resources, including, but not limited to, activities such as workshops, forums, historic house tours, walking tours of the historic villages and information packets on Town history.

Action CR-1.1a Create educational opportunities for Town citizens to learn about the history of the community and issues affecting cultural resources in the Town.

Action CR-1.1b Expand educational efforts and resources committed to teaching about local history in the Town's schools, such as establishing a special curricula and providing teacher training.

Action CR-1.1c Create an historic resource webpage on the Town's web site to illustrate and describe historic and cultural resources of the Town.

GOAL CR-2

PRESERVE AND RESTORE SMITHFIELD'S HISTORIC AND ARCHAEOLOGICAL DISTRICTS, SITES, BUILDINGS, STRUCTURES, DOCUMENTS AND OBJECTS.

Action CR-2.1a Identify, protect, and restore Smithfield's historic districts sites, buildings and structures, to promote and encourage the donation and preservation of historic documents, maps, objects and artifacts as representations of the Town's cultural heritage.

Action CR-2.1b Complete the on-going inventory of historic properties in the community and complete the designation of properties identified as historic on Town plat maps.

Action CR-2.1c Identify known archaeological sites on a Town base map in a generalized manner, i.e., twenty-acre radius around one or more sites so as not to pinpoint a particular site. Maintain this map as a resource in the Planning Department to let property owners know locations which may have archaeological sensitivity.

Action CR-2.1d Establish and implement the necessary land use regulations to provide local protection for the Town's historic sites, buildings, structures and objects.

Action CR-2.1e Evaluate review thresholds and procedures for review of proposed alterations to designated historical properties.

Action CR-2.1f Evaluate local historic district zoning for Esmond/Georgiaville and Greenville Village.

Action CR-2.1g Assess requiring applicants for Town permits for projects with the potential to affect designated historic properties to evaluate the impacts of the proposed projects on cultural resources and to minimize adverse impacts to the historic values of the properties.

Action CR-2.1h Study amending the Zoning and Subdivision Regulations to enhance preservation of designated historical and cultural places by incorporating architectural and aesthetic controls in keeping with the Secretary of the Department of the Interior's Standards for the Treatment of Historic Properties.

Policy CR-2.2 Consider adopting a tax credit program to encourage the preservation and maintenance of historic structures listed on the Smithfield Historic Inventory, State or National Register including barns and other agricultural outbuildings.

Action CR-2.2a Evaluate creating a separate and secure, controlled use archival area in order to foster better preservation of important documents and artifacts.

Action CR–2.2b Expand the Town’s knowledge and documentation of historical and archaeological sites and structures.

Policy CR-2.3 Promote and support research to further the understanding of the history of Smithfield and to establish and document the significance of cultural resources on public and private properties in the Town.

Policy CR- 2.4 Ensure the appropriate maintenance of historic cemeteries in the Town.

Policy CR-2.5 Continue the historic cemetery maintenance program.

Policy CR–2.6 Promote inter-office and inter-agency coordination and cooperation in historical preservation activities.

Action CR-2.6a Pursue Certified Local Government (CLG) status to permit the Town to secure preservation grants and loans to carry out preservation activities needed to protect historical resources.

Action CR-2.6b Coordinate with the Smithfield Historic Preservation Commission on all projects that may affect designated historic properties.

Action CR-2.6c Work with the RIHPHC to review those sites considered potentially eligible for listing on the National Register of Historic Places and encourage the owners to nominate the properties and have them listed on the Register.

Policy CR-2.7 Continue to foster cooperation between the various preservation groups in Town including the Historic Preservation Commission, Smithfield Historic Preservation Society and the Smithfield Historical Society.

GOAL CR-3

PRESERVE AND ENHANCE PUBLIC ACCESS TO PUBLICLY OWNED CULTURAL RESOURCES.

Action CR-3.1a Apply the Historic Review Process along with the Town’s Zoning Ordinance and Subdivision Regulations to Town projects, Land Trust acquisitions and Town properties to preserve and enhance the historic character of the community.

Action CR-3.1b Work with the Land Trust, Conservation Commission, and Historical Society to develop programs that will preserve and enhance public access to publicly owned historic properties in Smithfield.

RECREATION, CONSERVATION, AND OPEN SPACE

Introduction

This element is prepared in order to guide the implementation of programs to serve present community needs and provide for future needs, and to ensure that the Town of Smithfield is eligible for participation in future recreation, conservation, and open space funding programs.

This recreation, conservation, and open space element follows guidelines set forth by the State as well as standards for local Recreation, Conservation, and Open Space Plans. It includes an inventory of recreational resources, open space areas, and recorded access to such resources and areas. It also contains an analysis of forecasted needs and policies for the management and protection of such resources and areas. Policies and implementation techniques are also identified for inclusion in the implementation program element.

Previous studies prepared by and for the Town have been incorporated into this document. These studies include the original Smithfield Open Space Plan prepared in 1986 by Everett Associates, the Recreation, Conservation and Open Space Plan prepared in 1988 by the Smithfield Conservation Commission, a 1990 Open Space and Recreation telephone survey by Albert Veri & Associates, and the Recreation, Conservation and Open Space element of the 2001 Smithfield Comprehensive Plan and its 2006 update.

Addressed in this element are:

- Planning Context - Historical overview, socioeconomic factors, climate, topography, form of government, population, and growth and development patterns; role of outdoor recreation in the Town's social and economic life; public and private agencies which fund and administer local recreation and open space resources; the significance of open space to the welfare and character of the Town; and designation of planning districts.
- Resource Inventory and assessment - Inventory and assessment of existing recreational facilities and resources; assessment of public and private land and water resources representing potential for providing significant outdoor recreation or open space opportunities; unique natural areas and open space of special value requiring protection; and open space which supports community conservation and development Policies.
- Issues and needs assessment – Examination of the demand for recreational activities, analysis of the Town's need for new or expanded recreation facilities, maintenance of existing facilities and equipment, improved access, new or expanded open space, needs associated with different age groups in the community, and community standards for recreation and open space.
- Goals, Policies and Strategies - Goals, Policies and strategies for addressing the needs of the community.
- Action program - Program of specific actions to be undertaken by the community to attain fulfillment of needs through capital and non-capital means.

Responsible Local Agencies

Under the provisions of Chapter 4 of the Rhode Island General Laws of 1956, as amended, the Town of Smithfield is a public body empowered to receive and expend Federal, State, and local funds and to contract with the State of Rhode Island, Department of Environmental Management, for the purpose of receiving funds under Chapter 174 of the Public Laws of 1964 in acquiring land for conservation and recreation purposes.

Also, under the provisions of Chapter 4 of the Rhode Island General Laws of 1956, as amended, Section 32-4-8 states that the Town may deal directly with the Federal Government or any department or agency thereof for the acquisition of land for conservation and recreation purposes.

The Smithfield Planning Board has been delegated, with the permission of the Smithfield Town Council, as the Town Agency designated to prepare the Recreation, Conservation and Open Space element of the Comprehensive Plan. Preparation and maintenance of the Plan is the responsibility of the Planning Board. In addition, other local agencies and officials such as the Town Council, the Conservation Commission, the Land Trust, the Recreation Department, the School Department, Department of Public Works, and the Planning Department actively participate in the Plan.

The Smithfield Municipal Land Trust was established in 1999 and was provided by the State legislature and Town Council with the authority to acquire, hold and manage:

- Open space lands
- Agricultural lands
- Groundwater recharge areas
- Freshwater marshes and watersheds
- Wildlife habitats
- Land providing access to or views of lakes and ponds
- Land providing significant cultural or historical value
- Land for future passive or active public recreational use

All interests, or titles, to real property acquired are held in the name of the Smithfield Land Trust, preserving the land in perpetuity.

The Land Trust identifies its mission as: “To preserve and protect open space; wetlands; water bodies; ground and surface water resources; farmland; historical or cultural places of interest; scenic views; unusual, exceptional, or exemplary natural habitats; to provide opportunities for research and education on natural resources on land trust held properties; and to secure for the Town the goals and Policies set forth within the Comprehensive Plan.”

The Land Trust’s goals include the following:

- To protect significant open spaces through the acquisition of conservation and agricultural easements, acquiring title, and serving as a recipient of donations of real property.
- To work in partnership with other land protection organizations to preserve open space in Smithfield.
- To provide responsible stewardship of land trust holdings.

- To educate and inform landowners and the general public about the benefits of land use preservation and land conservation.
- To encourage volunteer participation and support of trust activities and projects.
- To establish an educational program to foster an understanding and appreciation of the mission of the Smithfield Land Trust.

In addition to the Land Trust, Smithfield also has a very active Conservation Commission. The Smithfield Conservation Commission's stated purpose (September 2011) is "to acquire, protect, and conserve open space, land and natural resources for the people of the town of Smithfield and future generations. It shall protect watershed resources and preserve natural aesthetic areas within the Town, and run educational projects to accomplish these goals and foster the value of these irreplaceable resources in our town."

The Conservation Commission conducts research and study, advocates for sound environmental and conservation programs and policies, and advises the community on issues that affect the Town and its future well-being. The Commission is an active agent in the municipal planning process as it relates to the Town's growth in accordance with the Town's vision as embodied in the Comprehensive Plan. It is interested in all matters that affect the environmental health and condition of the Town, its rural character and values, the collective quality of life, responsible economic growth and development, and housing patterns, as well as the protection and preservation of the Town's natural resources and aesthetic treasures.

Maintenance and Amendment

The Town of Smithfield maintains a Capital Improvement Program (CIP), prepared by the Finance Department and approved by the Town Council, to assist in preparing the annual budget. The CIP includes a recreation element that has capital improvement projects. Through the process of the program, the Town will be able to maintain and amend, as necessary, the Recreation, Conservation and Open Space element of the Comprehensive Plan.

With respect to long-range plans beyond the period covered by the Capital Improvement Program, the Planning Board will maintain and, as necessary, make recommendations for amendments to this Plan to the Smithfield Town Council. These recommendations shall be based on population trends and implementation programs, and will take into consideration changing planning concepts.

Planning Context

Physical and Social Characteristics

Smithfield is located about eleven miles northwest of Providence. It is bounded on the south by North Providence and Johnston, on the west by Gloucester, on the north by North Smithfield and on the east by Lincoln. The town includes the villages of Esmond, Georgiaville, Stillwater, Greenville, and Spragueville. At the time of the 2010 US Census, the population of Smithfield was 21,430, with a population density of 805.6 persons per square mile. The town contains 26.7 square miles of land and 1.1 square miles of inland water, for a total area of 27.8 square miles.

The Town is shown on the Georgiaville, Pawtucket, North Scituate, and Providence 7.5 Minute U.S.G.S Topographic Quadrangles. Aerial photographs of the Town are available from the Rhode Island Geographic Information System (RIGIS).

History

The town of Smithfield was established in 1636 as part of Providence. In 1730 / 1731, Smithfield was set off from Providence and chartered as a Town. At that time, it consisted of what are now Smithfield, North Smithfield, Lincoln, Central Falls, and the west bank of Woonsocket. It was settled chiefly by Quakers and the first influx of settlers turned to farming as their chief means of livelihood. The potential of the Woonasquatucket River through the Town was, for the most part, neglected. However, around 1812, textile mills were constructed in sections of Smithfield. With the increase in the number of mills and their dependence upon the Woonasquatucket River for power and water supply, it became evident that a more reliable source was necessary, particularly during the dry seasons of the year. Thus, the Woonasquatucket River Company was formed and its main Policy was to construct reservoirs to insure an adequate supply of water throughout the year.

The first reservoir to be built was Slack's Reservoir in 1832, which covered 153 acres near the Village of Greenville. Five years later, the Sprague Lower Reservoir, consisting of some 70 acres was built followed by Sprague Upper Reservoir in 1836. The Waterman Reservoir, the largest of them all, consisting of about 318 acres, was completed in 1838. In the 1850's the Georgiaville Pond was expanded from about 50 acres to 135 acres. In the 1890's the 270 acre Stillwater Reservoir (Stump Pond) was added.

With this complex system of reservoirs which could provide a steady flow of water, large mills were built in Georgiaville, Stillwater and Greenville, and this became a determining factor in transforming Smithfield from a farming community.

Eventually, when this system of water bodies was no longer needed for industrial purposes, it was sold off to the Town, State, and private groups. These reservoirs have been a magnet area for residential development and are a very valuable recreation and conservation resource for the Town.

Since World War II, Smithfield, as well as other communities located on the periphery of the Providence Metropolitan Area, has felt the impact of migration of people to the suburbs. Smithfield is within easy access of Providence, Pawtucket and Woonsocket. The Town has witnessed the change from an agricultural community to a suburban residential/industrial community with numerous undeveloped areas. With these changes there have been increased demands for community services.

Population Distribution and Density

Population in Smithfield has steadily increased from 1960, when the US Census documented 9,442 residents, to 2010, when the US Census documented 21,430 residents. The typical growth pattern has been for development to radiate out of core village areas into their immediate surrounding areas, and then toward the rural northern sections of town. Growth has extended out from long-established village areas along existing roads to rural areas, which funnel traffic back to their historic commercial and residential center. These development patterns follow the historic division of the Town into two distinct communities, divided by the naturally occurring Wolf Hill Ridge and by the man-made divisions of high-voltage transmission lines and Interstate Route 295.

Growth and its Effect on Outdoor Activity

As with residents of most other suburban and semi-rural communities, the people of Smithfield appreciate the feeling of open space. Historically, increased growth has threatened this feeling and has brought forth complaints from residents about the loss of their natural heritage. In response to these concerns, the Town has focused on protecting open space by regulatory and growth management strategies and by acquisition of conservation land. The town has also made efforts to preserve agricultural activities in Smithfield.

Resource Inventory and Assessment

Conservation Lands

The Town’s Conservation Commission and Land Trust have been very active in acquiring easements and/or title to conservation/open space lands. As of 2013, the Town has exceeded its goal of a minimum of 15% of Smithfield’s total area protected as conservation lands. Moving forward, management and protection of these lands will be of prime importance. In 2013, the Smithfield Planning Department updated the inventory of open space in the Town, finding a total of approximately 2,843 acres. Based on the 2010 population estimate of 21,430, this represents approximately 0.13 acres of open space land per person. The open space acreage represents approximately 16 percent of the Town’s total land area of 17,699 acres (including wetlands and water bodies). Table RC-1 lists conservation and recreation properties in Smithfield and Figure NR-4 Conservation Open Space & Recreation map shows the location of these resources.

Table RC-1: Conservation/ Open Space & Recreation Properties in Smithfield

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
1	Powder Mill Ledges	Sanderson Road	87	Audubon Property	Audubon Property
2	Unnamed	Ledgemont Drive	20	Audubon Property	Audubon Property
3	Unnamed Hanton City/Rocky Hill Rd	Hanton City Trail	174	Audubon Property	Audubon Property
4	Unnamed Tarkiln Road	181 Tarkiln Road	70.2	Audubon Property	Audubon Property
5	Woonsocket Reservoir	Rocky Hill & West Reservoir Rd	107.76	Other Private Open Space	City of Woonsocket
6	Connors Farm Assoc.	Connors Farm Drive	10	Other Private Open Space	HO Assoc.
7	Wionkhedge Homeowners Assoc.	Burlingame Road	16	Other Private Open Space	HO Assoc.
8	Deerhill Homeowners Assoc.	Deerhill Drive	24.4	Other Private Open Space	HO Assoc.
9	Greenville Terrace	Sophia Lane	5	Other Private Open Space	HO Assoc.
10	Mowry Farms	Mowry Farms Lane	10.3	Conservation Development	HO Assoc.

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
11	Village in The Woods	Aspen Lane/Austin Ave.	26.5	Other Private Open Space	HO Assoc.
12	Sleepy Acres	Tristan Court	25.5	Subdivision Donations in Process	HO Assoc.
13	Pheasant Run	Pheasant Run	50.8	Other Private Open Space	HO Assoc.
14	Village at Summerfield	Cambridge Circle	50.8	Other Private Open Space	HO Assoc.
15	Waterman Reservoir	44-6, 44-76	6.9	Other Private Open Space	HO Assoc.
16	Stillwater Pond/dam	300 Stillwater Road	25.5	Land Development Donation	Lighthouse Preservation
17	Judson Farm	Williams Road	55.6	Active Conservation	Land Trust
18	Mowry Homestead & Farm	Old Forge Road	24.8	Active Conservation	Land Trust
19	Shipman Purchase	Burlingame Road	42.6	Smithfield Land Trust	Land Trust
20	Hyde Tree Farm	Mann School Road	60	Conservation Easement	Land Trust
21	Matteo Farm	Swan Road	51.29	Farmland Conservation	Land Trust
22	Blackbird Farm	Limerock Road	57	Ag & Forestland Conservation	Land Trust
23	Booker/Steere Farm	West Greenville Road	5	Farmland Conservation	Land Trust
24	Steere Orchard	Austin Avenue	20.46	Farmland Easement	Land Trust
25	Burlingame Estates	Latham Farm Road	123	Unimproved Conservation	Land Trust
27	Hanton City	Hanton City Trail	15.5	Unimproved Conservation	Land Trust
28	Hanton City	Hanton City Trail	80.4	Unimproved Conservation	Land Trust
29	Cavanagh	251 Log Road	11.35	Conservation Easement	Land Trust
30	Pavao	Evans Road	6.49	Subdivision Donation	Land Trust
31	Dangelo	Old County Road	15.4	Farmland Conservation Easement	Land Trust
32	High Ridge/Gallo	Ridge Road/Crest Circle	30.85	Active Conservation	Land Trust
33	Angel Farm/Clark Road	Clark Road/Victoria Drive	8.8	Subdivision Donation	Land Trust
34	Sophia Lane	Smith Ave/Sophia Lane	28.33	Subdivision Donation	Land Trust

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
35	Wolf Hill Forest Preserve	Mountaindale Road/Carlton's Way	291	Smithfield Land Trust	Land Trust
36	Mowry Fly Fishing Area	6 Industrial Dr. So.	3.01	State Conservation Property	State of RI
37	Washington Grove	Route 116/Route 104	100	State Conservation Property	State of RI
38	Stillwater – Fishermen’s Access	Log Road	4	State Conservation Property	State of RI
39	Stillwater Reservoir Dam	320 Farnum Pike	16	State Conservation Property	State of RI
40	Stillwater/Mountaindale Reservoir	Pleasant View Ave/Rte. 104/Mountaindale Rd.	358.28	State Conservation Property	State of RI
41	Harris Farm	141 Harris Road	38	Farmland Conservation Easement	State Airport Corp.
42	Stillwater Scenic Trail	Farnum Pike/Capron Rd.	12.96	Active Conservation	Lease by Town
43	Deerfield Park	Blackhawk Trail	97.2	Active Conservation/Rec.	Town
44	La Perche Recreation Area	Limerock Road	12.9	Rec Field W/ OS	Town
45	High School/Middle School	Pleasant View Ave.	30.3	Rec Field W/ OS	Town
46	Burgess Field	Douglas Circle	6.22	Conservation/Rec.	Town
47	Mowry Conservation Area	Old forge Road	46	Active Conservation	Town
48	Cascade Brook	Mapleville Road (Pig Road)	27.28	Active Conservation	Town
49	Esmond Park	Farnum Pike@Esmond St.	4.85	Active Conservation	Town
50	Connors Farm Conservation Area	Connors Farm Drive	56.8	Active Conservation	Town
51	Mercer Lookout	Wolf Hill Road	24	Active Conservation	Town
52	Georgiaville Dam & Gorge & Islands	Stillwater Road	12.2	Active Conservation	Town
53	Leo Bouchard Conservation Center	5 Waterview Drive	2	Active Conservation	Town
54	Wenscott Conservation Area	Douglas Pike	7.6	Unimproved Conservation	Town
55	Hanson Property	13 Wadsworth Drive	16.42	Unimproved Conservation	Town
56	Summerfield Donation	Between 209 & 223 Ridge Road	28.55	Unimproved Conservation	Town

Smithfield Comprehensive Community Plan

Map ID	Name of Property	Location	Area (acres)	Type of Property	Ownership
57	Mendes Field/Town Hall	64 Farnum Pike	6.7	Unimproved Conservation	Town
58	Ridge Road	Between 265 & 275 Ridge Road	22.6	Unimproved Conservation	Town
59	Washington Grove/Appian Way	100 Washington Highway	1.76	Unimproved Conservation	Town
60	Sprague Village	Baldwin Drive	41.2	Subdivision Donations	Town
61	Nipsachuck/Laurelwoods Sub.	19 Laurelwoods Drive	32.1	Subdivision Donation	Town
63	Comet Farms- Clark Road	89 Clark Road	5	Subdivision Donations in Process	Town
64	Sleboda Farm	Whipple Rd. Route 7.	61.0	Conservation Easement	Land Trust
65	Whipple Field Conservation Area	Fenwood Avenue	8	Unimproved Conservation	Town
66	Circle Drive Lot	12 Russell Lane	2.3	Unimproved Conservation	Town
67	Rogler Farm/Farnum Pike Lots	39, 40 Rogler Farm Road	5.6	Unimproved Conservation	Town
68	Hilldale/Highview Lots	Redfern, Karen Ann & Forestwood Dr.	24.4	Unimproved Conservation	Town
69	Stillwater/Thurber Blvd. Lot	277 Stillwater	4	Unimproved Conservation	Town
70	Old County School Lot	200 Old County Road	21.5	Unimproved Conservation	Town
71	Wolf Hill- Mountaindale Road	Mountaindale Road/Carlton's Way	13.58	Subdivision Donation in Process	Town
72	Harris Pond	Ryan Court	5.6	Subdivision Donations	Town
73	Willow Field	Willow Road	15	Rec Field W/ OS	Town
74	Mapleville Highlands	Kristen Dr./Colwell Rd.	5.2	Conservation Easement	Town
75	Route 44 @ Gloucester Town Line		0.5	unknown	Town
76	Slacks Beach	Greenlake Drive	.6	Town Beach	Town
77	Winsor School Lot	Route 44, Greenville	0.7	School Play Lot	Town
78	Sasso	145, 146 Mann School Road	23.3	Conservation Easement	Land Trust
	TOTAL		2,843		

Source: 2012 Data from Smithfield Town Planner

Open space parcels in Smithfield range in size from 2 acres to 270 acres, and have various owners including the Town of Smithfield, the Smithfield Land Trust, the State of Rhode Island, the Audubon Society, the Town of Lincoln, the City of Woonsocket, Lighthouse Preservation, the State Airport Corporation, and homeowners and homeowners' associations. Some parcels are also leased by the Town of Smithfield.

Some of the most significant open space lands in the Town include the following:

Stillwater Reservoir and Vicinity

The group of open space parcels at Stillwater Reservoir and in its vicinity contain approximately 440 acres of land and water. These lots are owned by various groups, including the State of Rhode Island, the Town of Smithfield, and Lighthouse Preservation. Included within this area are Stillwater Reservoir, its dam and fishing access, George Washington Picnic Grove, and the Stillwater Scenic Trail. The Stillwater Trail is an open, flat lane with excellent river and pond views on one side, forest views, rocky slopes and open fields on the other; fishing spots; water birds and songbirds; two dams; remains of the old Stillwater Mill; and a plaque honoring World War I soldiers.

Wolf Hill

Wolf Hill forms a natural division in the Town, running roughly north-south, adjacent to Interstate 295. The Wolf Hill open space parcels contain approximately 282 acres of land, and create a valuable resource in the Town. In addition to conservation land, this area includes the Mercer Lookout Trail, described as having quiet woodland trails, second growth forest, a chimney and fireplace remaining from a Boy Scout cabin, blueberry bushes, and a panoramic view of the Providence skyline.

Connors Farm

The parcels that comprise Connors Farm include approximately 156 acres of open space. This conservation area contains a 2-mile hiking trail that provides access to, a pond, brook, dams, an old stone bridge, beech groves, and rugged glacial ledges.

Georgiaville Pond

Open space land around Georgiaville Pond includes the dam, gorge, and islands and contains approximately 12 acres of land. This long-time fixture of Smithfield recreational facilities includes a boat ramp, beach, fishing, high dam, spillway, gorge, huge old trees, picnic tables, benches, and restroom facilities.

Cascade Brook

Dedicated to Ken Weber, this approximately 27 acre property includes a seasonal brook and small waterfall, immense boulders and rock outcroppings, a walking trail, tall trees, and a four fireplace chimney remaining from another era.

Esmond Park

Esmond Park is a small, approximately 5-acre, but important open space parcel in eastern Smithfield. It features an arching bridge, small waterfall, picnic tables, benches, river, cattail marsh, walking path, and World War I monuments

Audubon Properties

The Audubon Society of Rhode Island (ASRI) owns four parcels of open space land in Smithfield, totaling approximately 351 acres. 120 acres this land forms Powder Mill Ledges, which includes hiking trails that

provide access to fine stands of pines, a pond, and a brook. The ASRI headquarters is also located at Powder Mill Ledges.

Recreation Programs

The Town of Smithfield provides a wide range of recreational activities and facilities for its citizens. The Smithfield Recreation Department works directly with the Department of Public Works, Smithfield School Department and youth sports organizations to maintain Town recreation facilities and provide a range of activities for youth and adult residents. The Department provides recreational programming, Town-wide event planning, facility development and youth employment opportunities. Affiliated youth sports organizations include:

- Figure Skating Club
- Girls Softball League
- Girls Basketball League
- High School Hockey Booster Club
- Junior Raiders Hockey
- Smithfield Little League
- NRI/Smithfield Lacrosse
- NRI Vikings Youth Hockey Association
- Vikings Youth Football & Cheerleading
- Youth Basketball Association
- Youth Soccer Association

Current programs sponsored by the Recreational Department in association with these leagues and organizations include the following:

Summer Recreation Programs

Recreation Playground Program – The summer youth activity program serves children ages 6 to 12. The program is held Monday thru Friday for 7 weeks starting at the end of June. The program is held at Gallagher Middle School each day from 8:00 am to 3:00pm. Programming includes field trips, games, arts & crafts and various athletic activities. A registration fee is charged for this program.

Tennis Lessons – Tennis lessons are available for boys, girls and adults Monday thru Friday starting at the end of June for 7 weeks. All ages and levels of ability may participate. A registration fee is charged for this program.

Adult Men's and Women's Tennis League – There is a tennis league for men and women over the age of 18 who are residents of the Town of Smithfield. Players are grouped according to ability. League play begins the first week of June and ends with a tournament on the last weekend of July. A registration fee is charged for this program.

Men's Recreational Softball League - Adult men's softball is open to individuals from age 35 and up. League play is Sunday mornings from end of May to early Sept. Six teams of 18 individuals play two games each Sunday.

Winter Recreation Programs

Adult Men’s Sunday Morning Basketball – Full court pick-up basketball for men ages 35 and older held at Old County Road School Gymnasium on Sunday mornings from 9am – 11:30am from the last Sunday in October to the last Sunday in March.

Municipal Ice Rink

Leagues and Clubs – The Smithfield Municipal Ice Rink rents ice time to youth, high school, and adult groups in the Town of Smithfield as well as other surrounding Northern Rhode Island Communities. The rink is the Home Ice for the Bryant University Bulldogs Hockey Team, the Smithfield Figure Skating Club, the Northern Rhode Island Viking Youth Hockey Program, and the Smithfield High School, Johnston High School, and Scituate High School varsity hockey teams.

Public Skating – The Ice Rink also provides skating hours for the general public, rents ice time for birthday parties for all ages, and rents conference rooms for all kinds of public gatherings.

Facilities and Sports Fields

The Recreation Department has facilities at the following locations:

Table RC-2: Recreation Facilities

Facility	Location
Recreation Office	Pleasant View Ave.
Deerfield Park	Lisa Ann Circle
Whipple Field Complex	Fenwood Avenue
Greenlake Beach	Greenlake Drive
Georgiaville Beach	St. Michaels Way
Smithfield High School Fields	Pleasant View Avenue
McCabe Basketball Courts	Pleasant View Avenue
McCabe Little League Field	Pleasant View Avenue
Burgess Athletic Field	Burgess Avenue
Willow Field	Willow Road
LaPerche Field	Limerock Road
Mendes Field	Behind Town Hall
Municipal Ice Rink	Pleasant View Avenue
Esmond Park	Waterman Ave.
Mowry Conservation Park	Forge Road

The Department maintains multiple sports fields and recreational facilities at each location including:

- 1 Lacrosse Field at Deerfield Park,
- 4 Little League Baseball Fields at Deerfield Park, Mendes, Whipple, and Willow fields,
- 2 Senior League Baseball Fields at Whipple Field and Burgess Field,
- 2 Outdoor Basketball Courts at Deerfield Park,
- 2 Outdoor Basketball Courts at McCabe School
- 4 Outdoor Tennis Courts at Deerfield Park,

- 10 Soccer Fields at Deerfield Park, and
- 3 Softball Fields at Whipple Field

The Department provides scheduling for the use of these fields and facilities and supervises recreational activities at these locations as needed. The Department also works with the Department of Public works to help maintain the facilities at each location.

Public Beaches

There are two fresh water beaches located in the Town of Smithfield, Greenlake Beach and Georgiaville Pond Beach. Both have handicapped accessible bathroom facilities.

Greenlake Beach – Located on Slacks Pond Reservoir, this is a private beach for use by Smithfield residents only and patrons need to show proof of residency. No boat launching is allowed in this area. Fishing from shore is allowed.

Georgiaville Pond Beach – Located on Georgiaville Pond, this facility is open to the general public. The Smithfield Recreation Department requires all beach patrons to purchase either a daily beach pass or a seasonal beach pass to use the facility. Day passes are valid for one day only while seasonal passes are valid for one beach season.

The Recreation Department requires beach patrons and boaters to purchase a sticker for vehicles, boats, and trailers to be used at Georgiaville Pond. Seasonal passes are valid for two years. Fees apply to all ages and there is no-charge for senior citizens and honorably-discharged veterans.

Adequacy of Service and Concerns

At present, recreational facilities are generally meeting the demand within the community, but the strain on the facilities is beginning to show as increasing demand taxes available resources. Maintaining the grass at playing fields is growing increasingly difficult in the face of extended play and multiple overlapping activities. The High School field is lighted, but the surface is grass and is not holding up well to heavy use. It has become nearly impossible to maintain the grass, resulting in dirt and frequently mud surfaces for much of the year.

Although the Town has a wide range of facilities with a good geographic distribution, it does not have any indoor facility for general sports, making it necessary to cancel game and league play in inclement weather and routing some activities to public and private indoor facilities in other surrounding communities. The ice rink has become a major focal point for Town recreational programs, but it was built as a single purpose facility. It is an excellent ice rink, but lacks the diversity of facilities necessary to fulfill the role of a community recreation center. Constructed in 1973, the rink is also beginning to show its age. At the time it was constructed, girls hockey was not a consideration, so the facility does not include adequate lockers, showers and changing rooms to accommodate co-ed play. The building does not incorporate modern “green” energy saving systems, and the refrigeration system used to make and sustain the ice relies on ozone depleting R-22 refrigerant which is likely to be banned or highly restricted in the near future.

Future Needs

The Town of Smithfield has, and will continue to have, an expanding population as people move from more congested areas into Town, and the numbers of households continues to increase. Projections suggest a steady, continued growth into the future, conceivable by the amount of available, potentially developable land remaining in Smithfield as shown in the buildout analysis.

Between 2000 and 2010, the town experienced a 3.9% increase in population and is projected to increase by 6% between 2010 and 2020. Between 2010 and 2030 population is projected to increase to 23,882, an increase of 2,452 +/- people (DOA Technical Paper #162). Population increases will not come from one specific cohort, but from various age groups. Over the next twenty years, Smithfield's pre-school age groups are projected by the State to continue to increase by 16% and the School age population is also projected to increase significantly, with the 5-9 year old cohort increasing from 1,287 in 2010 to 1,514 in 2030, an increase of 17.6% while the 10 to 14 year old cohort is projected to increase from 1,279 to 1,518 or 18.7% by 2030. These are the age groups that are will be driving the demand for recreational field space.

Although the recreation inventory indicates a number of recreation options for Smithfield residents, the demand for certain types of active recreational space continues to be high, particularly soccer, softball/baseball and lacrosse fields which are some of the more popular youth sports in the community. Public use of recreation facilities has resulted in the need for additional recreational space and expanded facilities. The limited capacity of some recreation facilities needs to be addressed to absorb growth-induced demands. The need for facility expansion and development will continue as residential growth increases and the Town continues towards a full build-out. Impact fees and other growth management tools provide a mechanism to assess population growth on community services and maintain the provision of adequate services.

A number of existing recreation facilities, such as Deerfield Park can be expanded and developed further to address this need. In 2013, the Town hired the Gifford Design Group to develop a revised Master Plan for Deerfield Park and to conduct a needs analysis of the existing and proposed athletic fields in Smithfield . This study analyzed the existing Town wide athletic fields for their current use and function. It also evaluated the extent and limitations of these existing fields with respect to the current and projected needs of the Town's Scholastic and Recreational Athletic Programs. An excerpt from the Study follows:

As is typical amongst all Rhode Island communities, the Town of Smithfield struggles to keep up with an increasing need for athletic sport fields. Deficiencies can be found regarding site layout, use and efficiency. The result of these deficiencies is that many of the Town fields are over-used, and exhibit excessive wear.

This inventory substantiates the determination of previous administrations. That is, the Town's current athletic field deficiencies cannot be met through a redesign of the Town's existing field resources located outside of the Deerfield Park property. Therefore, this study proposes the development of new fields within Deerfield Park to meet these deficiencies. The creation of new field areas in Deerfield Park presents an opportunity to provide the facilities needed by both the Scholastic and Recreational athletic programs, in one of the most densely populated section of Town.

This study concludes that Phase IIA be completed, with an additional little league ball field constructed within the northeast of Deerfield Park. This will allow more games to be scheduled in a centralized location, and give the Little League a “Home Base.”

In addition, Phase IIB of Deerfield Park offers an unusual opportunity that’s not found in many Rhode Island communities. Specifically, this area is large enough to serve an additional field for flexible use. This field could be for school use, but may provide the opportunity for general town-wide recreational use. Field Sport activities such as Soccer, Lacrosse, and Field Hockey produce the most excessive field wear. Sized to meet the expanse of a lacrosse field, this multi-purpose field will allow the opportunity to give other fields a rest. A rotation schedule may be established between seasons to allow time for turf to recover.¹

Another part of the population projected to increase significantly is the elderly population. There are many active seniors in this growing “Baby Boom” cohort that will place a demand on recreational facilities such as tennis courts and walking paths. A new walking path/cross country trail was constructed at Deerfield Park and is used by seniors who frequent the Senior Center. There is also room for expansion of the tennis and basketball courts adjacent to the existing courts within the park. If the new Little League field is constructed at Deerfield as shown on the Revised Master Plan, it would not only create the “Home Base” for Little League, it would free up space at Whipple Field which could then be dedicated to Softball and Senior League baseball.

¹ Source: Smithfield Athletic Fields -A Strategic Plan for Future Field Development Needs Assessment & Analysis of Existing and Proposed Athletic Fields Smithfield, RI, June 2013, The Gifford Design Group, Inc., Available in the Planning Department

Goals, Policies & Actions

GOAL RC-1

ENSURE THAT THERE IS SUFFICIENT OPEN SPACE PROTECTED IN PERPETUITY TO MAINTAIN THE CHARACTER OF THE TOWN OF SMITHFIELD AND ENSURE THAT PUBLIC PROPERTY IS WELL MANAGED AND MAINTAINED FOR PUBLIC USE.

Action RC-1.1a Study connecting existing open space parcels to maximize their benefits for wildlife habitat and passive recreation.

Action RC-1.1b Purchase Camp Shepard

Action RC-1.1c

Coordinate with Rhode Island Department of Transportation to make more effective use of the George Washington Picnic Grove property for conservation and public recreation purposes.

Policy RC-1.2 Ensure that all open spaces acquired for open space, conservation and recreation are protected by easements.

Action RC-1.2a

Confirm that conservation easements are recorded for all existing open space parcels.

Action RC-1.2b

Properly record conservation easements where they are missing or incomplete for existing open space parcels.

Action RC-1.2c

Adopt policies and procedures that ensure the proper recording of conservation easements for all future open space properties.

Policy RC-1.3 Ensure that all properties owned by any agency of the town are managed to maximize opportunities for public recreational uses.

Action RC-1.3a

Create management plans for all major open space properties owned by the town.

GOAL RC-2

ENSURE THAT THE RECREATIONAL NEEDS OF ALL SMITHFIELD RESIDENTS ARE WELL MET AND MANAGED.

Policy RC-2.1 Ensure that recreational opportunities and facilities keep pace with community growth.

Action RC-2.1a

Update the Town's Open Space, Recreation and Conservation Plan of 1988 to reflect ecological, sociological, demographic and economic changes, technological progress and current development trends.

Action RC-2.1b

Investigate a multi-use artificial turf field in a lighted location that can be used continuously in order to relieve the pressure on existing grass fields.

Action RC-2.1c

Investigate the construction of a new Little League field at Deerfield Park (Phase II A), allowing the conversion of the Little League field at Whipple Field to a softball field.

Action RC-2.1d Take advantage of grant opportunities available for funding new recreational facilities at Deerfield Park, Whipple Field and Willow Field including a multi-purpose field, Little League and softball fields with associated parking and other amenities.

Policy RC-2.2 Establish a proper balance between outdoor and indoor recreational facilities for all residents of all age groups.

Action RC-2.2a

Assess providing an indoor facility, associated with the ice rink and funded by revenue generated by the ice rink, for multiple use indoor field sports to allow the town to retain funds which are presently being diverted to private out-of-town sports facilities.

Action RC-2.2b Study upgrading the Town's ice rink and sports complex to ensure that the facility can continue to serve the needs of the community for the foreseeable future.

Action RC-2.3a

Develop a build-out plan for the future of the ice rink to include modernization of the existing (1973) facility with indoor field sports (Action RC 1.2), more locker room space, office and work space, a lobby, conference room, function rooms, and possibly sports related rental retail space(s). Provide a schedule for possible implementation of the build-out plan.

Action RC-2.3b

Reduce energy demand at the ice rink by improving the energy efficiency of all ice rink systems including lighting, HVAC, vending, and refrigeration. Explore option of converting hot water system from oil fired to gas fired, installing a heat pump system, and replacing the existing R-22 refrigeration system with a more ozone friendly coolant.

CIRCULATION

Circulation Overview

Smithfield's circulation system can be defined as its multi-faceted transportation network, which consists of:

- Structural elements (local and State roads, bridges, RIPTA bus stops and a Park & Ride lot, and the North Central Airport), and
- The various methods and modes of travel used in and along the structural elements (cars, trucks, buses, bicycles, airplanes, etc.).

Smithfield's circulation system directly and indirectly influences the lives of Smithfield residents daily, carrying the flow of people and goods to, from and throughout Town. Smithfield benefits from its close proximity to various different transportation elements, including a number of regional (i.e. State-owned and maintained) roads, public mass transit, the only public airport in northern Rhode Island, and nearby bike paths. These various elements provide an ease-of-access (both locally and to nearby population centers) that is desirable to residents and businesses alike, which has contributed to the continued growth of the community. If properly managed and grown, the circulation system will continue to do so for the foreseeable future.

Existing Circulation System Elements

The Town of Smithfield's overall circulation system, as described in the sections below, is typical of most municipal transportation systems in Rhode Island. It consists predominantly of locally owned and maintained roadways, a number of State-owned arterial roadways, and an approximately five-mile long, two-interchange stretch of Interstate Route 295. A more unique asset is, the North Central Airport which is located in the northeast corner of Town. Finally, the next leg of the Woonasquatucket River Greenway Bike Path is scheduled for construction in the near future; this segment will end at the southern border of town near Route 104 (Farnum Pike) and Old County Road.

Local Roads

The local roadway system consists of approximately 105 miles of roadways, the vast majority of which are paved. These roads vary widely in configuration, size, and presence of associated roadway corridor elements (sidewalks, curbing, storm drainage, traffic markings, etc.). All local roads are the responsibility of the Smithfield Department of Public Works to operate and maintain.

The Town does not presently maintain a pavement management (PM) database to assess, monitor or project roadway conditions and the costs associated with maintenance and/or capital improvements. MicroPaver, a proprietary software PM database tailored specifically to roadways, was purchased in 2003 and populated with roadway information only as recently as 2004; the information contained therein can no longer be considered either complete or current. Therefore, the Town Department of Public Works has only a general idea of the overall condition of the local road system, and cannot perform sufficiently accurate or comprehensive cost projections for routine maintenance or capital improvement expenditures.

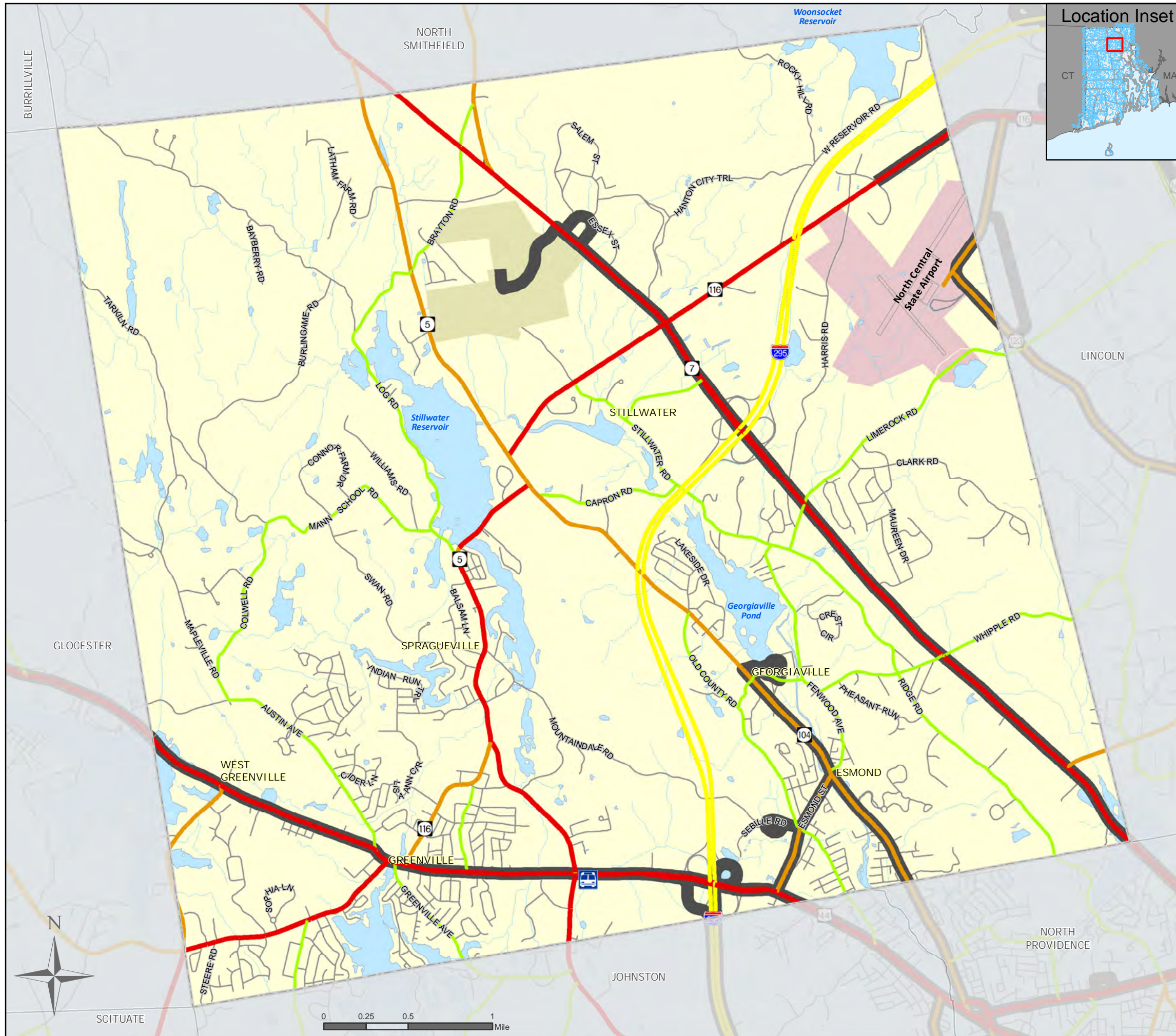


Fig. C-1 :: CIRCULATION



**TOWN OF SMITHFIELD
RHODE ISLAND
Comprehensive Plan**

Map Legend

- 2005-2015 FUNCTIONAL CLASSIFICATION
- Urban Principal Arterial - Interstate
 - Urban Principal Arterial - Other
 - Urban Minor Arterial
 - Urban Collector

- RIPTA Park 'n'Ride
- RIPTA Bus Routes
- North Central State Airport

Features

- Highways
- Roads
- Water
- Streams
- Bryant College

Boundaries

- Smithfield
- RI Municipal
- Other States

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The last available assessment of overall roadway conditions indicated that approximately twenty (20) percent of all local roads had deteriorated to the point that they would need to be completely reconstructed, which is the most expensive method of roadway repair (averaging approximately \$39/SY, or \$550,000/mile of a typical (24'-wide) local road in FY 2012). This would equate to approximately \$11.6M if only 20% of the local roads still needed to be constructed. However, the last capital funding appropriation for local roadway improvements consisted of just \$200,000 per year for the six (6) year period between FY 2005 and 2010.

Given the backlog of roadway capital improvements previously identified, and the certainty that additional roadways will now also need to be fully reconstructed, Smithfield will need to invest significantly more capital funding in order to remedy the current roadway deficiencies, and significantly more annual maintenance funding to sustain the road system in an acceptable overall condition. However, until the local roadways are assessed and monitored using a current and comprehensive PM database, it will be impossible for the Department of Public Works to efficiently and accurately project the capital and operational funding demands related to the local roads.

State Arterials

The Rhode Island Department of Transportation (RIDOT) owns and maintains the following roadways, significant portions of which fall within the Town of Smithfield:

1. **US Route 44** (Putnam Pike) – This road runs generally east to west through the southern portion of town, passing through the village of Greenville and intersecting with I-295 at Interchange #7.
2. **RI Route 5** (Farnum Pike/Pleasant View Ave.) – This road runs generally from north to south, approximately through the center of town, passing through the villages of Spragueville and Georgiaville and intersecting with Routes 44, 104 and 116. It is coincident with Route 104 for the northern half of its run, and with Route 116 for most of the southern half of its run.
3. **RI Route 7** (Douglas Pike) – This road runs generally southeast to northwest through the eastern third of town, intersecting with both I-295 at Interchange #8 and Route 116.
4. **RI Route 104** (Farnum Pike) – This road runs generally from north to south approximately through the center and eastern portion of town, passing through the village of Esmond and intersecting with Routes 5 and 116. It is coincident with Route 5 for the northern half of its run, and briefly with Route 116.
5. **RI Route 116** (Smith Ave./Pleasant View Ave./George Washington Hwy.) – This road runs generally from northeast to southwest through the center of town, passing through the villages of Spragueville Georgiaville and Greenville and intersecting with Routes 5, 7, 44, and 104.

These roads carry widely varied volumes of traffic; the most current available data from RIDOT is a 2009 compilation of 24-hour average daily traffic (ADT) volumes observed between 2004 and 2008 at selected monitoring locations throughout the state. Without performing a detailed review of a variety of parameters for each roadway (which is beyond the scope of this plan), it is impossible to derive any meaningful relationships between the reported ADT volumes and the operational efficiency of the roads; anecdotal observations, however, indicate that most of the State roadways are generally efficient, with the exceptions of Routes 44 and 7:

- Route 44 provides access to the most heavily developed commercial area of town, with abutting plazas including the Apple Valley Mall, Smithfield Commons, and numerous other commercial

entities. These various commercial plazas and entities generate consistently high traffic volumes on and along the road, but have not generally been designed to work in concert with one another efficiently. As a result, the portion of Route 44 east of the intersection with Route 5 is prone to frequent traffic back-ups and significant delays. Future development proposals in this corridor should employ access management principals such as linked driveways, and backage/frontage roadways to minimize additional turning movements on Route 44 and portions west of the intersection of Route 5, particularly weekdays during AM and Saturday peak hours.

- Route 7 provides access to another commercial corridor in town, which while not currently as congested as the Route 44 corridor, has grown over the past few years, and is projected to continue to grow. Commensurately, the section of Route 7 between I-295 and Route 116 is periodically subject to traffic back-ups and delays.

Access Management Plan

Access management has been defined as the process that provides or manages access to land development, while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. This process is achieved through managing the design and location of driveways, median openings, signalization, and points of access to the state highway system. The level of highway access control is based on the importance of the highway to regional and statewide travel as determined through a functional classification system. This system has just been updated. Research indicates that effective access management programs have the potential to dramatically increase the safety of streets and highways and also to increase roadway capacity, reduce congestion, reduce air pollution emissions, and reduce average travel times for motorists, preserving the capacity and functionality of the existing transportation system, enhancing safety, increasing system capacity in a manner that is sensitive to potential community and environmental impacts, and maximizing the return of scarce transportation resources.

Recognizing the importance of access management to maintaining high levels of service in key growth areas of Town, the Town commissioned an access management plan of the Route 7/116 corridor. The plan completed in 2011 provides the guidance to implement access management techniques in this and other corridors in Town¹. The draft of an access management ordinance was developed as part of the plan. The Planning Board will review the ordinance and forward it to the Town Council for adoption in the coming months.

There have been prior attempts to moderate the traffic congestion along Route 44, which have achieved only limited success. Land development projects proposed on Route 44 should be required to include access management provisions such as backage roadways and linked parking facilities to minimize turning movements on Route 44. There are currently no scheduled RIDOT projects to modify the geometry or configuration of either of these roadways.

¹ Corridor Access Management Plan Douglas Pike (Route 7) and George Washington Highway (Route 116), Vanasse Hagen Brustlin, Inc. (VHB), December 2011. Available in the Planning Department.

Interstate Route 295

Approximately five (5) miles of Interstate Route 295 passes through Smithfield, running generally from north to south. The two interchanges along this stretch of the highway are #7 (the intersection of I-295 with Route 44) and #8 (the intersection of I-295 with Route 7). Not surprisingly, these are the two State roads in town that are prone to the most frequent and significant traffic congestion, and at some times the congestion on the arterial roads is severe enough to impact I-295 itself (particularly at interchange #7, where traffic on Route 44 backs up off-ramp traffic on I-295).

There are presently no plans to modify I-295 in any locations along the corridor through Smithfield.

North Central Airport

The North Central Airport is a general aviation facility in the northeastern corner of Smithfield. Like all of the public airports in Rhode Island, North Central is operated by the Rhode Island Airport Corporation (RIAC).

The following are extracts related to the North Central Airport from the 2011 Rhode Island State Airport System Plan, prepared by the Statewide Planning Program:

“North Central Airport (SFZ) is located in the northeastern RI towns of Lincoln and Smithfield, and serves the greater Blackstone River Valley region of northern RI and southern Massachusetts. Defined within FAA’s National Plan of Integrated Airport Systems (NPIAS) as a General Aviation/ Reliever airport, SFZ exclusively accommodates general aviation traffic, from single-engine piston aircraft used for recreational and flight training to corporate and business aviation aircraft. SFZ does not accommodate scheduled passenger or cargo service.

Built in 1951 and having a 5,000-foot primary runway and a 3,210-foot crosswind runway, SFZ is able to accommodate full operations by most small and mid-sized corporate jets, although larger aircraft (such as the Gulfstream G-IV) occasionally do operate there at reduced weights, due to the runway length constraints.

As an economic generator, SFZ produces positive economic benefits for the local and surrounding communities through a variety of avenues. Aviation services provided at the airport and aviation-related industries requiring use of the airport create jobs, which have an immediate and direct impact on the local economy. Additionally, visitors to Rhode Island who utilize the airport spend money for hotels, attractions, goods, and services. Earnings and wages generated through these activities are spent on additional goods and services, creating additional jobs and additional economic impact. As an example of the magnitude of this economic activity, North Central Airport’s total quantifiable airport economic impacts in 2005 were \$9,583,900, according to the Rhode Island Airport Economic Impact Study completed in 2006.”

As part of the development of the 2011 report, surveys of airport users were conducted. The following are the responses received from the North Central Airport surveys:

Approximately 118 pilots using North Central responded to the survey. The top facility and service improvements at North Central noted in all survey results are as follows:

Restaurant: *Pilots overwhelmingly noted that a restaurant at North Central would be a large asset to the airport.*

Hangars: *Both pilots with aircraft based at North Central and transient pilots indicated that hangars should be constructed at the airport. One pilot suggested that RIAC improve or replace the large aircraft storage hangar and build more T-hangars. Another pilot noted that it would be useful if North Central had hangar space for overnight rental by business aircraft users.*

Courtesy Car: *Nearly all of the pilots that filled out the Transient Pilot Survey at North Central noted the need for a courtesy car. One transient pilot noted that, although North Central is most convenient to their office, they often fly into Norwood, Massachusetts because their arrival is typically between 10 and 11 pm, and Norwood offers rental cars and a courtesy car.*

Precision/Instrument Approach: *Both pilots with aircraft based at North Central and transient pilots noted the desire to have a precision approach to the airport. Many pilots noted that an ILS would be most beneficial. One pilot noted that an ILS to Runway 5 would make it safer to land at the airport and would increase airport utility under poor weather conditions. Pilots also indicated that a VASI on Runway 5 would be helpful.*

Full Service FBO: *Several pilots noted that they would like to have a full service FBO at North Central.*

Terminal Facilities/ Pilot Lounge: *Numerous pilots indicated the desire for an improved terminal building. Comments included that the current terminal is an “embarrassment visually” and that the terminal should be “presentable” and “more inviting”.*

Aircraft Maintenance: *Pilots with based aircraft at North Central and transient pilots noted that it would be beneficial to have aircraft maintenance offered at the airport.*

Other facility upgrades noted on the surveys included a full parallel taxiway for Runway 15/33, repaving of the ramp and Runway 5-23, improved apron and tiedown area lighting, and the addition of an air traffic control tower. Survey respondents also pointed out that the Unicom frequency (122.7) for North Central should be changed because it is too congested. It was also noted that the airport should lower fuel prices to compete with Massachusetts’s airports. Several pilots indicated that skydiving operations at the airport pose safety hazards to other pilots. If RIAC addressed these noted facility and service needs, the respondents indicated that they would fly 3,800 additional operations at North Central annually.

The 2011 plan further indicates that the RIAC plans to make certain enhancements to the airport in response to the responses received **from** the survey participants. These enhancements will promote additional use of the airport without changing its basic function and size.

As one of two general aviation “Reliver” airports in the RI Airport System North Central Airport serves a modest volume of general aviation traffic. This has both direct and indirect benefits to Smithfield’s circulation system and overall economy, as it can be assumed that a significant percentage of the economic activity generated by the airport is focused in Smithfield. Therefore, initiatives that promote the growth of the airport without adversely affecting the nearby residents and businesses should be endorsed and facilitated to the extent possible by the Town.

Bike Paths

Bicycling is a cost-effective, environmentally friendly mode of transportation that is rapidly growing in popularity. In addition to the obvious recreational opportunities and benefits it provides, it is also a potentially viable substitute for automobiles or other motorized forms of transportation on a local scale, provided that adequate facilities (whether expressly for bicycle usage or in conjunction with standard roadways) are provided to prospective users.

The following information on bike paths and designated bike routes was taken from the RIDOT web site.

The Woonasquatucket River Greenway is a multi-use path that starts in Providence, and runs alongside the Woonasquatucket River generally westerly and northwesterly through Providence and into Johnston. The next leg of greenway is proposed to continue northerly through Johnston, following an abandoned railroad corridor that generally parallels the Woonasquatucket River and terminating at the southern end of Smithfield. The Town is very supportive of the Woonasquatucket Greenway and encourages extension of the greenway into and through Smithfield. However, the Town does not support use of the former New York, New Haven & Hartford Railroad for that purpose. Significant parts of the right-of-way cross private properties in Smithfield such that intensified public use of that right of way would be intrusive and detrimental to the use and enjoyment of those properties. The town of Smithfield prefers extension of the greenway on local streets where it will not adversely affect private property owners. The Town will only support greenway use of the former railroad right-of-way in locations where local property owners have been consulted and have freely consented to that use. In all other cases, the greenway should be routed along local streets. Local streets allow ample opportunity to enjoy a stroll or a bike ride through Smithfield's historic villages along the Woonasquatucket River without adversely affecting property owners.

In addition to the Greenway, RIDOT has identified approximately twenty-two (22) miles of State and local roads in Smithfield as "suitable" for bike path development, and approximately eleven (11) miles of local roads as "most suitable" for bike path development. The Town is dedicated to providing streets that allow access not only for automobiles, but also for pedestrians, bicycles, wheelchairs, scooters, skate boards, roller blades and other forms of conveyance.

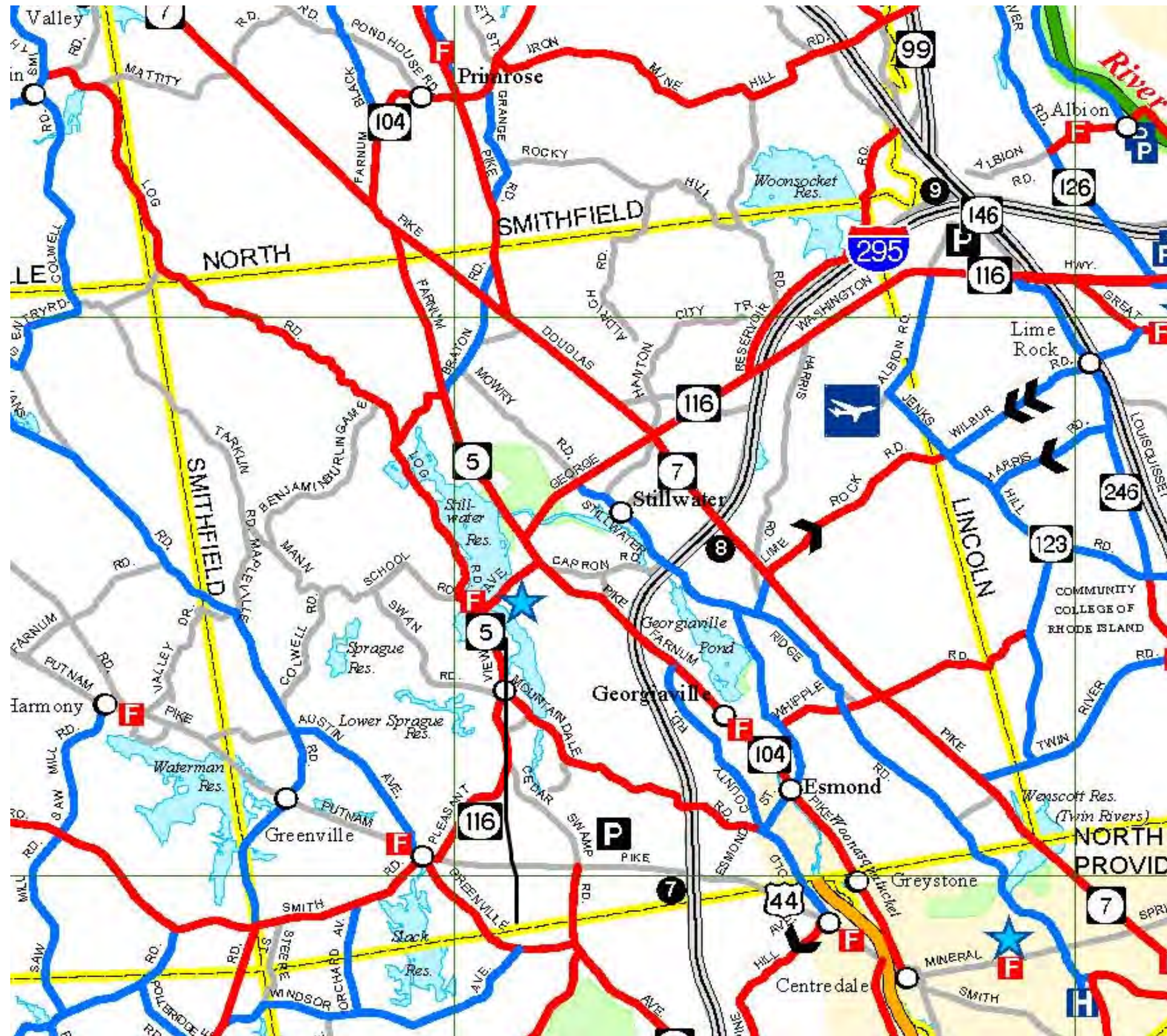
Given the present lack of designated bike paths in town, and the impending construction of the next leg of the Woonasquatucket River Greenway to the town's doorstep, Smithfield should investigate, initiate, and endorse initiatives at both the local and State levels that promote the creation and expansion of multi-use trails and designated bike routes to and through the town.

Pedestrian Facilities

As with bicycling, pedestrian travel (walking, jogging and running) is growing in popularity, particularly for its recreational, economic and environmental benefits. It too can serve as a viable alternative to motorized forms of transportation on a local scale, provided that adequate pedestrian facilities (whether expressly for pedestrian usage or in conjunction with standard roadways and/or bike paths) are provided to prospective users.

In order to encourage and promote pedestrian travel, the town should provide an adequate number of safe, readily accessible and efficient pedestrian travel ways between origination and destination

Figure C-2: Bike Routes



A Guide to Cycling in the Ocean State 2015

Map Legend

	Bike Path Completed		Exit Number
	Bike Path Under Construction		Denotes Steep Grade
	Bike Path Future Construction		Denotes Very Steep Grade
	Most Suitable Road		Airport
	Suitable Road		Hospital
	Multi-lane Highway		Visitor Information Center
	Other Road		Ferry Service
	East Coast Greenway		Train Station
	Bike Path Section CLOSED		Rest Room-Seasonal, Hours Vary
	Mountain Bike Trail		Carousel
	Hiking Trail		Urban Area
	Police Station		Parks, Forests, and Reserves
	State Police		Interstate Highway
	Fire Station		US Highway
	Bike Path Parking		State Highway
	RIPTA Park and Ride Location		State Boundary
			County Boundary
			Town Boundary

Map Scale
0 2.25 4.5 9 Miles
0 2.5 5 10 Kilometers

Information shown on this map was provided by the Rhode Island Geographic Information System and its participating organizations. Cartography by Rhode Island Department of Transportation, Providence, Rhode Island. Copyright, State of Rhode Island.

**Rhode Island Department of Transportation
Rhode Island Bicycle Map**

DISCLAIMER: This map has been developed by the Rhode Island Department of Transportation (RIDOT) to assist experienced and/or commuter cyclists in planning trips on roadways designated as most suitable for bicycle travel. The designated roadways may not be suitable for inexperienced riders or children. Riders should choose routes and trip lengths appropriate for their individual skill level. Bicyclists should use helmets, rearview mirrors and other protective equipment when riding on roadways and bicycle paths.

Although RIDOT has made reasonable efforts to ensure that the information contained in this guide is correct as of the date of publication, the actual conditions cyclists encounter may vary. Neither RIDOT, nor the cities and towns through which the designated roads pass, nor the groups and individuals who have contributed to the development of this bicycle guide warrant the safety or suitability of the routes shown on the map for shared bicycle/motor vehicle use. Bicyclists must remain alert to traffic and changing road conditions and obey traffic control devices.

Bicyclists assume the risk for their own safety at all times when traveling on roadways in Rhode Island. Bicyclists have the same responsibility as motorists to obey traffic laws and regulations. RIDOT and the political subdivisions of the State of Rhode Island assume no liability for personal injury or property damage suffered by users of this map or of designated State bicycle routes.

locations where pedestrian traffic is most likely to be in demand. Examples of such origination and destination points can include:

- Residential developments/neighborhoods and nearby schools;
- Residential developments/neighborhoods and nearby recreational facilities (parks, athletic fields, etc.);
- Residential developments/neighborhoods and nearby commercial parcels/developments;
- Elderly housing developments and nearby professional buildings (particularly medical practices).

Pedestrian travel ways include sidewalks (adjacent or in close proximity to roadways), separate walkways or footpaths, and bike paths. More than with bike paths, pedestrians (particularly young children and the elderly) must feel that a path of travel is safe, accessible and efficient; otherwise, they will not be inclined to use it:

- Safe pedestrian travel ways are those that generally separate and/or protect users from vehicular traffic, and which are also generally open and visible to view.
- Accessible travel ways are those which comply with ADA standards, but which also provide certain amenities which, while not required by the ADA, make the use of the travel way relatively comfortable (benches or other seating areas, periodic shaded areas, aesthetic improvements such as plantings, etc.).
- Efficient travel ways are those that provide relatively direct paths between an origination point and a destination.

The Town presently owns and maintains a number of sidewalks associated with its local roadways; these sidewalks may or may not be associated with areas of high pedestrian volumes, and may or may not presently be what could be considered safe, accessible and efficient. As with multi-use trails, Smithfield should investigate, initiate, and endorse initiatives at both the local and State levels that promote the creation and expansion of pedestrian travel ways in high-demand locations throughout town.

Mass Transit (Buses)

Mass transit is an important alternative to private motorized vehicles; by replacing a portion of the motorized traffic on the roadways, it can help alleviate traffic congestion. It is only effective, however, if it is readily accessible, travels from and to the locations desired by the riders who will use it, and operates with adequate frequency to allow riders to use it in place of their own vehicles.

Smithfield is presently served by two (2) Rhode Island Public Transit Authority (RIPTA) bus routes; Bus Route 52 runs between Kennedy Plaza in Providence and Bryant University on Route 7 (Douglas Pike), and Bus Route 58 runs between Kennedy Plaza and Smithfield Crossings on the north side of Route 44 (Putnam Pike). In addition, RIPTA has one designated Park and Ride lot at Smithfield Commons, a separate commercial development on the south side of Route 44.

The two bus routes that currently service Smithfield operate along the previously discussed heavily developed commercial corridors of Route 44 and Route 7. A detailed review of ridership rates was not performed as part of this update, but it is fair to assume that RIPTA has developed its routes and schedules in order to maximize ridership in its service areas.

Goals, Policies, and Actions

The following are the stated goals of maintaining and enhancing a healthy, diverse, accessible and sustainable circulation system, and the measures that shall be undertaken by the Town to achieve those goals.

GOAL C-1

PROVIDE A COMPREHENSIVE CIRCULATION (I.E. TRANSPORTATION) SYSTEM THAT SATISFIES THE NEEDS OF THE TRAVELLING PUBLIC THAT RESIDES IN SMITHFIELD AND/OR TRAVELS TO AND THROUGH THE TOWN.

Action C-1.1a Perform routine roadway condition assessments of all local roads, and will develop, implement and maintain a Pavement Management System to track roadway conditions and develop roadway budgeting projections.

Action C-1.1b Develop, Implement & Maintain Pavement Management System (PMS)

Smithfield, through its Department of Public Works, should acquire a PMS with graphic capabilities, and should populate the PMS with current roadway data for all Town-owned roads. The PMS should be updated on a regular basis, and should be used to develop roadway condition projections for all Town roads, as well as budget projections for the maintenance and/or reconstruction costs to keep roadway conditions at desired levels. The PMS should be either a) capable of being incorporated into a broader asset management database for other Town infrastructure (see the Facilities section of this plan), or b) capable of being expanded to serve as the base of a broader asset management database.

Action C-1.1c Develop a Roadway Capital Improvement Plan (CIP) and Bond Issue

Smithfield, through its Department of Public Works, should use the PMS (see above) to develop a current assessment of roadway conditions, and should determine the estimated capital cost to bring the overall roadway system up to a specified condition rating (to be determined by the Town). The estimated capital cost should then be used as the basis for a roadway improvement bond issue to be prepared by the Town; the bond issue may be implemented over a period of multiple years, depending on the Town's bonding capacity and ability to procure and manage the roadwork.

Action C-1.1d Determine a system-wide average roadway segment rating (RSR) goal and secure and expend capital funding as appropriate and practicable to improve its local roadways to achieve the designated RSR goal.

Policy C-1.3 Enforce land-development regulations requiring developers to coordinate their roadway/site designs with other nearby developments and with the Town and/or RIDOT, and will actively participate in the design process of any such developments to insure that they do not create or exacerbate traffic congestion issues.

Action C-1.3a Revise Land-Development regulations and Zoning Regulations related to traffic management in order to alleviate or at least moderate the current excessive traffic congestion on some State roadways, and to mitigate any potential worsening of traffic conditions that could result from further development along those roadways. Smithfield will augment its current land-development policies and zoning regulations to encourage and/or require property owners/developers along State-owned roadways to incorporate site design measures which can be coordinated with other existing and/or proposed developments in the vicinity (shared driveways, reduction of individual State curb cuts,

etc.). These land-development strategies must also be coordinated with RIDOT to insure that a) they do not conflict with applicable RIDOT standards, and b) they are implemented to the maximum extent possible.

Action C-1.3b Develop and adopt a town-wide access management ordinance as called for in the Route 7/116 Corridor Access Management Plan.

Action C-1.3c Employ access management measures in all Land Development projects and particularly those located along roadways with identified traffic congestion problems such as Route 44, Route 7 and Route 116.

Policy C-1.4 Coordinate with the RIAC to encourage the continued use and enhancement of the North Central Airport, so that it a) continues to provide its important aerial transportation services to the Town and the region, and b) continues to generate economic activity in the Town.

Policy C-1.5 Coordinate with the RIAC for any Future Enhancements at the North Central Airport
The Town should coordinate and collaborate with the RIAC to encourage the continued operation and further enhancement of the airport in accordance with the 2011 Rhode Island State Airport System Plan and Airport Master Plan, 2010, while simultaneously safeguarding the interests of the local residents and businesses near the airport.

Action C-1.5a

The Town will review the Rhode Island Airport Land Use Compatibility Guidebook to ensure that land uses are compatible with airport operations.

Policy C-1.5 Smithfield will actively coordinate with the RIDOT Department of Intermodal Planning to identify and develop multi-use trails, bike routes and associated facilities in and along roadways and other viable corridors.

Policy C-1.6 Coordinate with RIDOT Intermodal Planning for Expansion of Bike Paths and Facilities
The Town should coordinate and collaborate with RIDOT Intermodal Planning to encourage and facilitate the extension of RIDOT bike paths of various types (separate dedicated bike paths, roadway bike routes) and associated facilities to and through Smithfield, while simultaneously safeguarding the interests of the local residents and businesses near the bike paths.

Policy C-1.7 Smithfield will actively promote pedestrian modes of transportation as a viable alternative to motorized vehicular transportation, and should seek to a) expand or augment existing and/or b) create new pedestrian travel ways to encourage pedestrian travel.

Action C-1.7a Perform Pedestrian Travel Way Inventory and Route Identification

The Town will perform and maintain an inventory of its existing sidewalks and other designated pedestrian travel ways, and will identify and evaluate origination and destination locations throughout town that have a high probability of demand for pedestrian travel ways. The information so gathered will then be used as the basis for a) the expansion and augmentation of existing pedestrian travel ways, and b) the development of new pedestrian travel ways and associated amenities throughout town.

Policy C-1.8 Smithfield will actively coordinate with RIPTA to increase current bus ridership, and to identify and develop a) potential new bus service routes, and b) locations where existing bus service can be expanded or enhanced, particularly in high-density, high-traffic congestion areas.

Policy C-1.9 Coordinate with RIPTA on Bus Route Expansion and Enhancement

The Town should coordinate and collaborate with RIPTA to encourage and facilitate the extension of RIPTA bus service and associated facilities to and through Smithfield, particularly in densely-developed, high traffic congestion areas.

IMPLEMENTATION PROGRAM

The following section of this plan summarizes actions proposed for each topic area, including the proposed implementation schedule and an identification of responsible parties. All capital improvements identified within the this plan have been included in the Implementation Program. Actions listed within the Implementation Program that involve expenditure of capital improvement funds for improvements to public facilities or acquisitions are highlighted and contain an associated Capital Improvements Program (CIP) reference number.

The Town Charter calls for the Town to prepare a six-year Capital Improvements Program (CIP) on a bi-annual basis. A CIP is a multiyear planning tool used by governments to identify needed capital projects and to coordinate financing and scheduling of major capital equipment and improvements in a way that maximizes the return to the public. Selection and scheduling is based on adherence to community goals as expressed in the Comprehensive Community Plan, capital needs priorities, and the Town's fiscal capabilities.

Joining comprehensive planning with capital improvement budgeting reinforces the concept of planning for the growth that is projected in the Town's Comprehensive Community Plan and helps to clarify the financial implications of growth.

The Town of Smithfield certifies that has coordinated the goals and policies of the Comprehensive Community Plan with those of the goals and policies of the Smithfield, East Smithfield (PWSB) and Greenville Water districts as stated in their respective Water Supply System Management Plans, attached herein as appendices.

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
ED-5.3c	Work with the Rhode Island and U.S. Department of Agriculture programs that promote local produce and bolster farm business.					X	Planning and Economic Development, Town Council
ED-5.3d	Study the potential product/supply links to recruit businesses that will support existing businesses in the region. Work with Bryant University experts.					X	Planning and Economic Development, Department of Commerce
ED-6.1b	Evaluate current zoning of economic development districts to identify gaps in goods and services as they relate to export based industries and a comprehensive approach to economic development.					X	Planning and Economic Development, Department of Commerce
ED-8.1a	Work with the owners of industrial and employment district land to ensure that infrastructure needs are met.					X	Planning and Economic Development, Department of Commerce, Property Owners
ED-8.1b	Develop and maintain business/industrial park and roadway infrastructure maintenance program to include landscaping and roadway improvements.			X			Public Works, Property Owners
ED-8.1c	Work with RIDOT and RIPTA to improve access to growth centers while ensuring that village character is not adversely affected.		X				Planning and Economic Development, Planning Board, Town Council
ED-8.1d	Evaluate alternatives to connect I-295 with Route 116 in Smithfield as a means of providing enhanced access to businesses with the PC District			X			Planning and Economic Development, Public Works, Town Manager
ED-8.1e	Work with RIAC to promote the North Central Airport as a vital transportation link that can benefit the development of the Economic Growth Overlay District.	X					Planning and Economic Development, Department of Commerce, RIAC
ED-8.1d	Develop incentives for businesses that incorporate Green Development Techniques and/or utilize alternative energy.				X		Planning and Economic Development, Department of Commerce, Property Owners
ED-8.3b	Investigate ways to promote rooftop solar.	X					Planning and Economic Development, Department of Commerce, Property Owners
ED-8.3c	Encourage siting solar projects where forest clearing is not necessary.	X					Planning and Economic Development, Department of Commerce, Property Owners
ED-8.4a	Develop a detailed water use/availability plan for the Routes 7 and 116 corridor. Include quantity and delivery issues and estimate costs and timeline necessary to achieve needed capacity at buildout.		X				Planning and Economic Development, Public Works, Town Council
ED-9.1a	Work with neighboring communities to develop a regional economic development plan that takes advantage of each community's unique assets and capabilities.			X			Planning and Economic Development, Town Manager
	COMMUNITY SERVICES AND FACILITIES						

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-1.1a	Restore and maintain the structural integrity of police headquarters through repair, regular maintenance and upkeep.		X				Police Department
SF-1.1b	Renovate Police Headquarters CIP #15-Pol-1		X				Police Department
SF-1.2a	Continue program of replacing police vehicles at approximately 100,000-125,000 miles, and recycling vehicles for other municipal purposes as appropriate. CIP #15-Pol-2					X	Police Department
SF-1.2b	Continue to regularly upgrade firearms, computers, and communications equipment.					X	Police Department
SF-1.7a	Study the Police Department's complement of sworn officers over the next decade, adding additional officers as needed.				X		Police Department
SF-1.7b	Establish and fill the position of Criminalist to assist the Detective Division and make more efficient use of Detective Division personnel.		X				Police Department
SF-1.8a	Provide all Commissioned Officers with training in contemporary police management and/or Executive Development Training.					X	Police Department
SF-1.8b	Acquire additional Patrol Rifles and train all sworn officers in their use, as an additional resource to officers in tactical, lethal force situations.				X		Police Department
SF-1.8c	Establish a Police Firing Range within the Town or through cooperation with neighboring communities to ensure that all officers can fulfill compulsory firearms training requirements.		X				Police Department
SF-1.9a	Replace the existing deteriorated animal shelter with a new animal control facility.			X			Police Department, Public Works, Town Council
SF-2.1a	Develop plans for a new, fourth fire station in the northeast quadrant of the Town to serve the northeast part of the community and also house the headquarters function. CIP #15-FD-12		X				Fire Department, Town Council
SF-2.1b	Restructure the use, manpower, and apparatus types at the three existing fire stations.		X				Fire Department
SF-2.2a	Assess Fire Department staffing to ensure it is commensurate with the Town's population, land use and density patterns, gradually add additional staff as needed.					X	Fire Department
SF-2.2b	Add a third Emergency Medical Services (EMS) unit to meet increasing demand and improve emergency response times. CIP #15-FD-3		X				Fire Department
SF-2.4a	Upgrade communications systems to replace outdated, broken and deteriorated equipment and to deploy new technologies for communications, fire detection, fire prevention, and emergency response. CIP # 15-FD-15		X				Fire Department
SF-2.5c	Consider participating in or establishing a centralized municipal vehicle maintenance facility.			X			Fire Department, Town Manager, other Town Departments
SF-3.1a	Study the feasibility of establishing a centralized early learning center for pre-K and Kindergarten with a full day kindergarten program.			X			School Department, Town Council

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-3.1b	Address facilities issues at existing schools as needed.					X	School Department
SF-3.2a	Evaluate providing additional program choices within Advanced Placement Program to expand this successful program and meet high demand.			X			School Department
SF-3.2b	Provide space, technology, staff and equipment to support an industrial technology program teaching skills in engineering, wood, and metal to address vocational/technical program needs			X			School Department, School Committee, Town Council
SF-3.2c	Implement 21st century learning by establishing a blended learning (i.e. technology in the classroom) program. <ul style="list-style-type: none"> • Provide professional development and training for staff • Upgrade school electrical systems to support digital system demands • Provide high speed broad-band wireless internet in all schools • Acquire sufficient computers to meet learning demand and testing requirements through state lease buyout program 		X				School Committee, School Department
SF-3.3a	Cooperate with State and other districts exploring alternatives to financing education.					X	School Committee, School Department
SF-3.3b	Determine the capital needs of the school system based upon the conditions of existing public school facilities on a short and long term basis and develop a capital improvement program for integration into the Town's capital budget planning. CIP # 15-SCH-15-(1-7)					X	School Committee, School Department
SF-4.1a	Provide Town financial support to both independent public libraries for operation and maintenance expenses.					X	Town Council
SF-4.2a	Review library hours of operation as per the recommendations of the Town charrette on library services.		X				Greenville Library, East Smithfield Library
SF-4.2b	Continue assisting both libraries in expanding their collections, expanding their facilities, and upgrading their technology to keep pace with technological change and meet future community needs as long as they remain separate entities.		X				Town Council
SF-4.3a	Assist the Greenville library to construct an addition, using 50% state funding, on property already obtained for the addition and in accordance with construction plans already prepared for the library. CIP #15-GL-1			X			Town Council
SF-4.3b	Review reconfiguring the access and parking at the Greenville Library to add additional parking spaces on land already acquired by the library for that purpose and to provide a second access to the library parking lot via property at 9 Pleasant View Avenue already acquired by the library for that purpose. CIP #15-GL-1		X				Greenville Library

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-4.3c	Provide additional funding to the East Smithfield Library to undertake further repair and renovation of the former school building that houses the library. Repair and renovation should include eventual replacement of the roof, modernizing of the electrical system, and other code compliance and technology improvements as required.			X			Town Council
SF-4.3d	Undertake a study of the facilities needs at East Smithfield and prepare plans for an addition to the Library on adjacent property already owned by the Town. CIP #15-ESL-1		X				East Smithfield Library
SF-4.3e	Assess reconfiguring parking at the East Smithfield Library to determine the necessity of increasing parking and to replace spaces lost for construction of an addition on the library site.						East Smithfield Library
SF-5.1a	Determine whether to eliminate the position of Assistant Director and add additional hours (5 hours per week) to the position of the Kitchen Manager and van driver to recognize their roles in assisting the Director.	X					Town Council
SF-5.1b	Evaluate developing a program of evening activities to reach seniors who work during the day, especially evening exercise programs.		X				Senior Center Director
SF-5.1c	Collaborate with the Director and Staff of the Senior Center to actively pursue funds for expansion and improvement of Senior Center facilities and programs.					X	Planning Department
SF-5.1d	Evaluate ways to expand the Center's role in first alert and health problem detection by hiring contracting with a licensed health care agency for a part-time nurse to provide periodic health screening and medical review services for Senior citizens at the Senior Center.		X				Senior Center Director
SF-5.2a	Implement a "green" initiative within the Senior Center to improve lighting and reduce lighting costs. Replace existing lighting with more energy efficient (e.g. LED) fixtures and bulbs.					X	Town Administration
SF-5.2b	Replace existing antiquated heating, ventilation and air condition (HVAC) system with a more modern, energy efficient system. CIP #15-SC-2		X				Town Administration
SF-5.2c	Study the need for expansion of the Senior Citizens Center to provide more year-round program space and enlarge the activities room by enclosing the Bocce court along with the multi-purpose space between the Bocce court and existing building.			X			Town Council
SF-5.2d	Evaluate the budget for a replacement Senior Transportation Van every five years to ensure continued van service and avoid loss of transportation service due to breakdowns. CIP #15-SC-3		X				Town Council
SF-6.1a	Regularly Communicate with Water Suppliers.					X	DPW/Districts
SF-6.1b	Seek opportunities to collaborate on capital improvement projects with the water districts.					X	DPW/Districts
SF-6.1c	Collaborate with Water Companies in building mutually beneficial projects.					X	DPW/Districts

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-6.2a	Implement the Water Conservation program for Town Departments/Entities.					X	Public Works Director, Town Engineer
SF-6.2b	Institute Public Outreach & Education for Water Conservation.					X	Public Works Director, Town Engineer
SF-6.2c	Distribute Information about Costs of Water Supply.					X	Public Works Director, Town Engineer
SF-6.2d	The Town shall maintain on its web site direct links to the web sites of the water districts providing service within the Town, and shall also cooperate with the water districts to periodically provide notice of important information from the districts to Town residents through the various media outlets at its disposal.		X				Town Administration
SF-6.3a	Develop Asset Database & Capital Improvement Program (CIP) Planning.		X				Districts/Town Administration
SF-6.3b	Work with water districts to establish sustainable water rates.			X			Districts/Town Administration
SF-6.3c	Work with water districts to establish a Rate Structure Analysis		X				Districts/Town Administration
SF-6.3d	Study the feasibility of water system interconnections.		X				Districts/Town Administration
SF-6.3e	Institute System Component Upgrades.					X	Districts/Town Administration
SF-6.3f	Investigate the development of Alternative/Independent Water Supplies.			X			Districts
SF-7.1a	Update the Smithfield Storm Water Management Plan (SWMP) in accordance with state and federal regulations.		X				Public Works Director, Town Engineer, Town Planner, Local Boards, Town Council
SF-7.1b	Implement the provisions of the SWMP which require proper and efficient maintenance of existing stormwater management infrastructure, as well as the provision of new water quality treatment measures within the stormwater management system.		X				Department Heads
SF-7.1c	Implement Stormwater Management Policies/Practices -Erosion					X	Department Heads
SF-7.1d	Implement Stormwater Management Policies/Practices – Asset Management					X	Public Works Director, Town Engineer
SF-7.2a	Implement LID Standards for New Development					X	Public Works Director, Town Engineer, Town Planner, Local Boards

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-7.3a	Develop a public outreach, education & participation program to increase awareness of stormwater management issues. Public awareness and endorsement is a key factor in the success of any significant and broad-ranging program such as Phase II stormwater management; only with broad-based public support and participation can many elements and goals of the program be achieved.					X	Public Works Director, Town Engineer, School Department, Local Boards
SF-7.3b	Develop and distribute informational and educational materials to local residents about stormwater management, its importance to the natural environment and the community's overall quality of life, and ways that the public can become active participants in the process of improving the quality of stormwater runoff.		X				Town Engineer/Planning Department
SF-7.5a	Determine whether to assess fees for use of Town drainage facilities based on extent of impervious surfaces, encouraging property owners to reduce stormwater flows by minimizing impervious surfaces.			X			Town Engineer/Planning Department
SF-7.5b	Investigate whether to provide an assistant to the Town Engineer to help manage the stormwater utility, maintain the stormwater system, and oversee compliance with Phase III stormwater regulations.				X		Town Engineer, Town Manager
SF-8.1a	Replenish the Wastewater Capital Fund to a level sufficient to meet the anticipated CIP needs of the wastewater system, including reasonable contingency funds for emergencies.					X	Town Engineer, Town Manager, Town Council
SF-8.1b	Perform wastewater asset inventory and valuation on a routine and reasonably frequent (e.g. five-year) basis.					X	Town Engineer
SF-8.1c	Project wastewater asset depreciation and develop CIP needs assessments and funding requirements for the upgrade or replacement of wastewater assets.					X	Town Engineer
SF-8.1d	Perform rate structure evaluations to verify that the CIP funding requirements (as determined by the CIP needs assessment) will be met by the usage fees paid by entities connected to the wastewater system, and will adjust the usage fees as needed to insure that the funding requirements continue to be met.					X	Town Engineer
SF-8.2a	Source Identification and Quantification Initiate a system-wide program to locate, identify and quantify sources of inflow and infiltration (field investigations, record plan research, flow monitoring, etc.).			X			Town Engineer
SF-8.2b	Develop & Implement Capital Improvement Projects for I/I Removal			X			Town Engineer
SF-8.2c	I/I Removal Cost Evaluation/Impact Fee Structure The Town of Smithfield will determine the average cost (on a per gallon basis) of I/I removal from the wastewater system.					X	Town Engineer

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-8.3a	Sewer Extension Development Reimbursement Policy Evaluate and enact modifications to the current sewer extension policy to equitably share sewer extension construction costs among all benefitting parties.		X				Town Engineer, Town Planner, Town Solicitor, Town Council
SF-8.3b	Evaluate Mandatory Sewer Connection Policy The Town of Smithfield will evaluate and enact modifications to the current sewer connection policy.		X				Town Engineer, Town Planner, Town Solicitor, Town Council
SF-8.4a	Develop Industrial Wastewater Pretreatment Policy		X				Town Engineer, Town Solicitor, Town Council
SF-8.4b	Implement Industrial Pretreatment Program Hire adequate staffing to manage and implement the Industrial Pretreatment Program, and provide all tools, equipment and incidentals needed for the Industrial Pretreatment Program staff to carry out their duties.		X				Town Engineer
SF-8.5a	Evaluate establishing an On-site Wastewater Treatment System (OWTS) management program to provide technical and financial assistance to property owners, not served by public sewers, when their OWTS systems fail and require repair or replacement.			X			Town Engineer, Public Works
SF-9.1a	Dam Management Program and EAP Undertake a comprehensive dam management program for all 12 high hazard and significant hazard dams in Smithfield.			X			Town Engineer
SF-9.1b	Dam Removal Develop plans and seek funding assistance to remove dams that no longer provide a useful function in order to improve public safety and restore fish and wildlife habitat by restoring free flow to rivers and streams in Smithfield.				X		Town Engineer, Town Council
SF-10.1a	DPW Site Improvements Develop plans and seek funding to make more effective use of the DPW site on Pleasant View Avenue.				X		Department of Public Works, Town Council
SF-11.1a	Curbside Collection Improvements Continue and upgrade the municipal program of weekly curbside residential solid waste and recyclables collection while requiring commercial and industrial establishments to contract privately with waste disposal companies.		X				Public Works, Recycling Coordinator
SF-11.1b	Expanded Recycling Reduce the volume and weight of the solid waste stream that must be disposed at the Central Landfill by designing and implementing an expanded program of collecting mixed recyclables, backed by a public education campaign consisting of outreach to grade schools, direct mail to residents and collaboration with local businesses.		X				Public Works, Recycling Coordinator, Town Council

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-11.1c	Replace Oil Recycling "Igloo" Encourage recycling of waste oils by providing an updated oil recycling facility that is larger, easier to access, and provides separate storage for petroleum oils and cooking oils		X				Public Works, Recycling Coordinator, Town Council
SF-11.1d	Town Composting Facility Study a composting program of leaf and yard waste from Smithfield residents by constructing and utilizing a new composting facility at the DPW site, by utilizing a facility at some other nearby location, or by cooperating with nearby Towns to develop a regional composting facility		X				Public Works, Recycling Coordinator, Town Council
SF-12.a	Inventory dams in the community that might be suitable for alternative power generation using Archimedes screw or other technology.		X				Town Engineer, Planning Dept.
SF-12.1b	Explore the feasibility of using town owned dams for power generation projects.		X				Town Manager, Planning Dept, Town Council, Engineering
SF-12.1c	Identify and implement energy efficiency projects at Town facilities.					X	Finance, Planning Dept. Town Manager
SF-12.1d	Identify municipal and school sites suitable for solar projects.	X					School District, Finance, Planning Dept. Town Manager
SF-13.1a	Plan and develop enhanced programs for e-government access.		X				DPW Director, Town Engineer, Town Planner
SF-13.1b	Work with RIEDC and BBRI to increase the availability of Public points of access in libraries and community anchor institutions, advocate for private carriers to offer low cost basic plans to low income households in Smithfield, and provide digital literacy education to help people access education, employment resources, and other public services online		X				DPW Director, Town Engineer
SF-14.1a	Develop and maintain a single unified digital Asset Management System (AMS) capable of integrating comprehensive information about all elements of the Town's facilities and infrastructure networks.		X				
SF-14.1b	Investigate currently available AMS's, and select one which best serves the Asset Management goals and policies of the Town.		X				
SF-14.3a	Establish Operation and Maintenance (O&M) Funding Levels		X				All department heads with responsible oversight of facilities and/or infrastructure networks

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
SF-14.4a	Infrastructure Capital Improvement Planning Use the AMS to generate projections of facilities and infrastructure conditions (accounting for regular deterioration resulting from age and use), and use these projections to develop and plan for capital budget required for infrastructure upgrade and/or replacement.		X				All department heads with responsible oversight of facilities and/or infrastructure networks
SF-15.1a	Coordinate Facilities & Infrastructure Capital Improvements Use the AMS to identify opportunities to coordinate simultaneous facilities and infrastructure capital upgrades and/or replacements.		X				All department heads with responsible oversight of facilities and/or infrastructure networks
SF-16.1a	Establish a centralized purchasing system for all Town departments.		X				Town Administration
SF-16.1b	Study the feasibility of establishing a centralized municipal equipment and vehicle maintenance system.			X			Town Administration
SF-16.3a	Working with the Planning Board, Town Council, Economic Development Commission and others, review, and provide technical and other assistance where necessary to encourage expansion of the industrial and corporate tax base especially in the PCD.					X	Planning Department, Planning Board, EDC & Town Council
SF-16.3b	Study the feasibility of options such as shared and regionalization of services such as schools, fire, police, and public works.					X	Town Administration
NR	NATURAL RESOURCES						
NR-1.1a	Work with federal, state and local watershed and environmental organizations to maintain and improve the quality of all water bodies in Town.						Planning Dept., Conservation Commission
NR-1.1b	Institute community service activities to clean up river banks.					X	Conservation Commission
NR-1.1c	Implement the actions identified in the Town Phase II Stormwater Management Plan.					X	DPW, Town Engineer
NR-1.1d	Work with the City of Woonsocket and the Towns of Lincoln and North Smithfield to protect the water quality of Woonsocket Reservoir.					X	Planning Dept., Planning Board, Conservation Commission
NR-1.4a	Work with RIDEM and EPA to ensure clean-up of existing contaminated sites.						
NR-1.4b	Adopt a "Contaminated Groundwater Overlay District" to prevent the use of groundwater in the vicinity of the Davis Liquid Waste Superfund Site.	X					Town Council
NR-2.1a	Amend local ordinances and regulations to ensure that development designs are more sensitive to the surrounding environment, conserve woodlands, preserve stone walls, and work with existing topography.		X				Planning Board, Town Council
NR-3.1a	Adopt an access management ordinance aimed at reducing traffic congestion on all arterial roadways.		X				Planning Board, Town Council

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
NR-4.1a	Identify and pursue options for habitat preservation, preferably larger parcels, and those adjacent to other publicly-owned land.					X	Conservation Commission
NR-4.1b	Amend zoning designation of large contiguous parcels to match the level of development constraint.		X				Planning Board, Town Council
NR-4.4a	Pursue funding to develop and implement habitat management plans for Town owned properties.		X				Conservation Commission, Land Trust
NR-5.1a	Acquire/protect lands which protect wetlands' biological and hydrological integrity, provide opportunities for public access and usage, and enhance the proper management of wetland systems.					X	Conservation Commission, Land Trust
NR-5.1b	Make judicious use of the special provisions of the Town's Land Development Regulations enabling the Town to reserve suitable open space for recreation and conservation opportunities in larger subdivisions.					X	Planning Board
NR-5.1c	Refine provisions within the Zoning Ordinance and Land Development Regulations to encourage conservation development and to protect woodlands and other natural resources.			X			Planning Board, Town Council, Planning Department
NR-6.1a	Reduce pressure for farmland conversion by developing a voluntary farm, forest, and open space tax incentive program.				X		Town Council, Planning, Land Trust
NR-6.1b	Work with farmers, the RI Department of Environmental Management (RIDEM) and the U.S. Natural Resource Conservation Service (NRCS) to develop and implement programs that will improve yields, enhance farm revenues, and promote the practice of agriculture and silviculture in Smithfield.				X		Conservation Commission, Town Planner
NR-7.1a	Educate property owners eligible for the Farm, Forest and Open Space Act use value assessment program about the programs availability, and the existence of others, as appropriate.					X	Tax Assessor, Town Planner
NR-7.1b	Pursue other options for farmland and forestland preservation as appropriate.					X	Land Trust, Town Planner
NR-8.2a	Formally adopt the Town's draft Hazard Mitigation Plan.		X				Town Manager, Town Planner
NR-8.2b	Implement procedures recommended by the Hazard Mitigation Plan to ensure that the Town can adequately respond to natural disasters, protect infrastructure from natural hazards, and make adaptations to reduce vulnerability to natural disasters.			X			Town Manager, Town Council, DPW Director, Town Engineer, Emergency Services
NR-8.2c	Work to reduce global climate change through implementation of sustainable transportation options, utilization of renewable energy sources, requiring "green" building techniques and implementing water and energy conservation measures.					X	All Town officials and residents
CR	CULTURAL RESOURCES						

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
CR-1.1a	Create educational opportunities for Town citizens to learn about the history of the community and issues affecting cultural resources in the Town.					X	Historic Preservation Commission
CR-1.1b	Expand educational efforts and resources committed to teaching about local history in the Town's schools, such as establishing a special curricula and providing teacher training.			X			Historic Preservation Commission, Department of Education
CR-1.1c	Create an historic resource webpage on the Town's web site to illustrate and describe historic and cultural resources of the Town.		X				Historic Preservation Commission
CR-2.1a	Identify, protect, and restore Smithfield's historic districts sites, buildings and structures, to promote and encourage the donation and preservation of historic documents, maps, objects and artifacts as representations of the Town's cultural heritage					X	Historic Preservation, Planning Board
CR-2.1b	Complete the on-going inventory of historic properties in the community and complete the designation of properties identified as historic on Town plat maps.		X				Historic Preservation Commission
CR-2.1c	Identify known archaeological sites on a Town base map in a generalized manner, i.e., twenty-acre radius around one or more sites so as not to pinpoint a particular site. Maintain this map as a resource in the Planning Department to let property owners know locations which may have archaeological sensitivity.			X			Historic Preservation Commission, RIHPHC
CR-2.1d	Establish and implement the necessary land use regulations to provide local protection for the Town's historic sites, buildings, structures and objects.			X			Historic Preservation Commission, Planning Board
CR-2.1e	Evaluate review thresholds and establish procedures for review of proposed alterations to designated historical properties.		X				Historic District Commission
CR-2.1f	Evaluate local historic district zoning for Esmond/Georgiaville and Greenville Village.			X			
CR-2.1g	Assess requiring applicants for Town permits for projects with the potential to affect designated historic properties to evaluate the impacts of the proposed projects on cultural resources and to minimize adverse impacts to the historic values of the properties		X				Historic District Commission, Town Council
CR-2.1h	Study amending the Zoning and Subdivision Regulations to enhance preservation of historical and cultural places by incorporating architectural and aesthetic controls in keeping with the Secretary of the Department of the Interior's Standards for the Treatment of Historic Properties		X				Town Council, Historic Preservation Commission, Town Planner
CR-2.2a	Evaluate creating a separate and secure, controlled use archival, area in order to foster better preservation of important documents and artifacts.				X		Town Council, Historic Preservation Commission, Town Planner
CR-5.1a	Promote and support research to further the understanding of the history of Smithfield and to establish and document the significance of cultural resources on public and private properties in the Town.					X	Historic District Commission

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
CR-2.2b	Expand the Town's knowledge and documentation of historical and archaeological sites and structures.					X	Conservation Commission
CR-2.6a	Pursue Certified Local Government (CLG) status to permit the Town to secure preservation grants and loans to carry out preservation activities needed to protect historical resources.		X				Historic Preservation Commission, Historical Society
CR-2.6b	Coordinate with the Smithfield Historic Preservation Commission on all projects that may affect designated historic properties.					X	Town Manager, Town Council and all Town Departments
CR-2.6c	Work with the RIHPHC to review those sites considered potentially eligible for listing on the National Register of Historic Places and encourage the owners to nominate the properties and have them listed on the Register.					X	Historic Preservation Commission
CR-3.1a	Apply the Historic Review Process along with the Town's Zoning Ordinance and Subdivision Regulations to Town projects, Land Trust acquisitions and Town properties to preserve and enhance the historic character of the community.					X	Town Council, Historic District Commission, Land Trust, Conservation Commission
CR-3.1b	Work with the Land Trust, Conservation Commission, and Historical Society to develop programs that will preserve and enhance public access to publicly owned historic properties in Smithfield.					X	Town Council, Historic District Commission, Land Trust, Conservation Commission
RC	RECREATION, CONSERVATION, AND OPEN SPACE						
RC-1.1a	Study connecting existing open space parcels to maximize their benefits for wildlife habitat and passive recreation.					X	Town Planner, Land Trust, Conservation Commission
RC-1.1b	Purchase Camp Shepard CIP #15-TA-1			X			Town Council, Town Planner, Land Trust, Conservation Commission
RC-1.1c	Coordinate with Rhode Island Department of Transportation to make more effective use of the George Washington Picnic Grove property for conservation and public recreation purposes			X			Town Manager, Town Planner, Land Trust, Conservation Commission
RC-1.2a	Confirm that conservation easements are recorded for all existing open space parcels.					X	Town Planner, Land Trust, Conservation Commission
RC-1.2b	Properly record conservation easements where they are missing or incomplete for existing open space parcels.					X	Town Planner, Land Trust, Conservation Commission
RC-1.2c	Adopt policies and procedures that ensure the proper recording of conservation easements for all future open space properties.		X				Town Planner, Land Trust, Conservation Commission
RC-1.3a	Create management plans for all major open space properties owned by the town.			X			Town Planner, Land Trust, Conservation Commission

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
RC-2.1a	Update the Town's Open Space, Recreation and Conservation Plan of 1988 to reflect ecological, sociological, demographic and economic changes, technological progress and current development trends			X			Town Council, Recreation Director, Town Planner
RC-2.1b	Investigate a multi-use artificial turf field in a lighted location that can be used continuously in order to relieve the pressure on existing grass fields.		X				Town Council, Recreation Director
RC-2.1c	Investigate the construction of a new Little League field at Deerfield Park (Phase II A), allowing the conversion of the Little League field at Whipple Field to a softball field.			X			Town Council, Recreation Director, Town Planner
RC-2.1d	Take advantage of grant opportunities available for funding new recreational facilities at Deerfield Park, Whipple Field and Willow Field including a multi-purpose field, Little League and softball fields with associated parking and other amenities.					X	Town Council, Recreation Director, Town Planner
RC-2.2a	Assess providing an indoor facility, associated with the ice rink and funded by revenue generated by the ice rink, for multiple use indoor field sports to allow the town to retain funds which are presently being diverted to private out-of-town sports facilities.				X		Town Council, Recreation Director
RC-2.2b	Study upgrading the Town's ice rink and sports complex to ensure that the facility can continue to serve the needs of the community for the foreseeable future.			X			Town Council, Recreation Director
RC-2.3a	Develop a build-out plan for the future of the ice rink to include modernization of the existing (1973) facility with indoor field sports (Action RC 1.2), more locker room space, office and work space, a lobby, conference room, function rooms, and possibly sports related rental retail space(s). Provide a schedule for implementation of the build-out plan			X			Town Council, Recreation Director, Town Planner
RC-2.3b	Reduce energy demand at the ice rink by improving the energy efficiency of all ice rink systems including lighting, HVAC, vending, and refrigeration. Explore option of converting hot water system from oil fired to gas fired, installing a heat pump system, and replacing the existing R-22 refrigeration system with a more ozone friendly coolant					X	Recreation Director, Town Planner, Finance Director
C	CIRCULATION						
C-1.1a	Perform routine roadway condition assessments of all local roads, and will develop, implement and maintain a Pavement Management System to track roadway conditions and develop roadway budgeting projections.					X	DPW Director, Town Engineer
C-1.1b	Develop, Implement & Maintain Pavement Management System (PMS)		X				DPW Director, Town Engineer
C-1.1c	Develop a Roadway Capital Improvement Plan (CIP) and Bond Issue			X			DPW Director, Town Manager, Town Council

Implementation Program

REF. NO	ACTION	TIMEFRAME					RESPONSIBLE PARTY(IES)
		6mo	6mo - 2yrs	2yrs - 5yrs	5yrs - 10yrs	On-going	
C-1.1d	Determine a system-wide average roadway segment rating (RSR) goal and secure and expend capital funding as appropriate and practicable to improve its local roadways to achieve the designated RSR goal.		X				DPW Director, Town Engineer
C-1.3a	Revise Land-Development regulations and Zoning Regulations related to traffic management in order to alleviate or at least moderate the current excessive traffic congestion on some State roadways, and to mitigate any potential worsening of traffic conditions that could result from further development along those roadways.		X				Planning & Economic Development, Planning Board
C-1.3b	Develop and adopt a town-wide access management ordinance as called for in the Route 7/116 Corridor Access Management Plan.		X				DPW Director, Town Engineer, Town Planner, Local Boards & Town Council
C-1.3c	Employ access management measures in all Land Development Projects and particularly those located along roadways with identified traffic congestion problems such as Route 44, Route 7, and Route 116.					X	
C-1.5a	The Town will review the Rhode Island Airport Land Use Compatibility Guidebook to ensure that land uses are compatible with airport operations.					X	
C-1.7a	Perform Pedestrian Travel Way Inventory and Route Identification		X				Town Planner, DPW Director

APPENDIX A

WATER SUPPLY MANAGEMENT PLAN - EXECUTIVE SUMMARIES



REPORT

PARE Project No. 03066.40

**SMITHFIELD WATER SUPPLY BOARD
WATER SUPPLY SYSTEM MANAGEMENT PLAN**

EXECUTIVE SUMMARY

PREPARED FOR:

Town of Smithfield
64 Farnum Pike
Smithfield, RI 02917

PREPARED BY:

Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865

MAY 2015

EXECUTIVE SUMMARY

This Water Supply System Management Plan (WSSMP) has been prepared as required under Rhode Island General Laws 46-15.3, as amended and titled “The Water Supply System Management Planning Act” (Act). The legislative authority to effectuate the goals and policies of this Act has been conferred to the Rhode Island Water Resources Board (RIWRB). To this end, the RIWRB has promulgated the Rules and Regulations for Water Supply System Management Planning (“Rules”), last revised in October 2002, as amended to implement the provisions of the Act.

The Smithfield Water Supply Board (SWSB), as a water purveyor supplying over 50 million gallons (MG) of water per year, is responsible for updating its WSSMP every 5 years. This document is the 2015 Update of the WSSMP for the SWSB. The WSSMP has been prepared to be consistent with the goals of the Rules as well as the strategies and goals articulated in the RIWRB’s 2012 Strategic Plan and the RIWRB’s Water Use and Efficiency Rule for Major Water Suppliers. It is also consistent with the goals of State Guide Plan Element No. 721 – RI Water 2030 and the goals stipulated in the Comprehensive Plans for the Towns of Smithfield and North Providence.

Introduction

The SWSB’s primary objective is to operate a water system for the benefit of, and to meet the legitimate needs of, the customers in its service area. In accordance with that objective, the SWSB’s specific goals are to:

1. Promote the efficient use of water through:
 - conservation and efficient operation of the system in accordance with industry and State standards; and
 - effective metering and public information programs that encourage water conservation.
2. Comply with all applicable laws and regulations.
3. Protect the integrity of its existing source of supply connection to the Providence Water Supply Board (Providence Water).
4. Cooperate with the overall goals of the Town of Smithfield and the Town of North Providence as outlined in their respective Comprehensive Plans.
5. Provide for service to all locations within its service area.
6. Conform to the overall goals for water suppliers established in State Guide Plan Element No. 721 – Rhode Island Water 2030.



Background

The Town of Smithfield, through the SWSB, owns and operates a public water distribution system in a non-exclusive territory, serving portions of the Towns of Smithfield and North Providence. The SWSB was developed from a subsequent Water Supply Commission enacted by the Town of Smithfield. This Commission was authorized and established by Chapter 1676, 1930 Public Laws of Rhode Island with the purpose of developing “an accurate and comprehensive study of the water supply of the Town of Smithfield”. Today, the Town Council acts as the Board of Water Commissioners for the SWSB.

Water system management and day-to-day operations are the responsibility of the Water Commissioner and SWSB staff. Mr. Seth Lemoine currently serves as the Water Commissioner, as well as Director of Public Works for the Town of Smithfield. The SWSB has two other full time employees, both identified as “Field Observers”.

The SWSB operates out of the Smithfield DPW facility at the following location:

3 Spragueville Road
Smithfield, Rhode Island 02917
Telephone Number: 401-233-1034

The SWSB’s mailing address is at the Smithfield Town Hall, as follows:

64 Farnum Pike
Smithfield, RI 02917
General Number: 401-233-1000

General System Description

The SWSB water system consists of approximately 36 miles of distribution and transmission mains supplied by one primary interconnection with Providence Water at the Longview Reservoir in North Providence. The SWSB does not have any of their own sources of supply and does not typically treat wholesale water purchased from Providence Water. Occasionally, chlorine injection is performed to boost chlorine residual.



The SWSB's Longview Reservoir Pump Station draws water from the interconnection and boosts pressure to raise its hydraulic grade. The Limerock Booster Pump Station works in conjunction with the Longview Reservoir Booster Pump Station to boost pressure again to the system's main pressure zone. Each pump station is rated to approximately 2.0 million gallons per day (MGD) and both have three variable frequency drive pumps. A third pump station, the Davis Booster Pump Station, raises pressure to meet the hydraulic grade of an isolated section in the northwest part of the service area. This pump station has two constant speed, 150 gallon-per-minute (GPM) pumps.

There are three storage tanks in the system, as follows:

- 1.0 MG Rocky Hill Road Tank;
- 4.0 MG Island Woods Tank; and
- 300,000 Gallon Burlingame Tank.

All three tanks are of steel construction and require rehabilitation of the interior and exterior coatings. This work, along with the addition of tank mixing systems, is anticipated to be performed in upcoming years.

The SWSB sells water to the East Smithfield Water District (ESWD) through a wholesale interconnection on Ridge Road in Smithfield. The SWSB also has an emergency interconnection with the ESWD at Meadow View Drive and recently constructed a new emergency interconnection with the Greenville Water District (GWD) at the GWD's new storage tank in the vicinity of the SWSB's Burlingame Tank.

Average Day Demand (ADD) for 2014 was estimated to be 0.89 MGD based on total water use by the retail customer base of 323.22 million gallons. Total wholesale water purchased in 2014 was approximately 364 million gallons, an average of 1.0 MGD. The Maximum Day Demand (MDD) was estimated to be 1.7 MGD using a MDD to ADD peaking factor of 1.9.

Residential average daily per capita water use was estimated to be approximately 41.7 GPCD based on a service area population of 9,260 residents. Residential water use was approximately 44% of the total water use, while the remainder is grouped together and categorized as commercial/industrial. Major Users, customers that use at least 3 million gallons of water annually, represent a large proportion of commercial/industrial water use. There were 12 Major Users in 2014 and as many as 15 customers have qualified as Major Users in the past.



There were approximately 1,457 active accounts in 2014, as follows:

- Residential 1,297
- Commercial: 142
- Industrial: 13
- Government: 5
- Total: 1,457

All services are metered and the SWSB recently upgraded to system-wide radio-read metering. Major Users are metered and billed monthly while the remaining customer base is metered annually and billed semi-annually. The SWSB plans on transitioning to quarterly metering and billing, which is anticipated to go into effect in June 2015.

The SWSB anticipates developing an updated Capital Improvement Plan (CIP) in 2015. Some of the projects anticipated to be incorporated into the CIP were described in the WSSMP and have been included in the plan's Implementation Schedule. These projects include the following:

- Investigate the feasibility of new interconnections with the Lincoln Water Commission water system, evaluate associated costs, and identify potential funding sources;
- Rehabilitation and upgrade of the water storage tanks, specifically adding tank mixing systems and rehabilitating the interior and exterior tank coatings;
- Potentially replacing the Rocky Hill Road Tank with a new taller storage tank;
- Retrofit existing SCADA system for wireless access and transition to the use of radio transmitters for communication between the storage tanks and pump stations; and
- Construction of a new water main loop between George Washington Highway and Farnum Pike to improve available fire flow and system redundancy.

Water Quality Protection Component

The SWSB collects the charges associated with the water quality protection program and issues them to Providence Water and the Rhode Island Water Resources Board, as required, in accordance with the Public Drinking Water Protection Program (RIGL 46-15.3). This program distributes funds which are used for land acquisitions and to purchase development rights within the supply watershed areas to help protect water quality.



Water quality in the SWSB system has generally been good and compliant with State Standards. However, a chlorine injection system was installed at the Limerock Pump Station in 2011 to raise chlorine residual in the system due to previous exceedances of total coliforms. This system has only been used on occasion and is intended for seasonal use. Its use has not been required since 2012.

Sampling and analysis performed by the SWSB for total trihalomethanes (TTHMs) indicated that the running average TTHM concentration following the 1st Quarter of 2014 was 83.05 mg/L. A violation for TTHMs is triggered when the running average from the previous three quarters of sampling exceeds the Maximum Contaminant Level (MCL) of 80 mg/L. The running average increased to 85.5 mg/L following testing done in the 2nd Quarter of 2014, but testing performed for the 3rd Quarter of 2014 resulted in lower concentrations of TTHMs that decreased the running average concentration to below 80 mg/L. The running average TTHM concentration has remained below 80 mg/L since.

The concentrations of TTHMs in the samples collected in the SWSB distribution system were found to be very similar to concentrations in the wholesale water entering the system from the Longview Reservoir. There appears to be relatively little TTHM formation within the SWSB system itself. As such, the SWSB has coordinated with Providence Water and met with them in June 2014 to discuss strategies for lowering TTHM concentrations in the wholesale water sold to the SWSB. Providence Water indicated that they are evaluating water age and mixing at all of their storage facilities in an effort to reduce formation of TTHMs, with the Longview Reservoir being their highest priority. The SWSB is performing a similar evaluation at their three storage facilities and is considering the addition of mixing systems at their storage tanks in the near future.

Anticipated Future Demands

Anticipated future demands were developed based upon several factors, including:

- historic trends for water use;
- anticipated population changes;
- effects of conservation efforts;
- building code changes and efficiency of water using facilities and equipment (both system and user facilities and equipment);
- service area zoning and municipal policies; and
- known or anticipated major water user considerations.



Table 2 presents anticipated water use in the 5-year and 20-year planning periods with consideration to the factors identified above.

Table 2: Anticipated Future Water Demand

	Current [2014]	5-Year Period	20-Year Period
Residential Water Use (mgd)	0.39	0.41	0.46
Comm./Ind. Water Use (mgd)	0.50	0.765	1.257
Average Day Demand (mgd)	0.89	1.175	1.717
Total Demand (MG)	323.22	429	627
Maximum Day Demand (mgd)	1.7	2.35	3.43
MDD to ADD Peak Factor*	1.9	2.0	2.0

* Peaking factor assumed to be 2.0 based on historic water use estimates. AWWA Manual M32 suggests that typical MDD to ADD peaking factors range from 1.2 to 2.5.

Table 2 presents anticipated average and maximum daily water use in the 5-year and 20-year planning periods. Commercial water use projections are consistent with estimates made in a 2007 Buildout Analysis performed by the Town as well as planned expansion and development of the Town's Planned Corporate District. Residential projections are based on an assumption of an average of 60 new residents in the SWSB service area each year, each using 65 gallons per day on average which is equivalent to the State's residential per capita water use goal. Actual residential per capita water use is currently less than this, so this may be a conservative approach for projecting future water use. Population growth is based on the assumption that 48 new housing units are constructed in the Town of Smithfield each year and that approximately half of these would be built in the SWSB service area with an average occupancy of 2.5 people per unit. These assumptions have been made based on recent discussions with the Smithfield Town Planner. The MDD has been estimated to be 1.7 mgd in recent years and it has been projected for future years using a MDD to ADD multiplier of 2.0.

Table 3 provides annual water use by retail customers, wholesale water sales to the ESWD, an estimate of non-account water and the total wholesale purchase from Providence Water for the 2014. Projections for the 5-year and 20-year planning periods have also been provided. Estimates for non-account water have been made assuming it is 8% of total wholesale water purchases for the 5-year and 20-year planning periods, consistent with current estimates.



Table 3: Anticipated Future Wholesale & Non-Account Water

	Current [2014]	5-Year Period	20-Year Period
Total Water Use – Retail Base (MG)	323.22	429	627
Wholesale Water Sales to ESWD (MG)	11.26	12	12
Non Account Water (MG)	29.65	35.3	51.1
Total Wholesale Water Purchases (MG)	364.13	476.3	690.1
Average Daily Wholesale Water Purchases (MG)	1.0	1.3	1.9

Available Water

The SWSB and Providence Water reached an agreement in 1993 that allows the SWSB to purchase up to 1.965 MGD, identified as a “projection of a maximum demand...in the year 2004”. This agreement was reached at the time the SWSB was undergoing the EPA system expansion and performing the system upgrades associated with the Davis Waste Site. Although this was based on a projection for 2004, the estimated MDD has historically been below 1.965 mgd and there is no expiration date identified in the agreement. The SWSB continues to follow this agreement for wholesale water purchases from Providence Water.

Existing infrastructure at the interconnection (i.e. pumps at Longview Reservoir Booster Pump Station and transmission piping) is designed for a maximum of 1.965 mgd. However, future maximum day demands are expected to exceed this current limit. Upgrades would be necessary to increase the maximum supply available from this interconnection, in addition to consent from Providence Water. It is the SWSB’s understanding that Providence Water would be amenable to selling more water to the SWSB under this scenario.

The SWSB does not have access to suitable water supply sources of its own. However, development of alternative sources of supply from other suppliers is possible, such as the Lincoln Water Commission. The SWSB is considering the potential of establishing new emergency interconnections with the Lincoln Water Commission (LWC), which has interconnections with the municipal water systems in Woonsocket, Cumberland, and Pawtucket in addition to their primary connection to Providence Water. Supply augmentation studies are intended to investigate and recommend alternative water supply sources due to anticipated shortfalls in the quality or quantity of existing



supplies. The SWSB has not conducted supply augmentation studies and does not believe they are required at this time.

Demand Management

The *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*, adopted May 16, 2011, established efficient water use targets for major public water suppliers, which includes the SWSB. One of these targets is that residential average per capita water use be no higher than 65 gallons per capita per day (gpcd). The average annual per capita water use for Fiscal Year 2014 was approximately 41.7 gpcd and the SWSB has consistently met this target. While many multi-family housing units are not included in this rate because they are metered and billed as commercial customers, the SWSB has a high level of confidence that per capita residential water use still meets the State's goal even with multi-family housing included. Incorporating the multi-family housing units that also qualify as "Major Users", residential water use estimated in 2014 would result in approximately 50 gpcd, still well below 65 gpcd.

The SWSB has implemented programs to improve the efficiency of indoor and outdoor water use by its customers, generally in parallel with programs conducted by Providence Water. One such strategy employed by the SWSB has been to offer complimentary retrofit kits to their residential customers. The SWSB has often used mailings and information on their website to educate its customers about efficient water use in the past. Continuing to provide notifications in the annual water bill and on the Town's website, as well as placing informational door hangers at customer's homes, conducting public workshops, and soliciting public notices, are all possible methods the SWSB may use to continue educating its customers about efficient water use.

The SWSB's Demand Management Strategy, prepared in 2012, provided an estimated average leakage rate for 2009-2011 of approximately 6%. Leakage ranged from 3% to 8% during this time period, meeting the State's 10% goal for leakage. Leakage in the system continues to meet the State's goal. Non-account water, the majority of which is considered to be leakage, was estimated to be approximately 8.1% in 2014. The SWSB has historically estimated water used by the local fire departments for hydrant flushing and fire-fighting to be approximately 12% of total non-account water, but has found this to be an overestimate. The SWSB recently began coordinating with the Smithfield Fire Department for more accurate estimates of water use for fire-fighting.



Total wholesale water purchased from Providence Water was approximately 364 million gallons for Fiscal Year 2014. This averages 1.0 MGD for the year. The ADD for this time period, based on distribution meter readings, is approximately 0.89 MGD over the entire year while it is approximately 1.0 MGD during the summer months. Demand is somewhat higher in the summer months as it is in most systems, yet the increase in water use in the summer compared to other times of the year is not as severe as in other systems. This is likely due to the fact that the system has a relatively high commercial water demand and that the system's largest user, Bryant University, has limited enrollment and activity during the summer months

System Management

The major goals of system management include the following:

- Maintaining non-account water use to below 15% of total system demand, in accordance with State Guide Plan Element 721;
- Reducing leakage to below 10% of system demand;
- Establishing a preventive maintenance program; and
- Maintaining compliance with the applicable requirements of the *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*.

All delivered water, excluding leakage and approved non-billed uses (e.g. hydrant flushing, fire-fighting) is metered and billed. Leakage has routinely been calculated below 10% of total water use, in accordance with the *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*. Non-account water has consistently been below 15%, in accordance with State Guide Plan Element 721.

The SWSB meters 100% of the users in the system and this will continue to be their policy. The SWSB recently completed the retrofit and conversion of distribution meters to remote read type meters in accordance with State requirements. Major User meters are read and billed monthly while other meters are read annually. The SWSB will work toward establishing quarterly meter reading for these customers to comply with RIGL §46-15.3-22. Quarterly billing of residential customers is anticipated to begin in June 2015.



The SWSB performed a leak detection survey in early 2014, hiring Atlantic States Rural Water and Wastewater Association to perform an acoustic survey of the entire system. The survey was performed after the SWSB noticed an increase in unaccounted water use, and leaks were subsequently repaired. Leakage in the system remains relatively low. The SWSB will continue to monitor leakage and recently purchased its own leak detection device to monitor for leakage between formal leak surveys. The SWSB will perform subsequent leak detection surveys should leakage increase to rates close to or above the State's 10% goal.

The SWSB maintains an active Preventative Maintenance (PM) Plan. Major infrastructure components in the SWSB system that require ongoing preventative maintenance include the three storage tanks and three pump stations. Pumps and emergency power equipment are inspected and exercised weekly, and the SWSB hires a contractor to perform tank inspections approximately every five years. Additionally, SWSB staff performs routine system maintenance activities on other system components, such as exercising valves and flushing hydrants annually. The SWSB also maintains records of water main breaks in the system, detailing the size of the break, its location, the pipe size and material, and the repair method used.

Emergency Management

An updated Emergency Response Plan was prepared as part of this WSSMP, which generally establishes the following:

- Responsibilities and authority within the SWSB for responding to most probable emergencies;
- Most probable causes for emergencies and their potential impacts to the system;
- System components that are vulnerable to damage or incapacitation based on the most likely causes for emergency; and
- Specific tasks for carrying out functional and constructive solutions based on a review of the potential emergencies and the associated system risks.

Drought Management

Drought is one specific type of emergency that is treated separately, as it can impact the system over an extended period of time. Drought management procedures followed by the SWSB, as outlined in the updated WSSMP, are meant to be consistent with State Guide Plan Element 721 - RI Water 2030



and the requirements of Section 8.09 of the October 2002 Rules and Procedures for Water Supply System Management Planning.

The five phases of drought consistent with the Drought Watch/Warning System of the National Weather Service, are:

- Normal;
- Advisory;
- Watch;
- Warning; and
- Emergency.

Drought conditions are evaluated on a regional basis across the state and are assigned based on conditions represented by major hydrologic indices, including precipitation, groundwater levels, stream flow, and the Palmer Drought Index. The Rhode Island Water Resources Board and Drought Steering Committee evaluate the major hydrologic indices and adjust drought levels both state-wide and on a regional basis, accordingly.

The SWSB relies solely on Providence Water for water supply and is therefore dependent on Providence Water for drought management at the source. The SWSB works in conjunction with Providence Water on preventive measures and maintenance to aid in drought management.

The ability of the SWSB to withstand a drought is largely dependent upon the water supply demands of Providence Water. The direct effects of drought on the SWSB system potentially include:

- Reduction of available wholesale water from Providence Water;
- Reduction of Providence Water's surface water levels which can adversely impact water quality in addition to water quantity;
- Reduction in amount of water that can be sold to the ESWD; and
- Reduction of operating income due to reduced delivery of water.



The SWSB has identified four water quantity tiers in its Emergency Response Plan. Water use reductions correspond with Tier 2 - 4 water quantity conditions based on the severity of the drought or emergency, as follows:

1. **Tier 1** – 0.9 MGD – Water quantity consistent with normal operating conditions of the water system in regard to the ability to provide potable water for the average day use.
2. **Tier 2** – 0.45 MGD
3. **Tier 3** – 0.13 MGD
4. **Tier 4** – 0.015 MGD

Table 4 shows response actions to be taken by the SWSB corresponding to various stages of drought.

Table 4: Drought Response Actions

Drought Phase	Phase Identification	SWSB Initial Response	SWSB Response Actions
Normal	RIWRB Drought Steering Committee (DSC)	Coordinate/ Consult with Providence Water	1. Maintain Operations
Advisory	RIWRB DSC	Coordinate/ Consult with Providence Water	1. Coordinate w/ Mutual Aid Agreement Contacts and State Agencies per Emergency Management Plan (EMP) 2. Respond per Tier 1 Water Quantity Condition in accordance with EMP, as applicable
Watch	RIWRB DSC	Coordinate/ Consult with Providence Water	1. Coordinate with Mutual Aid Agreement Contacts and State Agencies per EMP 2. Respond per Tier 2 Water Quantity Condition in accordance with EMP, as applicable
Warning	RIWRB DSC	Coordinate/ Consult with Providence Water	1. Coordinate with Mutual Aid Agreement Contacts and State Agencies per EMP 2. Respond per Tier 3 Water Quantity Condition in accordance with EMP, as applicable
Emergency	RIWRB DSC	Coordinate/ Consult with Providence Water	1. Coordinate with Mutual Aid Agreement Contacts and State Agencies per EMP 2. Respond per Tier 4 Water Quantity Condition in accordance with EMP, as applicable



Implementation and Financial Management

A detailed schedule outlining the individuals responsible, timing, and capital costs associated with recommendations of this WSSMP has been developed and is presented in Table 5. This program has been compiled from the modifications and upgrades identified in the WSSMP. Also, the SWSB anticipates updating their 20-year Capital Improvement Plan (CIP), which is expected to include these projects but will likely identify other projects as well. The SWSB intends on completing a comprehensive rate study upon the completion and acceptance of its 20-year CIP. The SWSB will look to establish water rates that are fair and economical yet adequate for loan repayment associated with these projects.



Table 5: Implementation Schedule

Plan Element	Responsible Party	Estimated Timeframe	Estimated Cost	Possible Funding Source
<i>Water System Operational Procedures</i>				
Establish metering and billing on a minimum quarterly cycle for the entire system	SWSB Staff	2015	N/A	N/A
Institute full-accounting of non-billed water (Fire Dept., DPW use)	SWSB Staff	2015	N/A	N/A
Revise SWSB Rules and Regulations	SWSB Staff & Board of Directors	2016	N/A	N/A
Approach Providence Water regarding increase in allowable wholesale water purchases	SWSB Director	2016	N/A	N/A
<i>Water System Planning</i>				
Update 20-year CIP & Perform Rate Study	SWSB Staff & Engineering Consultant	2015-2016	\$35,000	General Operating Budget
<i>Infrastructure Rehabilitation</i>				
Install passive mixing systems at each storage tank	Outside Contractor	2015-2017	\$300,000	General Operating Budget
Rehabilitate exterior/interior tank coatings and perform miscellaneous structural repairs	Outside Contractor	2016-2018	\$3,000,000	Drinking Water SRF or Other Loan
Create system loop at Farnum Pike and George Washington Highway	Outside Contractor	2018-2020	\$2,000,000	Drinking Water SRF or Other Loan



The SWSB operates in a financially self-supporting manner and establishes water rates to fund operation and maintenance of the system. The SWSB intends on completing a comprehensive rate study upon the completion and acceptance of its 20-year CIP. The SWSB will look to establish water rates that are fair and economical yet adequate for loan repayment associated with these projects.

Table 6 summarizes the revenue and expenses for the SWSB for Fiscal Years 2011 - 2013. The SWSB Fiscal Year runs from July 1 through June 30.

Table 6: SWSB Total Revenue & Expenses (2011-2013)

	2013	2012	2011
Total Revenues	\$1,450,424	\$1,378,510	\$1,399,134
Total Expenses	\$1,357,436	\$1,338,080	\$1,335,432
Total Income (Loss)	\$92,988	\$40,430	\$63,702

The SWSB uses an inclining block rate schedule based on water usage. Current water rates went into effect in 2010 and represent a 9.9% increase from previous rates. The rate increase was in response to an increase in the wholesale rate charged by Providence Water.

The current rates are as follows:

Tier I (0 – 100,000 gallons annually): \$3.20/1,000 gallons

Tier II (100,000 – 1,000,000 gallons annually): \$3.80/1,000 gallons

Tier III (Over 1,000,000 gallons annually): \$4.40/1,000 gallons

Effectively, households that practice water conservation can fall into Tier I and pay the lowest rates, while households that use excessive amounts of water will likely be in Tier II. Many large commercial users will fall into Tier III but there is incentive for water conservation among many of the small and medium commercial customers to maintain water use within Tier II. The existing rate structure generally meets the State's intent for the establishment of water rates that promote water conservation.

Major users are metered and billed monthly, while the rest of the customer base is metered annually but billed semi-annually. The SWSB will transition to a program of metering and billing at a



minimum frequency of quarterly, to comply with the State's requirements for metering and billing frequency, now that system meters have been upgraded to automatic read meters. This has been identified as an action item in the SWSB's Implementation Schedule. It is anticipated that quarterly billing will be established by June 2015.

Coordination

The WSSMP was prepared with consideration to the Comprehensive Plans of the Towns of Smithfield and North Providence. While little future development is anticipated in the part of the SWSB system in North Providence, the Town of Smithfield anticipates increases in residential and commercial development in several parts of the town. This includes areas served by the SWSB, including the Town's Planned Corporate District along Douglas Pike (Route 7) and George Washington Highway (Route 116). Future development expectations have been used to project future water demands.

The SWSB and ESWD had reached a formal, signed agreement to consolidate both water systems into one new water district, entitled the "Smithfield Consolidated Water District". The SWSB serves a slightly greater population and has approximately 30% higher annual water sales than the ESWD. Currently both systems are supplied entirely through wholesale purchases from Providence Water and they serve customers in both Smithfield and North Providence. Their service territories are immediately adjacent to each other and are already interconnected at Ridge Road. A closed interconnection at Meadow View Drive could also be opened to connect the two service areas. Consolidating the two districts would hope to achieve operational cost savings through shared resources, such as equipment and personnel.

Formation of this district would require an Act of Legislation to be passed by the Rhode Island General Assembly. Legislation was first introduced in the Rhode Island General Assembly in May 2013 and then again in 2014, but in both cases the bill was held for further study. Consolidation of two districts is still under consideration and may be pursued again in the future.



GREENVILLE WATER DISTRICT WATER SUPPLY MANAGEMENT PLAN FIVE YEAR PROGRESS REPORT

(EXECUTIVE SUMMARY)

This progress report and supplemental update of necessary components and updated WSSMP issued as part of this submission represent the minor alterations (mostly usage data) with no significant system component updates. The Greenville Water District has made no major upgrades or updates since the approval of the 2007 plan. Moving forward, the next 5 year update will include new facilities and distribution upgrades and will require a comprehensive update of this plan.

Section 1 – Statement of Goals

The Greenville Water District's primary mission is to operate a water system for the benefit of and to meet the legitimate needs of the customers in the service area. In accordance with that mission the District's objectives are to:

1. Promote the efficient use of water through:
 - Efficient operation of the system in accordance with industry and state standards
 - Efficient use of water by the customers through effective metering and public information programs regarding wise use of water
2. Comply with all applicable laws and regulations.
3. Protect the integrity of existing source of supply connection to the Providence Water Supply Board.
4. Cooperate with the overall goals of the Town of Smithfield as outlined in the Town Comprehensive Plan
5. Provide for service to all locations within the service area.
6. Conform to the overall goals for water suppliers established in the State Guide Plan 721.

The District has adopted an additional goal to improve consistency of supply through interconnection of the transmission system with alternate suppliers. The District is implementing this goal through:

1. Developing engineering evaluations for alternative connections.
2. Requesting authority from the Town of Smithfield to connect to the Town system as an emergency interconnection which has been approved.

3. Developing a potential interconnection with the Town of Johnston's transmission system.

The goal of this Water Supply Management Plan Progress Report is to amend and update the approved Plan (2007) as required by the regulations with any changes since the 2007 Plan Approval while not supplying documents as addendums or appendixes that have not changed since the 2007 approved plans.

Section 2 - System Description

Legal

The Greenville Water District is an independent water district providing water to a specific service area in the Greenville section of Smithfield. Water is also supplied to a small section of the Town of Johnston that abuts the service area and Smithfield. The District is established under state law with full authority to manage its business, as approved by qualified voters of the district. The Greenville Water District was incorporated as a quasi-municipal corporation in accordance with the Rhode Island Public Laws, 1955, Page 684, as amended.

As a wholesale customer of the Providence Water Supply Board, the Greenville Water District is also subject to various sections of the legislation that establishes and provides powers to the Providence Water Supply Board (Chapter 1278 of the Rhode Island Public Laws of 1915, as amended).

Organization

The owners of the Greenville District are the qualified taxpayers of the Town of Smithfield living in the District's service area. The qualified taxpayers are eligible to vote for the Executive Committee that consists of seven members, and the ten other officers of the District consisting of:

- 1 - Moderator
- 1 - Clerk
- 1 - Treasurer
- 3 - Tax Assessors
- 1 - Tax Collector
- 3 - Members of Board of Canvassers

The Executive Committee manages the business, property and affairs of the District. The Executive Committee elects a Chairman and Vice-Chairman from its own membership, establishes policy, approves budgets and employs a full time Superintendent who is in charge of the day to day operations of the District, including supervision of the District's staff. The Superintendent is responsible to the Executive Committee for all operations of the District's water system. The current staff, in addition to the Superintendent, includes three full time workers, one Transmission & Distribution Technician, one Meter Reader/Maintenance, and one Executive Secretary. Employees of the District other than the Superintendent are represented by Teamsters Local 251.

The District maintains its offices at 630 Putnam Pike, Greenville, Rhode Island 02828, and the telephone number is 401-231-1433.

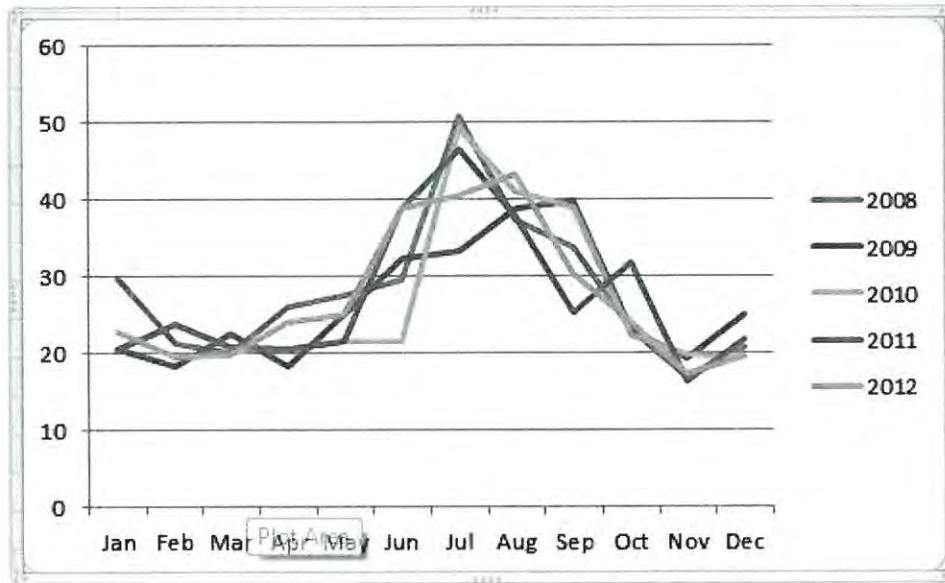
System Overview

The Greenville Water District's water system has a shape that is like a large tree. The roots of the system are the connection point to the Providence Water Supply Board system, located near the intersection of Route 44 and George Waterman Road in the Town of Johnston. From the connection, the trunk of the system (major transmission line) proceeds westerly in Route 44 to a major pumping station on Route 44 (Putnam Pike) just east of the Route 44 intersection with Interstate 295. After passing under I295, the transmission proceeds westerly on Putnam Pike to eventually branch out to the various streets and roads consisting of the village of Greenville. The pattern resembles the branches of a large tree. Near the westerly extremis of the system and at a significantly higher elevation, a tall water storage tank is installed to allow for supply during peak demands, emergency situations, and as a hydraulic head for the fire protection system in the service area. Water is delivered to the storage facility from two pumping stations, one located adjacent to the storage tank, and one located on Putnam Pike at the Waterman Lakes housing facility. Generally the system water volume and pressure is provided from continuous pumping at the primary pumping station just east of I295 with the storage facility providing flow and pressure during high demand periods. Appendix C includes a map describing the service area and a schematic representation of the water system.

Water Supply Sources

The Greenville Water District continues to obtain all of its water supply by direct wholesale purchase from the Providence Water Supply Board. The District has one connection with Providence Water that is described in Figure 1 including an update for 2011 delivery from Providence to the District.

(Figure 1)



Treatment Facilities

The District does not provide any treatment to its water beyond that treatment provided to the wholesale water by Providence Water.

Transmission, Storage, and Pumping Facilities

The transmission systems include piping, one primary pumping station and two pressure boosting pumping stations that essentially are integrated into one distribution system. Pumping and finished water storage remain the same as the approved plan.

Interconnections

The Greenville Water District does not currently have interconnections with any water system besides the primary supplier, the Providence Water Supply Board; however, the District has been negotiating with the

Town of Smithfield to install an emergency connection. Currently the installation has been approved by the Town of Smithfield.

Service Area

The District's service boundaries were established by the 1955 Act as amended in 1982 and the Connor's Farm area was added by 98-H 8494A enacted 7/7/98. The boundaries of the District include approximately 7.8 square miles of area with a perimeter of approximately 13 miles located in the southwestern portion of the Town of Smithfield (Greenville) and a small section of the portion of the Town of Johnston which is adjacent to the District.

The Greenville Water District does not currently provide water service to all of the buildings and facilities within the boundaries of the District. At this time less than ten residential buildings within the District boundaries are supplied from private wells.

The District has no plans to change its service area for the foreseeable future.

Population Served

The population served by the District was obtained from the 2010 Census Block information as well as information on economic levels and other demographics. In coordination with the US Census information the Rhode Island Statewide Planning information and projections were used to identify the population served.

Master Meters

Greenville Water continues to utilize the master meter described in the approved plan at the connection with Providence. The meter is read weekly and was last calibrated in December 2011.

Distribution Meters

Greenville Water meters 100% of the water distributed to its customers. Currently all customers are billed on a quarterly basis along with commercial and industrial accounts. The District has been installing radio read meters over the last 10 years. Currently all commercial industrial and high user accounts are radio

read meters. It is anticipated that all residential accounts will be converted to radio read meters within the next five (5) years. Currently 100% of the customer meters are equipped for remote reading.

System Production Data

The Greenville Water District obtains water solely from one connection with the Providence Water Supply Board. Historical analysis at this connection is reported for 2008- 2012 by month in Figure 1 on Page 4 of the executive summary.

Water Use

The water used in the District continues to be primarily residential type use. Commercial, industrial and government use account for less than 30% of the total use. The largest portion of other than residential use is commercial (approximately 28% of the 30%) and much of that use is similar to residential use in that it is for nursing homes and other residential type users. Figure 6 indicates the historic use including a breakdown of residential, other, and system (including unaccounted water) use. Greenville Water has only two multi-family housing units and includes that usage as residential usage. There is minimal industrial usage and the actual number of commercial and governmental accounts has been static for a number of years. (See Figure 2 below)

(Figure 2)

Historic Water Use

DESCRIPTION	2012 MG	2011 MG	2010 MG	2009 MG	2008 MG
Purchased from Providence	330.6	336.7	316.5	336.7	339.9
Billed to Residential	247	256.3	238.9	250	255
Billed to Commercial/Industrial/Government	62	64	60	62	61
Fire Fighting / System Use Non-Account	1%	1%	1%	1%	1%
% Accounted For Water	92%	94%	93%	91%	91%
% Unaccounted For Water	6	7	6	8	8

Major Users

The District serves the same three (3) Major Users identified in the approved plan.

Water Conservation Programs

The Greenville Water District makes available free water device conservation kits and promotes these kits through advertisements in the local newspaper and through information included with the water bills. In addition the Superintendent currently provides presentations in the school systems, coordinates drinking water projects with high school students for the RI Science & Engineering State Fair. He further provides technical assistance and science equipment to students who are working on projects as requested by school administrators. These programs are well received by the students and teachers and have been featured in local newspapers. The Greenville Water District also provides a quarterly newsletter to all of its residents promoting conservation and the value of water.

Needed Improvements

The Greenville Water District has completed the development of a hydraulic model (developed by Pare Engineering) to assist the District in the identification of hydraulic weaknesses in the system as well as to assist in the decision making process regarding system improvements and extensions. As a result of the hydraulic evaluation the District has identified major projects to strengthen the hydraulic capabilities, including the improvement of fire flows, of the distribution system including:

- Development of an Emergency Connection with the Town of Smithfield in the area of Routes 116 and Route 5 on the northern portion of the system;
- Complete the Cedar Swamp Road loop;
- Install an additional distribution storage tank on Burlingame Road;
- Install an emergency connection at Mann School Road and Burlingame
- Development of a separate high pressure zone to serve higher elevation sections of the system that are currently unserviceable; and
- Rehabilitate/replace sections of the system based on hydraulic and maintenance considerations.

The Emergency Connection project was developed recognizing the extreme vulnerability of the system to any failure of the single interconnection to Providence and/or the associated transmission line and primary pump station on Putnam Pike. Currently this project has been approved and the Town of Smithfield has approved the connection. The Town has also taken the position it will not provide any funding for an emergency connection.

Completion of the Cedar Swamp Road loop is on hold pending coordination with planned road rehabilitation.

The additional storage and the high-pressure zone are under consideration for development is in the design phase and scheduled for completion in November of 2013.

Section – 3 Water Quality Protection Component

This section is not a required portion of the Greenville Water District's Water Supply Management plan; however, the District collects the fees and taxes associated with the program and forwards said fees and taxes to the Providence Water Supply Board and the Rhode Island Water Resources Board.

Section- 4 Mapping

A system map is included in Appendix C.

Section 5 - Supply Management

General

The Greenville Water District is entirely dependent upon the Providence Water Supply Board to protect the water supply for the District.

Anticipated Future Demands

Anticipated future demands are developed based upon several factors including:

- historic trends for water usage
- anticipated population changes

- effects of conservation efforts and residential retrofit program
- building code changes and efficiency of water using facilities and equipment (both system and user facilities and equipment
- regulations adopted by state agencies regulating the use of water
- service area zoning and municipal policies
- known or anticipated major water user considerations

The assumptions and calculations for the anticipated five (5) and twenty (20) year planning horizons are included in Appendix D. Figure 3 is a summary of the anticipated demands.

(Figure 3)

Summary of Anticipated Water Demands

Year	Actual/Est	MGD	MGY
2009	Actual	0.92	336.7
2010	Actual	0.87	316.5
2011	Actual	0.92	336.7
2012	Actual	0.91	330.6
2025	Estimated	1.08	396.2

Available Water

The water available to the District is limited by state law and agreements with the Providence Water Supply Board. Currently the agreement with Providence has expired; however negotiations are underway with Providence to complete a new wholesale purchase agreement. State law continues to prevail as to the amount of water available to the District. Chapter 1278 of the Public Laws of 1915 as amended provide for Providence to supply 150 gallons per capita per day on a monthly basis. Therefore the Greenville Water District calculates the safe yield of its system at 150 gallons per capita per day. For the year ending December 31, 2011 the safe yield is 1.294 mgd. Figure 12 compares the 2011 available water to the 2011 water use. Figure 13 compares the anticipated future demand to the available water in the 5 and 20 year planning scenarios. A new demand management strategy has been adopted by the state of Rhode Island and has been attached to this document and has been implemented. (see figure 4 below)

(Figure 4)
Available Water vs Anticipated Water Use

Planning Year	Estimated Available (MGD)	Estimated Demand (MGD)
2016 (5 yr)	1.29	0.96
2032(20 yr)	1.41	1.08

Alternative Supplies

At the present time the Greenville Water District does not have access to any alternative water supplies. The District is negotiating with the Town of Smithfield to develop an interconnection that could be used for emergencies; however, it is not anticipated that the future interconnection could be used to augment existing supplies without significant capital investment to improve the hydraulic capabilities of both the Town and the District. The District has additionally entered into discussions with the Town of Johnston to develop an interconnection; this situation is currently in the early stages and considerable engineering evaluation would be required prior to considering the undertaking of this interconnection. The District considers its connection to Providence to be sufficient for the five (5) and (20) year planning scenarios.

Supply Augmentation Studies

The District does not currently have any plans to augment supplies except on an emergency basis through a connection with the Town of Smithfield and/or the Town of Johnston.

The District has no plans or intentions to activate the previously abandoned wells.

Section 6 – Demand Management

The District continues its program, implemented in 1992, to improve the efficiency of water use through:

- Supply Management Techniques
 - Metering
 - Leak Detection and Repair
 - Pressure Reduction
- Demand Management Techniques
 - Pricing
 - Public Education
 - Regulation and Legislation

- Retrofit
- Reuse and Recycling
- Peak Usage Reduction

A copy of the Demand Management Strategy has been added as an addendum to this document

Residential Retrofit Program

Figure 14 identifies the historical distribution of Residential Retrofit Kits. The District has provided annual notification to all of its customers through its Consumer Confidence Report and also through its quarterly newsletter. Individuals pick up the kits without charge at the District office and are provided with information on installation. Each kit contains:

- Leak detection tablets
- Water Faucet Aerator
- Low flow showerhead
- Toilet Tank Bag
- Instructions for use and installation

The District does not provide installation services.

Leak Detection and Repair Program/Meter Improvement Program

The District's has a Leak Detection and Repair program and the system has been surveyed twice, once by CA Turner and Associates in 2007 and by Atlantic States Rural Water in 2012. No evidence of leakage was found. This is corroborated by Non-account water being consistently below 10%, well within the state guideline. The District anticipates continuing the services of the Rural Water Association to complete future leak detection programs on as as-needed basis. Meter Improvement programs are the same as included in the approved plan. (See figure 5 below.)

(Figure 5)

Distribution of Residential Retrofit Kits

Year	Number of kits distributed
2012	36
2011	14
2010	19
2009	16
2008	31
2004	*3100

**In 2004 the Greenville Water District embarked on an aggressive program to distribute conservation to all customers in the district. In previous years, the kits were made available at no charge and were available to pick up in the District Office.*

Major Users Technical Assistance Program

The Major User Technical Assistance Program is not specifically included in the Water Conservation Program; however, all of the elements of the specified program are applicable to the major users.

Elements of the technical assistance

The District provides assistance on efficient use of water to its major users using in-house resources. An informal visit to each major user by a District staff member is conducted. Any actions recommended are provided to the major user. Each Major User visited approximately annually.

Section 7 – System Management

Non-Account Water

The District maintains a policy (as identified in the Goals statements) of complying with all Federal and State regulations, policies, and guidelines. As such the District strives to maintain Non-Account Water below the 15% guideline identified in the State Guide Plan. The District also has identified its long-term goal of reducing Non-Account Water to 10% as recommended by the Water Supply Management Plan regulations. Accordingly Figure 15 provides a historical representation of Non-Account Water for the District. A three year calculation of non-account water is also provided since the meter readings may not

be coincident within a year and the three year average is a better indicator of trends than a one year calculation. (see figure 6)

(Figure 6)
Historical Non-Account Water

Calendar Year	% Non-Account Water (including 1% Fire Fighting Allowance)	
	Annual Basis	Three Year Trend
2012	8.0%	7.3%
2011	8.0%	7.0%
2010	6.0%	6.6%
2009	7.0%	7.2%
2008	6.0%	7.4%

Meter Installation, Maintenance, and Replacement (MIMR) Plan

The District maintains a policy of metering 100% of the users of water and in fact has historically metered 100% of the users.

Residential Meters

The District has completed the installation of remote reading meters for 100% of the service connections in the District.

The District continues to test meters on a schedule such that each meter is or replaced no less frequently than every fifteen (15) years.

Currently all customers are billed on a quarterly basis along with commercial and industrial accounts. The District has been installing radio read meters over the last 10 years. Currently all commercial industrial and high user accounts are radio read meters. It is anticipated that all residential accounts will be converted to radio read meters within the next five (5) years.

Major Users

Meters for major users are tested and calibrated annually.

Master Meter

The District has one Master Meter at the connection to the Providence Water Supply Board. This connection at George Waterman Road and Route 44 contains a Venturi meter that is tested and calibrated annually. The meter is read monthly and the District is billed monthly for water used in the previous month.

Preventative Maintenance Plan

The District maintains logs at each of the pumping stations identifying maintenance tasks and the frequency of each task. The District intends to consolidate the logs and manufacturer's information into a formal written Preventative Maintenance Plan.

Section 8 – Emergency Management

Section 8 – Emergency Management

(This section has been revised to eliminate much of the excess explanations of emergencies. The Emergency Response Action Plan has been reviewed and it has been determined that the only changes required are to the volumes of water corresponding to the emergency requirement.)

Plan Summary

Emergency Management including a Vulnerability Assessment for the District is included in this section. The Emergency Response Action Plan changes developed from the water demand changes are included in Appendix E.

Upon identification of critical water system components, the goal of emergency management is to present emergency response scenarios that minimize impacts to the water system and its users. This shall include general responses for specific identified tiered water conditions, specific responses for identified disaster/emergency events, and responses tailored to addressing the losses of particular critical components.

Other portions of the Emergency Management Plan consist of emergency preparedness planning, requirements for training, and guidelines for periodic updates of these documents.

Consistency With Other Local Plans

This plan establishes the relative responsibility and authority within the District organization for responding to the most probable emergencies, and outlines specific tasks for carrying out functional and constructive solutions based on a review of such potential emergencies and risks.

The procedures set forth are consistent with the goals of the State Emergency Water Supply Management Plan and are as follows:

1. Establish situational parameters for involvement in water emergencies.
2. Identify courses of action that should be taken in the most probable types of water emergency.
3. Define responsibility and determine levels where state action is appropriate.
4. Describe communication responsibilities and procedures among state agencies, water suppliers, and other entities so that public communication and warnings of emergency situations is accomplished in a timely and efficient manner.
5. Define common terminology used during water emergencies.

Adherence to these guidelines should ensure that primary aspects of recovery are addressed in an organized manner, thus enabling a more efficient response and in turn helping to maintain drinking water quantity as well as quality.

Emergency/Disaster Events

General

The potential emergency/disaster events that could affect the District's water system components include those natural causes (i.e. weather, earthquakes, etc.); those caused by manmade events (i.e. civil disorder, strike, etc.) or those caused by accidental occurrences (i.e. vehicle accidents, equipment failure, etc.). The

following is a general description of the anticipated potential emergencies/disasters, along with the typical type of effects that could be expected to result from such events.

Section 9 – Drought Management

The District has included voluntary odd-even lawn watering in its revised Rules and Regulations to assist in reducing the peaking requirements during the summer months.

As a wholesale customer of the Providence Water Supply Board, the District will comply with any demand restrictions imposed by Providence.

Section 10 - Implementation Schedule, Responsible Entities, and Projected Costs

Figure 7 identifies the activities and responsibilities for implementation of the elements of this Plan.

(Figure 7)
Implementation of Plan Elements

Plan Element	Scheduled Completion Date	Source of Funding	Responsibility for Completion	Status
Complete Installation of Remote Meter Reading Devices	NA	Annual Budget	Superintendent	Complete
Implement Quarterly Billing for all Customers	Completed October 2008	Annual Budget	Superintendent	Complete
Complete Major Users Technical Assistance Visits	Completed	Annual Budget	Superintendent	Complete
Conduct Mock Emergency Response Drill	NA	Annual Budget	Superintendent	Complete
Pursue Emergency Connection	Scheduled completion November 2013	Annual Budget	Superintendent	In design phase and scheduled for construction
Complete Colwell Road loop	NA	Capital Plan	Superintendent	Complete
Complete Cedar Swamp Road loop	NA	Capital Plan	Superintendent	On hold pending coordination with road rehabilitation
Construct additional distribution storage	Scheduled completion November 2013	Capital Plan	Board	In design phase and scheduled for construction
Construct additional distribution storage for fire flow and EC	Scheduled completion November 2013	Capital Plan	Board	In design phase and scheduled for construction
Rehab/Replace distribution system	On-going	Annual Budget	Superintendent	On-going

Section 11 – Financial Management

General

The District operates the water system in a financially sound manner, in fact the District has no sources of revenue other than those fees, rates, and charges levied against the customers of the water system. All costs of implementing the elements of this Plan will be paid for from the normal charges to the customers of the water system.

The District maintains a rate structure that includes a service charge based on the size of the meter and a consumption charge that is charged at a flat rate. Other charges to customers are based upon the actual cost of providing service; e.g. private fire protection, service installations, etc. This rate structure is fully in compliance with the State of Rhode Island policies.

The district has no plans to go to an increasing block rate at this time, but will increase its efforts to educate customers on conservation measures. The district will upgrade its leak detection equipment and continue to upgrade large meters for increased accuracy. The district may also implement a mandatory outside watering schedule to help with peaking in the summer months.

Billing

General

Currently all customers are billed on a quarterly basis along with commercial and industrial accounts. The District has been installing radio read meters over the last 10 years. Currently all commercial industrial and high user accounts are radio read meters. It is anticipated that all residential accounts will be converted to radio read meters within the next five (5) years.

Section 12 - Coordination

This update and progress report was developed using the RI Statewide Planning information as well as the Town of Smithfield Comprehensive Plan. Research was conducted with particular respect to

population trends, commercial/industrial growth, and land use, was used to assure that this progress report provides for potential future demands.

The District had negotiated with the Town of Smithfield to implement an emergency interconnection between the two systems and the Town has approved the project that will make the project a reality. This project is scheduled for completion in November 2013.

The District will forward this update and progress report to the Town Planner of the Town of Smithfield for review and compliance with the Town's Comprehensive Plan.

REPORT

PARE Project No. 05136.12

**EAST SMITHFIELD WATER DISTRICT
WATER SUPPLY SYSTEM MANAGEMENT PLAN
EXECUTIVE SUMMARY**

PREPARED FOR:

**EAST SMITHFIELD WATER DISTRICT
307 WATERMAN AVENUE
SMITHFIELD, RHODE ISLAND**

PREPARED BY:

**PARE CORPORATION
8 BLACKSTONE VALLEY PLACE
LINCOLN, RHODE ISLAND 02865**

Original Submission: June 27, 2014

Revised March 2015

Approved July 17, 2015

EXECUTIVE SUMMARY

This Water Supply System Management Plan (WSSMP) has been prepared as required under Rhode Island General Laws 46-15.3, as amended and titled “The Water Supply System Management Planning Act” (Act). The legislative authority to effectuate the goals and policies of this Act has been conferred to the Rhode Island Water Resources Board (RIWRB). To this end, the RIWRB has promulgated the Rules and Regulations for Water Supply System Management Planning, last revised in October 2002, as amended to implement the provisions of the Act.

The East Smithfield Water District (ESWD), as a water purveyor supplying over 50 million gallons (MG) of water a year, is responsible for updating its WSSMP every 5 years. This document is the 2014 Update of the ESWD WSSMP. The WSSMP has been prepared to be consistent with the goals of these Rules as well as the strategies and goals articulated in the RIWRB’s 2012 Strategic Plan and the RIWRB’s Water Use and Efficiency Rule for Major Water Suppliers. It is also consistent with the goals of State Guide Plan Element No. 721 – RI Water 2030 and the goals stipulated in the Comprehensive Plans for the Towns of Smithfield and North Providence.

Introduction

The ESWD’s primary objective is to operate a water system for the benefit of, and to meet the legitimate needs of, the customers in its service area. In accordance with that objective, the ESWD’s specific goals are to:

1. Promote the efficient use of water through:
 - Conservation and efficient operation of the system in accordance with industry and State standards.
 - Efficient use of water by the customers through effective metering and public information programs that encourage water conservation.
2. Comply with all applicable laws and regulations.
3. Protect the integrity of its existing source of supply connections to the Providence Water Supply Board (Providence Water) and the Smithfield Water Supply Board (SWSB).
4. Cooperate with the overall goals of the Town of Smithfield and the Town of North Providence as outlined in their respective Comprehensive Plans.
5. Provide for service to all locations within its service area.



-
6. Conform to the overall goals for water suppliers established in State Guide Plan Element No. 721 – Rhode Island Water 2030.

Background

The ESWD is an independent water district providing water to a specific service area in the Esmond and Georgiaville sections of the Town of Smithfield, and the village of Greystone in the Town of North Providence. The ESWD is established under state law with full authority to manage its business, as approved by qualified voters of the ESWD. It was incorporated as a quasi-municipal corporation in accordance with the Rhode Island Public Laws of 1934, with amendments in 1939 and 1952.

The ESWD owns, operates, and maintains the water system, which serves approximately 8,000 customers within the district. The seven member Board of Directors for the ESWD is comprised of five elected residents and two ex-officio members (the moderator and the treasurer), which aim to provide representation across the entire district. The Board establishes policy, approves budgets and employs a General Manager who is in charge of the day-to-day operations of the ESWD. The General Manager is responsible to the Board for all operations of the ESWD's water system. The current General Manager is Mr. Raymond DiSanto. The current staff also includes one full time Operations Manager, one Operator, and one Administrative Assistant.

The ESWD Offices are at:

307 Waterman Avenue
Smithfield, RI 02917
Telephone: (401) 231-0510

General System Description

The ESWD's water system consists of approximately 33 miles of looped transmission lines served from four separate interconnections and two booster pump stations, all of which establish six separate pressure zones. Two primary interconnections, at Waterman Avenue and Dean Avenue, are located in the southern portion of the system near Route 44 and are served directly from Providence Water. These two interconnections serve four separate pressure zones, two through each interconnection with Providence Water and two through separate booster pumping stations downstream of these interconnections. The two other primary interconnections are on Ridge Road, located on the northeast boundary of the system. One of the interconnections on Ridge Road is served by the nearby Providence Water storage tank on a separate pressure zone and directly serves the Villages of



Summerfield residential development. The other interconnection at Ridge Road is with the SWSB, served by the SWSB's pumping station at the Longview Reservoir.

The ESWD obtains all of its water supply by direct wholesale purchase from Providence Water and indirect wholesale purchase from Providence Water, via the SWSB, through these interconnections. The ESWD does not have any temporarily inactive or abandoned water supply sources of its own and the development of its own source is not thought to be feasible. The ESWD has one emergency interconnection with the SWSB, located at Meadow View Drive and Stillwater Road, but it has not been used in several years.

The ESWD does not provide any treatment to the water in the distribution system in addition to the treatment provided by Providence Water and does not have any storage facilities of their own. There are currently two booster pump stations in the system, identified as the Farnum Pike Pump Station and the North Elmore Pump Station. Both pump stations raise the hydraulic gradient to serve specific service areas of the ESWD system. The North Elmore Pump Station consists of three 250 gpm, 20 H.P. pumps that boost pressure in the Woodhaven area of the system. The Farnum Pike Pump Station consists of two 250 gpm, 15 H.P. pumps that boost pressure to the far western part of the system.

The ESWD will be installing a new pump station, identified as the Waltham Street Pump Station, in the summer of 2014. It is a prefabricated station that will consist of two low service, 115 gpm, 5 H.P. pumps and two high service, 810 gpm, 60 H.P. pumps. This pump station will boost pressure to the Timberlane Condominium development while also boosting pressure to the western part of the system and stabilizing water pressure along Old County Road. The project also includes replacing an existing 8" asbestos cement (AC) water main in Hillside and Fairmount streets with a new 12" ductile iron (DI) water main, which was recently completed. This station, once completed, will effectively serve the area of the system currently supplied by the Farnum Pike Pump Station. As such, the Farnum Pike Pump Station will be permanently taken out of service. The Farnum Pike Pump Station has become unreliable in its current condition, requiring that the ESWD perform increased maintenance and temporary repairs so that it can continue to function.

The ESWD distribution system consists of approximately 33 miles of water main ranging in size from 2" to 16". It is comprised of cast iron (CI), DI, AC, and a small amount of polyvinyl chloride (PVC) pipe.



The ESWD has made several recent upgrades to its distribution system piping. Upgrades performed in the last 10 years are summarized in Table 1.

Table 1: Recent Distribution System Upgrades

Year	Description	Type of Pipe	Pipe Size (Inches)	Type of Upgrade	Length (L.F.)
2014	Hillside & Fairmount	DI	12	Replacement	1,350
2014	Hillside Street	DI	8	Replacement	450
2012	Fenwood Avenue	CI	8	Clean & Line	2,000
2010	Arnold Avenue	CI	6	Clean & Line	492
2010	Maple Street	DI	8	Replacement	450
2008	Higgins Street	DI	8	Replacement	1,750
2007	Berwick Avenue	DI	8	Replacement	450
2006	Second St.	DI	8	Replacement	415
2005	Jackonia & Stella Dr.	DI	8	Replacement	750
2004	River & High St.	DI	8	Replacement	140
2004	Cragie St. (looping)	DI	8	Replacement	270

The “Rules and Regulations for Water Supply Management Planning” define transmission piping as the pipes “required to carry potable water from a water source to or throughout an area served or to be served by a water supply system for the specific purpose of supplying water to support a general population.” According to this definition, four distribution lines can be categorized as transmission mains, as follows:

Waterman Avenue/Farnum Pike to Old County Road – Approximately 65 year old 12” CI transmission main. This water main is approximately 14,000 feet long and is reportedly in fair condition.

Dean Avenue to Esmond Street – Approximately 65 year old 8” CI transmission main. This 2,400-foot main is believed to be in poor condition based on C-value testing performed by the ESWD.

Ridge Road to Whipple Road – Approximately 45-year old 8” AC transmission main. This water main is approximately 3,000 feet long and is reportedly in good condition.

Ridge Road to Villages of Summerfield – Approximately 15-year old, 12” DI transmission main used to supply the Villages of Summerfield development. This water main is approximately 4,400 feet long and is reportedly in good condition.



The ESWD is supplied by four wholesale interconnections, described as follows:

- Twelve-inch (12") interconnection with Providence Water on Waterman Avenue, in the southern portion of the ESWD system close to Route 44.
- Eight-inch (8") interconnection with Providence Water on Dean Avenue, also in the southern portion of the ESWD system and close to Route 44.
- Twelve-inch (12") interconnection (water main is 12", meter is 10") with Providence Water on Ridge Road, which serves the Villages of Summerfield development.
- Eight-inch (8") interconnection with SWSB on Ridge Road. This represents an indirect connection with Providence Water, as SWSB purchases all of its water from Providence Water.

Each of the interconnections with Providence Water are owned, operated, and maintained by Providence Water. Each interconnection has a compound meter that records in cubic feet and is read monthly by Providence Water personnel. The ESWD owns the interconnection with the SWSB and provides all needed maintenance, calibration, and meter reading. In 2007, the ESWD upgraded this interconnection to an 8" connection with a new meter and pressure reducing valve. This meter is also a compound meter but records in gallons.

Average Day Demand (ADD) for Fiscal Year 2013 was estimated to be 0.476 MGD based on total water use of 173.83 million gallons. The vast majority of water use in the system is residential. Residential water use was estimated to be 163.42 million gallons in Fiscal Year 2013. Residential average daily per capita water use was estimated to be approximately 56.0 GPCD based on a service area population of 8,000 residents. The Maximum Day Demand (MDD) was estimated to be 1.19 MGD using a MDD to ADD peaking factor of 2.5 in accordance with AWWA Manual M32.

There were approximately 2,401 active accounts in Fiscal Year 2013, of which over 95% were residential. Three (3) customers currently qualify as major users, with annual demand of at least 3 MG. These customers are the Homestead Mills Condo Association, Induplate, and Greystone Lofts. Induplate is an industrial user while the other two major users are large, multi-family residential facilities. The service connections in Fiscal Year 2013 were as follows:

- Residential 2,341
- Commercial: 51
- Industrial: 9
- Total: 2,401



The ESWD implemented a service meter radio-read conversion program in 2008, converting virtually all customer meters in the system to radio-read meters. The entire system is now metered, and all meters are read at least quarterly, while large meters are read monthly. Meters 2-inches in size and smaller have an anticipated useful life of at least 15 years, and the ESWD will begin testing and replacing meters, as necessary, at that time. These comprise almost all of the meters active in the system. Large meters are tested more frequently based on size, according to AWWA guidelines.

The current condition of the Farnum Pike Pump Station is the most significant system deficiency currently identified by the ESWD. This pump station has become increasingly unreliable, utilizes outdated technology, and provides a limited boost in pressure that is insufficient for some customers. The new Waltham Street Pump Station, which was first conceived as a private pump station to boost pressure to the existing Timberlane Condominium development but will now be owned and operated by the ESWD, will effectively replace the Farnum Pike Pump Station. The Waltham Street Pump Station is currently under construction and is planned to come online at the end of summer 2014. The Farnum Pike Pump Station will be taken out of service upon completion of the Waltham Street Pump Station.

While the distribution system is currently in good working order, much of it is comprised of aging asbestos-cement pipe that is prone to future breaks and old cast iron pipe that results in “rusty” water complaints from customers in some parts of the system. These issues do not necessarily represent major system deficiencies as the water delivered to customers continues to be of good quality. However, the ESWD has identified this as an area of improvement in the system and the majority of their immediate future system upgrades target the distribution system, beginning with areas that have received the most complaints, contain the oldest pipes, or are critical water mains of paramount importance to the distribution system. The implementation component of the WSSMP summarizes these rehabilitation projects.

Water Quality Protection Component

The ESWD purchases all of its water through direct and indirect wholesale connections to Providence Water. They do not have any current or former supply sources and they do not provide additional treatment to the water received through the wholesale interconnections. As such, a Water Quality Protection Plan (WQPP) or Source Water Assessment Plan (SWAP) is not required for this WSSMP.



The ESWD collects the charges associated with the water quality protection program and issues them to Providence Water and the Rhode Island Water Resources Board, as required, in accordance with the Public Drinking Water Protection Program (RIGL 46-15.3). This program distributes funds which are used for land acquisitions and to purchase development rights within the supply watershed areas to help protect water quality.

Consumer Confidence Reports from 2007 to 2014 (summarizing monitoring data through end of 2013) are available on the ESWD website and show that there historically have not been any violations for the water quality parameters routinely monitored. This includes trihalomethanes (TTHMs), despite the fact that several of the water systems supplied through wholesale connections to Providence Water have observed an increase in TTHMs entering their system in recent years. The ESWD saw an increase in TTHM concentrations as well, particularly in 2011 when it averaged 75.8 parts per billion (ppb), but it has not exceeded the 80.0 ppb Maximum Contaminant Level (MCL). The TTHM concentrations entering the ESWD system have declined since then and averaged 50.2 ppb for 2013.

Anticipated Future Demands

Anticipated future demands were developed based upon several factors, including:

- historic trends for water use;
- anticipated population changes;
- effects of conservation efforts;
- building code changes and efficiency of water using facilities and equipment (both system and user facilities and equipment);
- service area zoning and municipal policies; and
- known or anticipated major water user considerations.

Table 2 presents anticipated water use in the 5-year and 20-year planning periods with consideration to the factors identified above.



Table 2: Summary of Anticipated Annual Water Demand

	Current [2013]	5-Year Period [2018]	20-Year Period [2033]
<i>Water Sales</i>			
Residential (MG)	163.42	169.7	201.7
Commercial (MG)	3.11	5.3	7.0
Industrial (MG)	7.308	12.4	16.4
Total, ADD (mgd)	0.476	0.513	0.617
Total Annual Use (MG)	173.83	187.4	225.1
Annual Non Account Water (MG)	42.5	33.1*	39.7*
Total Annual Wholesale Water Purchases by ESWD (MG)	216.3	220.5	264.8
Estimated MDD (MG)**	1.19	1.28	1.54

* Non-account water estimated to be 15% of total wholesale water for planning purpose

** Estimated based on a MDD to ADD peaking factor of 2.5

It should be noted that water use has decreased in the years since the 2005 WSSMP update, rather than follow the projected increases. That said, projecting a continued downward trend in water demand would represent a lack of conservative planning, which would be inappropriate for this WSSMP. The current downward trend in water demand has been reported in other communities in the State and is likely due to a mix of increased water conservation efforts and a reduction in development, tied in part to the poor economic conditions experienced in Rhode Island in recent years. It is difficult to predict how future water use patterns will follow as the economy recovers, but some moderate increase in water use is inevitable.

Available Water

The water available to the ESWD is limited by state law and the wholesale purchase agreements with Providence Water and the SWSB. These agreements do not stipulate the maximum amount of water the ESWD can purchase annually or on any given day. Consequently, the ESWD estimates its available water supply in accordance with Chapter 1278 of the Public Laws of 1915, which provides for Providence Water to supply 150 gallons per capita per day on a monthly basis. The ESWD has historically used, and continues to use, far less than this. Also, projected demand for the 5-year and



20-year planning periods is well within the range of water demand from previous years when water use was much higher than it is currently.

Alternative sources of supply and supply augmentation are not believed to be important considerations for the ESWD at this time. Anticipated total wholesale purchases in the 20-year planning period have been estimated at 264.8 million gallons. This was exceeded in 2007 and 2008 without any supply constraints or concerns.

Demand Management

The *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*, adopted May 16, 2011, established efficient water use targets for major public water suppliers, which includes the ESWD. The ESWD is in general compliance with the requirements of this Act. This includes the residential average per capita water use goal of 65 gallons per capita per day (GPCD), which was estimated to be 56.0 GPCD for Fiscal Year 2013. The ESWD estimates non-billed water from various uses, such as firefighting and system flushing, and meets the metering and billing requirements stipulated in the Act. The ESWD has retrofitted the vast majority of the meters in the system to radio-read meters. The ESWD has also presented efficient indoor and outdoor water through offering residential retrofit kits and providing educational materials to the customer base.

Total residential water use in the 1st Quarter of Fiscal Year 2013, which represents peak seasonal water use, was approximately 56 million gallons (average of 18.745 million gallons each month from July – September). The average daily residential water use over this time period is estimated to be 76.4 GPCD based on 8,000 residents. Average daily residential water use is below the State’s goal of 65 GPCD in the remainder of the year and average 56.0 GPCD for all of Fiscal Year 2013, as stated above.

While the system remains in compliance with the Act, the ESWD will target water use restrictions during the peak seasonal demand period should annual per capita residential water use increase and approach the 65 GPCD threshold established by the State. It is noted that peak seasonal demand has declined in recent years along with an overall decline in water use, due in part to some of the demand management initiatives already in place by the ESWD (e.g., inclining block rate structure, public education efforts, etc.).



Unknown water use was estimated to be 13.55% of total water production for Fiscal Year 2013, ending June 30, 2013. This is above the 10% target for leakage, though it likely includes some amount of water lost due to theft and other unknown, unauthorized uses. As such, the ESWD immediately implemented leak detection surveys to comply with the requirements of the Act.

A two-year system-wide leak detection survey that was completed in July 2013 by M2 Service Group of Exeter, New Hampshire identified six significant leaks in the ESWD water system. As a result of this survey and the subsequent repairs, unaccounted for water was reduced for the second half of 2013. The reported unaccounted for water percentages for July – September and October – December in 2013 were 8.61% and 9.23%, respectively. The ESWD will routinely monitor system leakage and will continue to implement leak detection and repair efforts in the future, as conditions warrant.

System Management

The major goals of system management include the following:

- Maintaining non-account water use to below 15% of total system demand, in accordance with State Guide Plan Element 721;
- Reducing leakage to below 10% of system demand;
- Establishing a preventive maintenance program; and
- Maintaining compliance with the applicable requirements of the *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*.

Leak detection surveys have routinely been performed by the ESWD to identify and reduce leakage, most recently in 2013. Repairs are made at locations that leaks are detected, lowering unaccounted for water. The ESWD anticipates performing leak detection surveys on a roughly annual basis, as funding allows and as needs arise.

The ESWD performs sound preventive maintenance (PM) practices at the two pump stations, the only major components in the system. The ESWD performs system flushing and exercises valves routinely to maintain the distribution system in good working order.

The ESWD is in compliance with the *Rules and Procedures Governing the Water Use and Efficiency Act for Major Public Water Suppliers*.



Emergency Management

An updated Emergency Response Plan was prepared as part of this WSSMP, which generally establishes the following:

- Responsibilities and authority within the ESWD for responding to most probable emergencies;
- Most probable causes for emergencies and their potential impacts to the system;
- System components that are vulnerable to damage or incapacitation based on the most likely causes for emergency; and
- Specific tasks for carrying out functional and constructive solutions based on a review of the potential emergencies and the associated system risks.

Drought Management

Drought is one specific type of emergency that is treated separately, as it can impact the system over an extended period of time. Drought management procedures followed by the ESWD as outlined in the updated WSSMP are meant to be consistent with State Guide Plan Element 721 RI Water 2030 and the requirements of Section 8.09 of the October 2002 *Rules and Procedures for Water Supply System Management Planning*.

The five phases of drought consistent with the Drought Watch/Warning System of the National Weather Service, are:

- Normal;
- Advisory;
- Watch;
- Warning; and
- Emergency.

Drought conditions are evaluated on a regional basis across the state and are assigned based on conditions represented by major hydrologic indices, including precipitation, groundwater levels, stream flow, and the Palmer Drought Index. The Rhode Island Water Resources Board and Drought Steering Committee evaluate the major hydrologic indices and adjust drought levels both state-wide and on a regional basis, accordingly.



The ESWD relies solely on Providence Water for water supply and is therefore dependent on Providence Water for drought management at the source. The ESWD works in conjunction with Providence Water and the SWSB on preventive measures and maintenance to aid in drought management.

The ability of the ESWD to withstand a drought is largely dependent upon the water supply demands of Providence Water. The direct effects of drought on the ESWD system potentially include:

- Reduction of available wholesale water from Providence Water;
- Reduction of Providence Water's surface water levels which can adversely impact water quality in addition to water quantity; and
- Reduction of operating income due to reduced delivery of water.

The ESWD has identified three water quantity tiers in its Emergency Response Plan. Water use reductions correspond with Tier 2 and Tier 3 water quantity conditions based on the severity of the drought or emergency, as follows:

1. **Tier 1** – 0.5 MGD – Water quantity consistent with normal operating conditions of the water system in regard to the ability to provide potable water for the average day use.
2. **Tier 2** – 0.25 MGD
3. **Tier 3** – <0.1 MGD

The ESWD will take steps to restrict water use to these tiered conditions in the event of a drought or emergency, in accordance with the Emergency Response Plan. Additionally, the following response actions would be used, as appropriate, during drought conditions:

1. The General Manager shall monitor system pressures in critical locations throughout the system to identify localized pressure or flow problems.
2. If, during drought conditions, sustained peak demands have a detrimental effect on the system, the General Manager may consider the following actions:
 - a. Voluntary restriction of outside water usage.
 - b. Mandatory dayscheduling of outside water usage.



-
- c. Mandatory restriction of outside water usage.
 3. Increase surveillance in residential areas to identify unauthorized water usage (i.e. lawn watering during times of outdoor water use restrictions) and take corrective action necessary (warnings, possible water shut-off).
 4. The General Manager shall communicate with each of the system's wholesale providers on a daily basis to monitor the potential impacts of the drought event.
 5. The General Manager shall coordinate with the wholesale providers to stay informed with how drought conditions may be impacting those systems and ultimately the availability of water for purchase and use in the system.
 6. Monitor water quantity and quality during periods of extended drought and sustained peak demand periods to identify any reduction in Tiered water quality and quantity conditions.
 7. Implement General Responses identified in the ESWD Emergency Response Plan.

Implementation and Financial Management

A detailed schedule outlining the individuals responsible, timing, and capital costs associated with recommendations of this WSSMP has been developed and is presented in Table 3. This schedule has been prepared with consideration to the modifications and upgrades identified in the ESWD's 2012 Clean Water Infrastructure Replacement Plan (CWIRP) along with the ESWD's assessment of current system conditions and priorities. For the most part, the projects anticipated in upcoming years are outside of the capabilities of the ESWD Operations personnel to perform in-house. The ESWD General Manager and Board of Directors will be responsible for soliciting for these services and selecting contractors to perform them.



Table 3: Implementation Schedule

Plan Element	Responsibility	Scheduled Completion Date	Estimated Cost	Possible Funding Source
Miscellaneous computer hardware/software upgrades	ESWD Operations Staff	2016	\$10,000	Annual Budget General Fund
Repair/replace 13 “very poor” condition hydrants	Outside Contractor	2016-2017	\$65,000	Annual Budget General Fund
Replace 1,000 feet of 8” AC on North Elmore	Outside Contractor	2018	\$200,000	Infrastructure Replacement Fund
Clean and Line 1,600 feet of 8” CI on Old County Road	Outside Contractor	2018-2019	\$160,000	Infrastructure Replacement Fund
Clean and Line 2,400 feet of 8” CI in Dean Avenue	Outside Contractor	2018-2019	\$240,000	Infrastructure Replacement Fund
Replace 500 feet of 8” AC on Julia Drive	Outside Contractor	2020	\$100,000	Infrastructure Replacement Fund
Replace 1,000 feet of 6” CI/AC on Whitman Street	Outside Contractor	2020	\$200,000	Infrastructure Replacement Fund

The ESWD has typically funded improvement projects through their Infrastructure Replacement Fund (IRF), when possible. However, larger projects, including many of the projects listed in Table 3, will likely require that the ESWD seek out State Revolving Fund (SRF) loans or other loan and grant opportunities.

Table 3 lists several projects the ESWD has under consideration for the next five years, but changing system conditions and future development patterns may necessitate that different projects be selected for implementation. For the most part, the projects listed in Table 3 are not of immediate concern nor are they needed to curtail imminent system deficiencies of a critical nature. Rather, the ESWD believes that approximately \$1 million in rehabilitation projects are feasible based on current and projected system revenues while allowing them to address many of their highest priority upgrade projects in the next five years. The total estimated cost of the projects listed in Table 3 is \$975,000.

The ESWD operates in a financially self-supporting manner and establishes water rates to fund operation and maintenance of the system while contributing to its IRF for future system upgrades.



Revenues are from water rates as well as a service charge and miscellaneous other fees imposed by the ESWD. An inclining block rate structure has been in place since 2008.

Table 4 depicts the ESWD’s overall financial trend for the last three years. These figures are from audited financial statements for Fiscal Years 2011-2013 (April 1, 2010 – March 31, 2013). The ESWD’s Fiscal Year runs from April 1st to March 31st each year. A financial statement for Fiscal Year 2014 is not yet available at this time.

Table 4: ESWD Financial Management (2011-2013)

	2013	2012	2011
Total Revenues	\$1,005,056	\$928,759	\$852,019
Total Expenses	\$1,002,074	\$893,391	\$875,131
Total Income (Loss)	\$2,982	\$35,368	(\$23,112)

Current water rates for Fiscal Year 2015, which went into effect on April 1, 2014, are structured based on meter size and consumption.

Residential (single and two family dwellings) consumption rates are as follows:

	<u>Quarterly</u>
0 to 6,000 gallons*	\$3.35 per 1,000 gallons
6,001 to 21,000 gallons*	\$4.25 per 1,000 gallons
Over 21,000 gallons *	\$4.55 per 1,000 gallons
Infrastructure Rehab Fee	\$0.75 per 1,000 gallons

*Quantities in each bracket are doubled for two family dwellings.

Multi-family residential, commercial and industrial consumption rates are as follows:

	<u>Monthly</u>
Per 1,000 gallons	\$4.30
Infrastructure Rehab Fee	\$0.75



An annual service charge, excluding fire services, is also applied as follows:

<u>Metered Size (in)</u>	<u>Quarterly Accounts</u>	<u>Monthly Accounts</u>
5/8 & 1	\$13.00	\$4.33
1 ½	\$27.00	\$9.00
2	\$45.00	\$15.00
3	\$84.00	\$28.00
4	\$132.00	\$44.00
5 & above	\$200.00	\$66.67

An annual public fire service charge of \$325.00 per hydrant is also imposed.

The ESWD reads meters and bills residential customers on a quarterly basis and large commercial and industrial users, as well as eight multi-family housing facilities, are metered and billed monthly. The ESWD is in compliance with the State’s requirements for metering and billing frequency.

Coordination

The WSSMP was prepared with consideration to the Comprehensive Plans of the Towns of Smithfield and North Providence. While little future development is anticipated in the part of the ESWD system in North Providence, the Town of Smithfield anticipates increases in residential development in several parts of the town. This includes areas served by the ESWD. Commercial and industrial development is not anticipated by either town in areas within the ESWD service district.

The ESWD and SWSB had reached a formal, signed agreement to consolidate both water systems into one new water district, entitled the “Smithfield Consolidated Water District”. The SWSB serves a slightly greater population and has approximately 30% higher annual water sales than the ESWD. Currently both systems are supplied entirely through wholesale purchases from Providence Water and they serve customers in both Smithfield and North Providence. Their service territories are immediately adjacent to each other and are already interconnected at Ridge Road. A closed interconnection at Meadow View Drive could also be opened to connect the two service areas. Consolidating the two districts would hope to achieve operational cost savings through shared resources, such as equipment and personnel.



Formation of this district would require an Act of Legislation to be passed by the Rhode Island General Assembly. Legislation was first introduced in the Rhode Island General Assembly in May 2013 and then again in 2014, but in both cases the bill was held for further study. Consolidation of the ESWD and SWSB is still under consideration and may be pursued again in the future.

