Town of Hampton Falls

2019 Master Plan

Dedication

It has always been said that Hampton Falls is a community of volunteers, and nobody set a better example of volunteerism than Charlyn Brown. As a long-time resident and volunteer, Charlyn always worked tirelessly to make sure Hampton Falls maintained its rural character and charm. She was a Planning Board member from 1994 - 2017, serving as either Chair of Vice Chair during many of these years. As a function of being a Planning Board member, she was also a member of the Capital Improvement Committee, Ordinance and Regulations Review Committee, and of course two rounds of being on the Master Plan Committee. As an example of her leadership, in 2011 she received a Municipal Leadership Award from the Workforce Housing Coalition for her work on the town's workforce housing regulations. It was a sad day when she decided not to run for re-election in 2017, but in true Charlyn form she stayed on the Master Plan committee until the work was fully complete in 2019.

Prior to her Planning Board work she was a member of the School Board from 1988-1990, serving as Chair in 1990. She was always very proud to mention that she was an English teacher for many years at Winnacunnet High School. Charlyn married longtime Hampton Falls resident Forrest Brown and they raised their son Glenn at their home on Exeter Road, which was built on land that was part of Forrest's family farm. Forrest was also a member of the Planning Board from 1967 – 1985. It's a startling fact when you consider that from 1967 - 2017 either Charlyn or Forrest was a Planning Board member for 41 of the 50 years.

Members of the Planning Board miss her dedication, wit, kindness and sense of humor. Charlyn put in countless hours of volunteer work for Hampton Falls. Not only did she spend well over 1,000 hours of her time attending meetings, but her leadership and work behind the scenes was exemplary. For these reasons and many more, the 2019 Planning Board of Hampton Falls is more than happy to dedicate the 2019 Master Plan of Hampton Falls to Charlyn Brown.

Hampton Falls Master Plan 2019

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TABLES

ACRONYMS

ACS ..... American Community Survey
AFA ..... American Forestry Association
ALPC ..... Agricultural Land Preservation Committee
AMR ..... American Medical Response
ASNH ..... Audubon Society of New Hampshire
BDN ..... Business District North
BDS ..... Business District South
BMP ..... Best Management Practices
BOCA ..... Building Officials Code Administrators
CAAA ..... Clean Air Act Amendments
CDBG ..... Community Development Block Grant
CFA ..... Conservation Focus Area
CIP ..... Capital Improvement Program
COAST ..... Cooperative Alliance for Seacoast Transportation
COP ..... Community Oriented Policing
CPR ..... Cardio-Pulmonary Resuscitation
CWIPP ..... Coastal Watershed Invasive Plant Partnership
CWWS ..... Community Waste Water System
DARE ..... Drug Abuse Resistance Awareness
DFIRM ..... Digital Flood Insurance Rate Map
ELU ..... Existing Land Use
EMT ..... Emergency Medical Technician
EPA ..... Environmental Protection Agency
FCC ..... Federal Communications Commission
FEMA ..... Federal Emergency Management Agency
FIRM ..... Flood Insurance Rate Map
GES ..... Gove Environmental Services
GIS ..... Geographical Information System
HFMP ..... Hampton Falls Master Plan
HISS ..... High Intensity Soil Survey
HYA ..... Hampton Youth Association
ISTEA ..... Intermodal Surface Transportation Efficiency Act
KV ..... Kilovolt
LCHIP ..... Land and Community Heritage Investment Program
MAP21 ..... Moving Ahead for Progress for the 21st Century
MBTA ..... Massachusetts Bay Transportation Authority
MHHW ..... Mean Higher High Water
MOU ..... Memorandum of Understanding
MPO ..... Metropolitan Planning Organization
MTBE ..... Methyl Tertiary Butyl Ether
NHCP ..... New Hampshire Coastal Program
NHDES ..... New Hampshire Department of Environmental Services
NHDOT ..... New Hampshire Department of Transportation
NNEPRA ..... Northern New England Passenger Rail Authority
NH NRCS ..... New Hampshire Natural Resource Conservation Service
NH SPA ..... New Hampshire Shoreland Water Quality Protection Act
OSI ..... Office of Strategic Initiatives
PCS ..... Personal Communication System

ACRONYMS

PUC ..... Public Utilities Commission
PWD ..... Prime Wetlands Designation
PWS ..... Public Water Supply
PWSID ..... Public Water System Identification Number
RCCD ..... Rockingham County Conservation District
RPC ..... Rockingham Planning Commission
RSA ..... Revised Statutes Annotated
RTE ..... Route
SAU ..... School Administrative Unit
SLR ..... Sea Level Rise
SPNHF ..... Society for the Protection of New Hampshire Forests
TCD ..... Town Common District
TDR ..... Transfer of Development Rights
TEA-21 ..... Transportation Equity Act for the 21st Century
TIP ..... Transportation Improvement Plan
TWS ..... Transient Non-Community Water System
UNH ..... University of New Hampshire
US ..... United States
USDA ..... United States Department of Agriculture
USGS ..... United States Geological Survey
WEI ..... West Environmental Inc.
YMCA ..... Young Men's Christian Association

COMMUNITY VISION & GOALS

COMMUNITY VISION & GOALS

One of the most important steps in developing a Master Plan is to determine the community's vision and goals with regard to its growth and development. According to RSA 674:2, II(a), the master plan shall include a vision section that "…serves to direct the other sections of the plan. This section shall contain a set of statements which articulate the desires of the citizens affected by the master plan, not only for their locality but for the region and the whole state. It shall contain a set of guiding principles and priorities to implement that vision."

The Vision Statement for the Town of Hampton Falls is as follows:

> ***Our vision is to preserve our rural character and our natural, historical and cultural resources, while providing municipal and commercial services, recreational facilities and housing options which support the needs of the community in a fiscally, socially and environmentally responsible manner.***

As the vision and goals will guide the various sections of the Master Plan and ultimately serve as a blueprint for residential, commercial and industrial development within the Town, it is vital that they reflect the priorities of the community as a whole. The community goals presented below were developed based on results of town-wide surveys conducted by the Planning Board in 1990, 2001 and 2015. In all three iterations of the citizen's survey, townspeople's primary goal continues to be maintenance of Hampton Falls' rural character. While the Board realizes that many residents would rather see the Town not grow at all, members recognize that growth is inevitable and that the Town's goals must address how to control and guide future growth.

> ***The 2015 citizen's survey indicated that 95.1 percent of all respondents indicated either strong agreement or agreement with the statement that the rural character of the town should be preserved and protected. Two percent had no opinion and three percent either disagreed or strongly disagreed with the statement.***

Goal 1: Plan for and manage growth so as to preserve and protect the rural character of the Town.
The protection of the Town's quality of life and rural history has long been stated as a priority by residents and local officials, and is a main theme of the Master Plan. The Master Plan and associated land use regulations are directed toward maintaining the Town's character as a residential community with a rural atmosphere, balanced by limited commercial and industrial land uses. Because development pressure and growth will continue, Hampton Falls must regularly update its land use regulations to ensure that growth is accommodated and continues in a sensible manner.

> ***The 2015 citizen's survey indicated that non-residential development activities should be encouraged along the NH Route 1 corridor by an over whelming majority of respondents, (86.5 percent). Only six percent of respondents disagreed with locating non-residential development along NH Route 1.***

Goal 2: Promote agricultural and forestry uses.
Agriculture and forestry have been an important part of Hampton Falls' economy since the Town's first European settlement in 1722. While this is less true today, these lands continue to provide both economic and social benefits to the Town. The protection of important agricultural and wooded parcels should be coordinated with open space planning (see Goal 3).

The 2015 citizen's survey asked residents to respond to the statement that agriculture and forestry practices should be encouraged and over 93 percent either strongly agreed or agreed with the statement.

Goal 3: Preserve open space, including wetlands and forests, for ecological and aesthetic reasons.
This goal is based upon the results of all three surveys which show maintenance of open spaces and preservation of wetlands to be a priority of Town residents. The Conservation Commission is the appropriate Town body to develop a strategy for protecting open space and wetlands. By coordinating open space preservation efforts with the need to protect agricultural and forestry uses, natural resources and to provide for passive recreation (see Goals 2, 4 and 5), land can be protected for a variety of reasons and uses.

The citizen's survey conducted in 2015 indicated 54 percent of respondents were either strongly in agreement or in agreement with the preservation of open space. Only 23 percent of respondents disagreed or were in strong disagreement with such preservation. An unusually large (22 percent) number of respondents had no opinion about preserving open space.

Goal 4: Protect from degradation important natural areas, water resources and coastal zone areas.
As the majority of property owners in Hampton Falls depend on private wells for domestic, public and business use, the quantity and quality of available groundwater must be protected from contamination and depletion. While the Town does not currently plan to develop a community water supply system, key parcels should be identified to protect any future water supply and wellhead locations. This effort should be coordinated with general open space protection efforts.

The citizen's survey conducted in 2015 indicated that preservation of natural inland areas and coastal resources from degradation was a priority of 94 percent of survey respondents.

Goal 5: Encourage housing which provides an adequate range of housing types for all citizens.
Housing is one of the most important and challenging issues to be addressed in the Master Plan. Housing costs in southern New Hampshire have escalated rapidly over the past decade, and in many communities now exceed the ability of many wage earners to keep pace with the increases. The Town's land use regulations are key to accommodating and guiding housing development which will provide for a diversity of housing opportunities while maintaining rural character.

Nearly half of the respondents (48.7 percent) to the 2015 citizen's survey either agreed or strongly agreed that the Town's housing policies provided the types of housing necessary to residents. The bulk of the remaining responses (38.9 percent) had no opinion regarding housing policy.

Goal 6: Provide adequate areas and facilities for recreation.
Recreation contributes to the general health of a community's population, individual enjoyment and education, and perhaps most importantly, to the overall quality of life and sense of community in Hampton Falls. As the population grows, the Town will need to enhance its commitment to recreation by maintaining the quality of, and access to, all of its existing facilities and programs, and by expanding them as needed to accommodate growth.

2015 Survey responses clearly indicate support for the development of conservation land (54 percent), open space (71 percent of respondents chose open space as either the first or second priority of what is most needed in Town out of 13 choices), nature trails (71 percent), and bike paths (57 percent) for recreational use.

Goal 7: Support programs that preserve and encourage the restoration of important historical and cultural sites.
The Town of Hampton Falls contains a valuable architectural heritage which makes an important contribution to the character of the community. The Town has an active Historical Society and Heritage Commission; also several roadways in the Town are part of the State of New Hampshire's Scenic & Cultural Byways Program. Both organizations seek to protect the historical resources of the Town and to inform the public about those resources.

> ***The citizen's survey conducted in 2015 indicated that preservation and restoration of historic and cultural sites and resources were supported by 77 percent of respondents.***

Goal 8: Maintain the excellent quality and quantity of existing municipal services.
The Hampton Falls Police and Fire Departments, the Free Library, Lincoln Akerman School and the Town Offices are the major municipal entities which provide needed services to Town residents. As the Town's population grows, the demand for these and other services will also increase. Future planning is necessary to ensure that the Town continues to provide these services, plus additional services as deemed necessary and feasible.

> ***The 2015 citizen's survey asked residents two questions specifically about all services and the majority of responses to both questions was that the existing level of service is appropriate. The one area that respondents called out for improvement to a service was with respect to the Lincoln Akerman School. A majority of respondents (66 percent) felt that the Lincoln Akerman School was not adequate to meet the needs of the community for the foreseeable future. (At Town Meeting in 2018, the residents passed a bond measure to address the space needs at the Lincoln Akerman School.) Finally, the 2015 survey results also indicate that 50 percent of respondents felt the Town's web site is an effective resource for information and communication with 15 percent of respondents disagreeing with the effectiveness of the Town's website for information and communication.***

Goal 9: Maintain and expand the Town's solid waste recycling program to reduce the volume of waste.
The future of solid waste disposal in the region is at a crucial point. As existing landfills approach their capacity, important decisions on which disposal methods are best will need to be made. Hampton Falls should continue its involvement in solid waste planning, and continue its recycling program.

> ***The 2015 citizen's survey asked specifically whether the Town's recycling program should be continued and 88 percent responded with either agreement or strong agreement with the program's continuation, conversely only four percent of respondents felt the program should be discontinued.***

Goal 10: Promote housing patterns that ensure well-designed neighborhoods and roadways that preserve scenic values while minimizing municipal expenditures.
The results of the 2015 Town survey reveal that maintenance of rural character is of very high importance to the Town's residents. As such, the development of housing should be consistent with this goal to be successful. Because housing growth will continue, Hampton Falls must regularly update its land use regulations to ensure that growth is accommodated and continues in a sensible manner.

Although the 2015 citizen's survey did not ask questions directly regarding housing and neighborhood design, the public forums held in the Fall of 2015 did address this topic extensively in the sessions on existing land use and housing. In both of these forums the overwhelming majority preferred housing patterns that enhance the Town's rural character. This included larger lots with greater spacing. The only exception was support for conservation subdivisions that allow homes in closer proximity to one another so that larger unfragmented open space areas can be created and conserved.

Goal 11: Support commercial development which will not significantly degrade the quality of the air, water, roadways, or surrounding land and which helps meet the community needs, broadens the tax base, and contributes to a healthy social and economic environment.
Survey results indicate that Town residents support responsible commercial and industrial development. This indicates the need for the Planning Board to monitor and update, as necessary, the Town's zoning, site plan review and sign control regulations. Development in the Town's business districts is affected by the lack of public water and sewer service. Although the Town does not plan to install a municipal water or sewer system in the foreseeable future, long-term planning efforts should consider the need for, and feasibility of, arrangements creating public water and/or sewer service.

In the 2015 citizen's survey, 70 percent of respondents felt the town should attract new businesses to broaden the tax base. The survey asked who should bear the cost of expanded water or sewer infrastructure along NH Route 1 to create new businesses. Thirty two percent felt the Town should undertake such infrastructure expansion with 48 percent feeling the town should not undertake such capital expenditure. However, 67 percent of respondents felt potential business owners should invest in such infrastructure improvements to enable new business and only 18 percent of respondents disagreed.

Goal 12: Encourage appropriate responses to climate change throughout the community. As the science of climate change evolves so do the different ways a municipality can respond. The Town of Hampton Falls should plan for necessary improvements to the Town's road network to manage additional stormwater from more frequent and more powerful storm events. The Town should also work with coastal landowners to ensure that probable sea level rise does not inundate new construction.

The 2015 citizen's survey did not address any issues surrounding climate change. However, during the public visioning sessions held by the Planning Board in the Fall of 2015, many residents expressed support for the Town proactively planning for potential negative impacts from climate change.

EXISTING AND FUTURE LAND USE

Applecrest Farm
circa 2018

EXISTING AND FUTURE LAND USE

Hampton Falls is a predominantly rural coastal community that lies in the heart of one of the fastest growing regions of New Hampshire. The Town is accessible by several state-maintained highways, including direct access to U.S. Route 1 and State Routes 27, 84 and 88, and indirect access to Interstate 95 and NH 101. Hampton Falls is a community that is feeling development pressures as its larger neighboring towns become more populous and congested. The Town's population has remained relatively stable over the past decade.

Land use is the result of our interaction with the physical environment. It defines the physical development of the community and therefore is among the most important subjects to consider in the master planning process. One of the primary purposes of a master plan is to study a community's land use patterns and trends in order to guide future development. In order to properly plan for the future, however, the past needs to be understood. By studying today's land use patterns, lessons can be learned about how the community came to be developed under the present land use regulations. This chapter provides information on Hampton Falls' existing land use and analyzes how and why Hampton Falls looks as it does today.

1.0 EXISTING LAND USE SURVEY

The centerpiece of any Existing Land Use Chapter is an existing land use survey and resulting map. The purpose of developing an Existing Land Use Map is to provide a town wide view of specific development activities and the overall pattern and configuration of land uses. The map serves as a "snapshot" of a community at a given point in time. It is important to keep in mind that given the nature of development, even the most accurate land use map is quickly outdated. The map is particularly useful in reviewing land use trends over time and establishing a baseline for future land use objectives.

Land uses for the year 2015 are shown on Map 1, Existing Land Use, in Appendix B. The 2015 Existing Land Use Map depicts fourteen land use categories: residential, commercial, government, institutional, educational, transportation, built outdoor recreation, agriculture or other cleared open space, cemetery, brush or transitional forest, forest, surface water and other undeveloped lands. The residential category encompasses both single- and multi-family structures. Commercial includes offices, retail shops or restaurants, daycare, pet care, schools and storage facilities.

It is important to note that, in most cases, the land use shapes shown on the map are not based on property lines. For example, if a single-family home was located on a twenty-acre parcel, only two acres (the minimum lot size in Town) were shown as developed. Thus, in general, only the developed portion of the parcel is shown. For the agriculture category, the entire parcel is shown since the agricultural use relies on the land to be maintained as a viable use. The entire parcel is also shown for the government lands category since it is unlikely that these parcels will be subdivided.

Table ELU-1 below provides a comparison of land use by acreage in 1998 and 2010. According to GIS estimates, from 1998 to 2010 one hundred fifty six acres of land in town were converted to single-family residential use. This residential activity appears to have been the result of land removed from the Agricultural category.

TABLE ELU-1
HAMPTON FALLS EXISTING LAND USE – 1998 and 2010[1]

	1998		2010	
LAND USE CATEGORY	**# OF ACRES**	**% OF TOTAL**	**# OF ACRES**	**% OF TOTAL**
Single-family residential	1077	13.3%	1,233	15.3%
Multi-family residential	2	0.02%	4	0.04%
Commercial - Retail	70	0.9%	70	0.9%
Government	8	0.09%	8	0.1%
Institutional or Religious	1	0.02%	1	0.02%
Educational	6	0.07%	6	0.07%
Transportation	60	0.7%	156	1.9%
Outdoor recreation	24	0.3%	61	0.7%
Cemeteries	7	0.09%	7	0.1%
Agricultural / Other cleared open space	1,130	14.0%	791	9.8%
Brush or transitional forest	92	1.1%	0	0%
Forest	4,251	52.6%	4,391	54.3%
Surface water	357	4.4%	357	4.4%
Disturbed land (construction sites)	0	0.00%	0	0.0%
Other undeveloped lands	993	12.3%	993	12.3%
TOTAL	**8,078**	**100.0**	**8,078**	**100.0**

[1]1998 and 2010 generalized land use information was derived from interpretation of digital orthophoto images of 1:4800 scale aerial photographs taken in 1998 and 2010 by the Agricultural Stabilization and Conservation Service. The land use classification follows a modified version of the NH Land Use/Land Cover Classification System as provided by the NH Office of Energy and Planning. Interpretation and automation was done by the Rockingham Planning Commission.

2.0 LAND USE DESCRIPTION

Hampton Falls' land use pattern is basically rural. Agriculture, both in the past and at present, has tended to keep a significant portion of the Town open with many large land holdings. In the last decade, some of the farmland has been converted to single family residential use. Unlike most other coastal communities, Hampton Falls does not directly border the Atlantic Ocean. Therefore, it does not have the seasonal residential and commercial development as do communities like Hampton and Seabrook. Hampton Falls' coastline abuts the Hampton-Seabrook Estuary and is comprised of tidal marshland. Most residential development in Hampton Falls is located west of Route 1. As Table ELU-1 shows, the vast majority of residential development is in the form of single-family dwellings. Greater accessibility in the regional highway system and general population growth in southern New Hampshire have made Hampton Falls increasingly attractive to development.

One of the most important aspects of Hampton Falls' rural landscape is its impressive stock of historic residences and outbuildings found throughout town. These serve to not only provide an architectural timeline of the way Hampton Falls developed but enhance our unique history. In addition, these Federal, Greek, and Italianate vernacular New England structures heavily influenced modern building construction through the incorporation of pitched roofs, multi-light windows, clapboard siding and cupolas. These styles reflect some of the most attractive new construction throughout the community. Today and into the future, Hampton Falls will benefit from preserving this rich agricultural heritage. Information on historic resources in town may be found at the Heritage Commission website, http://www.hamptonfalls.org/Pages/HamptonFallsNH_BComm/Heritage/index and the Historical Society website, https://www.hamptonfallshs.org/.

Commercial development in Hampton Falls is primarily located along U.S. Route 1, which runs north and south through the eastern part of the Town. The Route 1 corridor is the only commercial area in Town and is characterized by small retail stores and service establishments. Typical businesses include antique shops, restaurants, automobile dealers, daycare facilities and small specialty stores. In 2000 Town residents voted to expand the Business District near the intersection of Route 1 and NH Route 88 to include the Lincoln Akerman School.

Hampton Falls has no industrial development. The Zoning Ordinance allows light industrial use in the Business District North zone. In some instances, industrial use is permitted by right such as for research and development and corporate and business offices. The biggest constraint to development along NH Route 1 is the impact of wetlands on the developabilty of land along the corridor. Most lots contain wetland areas that greatly limit the amount of land left for development purposes. Another factor for the absence of industry is the lack of municipal water and sewer, which many industries desire or require. Additionally, an inhibiting factor is the lack of proximate access to Interstate 95 in Hampton Falls; the nearest exits are in the neighboring towns of Seabrook and Hampton.

3.0 LONG TERM TRENDS IN LAND USE PATTERNS

Table Existing Land Use-2 presents data on the change in land uses for each of five time periods using aerial photograph interpretation. The years utilized are 1962, 1974, 1998, 2005, 2010 and 2015. Several dramatic trends are evident from studying the data. In 1962, Agricultural land use accounted for nearly 1,500 acres in town. That total had dropped to 651 acres in 2015, a decrease of fifty-six per cent.

Conversely, residential land accounted for 302 acres of area town-wide and by 2015 that figure had expanded to 1,265 acres, a 318% increase in 53 years. Although the information offered for wetlands is complicated because photo interpretation has become more sophisticated in recent years, it is important to note that 2015 estimates indicate that over 2,300 acres of land in town fall within this category. This land is expected to be totally undevelopable.

A dramatic loss of forested land was also experienced. Forested land decreased from 4,292 acres in 1962 to 2,94 acres in 2015. That represented a 31% decrease in the amount of forested land.

TABLE Existing Land Use-2
1962, 1974, 1998, 2005, 2010 and 2015 LAND USE COMPARISON

Hampton Falls Historical Land Use							
Land Use Type	**1962**	**1974**	**1998**	**2005**	**2010**	**2015**	**2010 to 2015 Percent Change**
Active Agricultural	1,491.3	1,183.9	711.3	703.7	708.5	651.1	-8.1%
Aux Transportation				35.4	35.4	36.7	3.7%
Farmsteads	63.9	58.8	6.1	82.9	83.4	73.9	-11.4%
Forested	4,292.5	4,314.2	4,371.3	3,000.0	2,920.6	2,943.8	0.8%
Industrial/Commercial	76.5	78.1	112.5	70.7	69.7	71.8	3.0%
Mixed Urban	0.1	0.1	23.5	7.0	7.0	7.0	0.0%
Open Wetlands	1,074.2	1,083.3	1,084.1	2,347.7	2,340.9	2,356.6	0.7%
Other/Idle	389.6	494.1	328.3	288.5	265.9	261.4	-1.7%
Playing fields / Recreation				61.1	61.1	65.7	7.5%
Railroad				3.1	3.1	3.1	0.0%
Residential	302.4	456.5	990.4	1,129.2	1,232.6	1,264.9	2.6%
Transportation	94.1	97.7	103.5	156.2	156.9	154.4	-1.6%
Utilities				25.9	25.9	25.9	0.0%
Water	293.2	311.2	346.9	166.7	166.7	161.7	-3.0%
Grand Total						**8,078.0**	
** Note: Years 1962,1974 and 1998 were compiled with a slightly different methodology than 2005, 2010 and 2015. Aux Transportation (auxiliary transportation as a land use cover includes transportation related land uses like park and ride lots, toll plazas and other uses that support the transportation network), Playing Fields and Utilities are categories only broken out in 2005, 2010 and 2015. Classification of wetlands was improved between 1998 and 2005. Due to lesser quality, aerial photos many wetlands were classified as 'Forested' before 2005. Differences between 2010 and 2015 are due to better aerial photography available in 2015.							

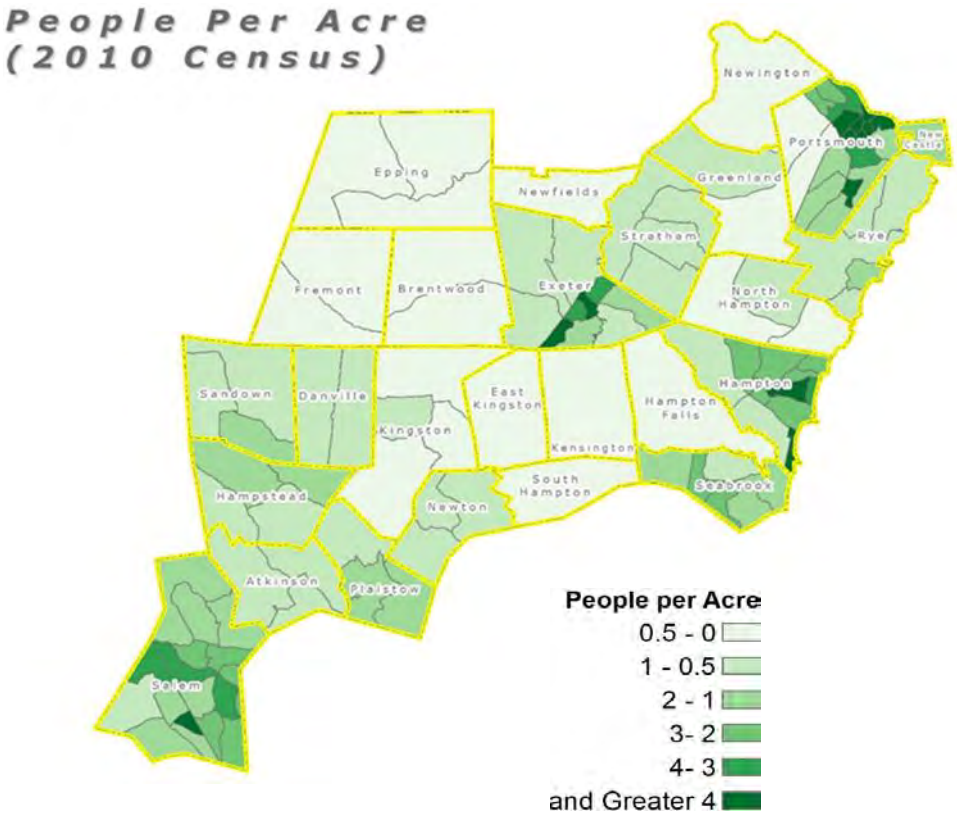
One unique characteristic of Hampton Falls that many other communities do not have to contend with is the large amount of wetlands that exist in town. Based on photo interpretations, 29% of the Town is open wetlands, and based upon soils, up to 39% of the land in Hampton Falls is considered to be wetlands. With development restricted in these areas, a large portion of land is virtually unusable for building. If the amount of wetlands is combined with the land already developed (27%), and it is assumed that there is some overlap between the two categories, this leaves approximately one-third of the Town remaining for development. In addition, the Town has made conservation of open space a priority through outright purchase of land or through deeded easements which deny future development. This information is not presently captured in Existing Land Use Table 2.

The wise and careful use of the remaining land should be a priority for the Town. This is why land use controls are so crucial to Hampton Falls. Another reason for up-to-date land use regulations is that, traditionally, the best land is developed first, leaving the lesser-quality land for future use. This land has greater limitations for development, a fact that the Planning Board must take into consideration when

making land use decisions. The Board's decisions will become more difficult as proposals for development continue and the amount of desirable land decreases.

Another striking indicator of Hampton Falls' ability to retain its rural character is shown in the following graphic regarding people per acre. Hampton Falls is the only coastal community whose entire extent has a census block people per acre factor of fewer than one person per acre. The Town has exhibited a strong desire and willingness to permanently protect important open space areas to help maintain the community's rural character; examples of such land protection include large portions of the Tonry, Applecrest and Raspberry Farms.

Existing Land Use - Map 2



Source: Rockingham Planning Commission' s 2015 Regional Master Plan

4.0 COMPATIBILITY WITH ZONING

4.1 Overview

One of the main purposes for conducting a land use survey is to compare existing land use with the zoning districts the Town has adopted. The purpose of zoning is to regulate the location and impact of various types of land use and to maximize the compatibility of adjacent land uses. Zoning is a regulatory tool by which to enact and enforce the community plan for particular land areas.

A community's plan may differ at times from actual land use for several key reasons, including:

- Zoning Board of Adjustment granting variances to the established zoning ordinance
- Pre-existing uses which, after the zoning was enacted, constitute non-conforming uses
- Difficulty in enforcing the Zoning Ordinance and exploitation of "loopholes" in zoning regulations, although these problems are constantly monitored and corrected by the Planning Board.

In cases where the existing land uses differ substantially from zoning, changes to the zoning ordinance should be considered. Any such changes should be compatible with the policies set forth in the Master Plan. While amendments to zoning ordinances are necessary to reflect changing circumstances, those changes must be based on a thorough investigation of the community's policies and the implications of such changes for the community's character.

4.2 Zoning in Hampton Falls

The Hampton Falls Zoning Map was adopted in 1963 and has been amended over the years. There are currently four zoning districts - Residential/Agricultural, Town Common, Business District North and Business District South and eight zoning overlay district - Telecommunications, Wetlands, Aquifer, Floodplain, Elderly and Multi Family Housing, Small Wind Energy Systems, Residential Open Space-Conservation Subdivision Development and Home Occupation. The zoning districts match up fairly well with the actual land uses. There are some commercial uses in the Residential/Agricultural District along NH 88 which are allowed under the Town's zoning.

The four existing districts in town are described as follows in the Town's Zoning Ordinance:

Agricultural/Residential District (A-District) - The intent of this district is to provide areas for single family dwellings and appropriate accessory uses at rural densities and to promote and provide for agricultural uses. (**Area in acres: 7,486, 94.8 % of total area in town**)

Town Common District (TCD) – The intent of this district is to establish a downtown area that promotes a wide range of services, combine business, retail and residential uses, cultural and other public and private uses surrounding Hampton Falls historic Town Common, at intensities and patterns that encourage safe pedestrian circulation and amenities, support public transit and upholds Hampton Falls' historic New England architectural integrity. (**Area in acres: 124, 1.6% of total area in town)**

Business District North (BDN) – The intent of this district is to promote light industry, retail, commercial recreation and business uses in areas where reasonable highway accessibility is achievable. **(Area in acres: 196, 2.5% of total area in town)**

Business District South (BDS) – The intent of this district is to provide for redevelopment along the southern portion of Hampton Falls' Route 1 corridor in order to enhance the visual character of the gateway into Hampton Falls from Seabrook, to promote traditional New England architecture, moderately sized, professional office, retail and restaurant uses, as well as to encourage site design that includes landscape beautification, pedestrian circulation and public transit use. **(Area in acres: 86, 1.1 % of total area in town)**

In addition to the traditional land use zones detailed above, the town has a number of special use zoning districts that are overlays in nature; as such their boundaries are either created by way of physical attributes of the land as in the case of the Wetlands Conservation District or are districts allowing specific permissions available across existing districts or portions of existing districts such as with the application of the Residential Open Space - Conservation Subdivision Development ordinance. These districts are described below.

Wetlands Conservation District – The purpose of the Wetlands and Surface Water Overlay District is to protect the public health, safety and general welfare. The district also strives to protect wetland ecological integrity and function by controlling and guiding land use in areas adjacent to and within wetlands.

Flood Plain Development Ordinance – The purpose of the Floodplain Development Ordinance is to establish the boundaries of areas prone to periodic flooding and to guide development away from these areas. In addition, those developed properties that fall in the established floodplain areas are provided relief in the form of flood insurance by the National Flood Insurance Act of 1986.

Telecommunications Facility Ordinance – The purpose of this ordinance is to preserve the authority of the Town to regulate and provide for reasonable opportunity for the siting of telecommunication facilities in town.

Elderly and Multi-Family Housing District – The purpose of this district is to make provision for the development of elderly multi-family and workforce multi-family housing (owner and renter occupied). It is expected that this will promote public health, safety and welfare, ensure a continued availability of diverse supply of home ownership and rental opportunities for low to moderate income households, and preserve the rural character of the Town.

Home Occupation – The purpose of this ordinance is to recognize and provide standards for the ability of residents to use residential property for limited business use. These requirements are in place to protect the integrity of the Agricultural/Residential zoning district so that such uses will not adversely affect the appearance, character or condition of the residence or neighborhood.

Aquifer Protection District – This district is intended to protect, preserve and maintain potential groundwater supplies and related groundwater recharge areas within known aquifers identified by the Town.

Residential Open Space – Conservation Subdivision Development – The purpose of this ordinance is to encourage environmentally sound planning to protect open space and natural resources while concurrently creating attractive living environments.

Small Wind Energy Systems Ordinance – The purpose of this ordinance is to accommodate small wind energy systems in appropriate locations while protecting the public's health, safety and welfare.

In addition to the overlay districts detailed above, the town's land use matrix provides standards for the establishment, under certain circumstances, of accessory dwelling units and bed and breakfast establishments.

The Town's zoning map serves as its future land use map as well. The Town is satisfied with the existing distribution of land uses throughout the municipality. This viewpoint is supported by the results of the citizen's survey undertaken in 2015. The overwhelming majority of respondents, 95%, indicated future land use should maintain the existing rural character of the town. Existing zoning has guided this development pattern for many years and there is no evidence to expect this will change.

5.0 VULNERABILITY ASSESSMENT OF COASTAL FLOOD HAZARDS

A. Tides to Storms Vulnerability Assessment Findings

The Tides to Storms coastal vulnerability assessment project completed by the Rockingham Planning Commission in 2015 produced maps and statistical data about the potential impacts to New Hampshire's seven coastal municipalities from sea-level rise and storm surge to infrastructure, critical facilities transportation systems, and natural resources. The following narrative and data are excerpted from the Hampton Falls Tides to Storms Vulnerability Assessment Report.

The Town of Hampton Falls is located along the north coastal area of New Hampshire comprising 8,231 acres including 5,683 acres of land and 2,548 acres of water and wetlands. With a population of 2,236 (2010 Census), only one coastal municipality has a smaller population. The coastal portion of Hampton Falls lies within the Hampton-Seabrook Estuary.

Upland
In the report, Maps 1 and 2 -Extent of Flooding- show upland affected by sea-level rise and coastal storm surge flooding above mean higher high water. Table Existing Land Use -3 reports the number of acres of upland affected by each flood scenario. Low-lying upland areas east of Route 1, in the interior fringe areas of the Hampton-Seabrook Estuary, are highly susceptible to flooding even at the lowest 1.7-foot sea-level rise scenario. Some of these uplands are the result of filling tidal marshes decades ago to create developable land. Over time, the underlying marsh sediments and material continue to subside, lowering the land elevation.

TABLE Existing Land Use -3 Upland Impacted by Coastal Flooding (acres)

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Acres	121.3	187.4	252.3	237.4	305.6	383.7
% Upland	1.6	2.4	3.2	3.0	3.9	4.9

Total Upland in Hampton Falls = 7,802.2 acres. Upland refers to land above mean higher high water (highest tidal extent).

Land Use/Land Cover

In the report, Map 14 -Regional Land Use - shows land use/land cover types affected by sea-level rise and coastal storm surge flooding**.** Table Existing Land Use- 4 reports the number of acres for each land use/land cover type affected by each flood scenario.

TABLE Existing Land Use-4 LAND USE/LAND COVER (acres)

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Active Agricultural	0.0	0.9	2.7	2.5	3.8	6.0
Aux Transportation	0.1	0.5	0.8	0.7	1.4	4.0
Farmsteads	0.0	0.0	0.0	0.0	0.0	0.1
Forested	10.1	55.0	105.2	94.2	142.7	192.2
Industrial/Commercial	0.0	0.0	0.3	0.1	2.2	5.7
Mixed Urban	0.0	0.0	0.0	0.0	0.0	0.0
Other/Idle	125.9	142.8	149.9	148.4	154.9	162.6
Playing Fields / Recreation	0.1	0.5	1.3	1.0	3.5	8.5
Railroad	0.1	0.6	1.1	1.0	1.4	2.3
Residential	0.1	0.6	1.1	1.0	1.4	2.3
Transportation	0.4	3.0	6.5	5.4	10.7	15.8
Utilities	0.0	0.4	1.0	0.9	1.7	3.1
Water	1.1	31.3	31.9	31.8	32.1	32.1
Wetlands	125.9	142.8	149.9	148.4	154.9	162.6

The land use types most impacted by both sea-level rise and coastal storm surge flooding are land classified as Forested and Other or Idle, (undeveloped or disturbed lands, unclassified lands). There are pockets of development in Hampton Falls in the interior fringe areas of the Hampton-Seabrook Estuary, primarily residential structures, both permanent owner-occupied dwellings and seasonal rental units.

Zoning

In the report, Map 13 - Regional Zoning - shows local zoning districts affected by sea-level rise and coastal storm surge flooding. Table Existing Land Use-5 reports the acres within each zoning district affected by each flood scenario. Zoning districts are superimposed over land use and land cover.

Flood impacts in existing zoning districts will result in single-family and medium-density residential and commercial development showing sensitivity at the lowest 1.7-foot sea-level rise scenario and all storm surge scenarios.

TABLE Existing Land Use-5 Zoning Districts (acres)

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Zoning / Land Use						
General/Single Zone	0.0	0.0	0.5	0.4	0.5	0.5
Residential – Medium Density	137.8	235.0	300.9	285.8	354.9	433.5

Parcels and Assessed Value

Table Existing Land Use-6 reports the number of parcels affected by for each of the six scenarios evaluated and the aggregated assessed value of these parcels. The degree to which the parcel and any development on the parcel is affected by sea-level rise or storm related flooding was not analyzed. Affected parcels were identified based on their location either partially or fully within the extent of the scenarios evaluated. The data may include a number of high value parcels under state and municipal ownership.

For Hampton Falls, the largest increase in the number of affected parcels is the extent of flooding from the 1.7 feet to 4.0 feet sea-level rise scenario. there is a 16 percent increase in the number of affected parcels and nearly a $19.5 million increase in assessed value from the 1.7 feet to the 4.0 feet sea-level rise scenarios. There is a 4.7 percent increase in the number of affected parcels and approximately a $5.3 million increase in assessed value from the 4.0 feet to the 6.3 feet sea-level rise scenarios

TABLE Existing Land Use-6 Parcels and Assessed Value

Sea-Level Rise (SLR) Scenarios	Number of Parcels Affected by scenario	Aggregate Value of Affected Parcels
1.7 feet SLR	237	$18,004,600
4.0 feet SLR	276	$37,463,800
6.3 feet SLR	289	$42,794,300
1.7 feet SLR + storm surge	288	$42,467,100
4.0 feet SLR + storm surge	293	$44,493,700
6.3 feet SLR + storm surge	303	$48,134,400

FEMA Flood Hazard Areas

In the report, Maps 23 and 24 - Preliminary FEMA Flood Hazard Areas - show areas within the 100-year floodplain and 500-year floodplain affected by sea-level rise and coastal storm surge flooding. Table Existing Land Use-7 reports the acreage within the current 100-year and 500-year floodplains affected by each flood scenario.

Table Existing Land Use - 7 shows that sea-level rise will produce additional flooding within the current 100-year and 500-year floodplains.

TABLE Existing Land Use -7 FEMA Flood Hazard Areas (acres)

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
100-year floodplain	**1,105.7**	**1,203.3**	**1,207.8**	**1,207.4**	**1,208.2**	**1,208.6**
100-year floodplain - Coastal Region	8,179.5	9,361.1	9,593.2	9,639.0	9,765.8	9,818.0
500-year floodplain	**1,105.7**	**1,203.7**	**1,234.0**	**1,232.7**	**1,236.0**	**1,237.1**
100-year floodplain - Coastal Region	8,180.6	9,368.4	9,837.6	9,879.8	10,015.3	10,069.5

Area of the 100-year floodplain = 1,690.0 acres. Area of the 500-year floodplain = 1,875.0 acres. Floodplain assessment based on Preliminary Flood Insurance Rate Maps (FIRMs) released by FEMA in 2014.

B. Issues and Considerations

The following issues and considerations about coastal flood hazards were identified by Hampton Falls municipal staff, municipal board members and RPC staff.

- Planning for long term sea-level rise can be integrated with existing regulatory and management frameworks for the current 100-year floodplain (e.g. floodplain development ordinance, site plan review regulations, and natural hazards mitigation plan).

- Providing information about potential flood hazards to those businesses and residents in high risk flood areas, including early notification of flood risk during a coastal storm event would enhance public safety and preparedness.

- Long term infrastructure management would benefit from an analysis of the costs necessary to improve roads and drainage infrastructure to withstand projected sea-level rise elevations at 2050 and 2100. This type of analysis could be conducted when new roads are being planned to serve commercial and industrial developments, and residential developments.

6.0 RECOMMENDATIONS

6.1 GENERAL RECOMMENDATIONS

1. The land use classifications should be recalculated using digital data every 5 years, using a standard methodology and the same data sources for purposes of consistency.
2. The Town should prepare a new build out analysis to determine the extent of future development under the existing land use requirements.
3. Residents are encouraged to visit the Rockingham Planning commission website at rpc-nh.org to view town specific maps that depict all of the towns zoning ordinance boundaries as well as existing land uses and natural resources information. www.rpc-nh.org
4. The Planning Board should work with the Conservation Commission and the Board of Selectmen to prepare a concise report of the permanently protected properties in Town.
5. Monitor changes in zoning district uses with respect to the impact of such changes on the town's tax base.
6. As an overall goal, the Town of Hampton Falls should encourage housing patterns that preserve and protect the Town's rural characteristics, while providing a variety of housing alternatives.
7. The Historical Society should continue to develop outreach and educational materials in conjunction with Lincoln Akerman School and the Hampton Falls Free Library to promote the collection and preservation of historic ephemera, artifacts and stories.
8. The Heritage Commission should develop and maintain an inventory of all public and private landmarks, including areas, sites and historic structures. The Commission should prioritize efforts to protect historic assets by educating owners about restoration and preservation and advocating for any initiatives that would benefit the preservation of our important historic resources.

6.2 COASTAL FLOOD HAZARD RECOMMENDATIONS

1. Elevate Structures 2 feet Above Base Flood Elevation. Adopt standards in floodplain zoning and/or Site Plan Review and Subdivision Regulations that require all new development and redevelopment to be elevated 2 feet above the base flood elevation (flood elevation of the 100-year/1% chance storm). Two feet of additional elevation will ensure that structures are protected from flooding based on the highest sea-level rise projection of 2 feet by 2050.
2. Adopt in the town's zoning ordinance a Coastal Flood Hazard Overlay District that includes performance- based standards that protect against flood impacts from sea-level rise and coastal storm surge. Establish the overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high-risk flood areas mapped by the Tides to Storms Vulnerability Assessment.
3. Adopt buffers and setbacks that adequately separate development and infrastructure from tidal wetlands, freshwater wetlands and surface waters to sustain flood storage capacity and allow for inland migration of tidal marsh systems and conversion of freshwater systems to tidal systems to accommodate projected changes in sea-levels. Incentives to further protect wetlands may include applying increased buffers and setbacks as mitigation for wetlands impacts from development.
4. Findings from the Tides to Storms Vulnerability Assessment should be consulted for any future subdivision proposals located in high risk flood areas.
5. Should rising sea-levels and groundwater levels result in reduced capacity or function of existing private septic systems and drinking water wells, evaluate adaptation options for residential neighborhoods located in high risk flood areas.

6.3 OPEN SPACE RECOMMENDATIONS

1. The Town should continue working with the Conservation Commission to preserve important open spaces through purchase and easements.
2. The Conservation Commission should develop a local open space plan to identify land protection priorities, support future grant funding opportunities, and offer a review of land protection progress over time.
3. The Town should explore additional means of generating local funds for open space protection.
4. The Planning Board, Conservation Commission, and Recreation Commission should work together to identify any future areas of land to support the open space recreational needs of the community.
5. The Town should encourage the private sector to develop water and sewer infrastructure within the business districts along NH Route 1.

COMMUNITY PROFILE

COMMUNITY PROFILE

1.0 Introduction

The Community Profile section of the Hampton Falls Master Plan compiles information to provide a snapshot of the community at the time of the current master plan. Information collected for the community includes population, age distribution; race, educational attainment, housing statistics and income information. This information provides a good baseline on current conditions and offers a starting point for comparison for future master plans.

2.0 Population

Table CP-1 displays population totals for Hampton Falls for the years 1980-2016 and population projections for the years 2020 and 2030. Historically the town saw its greatest population growth in the decade between 1990 and 2000. This growth was followed closely by the 16 year period between 2000 and 2016. The NH Office of Strategic Initiatives projects an eight percent increase in the four years from 2016 through 2020 and then a more restrained growth of four percent from 2020 through 2030.

Table CP – 1

Population

Population History and Projections for Hampton Falls					
1980	1990	2000	2012-2016	2020	2030
1,372	1,503	1,880	2,377	2,568	2,670
Percent Change in Population					
	1980-90	1990-2000	2000-16	2016-2020	2020-2030
	10%	25%	26%	8%	4%

Source: US Census and New Hampshire Office of Strategic Initiatives

Table CP-2 on the following page offers information on age distribution in town for the years 2007 – 2016. The general trend for the community is one of aging; as the median age for the community increased from 43 years of age for the period 2007-2011 to 46 years of age in the period of 2012-2016.

Table CP – 2

Population Distribution by Age

Population by Age	**2007-2011 Estimate**	**2012 -2016 Estimate**	**Percent Change**
Under 15 yrs.	488	444	-9.0%
15 to 24 yrs.	191	218	14.1%
25 to 34 yrs.	179	236	31.8%
35 to 44 yrs.	349	257	-26.4%
45 to 54 yrs.	437	436	-0.2%
55 to 64 yrs.	305	426	39.7%
65 to 74 yrs.	180	258	43.3%
Over 74 yrs.	118	102	-13.6%
Median Age (years)	43.4	46.1	

Source: U.S. Census and 2012-2016 American Community Survey Tables B01001 and B01002

The American community Survey indicates that the distribution of Hampton Falls' residents by race for the period 2012 through 2016 is overwhelmingly white at 96.8%. The next largest population found in Town is Asian and Pacific Islander comprising 1.6% of the Town's 2016 population.

Table CP-3 below, details information about the family make-up of residents in Hampton Falls. There were 67 more families in Town in 2016 than in 2007. There are fewer people per household but more persons per family. There are less married-couple family households and more single-parent family households. In addition, non-family households, which include single person households and same sex married households increased in number from 2007 to 2016.

Table CP-3
Households and Families

	2007-2011	2012-2016	% Change
Total Households	835	902	8.0%
Persons per Household	3.05	2.64	-13.5%
Family Households	672	654	-2.7%
Persons per Family Household	1.23	3.07	150.6%
Married-Couple Family Household	596	547	-8.2%
Single-Parent Family Household	76	107	40.8%
Non-Family Households*	163	248	52.1%
Persons per Non-Family Household	0.00	1.48	n/a

Source: US Census and 2012-2016 American Community Survey Table B11001

*Includes Single Person Households and same sex married / civil union couples without children.

Table CP-4 below, shows the place of birth for residents in Hampton Falls in 2007-2011 and 2012-2016. Not surprisingly, a majority of residents were born in a state other than NH. In 2016 64 percent were born out of State; with a majority of these (53 percent) being born in the Northeast. Very few residents were born outside of the US (roughly three percent), with this number decreasing from 2007 to 2016.

Table CP-4
Place of Birth

Universe: Total Population	2007 -2011 Estimate	Percent	2012-2016 Estimate	Percent
Total:	2,247		2,377	
United States Native	2,142	95.3%	2,307	97.1%
New Hampshire Native	636	28.3%	751	31.6%
Born in Different State	1,483	66.0%	1,540	64.8%
Northeast	1,173	52.2%	1,263	53.1%
Midwest	119	5.3%	77	3.2%
South	111	4.9%	159	6.7%
West	80	3.6%	41	1.7%
Native Born Outside US	23	1.0%	16	0.7%
Foreign Born	105	4.7%	70	2.9%
Naturalized Citizen	97	4.1%	65	2.7%
Not a Citizen	8	0.3%	5	0.2%

Table CP-5
School Enrollment

	2007-2011 Estimate	Percent of Population	2012-2016 Estimate	Percent of Population
Population 3 years and over	2,140		2,336	
Population 3 years & over enrolled in school	513	24.0%	614	26.3%
Preprimary (Nursery, Preschool, Kindergarten)	80	3.7%	75	3.2%
Nursery school and Preschool	53	2.5%	58	2.5%
Kindergarten	27	1.3%	17	0.7%
Elementary through High school	373	17.4%	404	17.3%
Elementary school (grades 1-8)	229	10.7%	313	13.4%
High school (grades 9-12)	144	6.7%	91	3.9%
College or Graduate School	60	2.8%	135	5.8%

Source: 2007-2011 and 2012-2016 American Community Survey Table B14001

Table CP-5 above, displays resident enrollment figures for the Town of Hampton Falls for the time periods 2007-2011 and 2012-2016. About a quarter of all residents of Town are enrolled in some level of education. The figures are stable between the two time periods with a shift in 2016 reflective of residents aging through the education system. The table reflects enrollment figures for both public and private schools as well as enrollments for home schooled students.

Table CP-6 below, displays the educational attainment for residents of Hampton Falls for the periods 2007-2011 and 2012-2016. The Town of Hampton Falls is very highly educated. In 2016, 99 percent of the population 25 years of age and older had at least a high school diploma, up significantly from 2016. In addition, nearly 60 percent of those residents 25 years of age and older earned a Bachelor's degree or higher.

Table CP-6
Educational Attainment

Educational Attainment	2007-2011		2012-2016	
	Estimate	Percent of Population	Estimate	Percent of Population
Population 25 years and over	1,568		1,715	
Less than 9th Grade	13	0.8%	0	0.0%
9th to 12th Grade, no Diploma	29	1.8%	12	0.7%
High School Graduate	343	21.9%	350	20.4%
Some College, No Degree	210	13.4%	201	11.7%
Associate Degree	109	7.0%	155	9.0%
Bachelor's Degree	492	31.4%	639	37.3%
Graduate or Professional Degree	236	15.1%	358	20.9%
Percent of High School Graduate or Higher		88.6%		99.3%
Percent of Bachelor's Degree or Higher		46.4%		58.1%

Source: 2007-2011 and 2012-2016 American Community Survey Table B15002

Table CP-7 below, shows income information for households in Hampton Falls. This information is provided for 2007-2011 and 2012-2016. The Town's median Household income in 2016 was $125,000. Only 30% of the households in Hampton Falls have a household income less than $74,999.

Table CP-7
Household Income

Household Income	2007-2011 Households		2012-2016 Households	
Less than $10,000 to 49,999	137	17%	147	17%
$50,000 to $74,999	80	10%	115	13%
$75,000 to $99,999	90	11%	120	13%
$100,000 to $149,999	243	29%	154	17%
$150,000 to $199,999	141	17%	105	12%
Greater than $200,000	144	17%	261	29%
Median HH Income	$114,375		$125,000	

Source: American Community Survey: B18101; B18102; B18103; B18104; B18105; B18106; and B18107

Table CP-8 below, provides information on household income by age of head of household. As housing is expensive in Hampton Falls it is not surprising that the majority of householders are aged forty-six or older. In addition, two-thirds of the population are in family households and one-third are non-family households. When reviewing the source data from the American Community Survey, there are several fields marked with an asterisk that do not appear to add properly.

Table CP-8
Household Income by Age of Householder

	Households	Under 25	25 to 44	45 to 64	65 & Over	Family Households	Non-Family Households
Less Than $10,000 to $49,999	135	22	26	21	73	58	89
$50,000 to $59,999	41	0	10	27	4	24	17
$60,000 to $74,999 *	74	0	11	38	25	69	18
$75,000 to $99,999 *	120	0	15	84	21	70	46
$100,000 to $124,999	69	0	30	28	11	65	4
$125,000 to $149,999	85	0	22	43	20	67	18
$150,000 to $199,999 *	105	0	37	59	9	108	9
$200,000 or More *	261	0	41	169	51	193	47
Total Households	902	22	192	474	214	654	248
Median Household Income	$125,000	-	$128,500	$142,500	$78,750	$141,389	$72,500

Source: American Community Survey: B18101; B18102; B18103; B18104; B18105; B18106; and B18107

Table CP-9
Disabilities by Age Distribution

	Under 5	5 to 17 years	18 to 34 years	35 to 64 years	65 to 74 years	75 years and older
With a disability:	0.0%	3.1%	1.8%	6.2%	10.9%	43.1%
Type of disability						
Hearing disability	0.0%	0.0%	1.8%	2.0%	8.9%	21.6%
Visual disability	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%
Cognitive disability	NA	3.1%	1.8%	1.3%	1.9%	3.9%
Ambulatory disability	NA	1.4%	0.0%	2.5%	0.0%	32.4%
Self-care disability	NA	1.4%	0.0%	1.1%	0.0%	7.8%
Independent living disability	NA	NA	0.0%	2.0%	1.9%	10.8%
No disability	100.0%	96.9%	98.2%	93.8%	89.1%	56.9%

Source: 2012-2016 American Community Survey Tables B18101; B18102; B18103; B18104; B18105; B18106; and B18107

Table CP-9 above, details the frequency of disabilities across age groups in Town. In Hampton Falls disabilities are mainly related to aging with significant numbers of disability reported in age groupings including 64 years old and older.

Table CP-10 below, details information regarding residents of Hampton Falls living below the Federal poverty threshold. In 2007-2011 2.4 percent of town residents were living in poverty. In 2016 this figure had increased to 4 percent. Of note, there were no residents 65 to 74 years of age in poverty in 1007-2011 but by 2012-2016 14 residents in this age bracket were in poverty. The Avesta affordable elderly housing is expected to lessen the population of elderly living below the Federal poverty level

Table CP-10
Residents Living Below the Federal Poverty Level

	2011 Income below Poverty Level		2016 Income below Poverty Level	
Population	**Estimate**	**% of Population in Poverty**	**Estimate**	**% of Population in Poverty**
Total Individuals living in Poverty	54	2.4%	94	4.0%
Under 5 yrs.	0	0.0%	0	0.0%
5 to 17 yrs.	17	4.1%	30	7.0%
18 to 64 yrs.	33	2.4%	50	3.3%
65 to 74 yrs.	0	0.0%	14	5.4%
75 yrs. & Over	4	3.4%	0	0.0%

Source: 2007-2011, 2012-2016 American Community Survey, Table B1701

The citizen's survey undertaken in 2015 offers additional information regarding residents of Hampton Falls that warrants discussion in this section of the master plan. This information is summarized below.

- Forty-three percent of the residents responding to the master plan survey have lived in town more than twenty years. Twenty percent of the respondents have lived in the town for less than five years.
- Fifty percent of the survey respondents live in two-person households.
- Of survey responses given, the three largest age groups in town and their corresponding percentage of the total are as follows; 56-65 years of age -32%; 46-55 years of age -31%; under 18 years of age - 30%.
- When asked why they choose to live in Hampton Falls eighty-six percent stated it was due to the Town's rural character. The next largest response was forty-three percent saying the friendly atmosphere was why the Town was chosen.

HOUSING

HOUSING

Housing is one of the most important and challenging issues to be addressed in the master planning process. The need for a community to provide housing diversity is required by state law. For communities like Hampton Falls, this requirement is difficult for many reasons. As a seacoast community the town has extremely high land costs, one of the primary factors in housing costs. This factor plays a major role in why the availability of affordable housing has not kept pace. Along with high land costs New Hampshire communities, especially those in the southern tier of the State, have received legal challenges on whether their zoning ordinances and land use regulations were exclusionary and failed to provide for a wide range of housing needs-housing which serves the requirements of a wide spectrum of age and income groups, including low and moderate income households. Two Rockingham County Supreme Court cases (*Britton v. Town of Chester* and *Soares and Lewis Builders v. Atkinson*) have led to the requirement that towns assess the housing needs of all income groups and adopt zoning and land use regulations that do not have the effect of pulling up the drawbridge to certain income, age or ethnic groups.

Housing costs in southern New Hampshire have remained relatively high and in many communities exceed the ability of many wage earners to keep pace with the increases. Housing affordability has become a major issue for the entire region as steep housing costs put home ownership out of the reach of even middle income households. Housing projects like the 2016 elderly affordable project developed by Avesta expand the housing options available to the community. This project is discussed later in the chapter.

This chapter of the Master Plan assesses the existing housing stock and housing costs of Hampton Falls in comparison to surrounding communities, reviews the Town's existing residential zoning requirements, and considers the results of the 2015 Regional Housing Needs Assessment prepared by the Rockingham Planning Commission. Recommendations regarding policies and actions to address present and future housing needs of the Town are also presented.

1.0 HOUSING DEMOGRAPHICS

1.1 Growth in Housing, 2000 - 2016

The development mosaic in Hampton Falls can be best described as residential beyond the Route 1 corridor, with a small number of commercial enterprises interspersed throughout the rest of the Town. As a result of limited commercial and no industrial developments throughout the Town, Hampton Falls continues to be a predominantly bedroom community, and its housing history confirms this trend.

According to the U.S. Census, there were a total of 704 occupied dwelling units of all types in Hampton Falls in 2000. Hampton Falls' average annual population increase of 2.8% between the years 2000 and 2015 resulted in an average annual increase of 1.73% in new housing units during the same period. As seen in **Table H-1**, approximately 200 new housing units were constructed in Hampton Falls between the years 2000 and 2016.

Table H-1
Occupied Housing Units and Persons per Unit
2000, 2010, 2016 U.S. Census and 2016 American Community Survey

	Occupied Housing Units			Avg. Annual Growth Rate		Avg. Persons per Unit	
Town/Area	**2000**	**2010**	**2016**	**00-10**	**10-16**	**2010**	**2016**
Hampton Falls	**704**	**834**	**936**	**1.7%**	**1.8%**	**2.7**	**2.4**
Exeter	5,898	6,114	6,456	0.4%	0.9%	2.3	2.4
Hampton	6,465	6,868	9,593	0.6%	4.6%	2.2	1.6
Kensington	657	761	864	1.5%	1.9%	2.8	2.4
North Hampton	1,671	1,760	1,955	0.5%	1.6%	2.4	2.3
Seabrook	3,425	3,706	4,685	0.8%	3.4%	2.3	1.9
Stratham	2,306	2,746	2,805	1.8%	0.3%	2.6	2.6
Area Total	21,126	22,789	27,294	0.8%	2.7%	2.4	2.0
Rock. County	104,529	115,033	130,189	1.0%	1.9%	2.6	2.3
New Hampshire	474,606	518,973	625,307	0.9%	2.8%	2.5	2.1

Source: 1990, 2000, 2010 U.S. Census; 2016 American Community Survey (ACS)

Between 2000 and 2016 Hampton Falls' housing supply grew at a higher rate than all but three of the surrounding communities, attributable in part to the Town's small housing supply. From 2010 to 2016, the average annual growth rate slowed due to the nation-wide recession in the mid to late 2000's but Hampton Falls still grew faster than all but the communities of Kensington, Hampton and Seabrook within the region. This comparison is somewhat clouded by the high vacancy rates experienced in both beach communities for much of the year. Between 2000 and 2016, 232 units were added to the Town's housing stock; 130 units between 2000 and 2010 and an additional 102 units between 2010 and 2016.

Hampton Falls' place in the region in terms of providing housing should also be evaluated in light of interpretations provided by the New Hampshire Supreme Court. The interpretation of New Hampshire Statutes by the State Courts suggests that towns are responsible for both accepting a fair share of population growth and housing, and providing opportunities for a variety of housing types to be built throughout town. Hampton Falls' ability to provide housing for all its residents can best be analyzed by examining the types of housing and the economic status of the Town's residents.

1.2 Ownership and Occupancy

As can be seen in **Table H-2**, the proportion of renters versus owners among the occupied housing units in Hampton Falls is typical of communities its size, though lower than the region's average. That average is pushed up by the larger communities which typically have a much higher percentage of rental units, as well as by the neighboring communities of Hampton and Seabrook, which both have a significant amount of seasonal housing.

Table H-2
Housing Ownership and Occupancy, 2016

Town/Area	All Housing	Occupied Units	Owner-occupied # units	Owner-occupied %	Renter-occupied # units	Renter-occupied %	Vacant # units	Vacant %
Hampton Falls	**936**	**902**	**804**	**89.1%**	**98**	**10.9%**	**34**	**3.6%**
Exeter	6,456	6,327	4,446	70.3%	1,881	29.7%	129	1.9%
Hampton	9,593	6,934	5,121	73.8%	1,813	26.1%	2,659	27.7%
Kensington	864	805	720	89.4%	85	10.5%	59	6.8%
North Hampton	1,955	1,750	1,559	89.0%	191	10.9%	205	10.5%
Seabrook	4,685	3,861	2,412	62.5%	1,445	37.5%	824	17.6%
South Hampton	421	307	258	84.0%	49	16.0%	114	27.1%
Stratham	2,805	2,712	2,415	89.0%	297	10.9%	93	3.3%
Area Total	27,715	23,104	17,104	74.0%	6,000	26.0%	4,845	17.3%
Rock. County	130,189	128,887	98,985	76.8%	29,902	23.2%	1,302	1.0%
New Hampshire	625,307	615,927	437,308	71.0%	178,619	29.0%	9,380	1.5%

Source: U.S. Census (Table DP1), ACS, 2016

The vacancy rate of 3.6 % for all housing units in Hampton Falls is generally in line with the neighboring communities, with the exception of Hampton and Seabrook, which again, have a significant amount of seasonal housing. Hampton Falls' vacancy rate is higher than the County and State rates which are at historic low levels.

1.3 Housing Types

Single family residences compose the bulk of the housing stock in Hampton Falls, supplemented by a small percentage of multi-family and manufactured dwellings. **Table H-3**[1] illustrates the Town's housing stock relative to the surrounding communities. The table reveals that Hampton Falls provides a smaller proportion of both multi-family and manufactured housing than the neighboring towns.

As seen in **Table H-3**, the housing stock in Hampton Falls is deficient in multi-family and manufactured housing. Only 0.50% of the Town's housing units are multi-family units and only 0.50% are manufactured units. It is possible that this information from the American Community Survey may be under-reporting multi-family units because it appears the Pelton Farm townhouse project may not be included. Subsequent ACS tables should be reviewed to determine if these units are included. This is significantly lower than Rockingham County as a whole at 17.0% and 6.2%. While Hampton Falls has demonstrated some regulatory success in providing opportunities for a variety of housing types, the statistical reality is that single-family residences are the dominant housing type throughout Town. While statistics are helpful in quantifying Hampton Falls' housing stock, they fail to recognize the most important factor driving residential development decisions - economics. Two-acre minimum lot size requirements, high land prices, current use-penalties, development/permitting costs and the lack of sewer and water service have, in effect, encouraged the development of large, expensive single family homes in lieu of other options necessary to help Hampton Falls meet its share of the regional housing need. The

[1]Note: A discrepancy exists between the total number of housing units per town shown in Tables H-2 and H-3. This discrepancy is due to the different years and different data sources used to generate each table.

Town has adopted the allowance to develop conservation subdivisions, these developments do provide a measure of relief to high land costs by permitting the clustering of units in a smaller area with the requirement of protecting larger undeveloped areas with conservation easements. In this way development costs like road construction and utility line placement may be reduced. The homogeneity of the Town's housing stock will likely be further mitigated in some measure by the adoption in 2017 of the State's Accessory Dwelling Unit law and also with the construction of the affordable aspects of the Avesta development in Town.

Although the development trend in Hampton Falls has predominantly resulted in the construction of single family homes, this is not inconsistent with the community's desires. The results of the 2015 Town survey reveal that maintenance of rural character is of very high importance to the Town's residents. As such, the development of the housing stock should, therefore, be consistent with this goal to be successful. Because housing growth will continue, Hampton Falls must regularly update its land use regulations to ensure that growth is accommodated and continues in a sensible manner. A careful review of the Town's current land use regulations, contained in Section 3 (page 4-11), will be valuable in developing recommendations to best accommodate and guide housing development in Hampton Falls. This will ensure that the Town provides for a diversity of housing opportunities, while maintaining its rural character.

Table H-3
Housing Distribution by Type, 2016

		Single Family		Duplex		Multi-Family		Manufactured	
Town/Area	Total	# Units	%	# Units	%	# Units	%	# Units	%
Hampton Falls	**936**	**880**	**94.0%**	**46**	**5.0%**	**5**	**.50%**	**5**	**.50%**
Exeter	6,456	3,308	51.2%	327	5.1%	1,883	29.1%	940	14.6%
Hampton	9,593	6,657	69.4%	477	5.0%	2,247	23.4%	212	2.2%
Kensington	864	840	97.2%	3	0.3%	2	0.2%	19	2.2%
North Hampton	1,955	1,573	80.5%	60	3.1%	10	0.5%	312	15.9%
Seabrook	4,685	2,515	53.7%	330	7.0%	877	18.7%	960	20.5%
South Hampton	421	347	82.4%	4	0.9%	0	0.0%	70	16.6%
Stratham	2,805	2,543	90.6%	46	1.6%	130	4.6%	86	3.1%
Area Total	28,651	18,663	65.14%	1,293	5.2%	5,154	19.9%	2,604	10.0%
Rock. County	130,189	85,244	72.10%	n/a	4.70%	39,604	17.0%	7,815	6.2%
New Hampshire	634,290	401,255	68.6%	n/a	5.90%	196,521	19.5%	36,514	5.9%

Source: ACS 5-Year Estimates (2012-2016) (Table B25024)

1.4 Housing Cost

Since the early 1990s and with the exception of the recession experienced in the late 2000's, Hampton Falls and the Seacoast region have been experiencing an explosive real estate market. This has been fueled by several factors, but most notably by the rapid expansion of employment opportunities at Pease International Tradeport and in the Seacoast region overall, as well as in the Boston metropolitan area; by continued population growth; and by limited single-family and apartment construction over the last decade. The combined effect of this sharp increase in demand and a shortage of supply, along with historically low interest rates has resulted in an escalation in the price of homes as well as rental rates.

Table H-4
Median Housing and Gross Rent 2015

Town/Area	Median Value, owner-occupied housing (owner estimate)	Median Gross Rent renter-occupied units
Hampton Falls	**$414, 000**	**$1,281***
Exeter	$290,000	$1,982
Hampton	$287,000	$1,138
Kensington	$357,000	$1,431*
North Hampton	$437,000	$873*
Seabrook	$345,000	$1,038
South Hampton	$330,000	$1,438*
Stratham	$361,000	$1,803
Area Total/Avg.	$352,625	$1,211
Rock. County	$275,000	$1,163
New Hampshire	$221,000	$1,069

Source: ACS 5-Year Estimates (2012-2016)
(DP04) Rents with an asterisk are county-wide averages due to very small sample sizes for these communities.

This chapter makes use of two different data sources to analyze housing costs in Hampton Falls--the U.S. Census Bureau's decennial census and the American Community Survey. While the U.S. Census Bureau provides data on home values, it is important to note that this data is reported by the homeowner and as such may not accurately reflect true housing values. As seen in **Table H-4**, the median value of owner-occupied housing in Hampton Falls was $414,000. Illustrated by **Table H-4**, this is higher than the median value of owner-occupied housing in surrounding communities with the exception of North Hampton at $437,000. This value is also significantly higher than that of the County at $275,000 and that of the State at $221,000. Median gross rent in Hampton Falls, while higher than the County median, is lower than it is in a few of the surrounding communities such as Kensington, South Hampton, and Stratham. Neighboring communities such as Exeter, Hampton and Seabrook have significantly larger rental housing supplies and would naturally tend to have a greater variation in rental rates.

Table H-5
Sales Transactions Recorded with the Town of Hampton Falls

YEAR	MEDIAN PURCHASE PRICE	NUMBER OF SALES TRANSACTIONS
2012	**$346,682**	**41**
2013	**$439,180**	**39**
2014	**$428,315**	**44**
2015	**$428,547**	**35**
2016	**$401,500**	**48**
2017	**$400,000**	**38**

Table H- 5 above displays sales transactions for the town of Hampton Falls for the years 2012-2017. With a minor fluctuation in 2013, the trend has been increasing values each year.

1.5 Resident Income

Like housing stock mix and cost, measures of income can be important indicators of the openness of a community for providing housing opportunities to individuals and families of all income levels. Data from the 2012-2016 American Community Survey, shown in **Table H-6**, indicates that Hampton Falls had a higher median family income than the average for surrounding communities or for the County. In 2012-2016, the median household income in Hampton Falls was $123,594, compared to $99,847 for all of Rockingham County. In the same year the Town had a per capita income of $61,298, the fourth highest in the County.

Table H-6
Median Family Income and Per Capita Income

Town/Area	2006-2010 Med. Family Income	2006-2010 Per Capita Income (PCI)	2012-2016 Med. Family Income	2012-2016 Per Capita Income (PCI)	2016 Per Capita Income Rank, Rockingham County
Hampton Falls	**$125,259**	**$53,371**	**$123,594**	**$61,298**	**4**
Exeter	$91,637	$37,043	$94,514	$40,616	20
Hampton	$81,029	$37,680	$98,642	$45,189	15
Kensington	$99,911	$39,837	$111,607	$51,406	10
North Hampton	$77,941	$45,595	$104,474	$65,339	2
Seabrook	$60,965	$29,907	$62,500	$28,761	36
South Hampton	$106,250	$41,185	$114,375	$47,755	12
Stratham	$120,100	$45,238	$138,239	$58,137	6
Area Total/Avg.	$95,387	$41,232	$101,068	$49,813	
Rock. County	$90,463	$35,889	$99,847	$41,449	
New Hampshire	$76,446	$31,422	$76,260	$36,320	

Source: ACS 5-Year Estimates (2006-2010) & (2012-1016) (Tables DP03)

2.0 AFFORDABLE HOUSING NEED

The high cost of housing in southeastern New Hampshire is challenging the popular belief that affordable housing means low-income housing. The term "affordable housing" simply means housing that does not cost more than approximately one-third of a family's income. Indications are that the affordability challenge is becoming more widespread, affecting workers earning middle incomes, and is becoming a barrier to labor force development.

The following table, **Table H-7**, provides an illustration of local housing costs relative to wages for an average local government employee and service sector employee household, both with one wage earner and with two wage earners in the same employment sector. When a comparison is made between these

households' maximum supportable housing purchase price and the median sales price of a single-family home in Hampton Falls in 2015 **(Table H-5**), it becomes very clear that home ownership in Town is out of reach of many middle-income households.

Table H-7
Income and Housing Cost 2017

Employment sector	Avg. weekly wage	Annual household income		Maximum supportable housing purchase price*	
		With 1 wage earner	With 2 wage earners	With 1 wage earner	With 2 wage earners
Local gov't employee	$592	$30,784	$61,568	$84,656	$169,312
Service sector employee	$759	$39,468	$78,936	$108,537	$217,074

Source of wage data: NH Employment Security, 2017
* Supportable price assumes purchase price = 2.75 times income

Understanding and recognizing the relationship between housing and jobs is important because the long-term economic sustainability of the region will depend in part on the region's ability to provide adequate housing for its employees. For the region to continue to expand its employment opportunities and to achieve economic sustainability, a significant number of housing units at varying price levels must be built to both fill the existing need and to provide housing for an expanding population.

New Hampshire RSA 674:2 requires that the housing chapter of a town Master Plan include an assessment of local housing conditions and a projection of future housing needs of residents of all levels of income and ages in the municipality and the region, as identified in the regional housing needs assessment performed by the regional planning commission pursuant to RSA 36:47, II. The following section of this Master Plan satisfies this statutory requirement.

In 1989, the Rockingham Planning Commission (RPC) prepared a Regional Housing Needs Assessment as a component of its regional master plan in accordance with RSA 36:47. The statute mandates that all regional planning commissions prepare a regional housing needs assessment which "...shall include an assessment of the regional need for housing for persons and families of all levels of income". The RPC updated their Regional Housing Needs Assessment in 2015 to include data from the 2010 US Census. The report indicates that the Town of Hampton Falls needs to add 53 affordable housing units to meet the Town's fair share of affordable housing within the region. As noted earlier in this section, the Town anticipates that the construction of accessory dwelling units will meet the majority of this need in the future. The full Housing Needs Assessment report is available on the Rockingham Planning Commission website.

3.0 ANALYSIS OF EXISTING ZONING AND LAND USE REGULATIONS

3.1 Zoning Districts

The Town's current zoning ordinance permits residential uses in both of the two (non-overlay) zoning districts. The general residential provisions of the zones are as follows:

- Agricultural - Residence District ("A" District): This is the basic underlying district in Hampton Falls. The intent is to promote agricultural and low density residential uses. Permitted residential uses include single family units, manufactured housing, mobile homes and trailers on two-acre lots (provided these are placed on solid foundations and connected to water, sewer and other utilities and services) and accessory housing units.

  Accessory dwelling units are allowed on any approved building lot provided that it does not exceed 750 square feet in size. While the property owner is required to occupy one of the units, the other unit can be used as an accessory apartment for family members or as a rental unit to non-family occupants. Under State law these units qualify as affordable units when determining regional affordability need.

  Home occupations are allowed in the Agriculture/Residential district, provided they meet the standards outlined in the Zoning Ordinance. The topic of home occupation is addressed in Chapter 3 (Future Land Use).

- **Business District North (BDN) –** The intent of this district is to promote light industry, retail, commercial recreation and business uses in areas where reasonable highway accessibility is achievable.

- **Business District South (BDS) –** The intent of this district is to provide for redevelopment along the southern portion of Hampton Falls' Route 1 corridor in order to enhance the visual character of the gateway into Hampton Falls from Seabrook, to promote traditional New England architecture, moderately sized, professional office, retail and restaurant uses, as well as to encourage site design that includes landscape beautification, pedestrian circulation and public transit use.

- **Town Common District (TCD) –** The intent of this district is to establish a downtown area that promotes a wide range of services, combine business, retail and residential uses, cultural and other public and private uses surrounding Hampton Falls historic Town Common, at intensities and patterns that encourage safe pedestrian circulation and amenities, support public transit and upholds Hampton Falls' historic New England architectural integrity.

- Multi-family residences are permitted in the Zoning Ordinance. These provisions include allowances for market rate and affordable multi-family development as well as age restricted developments that can be multi-family as well.

- The Town has also adopted standards to allow conservation subdivisions in an attempt to allow environmentally based flexible subdivision. The purpose of the ordinance is to:

  - Preserve large, contiguous parcels of open space throughout the Town
  - Provide diversity of housing types, opportunities and styles
  - Encourage road design that will contribute to and enhance a rural atmosphere and maintain adequate safety design
  - Provide connected corridors of open land throughout Town for preservation of habitat, environmental resources and passive recreation.

3.2 Development Density

The current zoning ordinance requires a minimum of two acres of land for each residential lot. Lots which fall within the Wetlands Conservation District may require greater acreage, as very poorly drained land cannot be used to meet the minimum two acre lot size.

The Town's Conservation Subdivision regulation provides flexibility in unit placement as well as offering density bonuses for certain elements of design.

3.3 Evaluation

It is important that Hampton Falls provide reasonable and practical opportunities for the development of affordable housing. While it is not necessary or expected that the Town take steps to construct such housing itself, it is important that a realistic opportunity exist for private individuals and developers to fill the need for lower cost housing. At the same time, communities have an obligation to ensure that development standards are adequate to protect public health, safety and environment and to protect against future public expenditures to correct for faulty design or construction. These standards inevitably, but necessarily, raise the cost of building houses. A reasonable test for the fairness of a community's land use regulations is that, when taken together, they do not place such stringent conditions on development so as to effectively discourage or preclude the development of lower cost housing. The adoption of a State compliant accessory dwelling unit ordinance should help provide lower cost housing in the community.

Several existing residential neighborhoods are impacted by future sea-level rise and storm surge flooding. Residential structures immediately adjacent to the Hampton-Seabrook Estuary on Depot Road and Brimmer Lane are located in a high risk flood area based on findings from the Tides to Storms Vulnerability Assessment (RPC, 2015). With rising sea-levels and groundwater levels anticipated in the future, the septic systems and drinking water wells servicing these residences, and those nearby, could be compromised. Hampton Falls has no public water or wastewater infrastructure to replace lost services; however, expansion of water and wastewater infrastructure from Seabrook may be a future alternative if conditions warrant such action. The Town will continue to monitor the impacts of sea level rise within the community.

3.3.1 Existing Community Housing Options

Following are land use policies that provide increased housing opportunity and serve as concepts that the Town may consider in the future:

Multi-Family Housing: Hampton Falls adopted a multi-family overlay district in 2009 to insure that there is an area in town that allows for the construction of multi-family residential dwelling units. This adoption helps the town comply with the requirements found in state law. These types of units are more affordable because the increased number of units typically allowed per acre reduces the cost of developing the units. Providing for multi-family housing with no municipal sewer system does require that extra care be taken to ensure that septic systems are adequately sized to handle the increased effluent flow.

Elderly/Age-Restricted Housing: The need for elderly housing in Hampton Falls is clear and it will continue to increase as the population ages. The Town adopted an age restricted housing zoning ordinance in 2004. In March 2016 the Hampton Falls Planning Board conditionally approved a senior

housing development on Brown Road. This development will contain three multi-story buildings clustered together on the interior of the site, each having 24 single-bedroom, affordable apartments for persons aged 62 and older. It contains a community well system and private roadway into the site. A large amount of open space will be permanently conserved by deed restriction. The first of the approved buildings is constructed and occupied. It is hoped that allowing multi-family housing in Town will open up greater opportunity for the construction of housing projects designed for the elderly.

Workforce Housing: In addition the Town has adopted a work force housing ordinance to allow the construction of housing geared to those with incomes meeting federal guidelines for affordability.

In summary, it is important that Hampton Falls provide reasonable and practical opportunities for the development of affordable housing. However, while development regulations and policies can be made unnecessarily restrictive in an attempt to discourage growth, it must be recognized that the high market value of land is a basic issue in the cost and type of housing in many Seacoast area communities. Increasing land costs, due to high demand and low availability in a prime Seacoast location, will clearly continue to place home ownership out of the reach of many.

4.0 RECOMMENDATIONS

The following recommendations are designed to further Hampton Falls' effort to provide needed housing, promote community goals and ensure compliance with relevant state and federal legislation.

4.1 General

1. As an overall goal, the Town of Hampton Falls should encourage housing patterns that preserve and protect the Town's rural characteristics, while providing a variety of housing alternatives.

2. The Planning Board should continue to monitor the findings of the RPC's updated Regional Housing Needs Assessment and incorporate any necessary information in the Housing Chapter.

3. Findings from the Tides to Storms Vulnerability Assessment (RPC, 2015) should be consulted when discussing any housing opportunities and regulations and any future subdivision proposals located within high risk flood areas.

4. Consider amendments to the existing floodplain development ordinance and Building Code to incorporate adaptation measures for development in high risk flood areas.

5. Should rising sea-levels and groundwater levels result in reduced capacity or function of existing private septic systems and drinking water wells, evaluate adaptation options for residential neighborhoods located in high risk flood areas.

4.2 Land Use Regulations

1. The Planning Board should continue to review impacts occasioned by growth in the community, and explore the need to assess additional impact fees to offset the costs of those impacts.

2. Housing and associated structures in coastal areas of town are at risk of flooding due to sea level rise and coastal storm surge. The 2015 Town of Hampton Falls Vulnerability Assessment and accompanying maps should be consulted when discussing housing opportunities and regulations.

TRANSPORTATION

TRANSPORTATION

1.0 INTRODUCTION

The Transportation element of the Master Plan is not simply a list of future projects but is an infrastructure plan that establishes the overall goals and guiding policies for addressing transportation issues within Hampton Falls. Transportation has direct links with the land use, population and housing, natural resources, community services and facilities and recreation sections of the Master Plan. The transportation system and the guiding policies established in this chapter will affect the community's physical, social and economic setting, as described below:

> Physical: The transportation system is one of the chief determinants of physical settlement patterns, and its location, design and modes have major impacts on land usage, emergency response and management, air quality, plant and animal habitat, environment, noise, energy use, community appearance, resilience to climate change and other components.
>
> Social: The transportation system is a primary determinant of the settlement pattern. It has a major impact on the areas and activities which it serves (or does not serve), on the structure of the community, and on the quality of human life. The system should be accessible to all segments of the population, including the young, the elderly and the economically or physically disadvantaged.
>
> Economic: Economic activities normally require circulation for materials, products, ideas or employees, and thus the viability of the community's economy is directly affected by the transportation system. The efficiency of a community's transportation system can either contribute to or adversely affect that community's economy by enabling or hindering this flow.

An important factor in Hampton Falls' future development will be the impact of continued commercial and residential growth on the transportation system. The Town, like many other seacoast area communities, developed along waterways and trails connecting it to larger nearby communities. In contemporary times Hampton Falls has developed with reliance on the automobile and the highway network. Other forms of transportation, though represented, are of lesser consequence.

As Hampton Falls has grown residentially and commercially, the roadway network has expanded to serve newly developed areas. The steady increase in traffic volumes both in and through Hampton Falls has resulted in a rise in congestion, particularly on and adjacent to U.S. Route 1. Maintenance and expansion of the roads, wise planning of the location and extent of further development and increased utilization of alternative modes of transportation will all play an important role in the Town's future.

Many of the transportation challenges facing the Town are associated with U.S. Route 1 and the continued impact of growth along this regional transportation corridor. These issues, along with others identified by the Master Plan Committee include the following:

- Traffic congestion on U.S. Route 1, which is believed to be exacerbated by the diversion of traffic from Interstate 95
- Congestion and safety concerns at the intersections of Route 1 and Routes 88 and 84
- The lack of transportation alternatives to the private auto

- The lack of safe bicycle and pedestrian access throughout the community, for both transportation and recreation use
- Delays at the I-95 tollbooths in Hampton, and any resulting traffic detours onto U.S. Route 1
- Heavy traffic congestion in the summer due to Hampton Beach and by Applecrest Farm in the fall.

This chapter provides an overview of Hampton Falls' transportation system, identifies major issues the Town is facing and provides recommendations to address those issues.

2.0 ROADWAYS

2.1 Major Roads

Hampton Falls' transportation network consists of approximately 41 miles of roadway, approximately 25% of which are maintained by the State of New Hampshire. Major highways within the state primary system are Route 1 (Lafayette Road), Route 88 (Exeter Road), Route 84 (Kensington Road), and Interstate 95. Route 107 does not actually enter the Town, but it forms the boundary line between Seabrook and Hampton Falls in the southwestern corner of Town. Route 1 and Interstate 95 are north-south highways, while Routes 84 and 88 are east-west highways. Interstate 95 has no exits in Hampton Falls; Exit 1 in Seabrook is to the south and Exit 2 in Hampton is to the north. Drinkwater Road is the only Town road that could be considered a major road, due to the amount of traffic using the road to travel to Kensington. The balance of Hampton Falls' roads are local roads which provide access to state highways or are service roads which serve only adjacent property owners and accommodate little or no through traffic.

2.2 Planning Studies

Traffic conditions along U.S. Route 1 have long been a primary concern for the Town. In 1988 the NHDOT contracted with Kimball Chase Co. to study U.S. Route 1 and determine the feasibility of reconstructing the roadway from Seabrook to Portsmouth. An update of this study was prepared by the Rockingham Planning Commission in 2012. The new report characterized Hampton Falls as follows:

> Route 1 is considered the root of traffic congestion concerns in Town and this is largely believed to be due to traffic diverting from Interstate 95 to avoid congestion or the tolls. A primary concern is also the number of intersections which have safety issues and the Master Plan references the Kimball Chase study which identifies the intersections of Route 1 with Route 88 and Route 1 with Route 84 as being problematic. At the same time, the Town is very concerned with how major improvements (widening) to those intersections might impact the village.
>
> The two closely spaced traffic signals at Exeter Road (Route 88) and at Lincoln Avenue in Hampton Falls are problematic as motorists can experience substantial delay and congestion particularly in the northbound direction during the weekday evening peak hour. Left turn movements entering Route 1 from Kensington Road (Route 84) also experience long delays given the heavy through volume on Route 1. The three-lane section north of Lincoln Avenue, like the section in Seabrook, has numerous un-controlled curb-cuts.

As part of the 2012 study update, the proposed improvements to the corridor remain remarkably similar to the earlier study.

- Addressing skewed angle intersections

  The skewed angle intersections (streets that do not intersect at a 90 degree angle) along the corridor are either realigned or closed to address the safety issues posed by the approach to US Route 1. In some cases, due to the addition of signals, the realignment will result in improved access and intersection functionality as well.

- Widening roadway segments

  Adding travel lanes is kept to a minimum along the corridor, but there are some areas where the roadway is at capacity or near it given existing growth rates. The addition of through travel lanes or turning lanes in these locations will make significant improvements to traffic flow and the general functioning of the roadway.

- Access Management

  Access management techniques will help minimize the need to widen the roadway by utilizing the existing infrastructure more efficiently and by making lower cost changes to the roadway and access points. This includes operational changes to the intersections and the roadway, raised medians at intersections to protect the functional area, driveway consolidations, improved driveway design, and other changes.

- Additional traffic signals

  There are areas along the corridor that will be better served with the addition or relocation of traffic signals.

2.3 State Highway Classification

New Hampshire State law adopted in the 1940s serves as the basis for the State Road System Classification that is still in use today. This classification scheme has eight categories of public roads; each roadway is grouped based on the role of the roadway as well as on the entity responsible for its maintenance. Hampton Falls is served exclusively by State-classified Class I, II, V and VI roadways, Map 11, Appendix B.

Class I roads are State-maintained trunk line or primary highways. There are presently 6.0 miles of Class I highways in Hampton Falls, comprised of Interstate 95 and U.S. Route 1. Class II roads are State-maintained secondary highways. There are approximately 7.9 miles of Class II highways in Hampton Falls, comprised of Routes 88 and 84. Class V roads, or Rural Highways, are Town-maintained roadways. There are 26.4 miles of Class V roads in Hampton Falls, the majority of the Town's roadway network. This category is the only one to have grown appreciably in the last two decades, and will continue to increase as new residential subdivision streets are turned over to the Town and become Class V roads. Class VI roads are non-maintained roadways belonging to the Town. There are 1.8 miles of Class VI roads in Hampton Falls.

TABLE T-1
HAMPTON FALLS ROAD MILEAGE
BY STATE CLASSIFICATION

STATE CLASS	2002	2017
Class I (State maintained)	6.0	6.0
Class II (State maintained)	7.9	7.9
Class V (Town maintained)	25.1	26.4
Class VI (Non-maintained)	1.8	1.8
TOTAL	**40.9**	**42.1**

NOTE: There are no Class III (recreational) or IV (urban compact) roads in Hampton Falls
Source: 2017 Town Report

2.4 Federal Functional Classification

In addition to the State classification scheme, there is the Federal Functional Classification system. The Federal system consists of 4 primary types of roads, based on the type of service that is intended to be provided by each category. In 1993 the New Hampshire Department of Transportation, in cooperation with the Federal Highway Administration and the regional planning commissions, revised the functional classification of all highways in the State. These classifications, which complement the State classifications, are primarily based on the traffic capacity and volumes attributed to the roads, and are divided into rural and urban systems. They are important because they are used to determine where and under what conditions Federal highway funds may be utilized. Roads that have a functional class of Collector or higher are eligible for Federal highway funds.

There are four classes, each represented in Hampton Falls as described below. **Table T-2** contains a listing of all Hampton Falls roadways classified as Collector or above.

Principal Arterial: Serves major centers of activity, the highest traffic volume corridors and the longest routes. In addition, they generally carry the major portion of traffic entering and exiting the community.

Minor Arterial: Links and supports the principal arterial system. Minor arterials are roads which place a greater emphasis on land access than the principal arterial and therefore offer a lower level of mobility. They serve as links between larger and smaller towns or as connections between collectors and the primary arterials.

Collector: Provides access to land uses along the roadway and circulation within residential neighborhoods, and/or to commercial and industrial areas. It differs from the arterial system in that the facilities on the collector system may penetrate residential neighborhoods. Conversely, the collectors also collect traffic from the local streets in residential neighborhoods and channel it into the arterial system.

TABLE T-2
FEDERAL FUNCTIONAL CLASSIFICATION

Roadway	FEDERAL FUNCTIONAL CLASSIFICATION		
	Principal Arterial	Minor Arterial	Collector
Interstate 95	✓		
U.S. Route 1		✓	
NH 88/84			✓

Source: NHDOT

Local Roads: Comprise all facilities not on any of three systems described above. Their function is to primarily provide direct access to abutting land and access to the higher order systems. They offer the lowest level of mobility, and service to through traffic movement is usually deliberately discouraged. Local roads are generally not eligible for federal funding for improvements or maintenance.

2.5 Traffic Volumes and Growth

Roadways in Hampton Falls have exhibited increases in traffic volumes over the past several decades. In an effort to monitor changes in traffic volumes, the NHDOT and RPC conduct annual traffic counts using automatic recorders at varying locations throughout the region. The NHDOT maintains a network of permanent counters at key locations around the State to monitor long term trends, and conducts additional traffic counts during the summer months, or in response to community requests for special counts. The State has no permanent traffic counters in Hampton Falls. The nearest one on Route 1 is installed in North Hampton, just north of the Hampton town line. Another permanent counter is located at the tollbooths on Interstate 95 in Hampton. Other possible sources of traffic count data are studies performed or commissioned by NHDOT.

Recent traffic counts for locations in Hampton Falls are shown in **Table T-3**. The volumes shown are Annualized Average Daily Traffic, or AADT, which have been adjusted to eliminate seasonal fluctuations.

The growth in traffic region-wide has increased slightly over the past decade. Traffic counts on I-95 in Hampton indicate that traffic volumes increased by a total of 6% from 2000 to 2010. Traffic volumes grew by 3% between 2010 to 2014.

TABLE T-3
TRAFFIC COUNTS IN HAMPTON FALLS

Counter Location	Source	2000	2003	2006	2009	2012	2016
I-95 @ Hampton town line	NHDOT	79,000	79,000	81,100	74,600	75,000	84,000
Rte 88 over I-95	NHDOT	4,300	--	4,000	3,600	3,700	3,800
Rte 84 over I-95	NHDOT	2,800	3,700	3,200	3,300	3,200	3,200
Rte 1 @ Seabrook town line	NHDOT	18,000	--	21,000	21,000	20,000	22,000

Source: Rockingham Planning Commission, NHDOT

While it may be on the increase, it is estimated that the traffic volume on local streets has not kept pace with the major state highways. If Hampton Falls maintains its growth pattern, the Town's road improvement system should be able to be continued, particularly as new roads are built to current standards to assure a long term service for the Town. To assure proper standards, the Town should review its present construction requirements. This should be done to make allowance for different road classifications based on projected traffic volumes.

2.6 Traffic Circulation

U.S. Route 1 (Lafayette Rd.) and NH Route 88 act as the central routes for travel in Hampton Falls, connecting the Town to Kensington to the west, Exeter to the northwest, and Hampton and Seabrook to the east. While I-95 runs through Hampton Falls, there are no exits within the Town (Exit 1 in Seabrook is to the south and Exit 2 in Hampton is to the north).

Traffic conditions along Route 1 have been a major concern of the Town for many years. Since Hampton Falls does not have an exit off of I-95, Route 1 is used to travel north and south and by commuters to access I-95. One consequence of the heavy traffic and poor traffic flow on Route 1 is that local side streets, such as Brown Road, Nason Road, Towle Farm Road, Mill Lane, Dodge Road and Stard Road are used as alternate north-south routes. Residents have become concerned about the increased traffic on these residential streets.

In addition, NH Route 84 and Drinkwater Rd. provide east-west connections to many of the other local roadways in Hampton Falls and abutting communities. Brown Rd. and Towle Farm Rd. also provide an alternative entry to Hampton and are used by many to avoid congestion on U.S. Route 1.

2.7 Roadway Conditions

Overall roadway conditions in Hampton Falls are good. The Town is fortunate in that a high percentage of its roads (approximately 25 percent) are state highways and are in fair condition, thereby relieving the Town of considerable maintenance responsibilities. The Highway Department's budget is supplemented with money from the State's Highway Block Grant Program, which totaled $67, 683 in 2017. Highway Block Grant Aid Funds are apportioned to all cities and towns on a yearly basis for the construction, reconstruction, and maintenance of Class IV and V highways Each year the Road Agent and Board of Selectmen determine which roads are most in need of repair and improves as many as possible with the available funding.

In addition to the intersections discussed above, the Highway Agent and Highway Safety Committee have identified additional problem locations. The Committee considers the following intersections as areas where safety problems exist:

- Crank Road/Goodwin Road
- Goodwin Road / NH RT 84
- Sanborn Road/Exeter Road
- NH 88/Brown Road/Nason Road

As part of the Capital Improvement Program, the Road Agent and Board of Selectmen should continue to prepare a prioritized list of roads in need of repairs.

The Town's 2012 Natural Hazard Mitigation Plan prioritizes several transportation related projects needed to protect and strengthen the Town's transportation infrastructure:

- Upgrade flood control systems at the dam on Big Dodge Pond (Whittier Pond) near Route 1 to prevent road flooding and damage resulting from storms and snowmelt
- Upgrade culverts at 33 Old Stage Road to prevent flooding of roadway
- Install rip-rap at the end of Depot Road due to erosion

2.8 Commuting Patterns

As primarily a residential community, many of Hampton Falls' citizens commute out of town for work. According to the 2010 U.S. Census, a total of 1,193 Hampton Falls residents reported being employed; 178 worked in Town while 1,015 commuted to jobs elsewhere.

While Hampton Falls has a reputation of being a bedroom community for the Boston metropolitan area, detailed Census data indicates that 76.30% of the Town's employed residents work in New Hampshire as compared to 23.70% who work in Massachusetts

Table T-4 summarizes commuting modes of travel for employed Hampton Falls residents as reported in the 2010 Census, and compares this to data for all of Rockingham County and the State of New Hampshire overall, as well as to the 2000 data for Hampton Falls. According to the 2010 Census, 76.3% of employed Hampton Falls residents drive alone to work, down from 83% in 2000. At the same time, however, transit usage by employed residents decreased from 0.9% in 2000 to 0% in 2010. This percentage is lower than transit usage for both Rockingham County and the State of New Hampshire overall. This is likely due in part to the far proximity of the intercity bus service from Hampton and Newburyport, and the MBTA commuter rail service in Newburyport.

Other alternative forms of travel saw an increase in use since 2000. Approximately 13.6% of Hampton Falls residents reported carpooling to work in 2010, up from 4.9% in 2000. The figure of 13.6% in 2010 is significantly higher than the 6.2% of commuting trips via carpooling for all of Rockingham County. The number of residents who walked to work also increased between 2000 and 2010, increasing from less than 1% to 1.8%.

Another interesting statistic is the significant decrease in the number of employed Hampton Falls residents who work at home. In 2010, 4.8% of residents reported working at home, down from 9.4% in 2000. This is slightly lower than the 6% of employed residents overall in both Rockingham County and the State of New Hampshire who reported working at home.

TABLE T-4
COMMUTE MODE OF TRAVEL AND MEAN TRAVEL TIME
2000, 2013

	H. Falls, 2000	H. Falls, 2009-2013 (avg)	Rock. Co, 2013	State of NH, 2013
Drove alone	83.4%	76.3%	84.2%	81.4%
Carpooled	4.9%	13.6%	6.2%	8.0%
Public transit (incl. taxi)	0.9%	0%	0.7%	0.8%
Walked	0.9%	1.8%	1.8%	3.0%
Other means	0.5%	3.5%	1.1%	1.2%
Worked at home	9.4%	4.8%	5.9%	5.6%
Mean travel time to work (min.)	30.2	25.8	29.1	26.3

Source: 2000 U.S. Census, 2013 American Community Survey

The average travel time to work for Hampton Falls' workers in 2000 was 30.2 minutes. This decreased to 25.8 minutes in the year 2010, nearly 4 minutes shorter than the commute time for Rockingham County overall.

2.9 Public Safety and Highway Accidents

According to the Hampton Falls Police Department, there were 417 reported motor vehicle accidents in Town from 2010 to 2014, as shown in **Table T-5**. The State of New Hampshire maintains a statewide database using reports submitted by local and State police, but a review of the database in 2002 found some evident coding problems, apparently resulting in an under-assignment of the Town's reported accidents. The Hampton Falls Police Department began the process of computerizing its accident reporting process in 2001. In lieu of a complete and accurate database of reported accidents in the Town, the analysis of accident data presented in this section is based on the 128 accident reports written by the Hampton Falls Police Department and entered into the Town's computer database between January 2013 and December 2014. Due to the limited period of time, the following analysis may not necessarily be considered a representative picture of motor vehicle accidents in Hampton Falls.

TABLE T-5
MOTOR VEHICLE ACCIDENTS

Year	# Motor vehicle accidents
2010	74
2011	72
2012	65
2013	97
2014	109

Source: Town Reports

Table T-6 provides a summary of the accident locations. The Route 1 corridor, characterized as a high traffic corridor with multiple curb cuts, has the highest number of accidents in the Town. The intersection of Route 1/Route 88 was the Town's highest single accident location. The intersection is actually a split intersection

served by two traffic signals. The Route 1/Route 84 intersection is the second highest accident location. The intersection is not signalized; Route 84 enters at an oblique angle rather than the standard 90 degree approach.

TABLE T-6
MOTOR VEHICLE ACCIDENT LOCATIONS
HAMPTON FALLS POLICE DEPT. DATABASE
01/01/11 TO 12/31/12*

Location	# of accidents in database
Rte.1 – various locations	31
Rte. 88 – various locations	18
Intersection of Rte. 1 / Rte. 88 (Exeter Rd.)	18
Intersection of Rte. 1 / Rte. 84 (Kensington Rd.)	13
Intersection of Rte. 1 / Marsh Lane	12
Rte. 84 – various locations	11
Drinkwater Road – various locations	7
Other	8
Total	**118**

Source: Hampton Falls Police Dept.

* Includes only those accidents entered into the Department's computer database.

As shown in **Table T-7**, the number of accidents during any particular day generally increased through the day to a peak in the afternoon commuting time (from 3:00 p.m. to 4:00 p.m.). Hampton Falls police officers are generally off duty overnight (i.e. midnight to 6:00 a.m.) and State Police assume enforcement duties during that time. Table T-7 does not include information on any accident reports filed by State Police. While accident reports spiked on Thursdays and Fridays, it is not clear from the available data whether there is a discernible trend in accidents by day of the week.

TABLE T-7
ACCIDENTS BY TIME OF DAY / DAY OF WEEK
HAMPTON FALLS POLICE DEPT. DATABASE
1/1/2011 TO 12/31/2012*

Time of Day	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Midnight - 1 am	0	0	0	1	1	0	0	**2**
1:00 am - 1:59 am	0	0	0	0	0	0	0	**0**
2:00 am - 2:59 am	0	0	0	0	0	0	0	**0**
3:00 am - 3:59 am	0	0	0	0	0	1	0	**1**
4:00 am - 4:59 am	0	0	0	0	0	0	0	**0**
5:00 am - 5:59 am	0	0	0	0	0	0	0	**0**
6:00 am - 6:59 am	0	0	0	0	0	0	0	**0**
7:00 am - 7:59 am	0	0	0	1	1	0	1	**3**
8:00 am - 8:59 am	0	2	0	1	1	0	0	**4**
9:00 am - 9:59 am	0	0	0	0	0	1	1	**2**
10:00 am - 10:59 am	1	0	1	0	3	1	0	**6**
11:00 am - 11:59 am	1	0	0	0	0	0	3	**4**
12:00 pm - 12:59 pm	3	0	0	3	0	3	1	**10**
1:00 pm - 1:59 pm	1	1	3	1	2	1	2	**11**
2:00 pm - 2:59 pm	0	2	2	2	3	2	1	**12**
3:00 pm - 3:59 pm	1	4	4	1	2	3	2	**17**
4:00 pm - 4:59 pm	1	4	1	0	1	1	1	**9**
5:00 pm - 5:59 pm	1	3	0	0	3	2	1	**10**
6:00 pm - 6:59 pm	0	1	3	2	2	2	0	**10**
7:00 pm - 7:59 pm	0	1	0	2	2	1	2	**8**
8:00 pm - 8:59 pm	0	0	0	0	0	3	2	**5**
9:00 pm - 9:59 pm	0	0	0	0	0	1	1	**2**
10:00 pm - 10:59 pm	0	0	0	1	0	0	0	**1**
11:00 pm - 11:59 pm	0	0	0	0	0	1	0	**1**
Total	**9**	**18**	**14**	**15**	**21**	**23**	**18**	**118**

Source: Hampton Falls Police Dept.

* Includes only those accidents entered into the Department's computer database.

More detailed accident data was not available for the preparation of this chapter, but would allow for more analysis including the type of accident (collision vs. non-collision, collision with other vehicle, bicyclist,

pedestrian, animal, etc.), accident location (intersection, at driveway, in parking lot, etc.), and contributing factors (i.e. road surface conditions, weather, lighting).

There is also growing concern about pedestrian and bicyclist safety due to the lack of adequate pavement width on many of the more highly traveled roadways in Town. Narrow pavement (i.e. less than 14' total travel lane width) becomes a safety issue on higher volume, higher speed roadways when there is not enough room for a motorist to pass a bicyclist or pedestrian without having to cross over the centerline of the roadway. As bicycle and pedestrian usage on these roads increases, so will the potential for conflict between roadway users.

2.10 Scenic Roadways and Corridors

2.10.1 Scenic Roads

Another transportation issue is scenic roads, which is addressed in RSA 231:157. Any road in a town, other than a Class I or Class II highway, can be designated as a scenic road. This is done either upon petition by persons who are either voters of the town or who own land which abuts a road mentioned in the petition (even though not voters of the town) or by a warrant article inserted by the Board of Selectmen. In turn, the town votes on it at any regular or special Town Meeting. Voters can rescind the designation of a scenic road at a regular town meeting upon petition or by a warrant article inserted by the Board of Selectmen.

The Town of Hampton Falls Zoning Ordinance has provisions for scenic roads. There are two potential benefits for the Town in designating scenic roads. First, it establishes a procedure for protecting the rural landscape within a public right-of-way. Secondly, it can demonstrate the public's interest to preserve the rural qualities of a road. Both can help preserve the scenic quality of the road in the event that changes to the road are proposed (i.e. widening, removal of walls and trees).

The effects of designating a road scenic are detailed in RSA 231:158. Included are restrictions upon the repair, maintenance, reconstruction or paving work which is done to the road. Two important facets of the designation are that it does not affect the eligibility of the Town to receive construction, maintenance, or reconstruction funds, or affect the rights of any land owner with respect to work on his own property. Article IX, Section 3 of the Zoning Ordinance lists the roads which have been designated as scenic roads and indicates that cutting of branches is permitted within six feet of transmission wires. Generally, the scenic roads are older roads that are maintained by the Town.

The Town's locally-designated scenic roads are listed below:

Blake's Lane	Dodge Road	Nason Road
Brimmer Lane	Drinkwater Road	Old Stage Road
Brown Road	Frying Pan Lane	Parsonage Road
Crank Road	Goodwin Road	Sanborn Road
Curtis Road	King Street	Stard Road
Depot Road	Mill Lane	Towle Farm Road

Residents who responded to the 2015 Town Survey expressed strong support for retaining the scenic roads ordinance. Seventy seven percent of survey respondents agreed that the ordinance should be retained, and only 5.7% did not support its continuation.

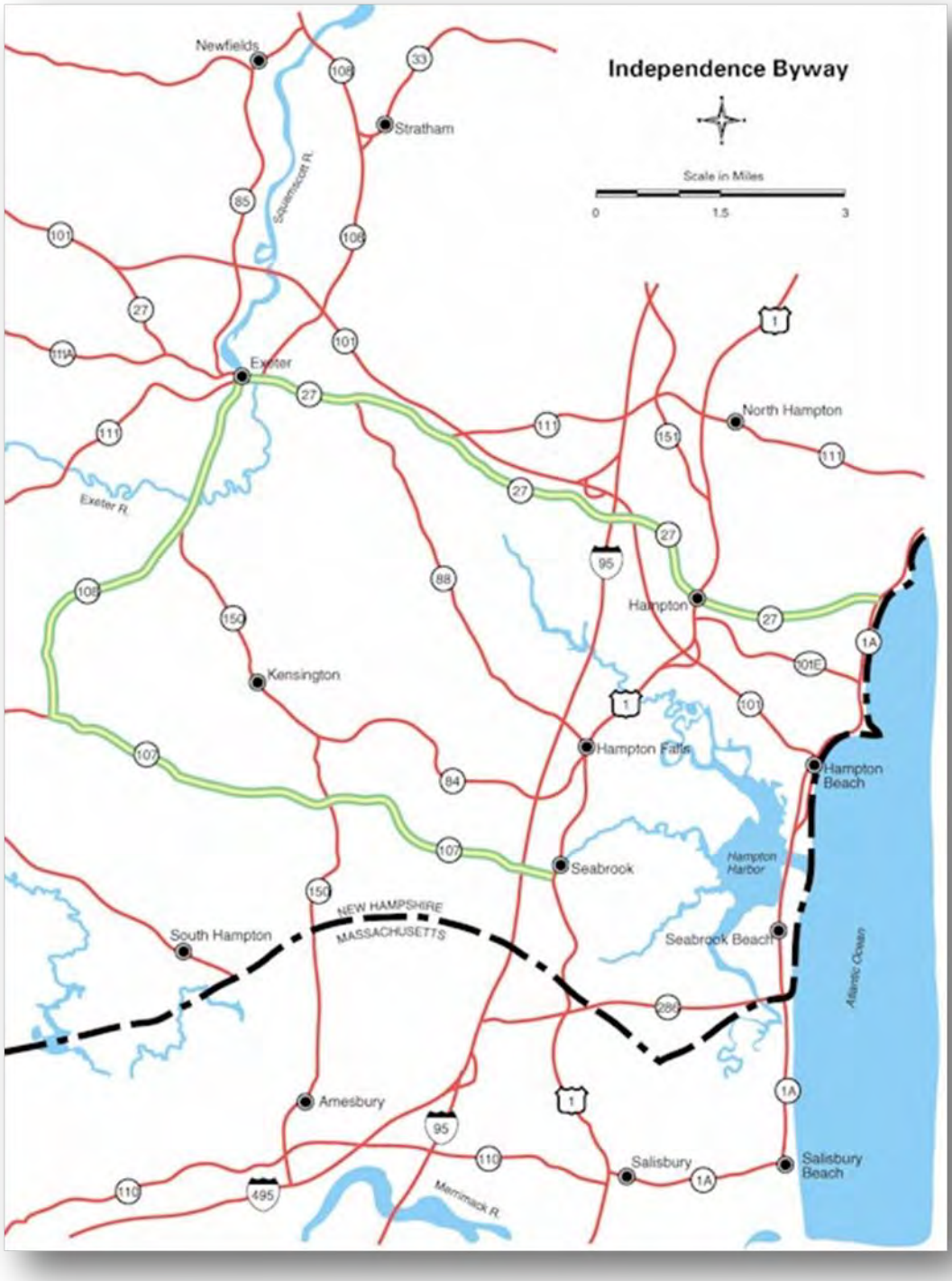
2.10.2 American Independence Scenic Byway

The southeastern corner of New Hampshire is home to some of the most scenic and culturally significant roadways in the State, and also to two of New Hampshire's fourteen designated Scenic and Cultural Byways. One of these--the American Independence Byway--passes through Hampton Falls. The American Independence Byway was formally designated by the NH Scenic and Cultural Byways Program in 1994. The Byway route is shown in **Map T-2**.

Scenic and Cultural Byways in New Hampshire are designated by the New Hampshire Scenic and Cultural Byways Program, and have a different purpose than locally-designated scenic roads. The Program was established in 1992 under RSA 238:19, " ...to provide the opportunity for residents and visitors to travel a system of byways which feature the scenic and cultural qualities of the state within the existing highway system, promote retention of rural and urban scenic byways, support the cultural, recreational and historic attributes along these byways and expose the unique elements of the state's beauty, culture and history." New Hampshire's Scenic and Cultural Byways Program, administered out of the New Hampshire Department of Transportation, is one of many now in place nationwide. These statewide programs are tied directly to the National Scenic Byways Program and, as such, are eligible to seek federal TEA-21 funds. Eligible projects include interpretive centers, scenic overlooks, safety improvements and marketing materials. The scenic byway designation does not preempt local planning and zoning authority, and does not bind any municipality.

In 1999, funding was received from the Federal Highway Administration to develop a management plan for the Byway. The Program contracted with the Rockingham Planning Commission to conduct a comprehensive study and develop a Management Plan for the Byway. A central element of the study was the formation of a Byway Advisory Committee, comprised in part of appointed representatives from each of the four Byway communities, and an extensive public participation effort.

MAP T-2 AMERICAN INDEPENDENCE BYWAY



The Independence Byway is detailed above in green including sections of NH State routes 27,108 and 27.

The purpose of the Management Plan is to document inventories of significant historic, natural, cultural and other resources on the Byway, and develop community-based strategies to both promote and protect the Byway and the resources that make it a special place. It is hoped that the communities will use the Plan as a guideline for ensuring use of the roadway and conservation of the surrounding resources and qualities. The following recommendations are made relative to transportation:

- Support for consistent state and local enforcement of posted speed limits
- Encourage community participation in regional transportation planning activities
- Support for paved roadway shoulders on the Byway route, as possible, to serve cyclists and pedestrians as well as to extend pavement life
- Encourage communities to incorporate bike storage racks in town centers and at key tourist sites and commercial centers
- Support for privately-funded trolley service to the Exeter train station.

Support and involvement from the Town of Hampton Falls, as well as the other three Byway communities, will be key to implementing the Management Plan's recommendations.

3.0 PUBLIC TRANSPORTATION

This section presents an examination of existing public transportation service available to Hampton Falls residents, from which recommendations for improving service to Hampton Falls residents will be developed. For the purpose of this document, public transportation is defined as any transportation service available to the general public.

When available, public transportation clearly plays an important role in addressing the traffic issues that a community may be facing. It represents a more efficient use of the existing road network by carrying passengers that otherwise might be driving their own vehicles. A successful public transportation system can remove a significant number of vehicles from the roadway and offer social benefits by providing a reliable means of travel for those who are unable or otherwise choose not to drive themselves.

3.1 Public Bus Service / Demand Responsive Service

There is currently no fixed-route bus service available in Hampton Falls. The Cooperative Alliance for Seacoast Transportation (COAST) recognizes a demand for increased service in the corridor, but the lack of funding has prevented the agency from expanding the service.

Demand response service in the Hampton Falls area is provided by a variety of health and human service agencies, each vary in its schedule and clientele. However, these agencies typically limit service to their own clients and/or patients. Lamprey Health Care operates public demand-response service to all communities in Rockingham County, but service is limited to residents who are either disabled or 55 years of age or older. Residents must call Lamprey Health Care in advance to schedule their ride.

3.2 Intercity Bus Service / Park & Ride Lots

The NHDOT has constructed 21 Park & Ride lots around the State to encourage individual efforts to carpool and to support private intercity bus carrier service. There are no such lots in Hampton Falls; however, the NHDOT maintains a lot in Hampton, near the I-95 toll plaza. This lot is well-situated to serve Hampton Falls

residents who commute via I-95. The lot was upgraded and expanded to accommodate 100 cars and includes lighting.

In 1999 the NHDOT opened a Park & Ride lot and intermodal bus terminal on Pease International Tradeport property adjacent to Exit 3 on I-95. C&J Trailways provides hourly weekday commuter bus service to downtown Boston and Logan Airport, along with frequent weekend service. Organized ridesharing is also an important opportunity for residents who commute long distances to their jobs. In addition, the Massachusetts-based Caravan for Commuters assists groups of commuters to organize vanpools for ridesharing. The Town should assist in promoting such services as a way to reduce overall peak hour traffic congestion on the region's roadways.

Probably the most convenient intercity bus service and park & ride lot location for Hampton Falls residents is from the Massachusetts Highway Department's Park & Ride lot off I-95 (Exit 57) in Newburyport, Mass. The 605-parking space lot is served by three intercity bus companies, providing regular service to downtown Boston and Logan Airport.

3.3 Passenger Rail Service

The long-awaited return of passenger rail service to the Seacoast region occurred on December 15, 2001, with the start of Amtrak service on the B&M Main Line between Portland, Maine, and Boston. Rail service is operated by Amtrak under contract to the Northern New England Passenger Rail Authority (NNEPRA), the Maine State agency responsible for operation of the service. Service is currently limited to four round trips per day, with stops in New Hampshire in Dover, Durham (weekend service only) and Exeter. This service has proven to be extremely popular with annual ridership in 2017 reported at 511,422.

Commuter-based train service is also available from the MBTA train station in Newburyport, Massachusetts.

There has long been interest in establishing commuter rail service to coastal New Hampshire, and more so in recent years since the extension of the MBTA commuter rail service to Newburyport. An abandoned portion of the Eastern (Hampton Branch) rail line runs through Hampton Falls, closely paralleling Route 1. The portion of the rail corridor from the Massachusetts border three miles into New Hampshire is owned by the State of New Hampshire. From that point north the line remains in private ownership and in active use, although freight activity is low. The line is in poor condition and supports maximum speed of only 10 m.p.h.

In 1999 the RPC published a study which examined the feasibility of developing an extension of passenger rail service from Newburyport. The study identified several major deficiencies which would need to be addressed in order to restore service. These included the need for all new track, ties, ballast and signals, and numerous bridge and grade crossing improvements. It was estimated that capital costs would range between $77 and $104 million, with an additional annual operating subsidy of between $1.5 and $7 million(these are very old cost estimates) depending on service levels. Federal Transit Administration new starts funding, along with significant State and/or local funds, would be needed. Other issues involved in the development of a new service include station siting, operating issues, growth impact concerns, benefits and cost of service, funding issues and institutional issues.

4.0 FREIGHT / GOODS MOVEMENT

Freight transportation and goods movement in Hampton Falls are characterized by a limited number of services. Ocean, rail, truck and air cargo services are all within a relatively short distance of the Town, and

provide access to services and markets worldwide. In Hampton Falls the users of freight transportation services are comprised primarily of businesses along Route 1.

As the area grows, additional truck traffic can be expected. In order to ensure that trucks use the proper roads, the Town should enforce RSA 47:17, Section VIII "Traffic Devices and Signals" which empowers the Board of Selectmen:

> "To make special regulations as to the use of vehicles upon particular highways, except as to speed, and to exclude such vehicles altogether from certain ways; to establish stop intersections, erect and provide for the control of traffic by, stop signs or other traffic devices or signals which shall conform to standards set by the highway commissioner and shall be approved by him as to type, size, installation and method of operation."

In 1998 the Board of Selectmen adopted an ordinance which prohibits through trucks with a weight in excess of 16,000 pounds (gross vehicle weight) from the following streets: Brown Road, Crank Road, Goodwin Road, Nason Road and Sanborn Road. Trucks making local deliveries and those traveling from a permanent base of operation in Hampton Falls to a designated truck route are exempted. Seasonal weight limits on local roadways are enacted as needed.

The Town should continue to enforce both the seasonal and permanent weight restrictions in order to protect the breakdown of certain Town roads that were not designed for use by heavy trucks.

5.0 NON-MOTORIZED TRANSPORTATION

5.1 Pedestrian Travel

Walking, while not used extensively as a mode of travel in Town, is nonetheless part of the transportation mix. While the Town has no sidewalk system, 2010 Census data indicated that just under 2% of employed residents walk to work. Additionally, there is some potential for some children to walk to and from school.

Results of the 2015 Town Survey found that while only 18% of respondents expressed support for sidewalk construction (57% disagreed that more sidewalks are needed), there was strong support for walking paths/nature trails and bike paths (64% of respondents supported). This may suggest that residents are less interested in traditional sidewalks, but rather in hiking trails or multi-use trails separated from roadways.

In general, the Town has not encouraged the construction of sidewalks in new residential subdivision construction, primarily because the dispersed residential development occurring in Hampton Falls does not warrant their construction and maintenance, and because the Public Works Department has not had the available workforce to maintain sidewalks. However, the Town should consider adding sidewalks in areas with the greatest potential for pedestrian and child bicycle usage. Examples of this are seen in the business districts along Route 1 and in the Town center.

5.2 Bicycle Travel

Bicycle transportation represents a seasonally dependent alternative to motorized transportation as well as a popular recreational activity. According to the 2010 Census, few Hampton Falls residents---less than 2%--utilized bicycles to travel to and from work. However, the popularity of cycling as both a travel mode and

recreational activity has increased over the past ten years, making the potential usage higher than previously experienced. In fact, results of the 2015 Town Survey suggest strong local interest in bicycling. Over 50% of survey respondents indicated that they support the development of bike paths in Town.

The NHDOT and Seacoast Metropolitan Planning Organization have jointly developed a regional bicycle plan which is designed to create a basic network of bike routes statewide. The network was developed with extensive input from experienced cyclists throughout the State, and includes several roads in Hampton Falls. One connection is created to Kensington and Hampton using Drinkwater Road, Route 88, Brown Road, Towle Farm Road and Crank/ Goodwin Road. A second connection from Kensington to Seabrook is formed via Route 84 and Stard Road and Mill Lane. Crank Road/Goodwin Road are utilized to connect both routes. These roads were identified because they offer lower traffic volumes and thus reduced conflict between motorists and bicyclists.

A potential multi-use trail facility through Hampton Falls exists in the form of the abandoned Hampton Branch railroad right of way from the Massachusetts border into Hampton. The State of New Hampshire owns three miles of the corridor from the Massachusetts border north into Hampton. The NH Department of Transportation has a policy of purchasing and "railbanking" abandoned railroad corridors when possible, thus preserving the corridor for future use. In certain cases, when funding is available, the corridor is maintained for trail use until such time as it is needed for other transportation purposes. While there has long been interest in establishing commuter rail service to the Seacoast along the former Hampton Branch corridor, it is a long-range effort. Until such time as the corridor would be developed for passenger rail service, it is managed by the NH Department of Resources and Economic Development's Division of Parks and Recreation Trails Bureau. At this time, the State has not developed the corridor for trail use. There have been efforts made by New Hampshire Seacoast Greenway to create a bicycle path along the coast. When complete, the New Hampshire spine route will total 16 miles, virtually all of it using the corridor of the Boston and Maine Railroad from Seabrook to Portsmouth. The railroad right-of-way crosses into Massachusetts, where advocates are working to turn it into a greenway. The southernmost portion of this right-of-way (4.5 miles) was acquired by New Hampshire's Department of Transportation. The northern section (11.5 miles) is owned by Guilford Industries/Pan Am Railways, which is negotiating the sale of the land to the state of New Hampshire for conversion to trail.

Many communities in New Hampshire have had success with developing bicycle facilities and sidewalks through the federal government's Transportation Enhancement funding program. While the funding program is very competitive, numerous projects in the Seacoast region have been awarded, with only a 20% match required from the applicant. To aid in the development of funds for the required local match, a few communities have chosen to implement a local option vehicle registration fee, as allowed under RSA 261:153, for the purpose of building a transportation improvement fund for matching funds for projects. Town residents were asked in the 2015 Town Survey whether they would be willing to pay an additional vehicle registration fee of $5.00 or less per vehicle if the money would remain in Town to fund local transportation projects such as road/bridge improvements, bicycle/pedestrian facilities or public transportation. Sixty eight percent of the respondents indicated that they would be willing to pay the additional registration fee.

6.0 CONGESTION TOOLBOX

6.1 Access Management

One approach that has been successful nationwide in dealing with the effects of traffic congestion is known as access management. The idea is essentially that greater control be exercised in the spacing, location and design of driveways, medians and median openings, intersections and traffic signals. Some general access management techniques involve:

- Physically restricting left turns
- Restricting curb cuts and direct access driveways
- Encouraging the use of shared driveways
- Separating obvious conflict areas.

The primary benefits of implementing access management strategies are a reduction in traffic accidents and improvements in traffic flow along arterial roadways. Access management is not without costs, and the most frequently cited is the negative impact on businesses that can occur with restricted access.

A current problem is the number of driveways onto the highway. In reviewing site plans for development along Route 1, the Planning Board should continue to carefully scrutinize the driveway design. Not only should the number of access points be reduced, but the installation of curbing to properly direct the vehicles to follow the traffic flow pattern is crucial.

In Hampton Falls' case, the logical application of access management techniques is on the Route 1 corridor, which is a State-maintained roadway. Several communities in the State worked with the NHDOT to develop a memorandum of understanding regarding access management on high volume roadways. Such a plan to identify points for curb cut consolidation, and establish a driveway access protocol with the NHDOT to ensure consistency of permitting was developed with NHDOT in 2013.

Traffic problems on Route 1 will likely continue to increase as development continues, not just in Hampton Falls, but along the entire corridor. The Town should work proactively with the NHDOT to develop a plan for controlling access along Route 1, possibly through the Route 1 Corridor Study update.

Hampton Falls has an active Highway Safety Committee composed of citizens and representatives of the Police Department, Fire Department and Highway Department. All development proposals that have the potential to cause traffic problems should be reviewed by the Highway Safety Committee. The Planning Board should continue to review their recommendations before making any final decisions.

6.2 Traffic Calming

A second approach for dealing with traffic congestion is known as traffic calming. There are many different approaches to traffic calming, but the primary method is to reduce the speed of traffic by altering the street. Limiting cars to more appropriate and safe speeds has the effect of reducing noise and air pollution, and lowering the number and severity of traffic accidents.

This type of traffic calming has two general approaches: active and passive. Active techniques, such as a barrier forcing the vehicle to turn off a street, force drivers to change their behavior and thereby enforce speed limits. Passive controls, such as speed limit or other traffic signs, do not physically require a change in behavior, but instead rely on a driver's decision to comply with local and state laws.

Another approach is to change how the street is perceived by the driver. By replacing wide, open streets with more narrow travel lanes, broken sight lines, and generally a more "closed in" feeling, drivers will have a tendency to slow their speed.

7.0 FEDERAL AND STATE TRANSPORTATION PLANNING

7.1 Moving Ahead for Progress

The enactment of the national Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Clean Air Act Amendments of 1990 (CAAA), and the reauthorization of ISTEA as the Transportation Equity Act for the 21st Century (TEA-21), and 2012 Moving Ahead for Progress in the 21st Century (MAP 21) have significantly changed the way transportation planning and project programming are done in New Hampshire.

These changes were most significant for communities such as Hampton Falls which are not part of existing metropolitan areas but are within the area considered as not being in attainment for meeting federal clean air standards. The basic thrust of ISTEA, TEA-21 and MAP 21 was to increase and elevate the importance of local decision making in the regional, state and federal transportation planning process. Under the ISTEA, TEA-21 and MAP 21 legislation, state-designated metropolitan planning organizations (MPOs) have a greater role and responsibility in programming highway and transit projects. The legislation charges MPOs with the responsibility of developing comprehensive, project-specific and financially realistic transportation plans with 20 year horizons. These plans serve as the vehicle from which virtually all federally-funded transportation projects are selected and implemented.

Hampton Falls is included in the study area of the Rockingham Planning Commission's Metropolitan Planning Organization study area, which covers 26 communities in Rockingham County. The MPO is staffed by the Rockingham Planning Commission. Participation in the MPO is meaningful to the Town in several ways. First, the MPO is responsible for developing a regional transportation plan and a prioritized list of capital improvements for transportation. Hampton Falls has the opportunity to participate in this planning process through town-appointed representation on the MPO's Technical Advisory Committee and Policy Committee. These two committees oversee and approve the transportation planning activities, including specific traffic, corridor and transit studies, which can be carried out in the region.

In addition, the Town can request transportation planning assistance and traffic counts from the MPO. Last, and perhaps most importantly, the Town can ensure that any eligible transportation improvements advocated by Hampton Falls, that involve federal funds, are considered in the MPO transportation planning and programming process.

7.2 MPO Project Selection and Planning Process

As stated above, MAP 21 transportation planning requirements call for the development of a regional project-specific long range transportation plan, covering a twenty year horizon. The MPO plan draws heavily on the transportation components of local master plans and will identify conceptual transportation improvements needed in the region. From the regional long range plan, the MPO develops a Transportation Improvement Program (TIP) on an ongoing two-year cycle. The TIP is developed as a prioritized list of projects for implementation.

Under the federal rules for metropolitan planning, at least the first three years of projects in the MPO TIP and the State TIP must be consistent. Given the importance of both the MPO Plan and TIP in defining the future transportation system in the region, it behooves the Town to remain actively involved in the MPO--both at the Technical Committee and Policy Committee levels. The Town should work with the MPO during each TIP development cycle to develop and submit a specific list of needed transportation improvements eligible for federal funding.

8.0 COASTAL FLOOD HAZARD IMPACTS ON TRANSPORTATION INFRASTRUCTURE

The Tides to Storms coastal vulnerability assessment project produced maps and statistical data about the potential impacts to New Hampshire's seven coastal municipalities from sea-level rise and storm surge to infrastructure, critical facilities transportation systems, and natural resources. The following narrative and data are excerpted from the Hampton Falls Tides to Storms Vulnerability Assessment Report (http://www.rpc-nh.org/download_file/view/1248/413) (2015, Rockingham Planning Commission).

The Town of Hampton Falls is located along the north coastal area of New Hampshire comprising 8,231 acres including 5,683 acres of land and 2,548 acres of water and wetlands. With a population of 2,236 (2015 Census), Hampton Falls is the sixth most populated of the seven coastal municipalities. The coastal portion of Hampton Falls lies within the Hampton Falls/Hampton/Seabrook Estuary.

8.1 Vulnerability Assessment Results

Impacts to roadways and transportation infrastructure for the Town of Hampton Falls are reported in the table below based on evaluation of the 1.7 feet intermediate-low, 4.0 feet intermediate, and 6.3 feet highest sea-level rise projections at the year 2100 and these sea-level rise projections with the current 100-year storm surge. From the report, maps 5 and 6 Road and Transportation Assets show the state and municipal roadways affected by sea-level rise and coastal storm surge flooding.

Unlike abutting communities, the municipal roadway network and supporting infrastructure in Hampton Falls is less sensitive to sea-level rise and coastal storm flooding with a few exceptions; segments of Route 1 1ocated immediately south and north of the Town Center, Depot Road, Brimmer Lane, and Marsh Lane. As shown on Maps 5 and 6 in the report, Route 1 at the Hampton border and adjacent to Whittier Pond are vulnerable to flooding at the 6.3-foot sea-level rise scenario, and low-lying upland areas east of Route 1 are at risk of flooding from the 4.0 sea-level rise scenario.

From the report, maps 3 and 4 Critical Facilities and Infrastructure show state and municipal infrastructure types affected by sea-level rise and coastal storm surge flooding. The table below reports when specific infrastructure types are affected by each sea-level rise and coastal storm surge scenario. As shown on Maps 3 and 4, culverts are the most frequently impacted type of infrastructure from both projected sea-level rise

and coastal storm surge flooding. Of particular concern are those culverts that currently function as freshwater conveyance systems that may be impacted by tidal flooding in the future. Freshwater culverts are not designed for bi-direction flow or the volume of water resulting from tidal flooding.

Table T-8 State and Municipal Roadways and Infrastructure (miles)

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet		SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Local Roads	0.0	0.1	0.2		0.2	0.2	0.4
State Roads	0.0	0.0	0.0		0.0	0.0	0.0
Total Road Miles	**0.0**	**0.1**	**0.2**		**0.2**	**0.2**	**0.4**
Guardrail	0.0	0.0	0.0		0.0	0.1	0.2
	0.0	0.0	0.0		0.0	0.0	0.1
Evacuation Routes	0.0	0.0	0.1		0.1	0.2	0.3
Culverts	0	1	4		4	6	7
Dams	1	1	2		2	3	5
Bridges	1	3	4		4	5	5
Public Transportation Facilities	1	1	1		1	1	1

Dams - Dam locations indicated on the Tides to Storms maps are based on data maintained by NHDES Dam Bureau of all dams in the state and represent both active and inactive dams that require regular state inspections, and those dams that are in ruins or exempt from state inspections due to small size and hazard status (most of these dams impound stormwater detention ponds). Additional information in this data layer include the dam name, impounded waterbody, drainage area, impoundment acreage, dam height, dam construction type, ownership (state, municipal, or private), dam status (active, inactive, ruins, exempt), and hazard classification. Dam hazard classifications are a ranking of the potential for the loss of life or property damage if a dam were to fail; there are no dams within the focus area of this project that rank as high hazard dams. Additional information regarding dams can be found:
http://des.nh.gov/organization/divisions/water/dam/index.htm

Definition of a Bridge. RSA 234:2, defines a bridge "… as a structure, having a clear span of 10 feet or more measured along the center line of the roadway at the elevation of the bridge seats, spanning a watercourse or other opening or obstruction, on a public highway to carry the traffic across, including the substructure, superstructure and approaches to the bridge". This definition includes a combination of culverts constructed to provide drainage for a public highway with an overall combined span of 10 feet or more and a distance between culverts of half the diameter or less of the smallest culvert.

Bridges Evaluated - Bridges identified as "impacted" by sea-level rise and/or storm surge scenarios indicate that the bridge and its infrastructure are located within the extent of the scenario. There has been no analysis to

determine if the bridge, or any part of its structure is impacted.

8.2 Issues and Considerations

The following issues and considerations about coastal flood hazards were identified by Hampton Falls municipal staff, municipal board members and Rockingham Planning Commission staff.

- Ownership of transportation infrastructure and assets by multiple state agencies (roadways, culverts, state parks, parking areas) and town responsibility for management of assets (sidewalks, roads in urban compact areas) creates complexity in comprehensively managing these systems and implementing climate adaptation strategies.

- Improvements are needed to the state roadway network, Route 1, Big Dodge Pond (Whittier Pond) to prevent flooding of the road. Town officials recommend raising Route 1 and installing a larger culvert.

- Improvements underway currently on I-95 in Hampton Falls will improve flow of the Taylor River.

- Although roadways, buildings and infrastructure can be protected by raising them above projected sea-level rise elevations, supporting land and land based uses may be impacted by daily tidal flooding from projected sea-level rise.

- Planning for long term sea-level rise can be integrated with existing regulatory and management frameworks for the current 100-year floodplain.

- Providing information about potential flood hazards to businesses and residents, and early notification of flood risk during a coastal storm event would enhance public safety and preparedness.

- Long term infrastructure management would benefit from an analysis of the costs necessary to improve roads and drainage infrastructure to withstand projected sea-level rise elevations at 2050 and 2100.

9.0 RECOMMENDATIONS

The following recommendations are based on the information and analyses presented in this chapter, and incorporate the recommendations from the 2004 Master Plan that continue to be valid.

It is a fundamental goal of the Town of Hampton Falls to achieve and maintain a safe, efficient transportation system which supports the rural character of the community, and which is adequate to support the transportation needs of the community. To attain this goal both now and in the future, the following recommendations are made.

9.1 General

1. In reviewing site plans for development along Route 1, the Planning Board should continue to carefully scrutinize the driveway design. Not only should the number of access points be reduced but the installation of curbing to properly direct the vehicles to follow the traffic flow pattern is crucial.
2. All development proposals that have the potential to cause traffic problems should continue to be reviewed by the Highway Safety Committee. The Planning Board should continue to review their recommendations before making any final decisions.
3. The Town should investigate the feasibility of establishing a local fund for transportation improvements. In addition to any money raised by the Town for specific projects, the Town could assess a fee up to $5.00 per motor vehicle registration for transportation purposes. This money could be used to provide a local match for state and federal projects, fund local road improvements or public transportation.
4. The Town should work with the Rockingham Planning Commission and the three other Byway communities to prioritize and implement transportation-related recommendations in the *American Independence Byway Management Plan*.

9.2 Highways

1. The Town should continue to actively participate in the Route 1 Corridor Study update.
2. The Town should continue to actively participate in the Seacoast MPO transportation planning process and should develop and submit to the MPO a prioritized list of needed transportation improvements eligible for federal funding for consideration during all future TIP development cycles.
3. As part of the Capital Improvement Program, the Road Agent and Board of Selectmen should continue to prepare a prioritized list of roads in need of repairs.
4. The Town should follow best management guidelines for road salt usage.
5. Where flooding from sea-level rise and storm surge is anticipated to impact roadways (as identified by Tides to Storms Vulnerability Assessment maps and Hazard Mitigation Plan), the Town should evaluate whether existing culverts and road infrastructure may be improperly sized or located, and consider road improvements that address these flood impacts.

9.3 Public Transportation

The Town should assist in publicizing NHDOT ride matching and Caravan for Commuters vanpool matching services as a way to reduce peak hour traffic congestion on the region's roadways.

9.4 Freight / Goods Movement

1. The Town should continue to monitor changes in truck traffic patterns in the community and work to address issues as they may arise.
2. The Town should continue to set and enforce seasonal truck weight limits on local roads as appropriate and permanent truck weight limits on Brown, Crank, Goodwin, Nason and Sanborn Roads.

9.5 Non-Motorized Travel

1. The Town should coordinate with the NHDOT on implementing any necessary and appropriate improvements (i.e. signage) on Town roads designated on the State bike network.
2. The Planning Board should continue to review commercial development proposals and require sidewalks as appropriate.

3. The Town should identify potential bicycle and/or pedestrian improvement projects and submit applications to the NHDOT for consideration in the biennial Transportation Enhancement and Congestion Management/Air Quality funding cycles.
4. The Town should continue to support rail trail planning activities.

9.6 Congestion Toolbox

The Planning Board, Board of Selectmen and Road Agent should continue to explore the feasibility of traffic calming applications in neighborhoods where excessive automobile speeds are a problem.

9.7 Coastal Flood Hazard Strategies

The following recommendations are short-term climate adaptation actions focused on strengthening land use development standards to create more resilient development and infrastructure, and sustain natural systems and their services.

1. Plan for necessary improvements to the roadways and their supporting infrastructure to manage additional stormwater runoff from more frequent and extreme storm events, and adapt to long term sea-level rise.

   Coordinate with the NHDOT on timely implementation of recommendations identified in the town's Natural Hazards Mitigation Plan and consideration of impacts identified in the Tides to Storms Vulnerability Assessment (2015, Rockingham Planning Commission) particularly for improvements to Route 1.

2. Incorporate impacts from sea-level rise and coastal storm surge flooding identified in the Tides to Storms Vulnerability Assessment (2015, Rockingham Planning Commission) into infrastructure management plans and capital improvement plans and projects.

PUBLIC UTILITIES

PUBLIC UTILITIES

1.0 INTRODUCTION

Utilities and public services have a direct and significant impact on the future development of a community and therefore are an important consideration in the Master Plan. Utility capacity and location are often decisive in determining how and when land will be used. In considering future plans for utility development or expansion, it is important to consider these effects. Even though Hampton Falls does not have municipal systems for water, sewer or other utilities, it does have the ability to influence their development through its zoning and land use regulations. This chapter briefly discusses the status of water, sewer, gas and telecommunication utilities in Hampton Falls at present, and the land use implications of their future development.

2.0 WATER SERVICE

Hampton Falls residents receive their water entirely from groundwater sources; mostly through the use of on-site domestic water wells. The Seabrook Water Department does supply water to 35 homes along the Seabrook border. In 2017, Hampton Falls entered into an agreement with Seabrook for groundwater reclassification of all wellhead protection areas. There are, however, eleven wells in Hampton Falls which are considered "public water systems" as defined by RSA 485:1. All of the water systems are non-community, transient systems as defined by the N.H. Water Supply Engineering Bureau. Each of the water systems obtain its water from wells and serve only its businesses.

The protection and wise use of water resources are of critical concern, both locally and regionally. With the majority of property owners in Hampton Falls dependent on private wells for domestic, public and business use, the quantity and quality of available groundwater must be protected from contamination and depletion. This concern is heightened by the potential siting of commercial production water wells in Hampton Falls. While the Town cannot prevent the location of these wells in Town, water protection measures can be developed and adopted to ensure that no adverse impacts to surface and groundwater supplies result.

The Town has maintained a strategy for land development that avoids the necessity of developing a municipal water system. This is achieved primarily by requiring all development to provide adequate on-site water supply and relatively large lots. There has been interest from the business community in the development of public water and sewer service in the business districts of Town. Such service would allow for more intensive development in the business districts. Because this issue has been a topic of discussion for quite some time in town, the 2015 citizens survey asked directly if municipal water should be made available in the business district along NH Route 1. The survey results are quite clear; one third of the survey respondents (32%) supported Town provision of water in the business districts, while nearly half (48%) of the survey respondents felt the community should not pay for a municipal water service in the business districts. Interestingly, the survey asked if residents would be in favor of a water system in the business districts if it were paid for with non-public funds and the results are significantly different; two-thirds of the survey respondents supported water service along NH Route 1 if private property owners were paying, with only seventeen (17%) percent disagreed with private financing of such water service. In addition, the lack of municipal water and sewer, which many industries desire or require, is probably the biggest factor for the absence of industry in Town.

3.0 SEWER SERVICE

Currently, Hampton Falls does not have a municipal sewer system or wastewater treatment facility. As with water supply, the Town requires all development to provide adequate on-site sewer disposal provisions and relatively large lots, thus avoiding the necessity of developing a municipal sewer system.

The Town intends to continue to support this policy by carefully selecting locations for home sites and septic systems. It is imperative that natural resource information, especially soil types, be utilized in order to assure the continued safe and sanitary disposal of the community's sewage wastes. Although the Town does not plan to install a municipal sewer system or a wastewater treatment facility within the planning horizon of this Master Plan, several alternatives could be considered, including:

- permitting privately developed central sewer systems
- developing a conventional municipal system to serve a defined sewer district area and tax increment financing area
- working with the towns of Hampton and/or Seabrook to explore the expansion of public sewer systems to serve the Route 1 corridor.

The discussion about the resident survey responses regarding water service along NH Route 1 also asked if residents were interested in developing a sewer system as well as a water system. Because it was one combined question the results are the same, with little support for public financing for a sewer system to serve the NH Route 1 business districts, but with over-whelming support if the initiative is paid for privately. The Town should investigate the feasibility of this service.

4. 0 ELECTRICAL SERVICE

Hampton Falls is supplied electricity by Unitil, Inc., under its franchise agreement with the N.H. Public Utilities Commission (PUC). It and all other utilities are required to meet the demand for all areas within their territory.

Unitil has five 34.5 KV transmission lines that pass-through Hampton Falls. One runs north/south through the middle of Town; two cross through the northern part of town in an east/west direction from the Hampton switching station to the substation in East Kingston; and two run east/west through the northern tip of Town from the Hampton switching station to the Exeter substation. It is expected that Unitil will be able to provide an adequate supply of electricity to meet local demand for the near future.

Eversource has three 345 KV transmission lines that originate from Seabrook Station in Seabrook and run through Hampton Falls. One runs north out of Seabrook Station, across the salt marsh into Hampton. Two of the lines run west from Seabrook Station and pass through the southern section of Town into Kensington. No new transmission lines are expected to be built in Hampton Falls in the near future.

The present development regulations in Hampton Falls require that electric, telephone and cable utilities in new subdivisions be installed underground.

5. 0 NATURAL GAS SERVICE

5.1 Local Service

Natural gas service is provided to a small portion of Hampton Falls by Northern Utilities, Inc., a public utility regulated by the N.H. PUC. A 4 to 6-inch transmission line runs from the main transmission line in East Kingston, through Hampton Falls along Route 107 to Seabrook. Only one Hampton Falls residential customer in this area is served by a distribution line along Weare Road. A distribution line runs from Exeter along Route 88 for a short distance to service Heronfield Academy in Hampton Falls. A few businesses near the Seabrook town line have expressed an interest in having Northern Utilities extend a distribution line north along Route 1. The company is investigating the feasibility of such a line extension for the near future. Unlike electric and telephone utilities, the gas company has some flexibility in deciding whether or not it will expand its services to a given area. Therefore, it may be some time before Northern Utilities decides it is economically feasible to expand into any other areas of Hampton Falls.

5.2 Regional Transmission

A major high-pressure interstate gas transmission pipeline was completed through Rockingham County in 1999. This line does not run through Hampton Falls. This 30-inch diameter line, which is jointly owned by the Portland Natural Gas Transmission System and Maritimes Northeast Pipeline L.L.C., is part of a major transmission facility providing access to gas production facilities in eastern Canada and off Nova Scotia. It was constructed parallel to the existing 6-inch and 8-inch lines to minimize additional utility corridor impacts.

6. 0 SOLID WASTE DISPOSAL / RECYCLING

The Town contracts with a private hauler for curbside trash pickup and delivery to the Covanta waste to energy facility in Haverhill, Massachusetts. The private hauler also collects the recycled material at the curbside for the Town's existing mandatory recycling program. Materials collected in this program include all types of paper, glass, aluminum and steel cans, food wastes, and plastics. The following table displays collection statistics as reported by the contracted waste hauler and reported in the annual Town Report:

Table 1

Year	Rubbish -- Tons	Recyclables--Tons	Scrap Metal -- Tons
2010	851	211	
2011	828	259	
2012	773	241	
2013	592	237	13
2014	712	280	10
2015*	344	158	8.9
	Trash -- Tons	Paper --Tons	Comingle -- Tons
2016**	716.89	182.42	121.63

**Rubbish and recyclable totals for 2015 represent the months of July through December only. Tonnage for the first six months of the year was not reported to the town by Pinard Waste Systems, the previous contractor.*

*** In 2016 the descriptions of the sources changed. The reports now indicate Trash, paper or comingled, and no longer include information regarding scrap metal.*

The only solid waste disposal facility in Hampton Falls which has a permit from the State is the Town brush dump. The Town holds an annual collection at the brush dump for tires and bulky items, and now chips rather than burns brush at the dump. The brush dump is open April 1st – November 30th for disposal of leaves and brush three inches in diameter or less. A shed is also available for mercury and battery recycling. The Town does not provide a disposal point for hazardous waste. (Information for hazardous waste disposal sites is available on the Town's website and from the Town Administrator.) According to the DES Waste Management Division, there are no existing permit violations at the brush dump site. The Town does not have any plans to upgrade or expand the brush dump site at this time. Counts of vehicles bringing materials to the brush dump are kept and although tonnage is not recorded, this provides a good indication of use by residents.

The future of solid waste disposal in the region is at a crucial point. As existing landfills approach their capacity, important decisions on which disposal methods are best will need to be made. Hampton Falls should continue its involvement in solid waste planning. In addition, the Town should continue its recycling program.

7. 0 TELECOMMUNICATIONS FACILITIES

7.1 Telephone Service

Residents of Hampton Falls receive telephone service from Consolidated Communications and Comcast. The Town does not have its own telephone exchange, but is part of the Hampton and Exeter exchanges. Due to the deregulation of the telephone industry, the choice of long distance and in-state long distance telephone service providers is up to the individual customer.

7.2 Wireless Telecommunication Service

The growing demand for wireless telecommunication (i.e. Internet, cellular phones) is creating a surge in demand for the installation of wireless telecommunication towers and antennae all across southern New Hampshire. Although the need for these facilities is fully recognized by the Town, the towers themselves can be unsightly and a nuisance to surrounding property owners. The unregulated nature of the industry which provides and markets these services means that multiple towers serving the same geographic market can and probably will be sited in the same area, greatly and unnecessarily exacerbating the impact of the towers. This problem has become more acute with the advent of PCS systems which require a more dense network of antennae ("cells") to function than do conventional cellular phone systems.

To forestall the kinds of negative impact to the landscape that a proliferation of antenna would create, Hampton Falls enacted a telecommunications facility ordinance at the 1997 Town Meeting. Although the Federal Telecommunication Act of 1996 limited the ability of Towns to prohibit the siting of such facilities, it does allow the exercise of reasonable local control over siting. Hampton Falls' ordinance establishes a telecommunications overlay district, which limits the siting of towers to within the U.S. 95 corridor. Presently one tower exists in this district.

7.3 Cable and Satellite Television Service

Cable television system franchises are regulated by N.H. RSA Chapter 53-C. Each community has the right to grant a franchise to one or more companies after holding a public hearing. In Hampton Falls, the

franchise was granted to Comcast of Maine and New Hampshire and will expire in November, 2022. Some consumers utilize satellite dish service for television service.

Telecommunications infrastructure, which includes telephone service, wireless telecommunications and cable service, is a key element of the municipal infrastructure, affecting the Town's quality of life, as well as any local economic development efforts. In that much of the infrastructure is located within public rights of way, it is important that the Town recognize right of way as an important public asset to be managed, just as it manages its other infrastructure.

8.0 RECOMMENDATIONS

8.1 Water

The Town of Hampton Falls should protect existing and potential public water supply sources, especially those areas and supplies identified as aquifers, from adverse impact from development and from commercial exploitation, which may affect existing residential water wells.

1. The Town should consider the purchase of land or development rights for key parcels to protect future water supply and wellhead locations. This effort should be coordinated with general open space protection efforts.
2. The Town should encourage private investment in a water system along the NH Route 1 business corridor.

8.2 Sewer

Development in town, particularly commercial and industrial development, is affected by the lack of public water and sewer service. Although the Town does not plan to install a municipal sewer system or a wastewater treatment facility within the planning horizon of this Master Plan, the Town should continue to explore an equitable arrangement for allowing the creation of public sewer service. Several alternatives could be considered, including:

1. Permitting privately developed central sewer systems as advocated in the resident survey in 2015 Working with the towns of Hampton and/or Seabrook to explore the expansion of public sewer systems to serve the existing business districts
2. Considering the use of tax increment financing to create a sewer system paid for by the private business sector.

8.3 Electric and Gas Utilities

1. The Town should encourage the further expansion of natural gas service areas in Town.

8.4 Solid Waste

1. The Town should continue its involvement in solid waste planning.
2. The Town should continue to promote recycling by residents and businesses as a means of controlling waste disposal costs.
3. The Town should continue to explore hazardous waste disposal opportunities.

8.5 Telecommunications

1. The Planning Board should review the current ordinance, monitor changes in FCC rules implementing the Federal Telecommunication Act, and make adjustments to local regulations as needed.
2. The Planning Board should participate in any future development of a regional telecommunications plan to help minimize the need for additional telecommunications towers in the Town and region and achieve other common objectives with the surrounding towns.

COMMUNITY FACILITIES & SERVICES

COMMUNITY FACILITIES & SERVICES

1.0 INTRODUCTION

Community facilities are those public facilities which provide a service to the residents of Hampton Falls, as well as to those non-residents who may be visiting, working in, or passing through Hampton Falls. It is important to take stock of such facilities and services to ensure that the community's on-going and future needs are met, and to ensure that existing resources are being utilized efficiently and effectively. This chapter identifies the municipal facilities in Hampton Falls, provides an assessment of these facilities and programs that are offered and recommends future actions.

2.0 MUNICIPAL COMPLEX

The Hampton Falls municipal complex is composed of five Town-owned parcels comprising a total of four acres near the intersection of Drinkwater Road and Rte. 88 (Exeter Road). The Town Hall, Public Safety Building, Free Public Library and the old Public Library are all located in the municipal complex.

2.1 Town Hall

The Town Hall was built in 1877 and has always been used as a town hall. In 2000, the Town renovated a portion of the Town Hall and constructed an addition on the west side of the building. The addition created a new building entrance and office space for the Town Administrator, Secretary, Bookkeeper, Town Clerk, Tax Collector and Building Inspector/Health Officer, as well as a small conference room for general use. Two offices in the original part of the building were converted for use, one for storage space and the tax assessor, and the second for shared use by the Conservation Commission, Supervisors of the Checklist, Trustees of the Trust Fund and Cemetery Trustees.

The renovation project also included restoration of the main hall. This large meeting room is used for Town Elections, Board of Selectmen, Planning Board, Zoning Board of Adjustment and Grange meetings and other Town and civic meetings. The room is also available to residents for rental for private functions. There is a second floor on either end of the Town Hall. The front section of the second floor contains a kitchen for the Grange, while the rear section is utilized as storage space for various municipal departments and committees. A garage on the northern edge of the Town Hall parking lot is used by the Fire and Police Departments for equipment storage. A capital improvement program for the Town Hall has been in place since 2013. Efforts to upgrade building insulation and the exterior siding of the structure have been accomplished recently. The Town understands the limitations of the existing land available for expansion of the municipal facilities in the town Center and has been investigating purchase of abutting land. These efforts are on-going.

Services

The Town Hall is the site for numerous key town offices and thus is the point of delivery for municipal services. The building houses offices for, or supports the activities of, the Board of Selectmen, Tax Assessor, Planning Board, Zoning Board of Adjustment, Town Clerk, Tax Collector, Town Administrator/Welfare Officer, Administrative Assistant/Bookkeeper, Building/Health Inspector, Parks and Recreation, Supervisors of the Checklist, Appraiser, Trustees of the Trust Funds, Cemetery Trustees, Conservation Commission and Recycling/Solid Waste Committee.

2.2 Public Safety Building

The Town's Public Safety Building was constructed in 1992. The building has a total of 8,250 sq. ft. of space which is shared by the Hampton Falls Volunteer Fire Department, Police Department and Office of Emergency Management. Additional detail on the allocation of space between the Fire and Police Departments is provided in sections 3.1 and 3.2 below. The Public Safety Building also has a training/meeting room which is used by the Fire and Police Departments, and on occasion for other Town-related meetings. The room is sometimes rented to outside groups.

2.3 Free Library

The Hampton Falls Free Library on Drinkwater Road was constructed in 2001. The Library had outgrown its prior location (see section 2.4 below). In addition to the stacks, public reading space and administrative areas, the Library has a meeting room, with a capacity of 50 persons, available for free to residents and local non-profit organizations.

Staff includes a full-time Director and four part-time employees.

Collection, Programs and Services

Library services are available on a free basis to all Hampton Falls residents and business owners; library cards are available to non-residents for a small annual fee. The Library's collection currently stands at approximately 21,091 items including books, periodicals, audio books, CDs, DVDs and videocassettes. The Library does attempt to collect items on local history, by local authors and/or of special interest to Hampton Falls residents.

As shown in Table Community Facilities and Services-1, 2012 was the high mark for registered patrons to the library over the last 5-year period. After the decrease in patrons experienced in 2013, the number of patrons has slowly increased. In this same five-year period, the total circulation volume has stayed very constant, fluctuating between 18,500 and 19,081.

TABLE Community Facilities and Services-1
HAMPTON FALLS FREE LIBRARY - LEVEL OF ACTIVITY

	2012	2013	2014	2015	2016	2017
Registered patrons	1,556	1,143	1,003	1,086	1,152	1,192
Total circulation	18,657	19,081	18,800	18,705	18,709	18,559

Source: Hampton Falls Town Reports

In addition to its lending collection, the Library offers patrons other services and programs, including 3 personal computers for public use, word processing software, Internet access, in-house reference services,

children's services and programs, interlibrary loan, separate student and adult book discussion groups and other special activities.

The role of the Free Library has changed over the past decade from the prototypical lending institution into a community gathering space. The Free Library serves this role very well with the single greatest deficiency being the lack of an adequate separate meeting space. The present facility has a separate meeting space suitable for youth activities and very well utilized for this purpose. However, when presentations are offered for adults a makeshift area is established in the center of the library which comfortably allows for public presentations for less than 50 participants. In conjunction with this the parking for the Free Library is also constrained. Presently 25 parking spaces are available, and patrons use spaces at both the Town Hall and The Safety Complex when popular programs are undertaken. This can mean a walk with a change in grade is necessary to participate in the library programs, often at night along Drinkwater Road.

2.4 Original Hampton Falls Free Library

The original Hampton Falls Free Library is located near the junction of Drinkwater Road and Rte. 88 (Exeter Road). The structure was originally built in 1835 for use as a church and was remodeled for use as a library when the Hampton Falls Free Library became an entity in 1901. Since the Free Library vacated the space in 2001, the Town has been leasing the original Library building to the Hampton Falls Historical Society, which uses it as a historical research library, meeting space and museum.

2.5 Old Schoolhouse

The old Schoolhouse, located next to the Hampton Falls Free Library, was originally located on the west end of the Common. The structure was reconstructed by the Hampton Falls Historical Society and serves as a museum. The Town has given the Historical Society a 99-year lease for the land on which the Schoolhouse is located.

3.0 TOWN DEPARTMENTS

3.1 Volunteer Fire Department

Formed in 1948, the Hampton Falls Volunteer Fire Department provides excellent protection to the Town. It forms the largest branch of the Town's emergency services in that it is responsible for fire, rescue and mutual aid. The Hampton Falls Fire Department provides emergency medical service for the Town. It also assists the Town's Building and Health Inspector with inspections prior to the issuance of Certificates of Occupancy. The Department has mutual aid agreements with 40+ communities in New Hampshire, Massachusetts and Maine should additional emergency assistance be necessary.

Staffing and Activity

The Department is a volunteer organization headed by a full-time Fire Chief who is appointed by the Board of Selectmen. Three part-time firemen work four days a week. There is currently a roster thirty-four volunteer "call" or "reserve" members of the Fire Department. Thirty-one of the thirty-four members are certified by the State of New Hampshire as Level 1 firefighters, which requires completion of 120 hours of specialized training. Twenty-three of the volunteers are also trained as Emergency Medical Technicians (EMTs), which

requires 140 hours of training; typically, several new members go through EMT training each year. With the ambulance service for Town handled in house, the Fire Department has seen a continual up-tic in ambulance calls; a circumstance that will only be increased as the age restricted Avesta development is fully constructed.

As shown in Table Community Facilities and Services - 2, the demand for Fire Department services has increased steadily over the past five years. Fire and rescue calls to the Fire Department remained fairly level at between a low of 247 calls to a high of 312 calls. Service calls saw a more continuous growth over the same five-year period with an increase from 417 calls in 2013 to just under 800 calls in 2017; a near doubling in activity. Calls to the Fire Department are expected to continue to increase as residential and commercial growth continues.

TABLE Community Facilities and Services-2
FIRE DEPARTMENT CALL STATISTICS: 2013-2017

	2013	2014	2015	2016	2017
Fire/rescue calls	261	247	251	312	267
Service calls	417	507	594	844	782
Total calls	***678***	***754***	***845***	***1,156***	***1049***

Source: Hampton Falls Town Reports

Response times to calls depend on whether volunteer firefighters are present in the Public Safety Building when a call is received. Times range from 4-6 minutes if volunteers are in the building to 10-12 minutes if no members are present at the station.

Facilities and Equipment

The Department occupies approximately 7,070 sq. ft. of the Public Safety Building which includes an office for the Fire Chief, dispatch room, conference room, meeting space, kitchen and hose tower. The building has three 80-foot long bays (two of which are drive-through) which house Fire Department vehicles. The Department, along with the Police Department, also uses the garage on the Town Hall parking lot for storage. All of the Fire Department's equipment is owned by the Town.

Additional Programs

The Fire Department has been given the additional responsibilities of "first responder" status and, under the Office of Emergency Management, is responsible for mobilizing personnel and equipment to deal with nuclear, terrorism, chemical, explosive, biological or natural disasters (described in further detail in section 3.3 below). The Fire Department is also active in several other local programs, activities and professional organizations. The Department belongs to the Seacoast Fire Chiefs Association (40+ community mutual aid agreement) and the Seacoast Technical Assistance Response Team (hazardous materials responders). The Department promotes fire safety education through its annual school and daycare program on fire safety, conducts home fire safety inspections upon request and is available to teach CPR and first aid.

3.2 Police Department

The Police Department is located in the Public Safety Building on Drinkwater Rd. It is responsible for local law enforcement and public safety and serves the Town well in this capacity. In addition to routine patrols and responding to calls, the Department plays a significant role in preparing the community for dealing with catastrophes, most notably potential incidents involving the Seabrook Station. Just as with the Fire

Department, the events of September 11, 2001, added a new dimension to the Police Department's role in ensuring public safety. Along with some additional Federal and State funds for equipment, the Department has had to assume additional training responsibilities, and has seen a significant increase in the number of suspicious persons/activities calls from residents.

Many police departments in the country have adopted what is termed the "Community Oriented Policing (C.O.P.)" philosophy. The C.O.P. philosophy is intended to make a police department more responsive to the needs of the community and to deliver services in a way that will address these needs. While it hasn't formally adopted such a policy, the Hampton Falls Police Department practices the C.O.P. approach. The Department prides itself on interacting well with residents and to that end maintains a public website.

Staffing and Activity

Police protection is provided by a full time chief, a lieutenant, two regular full-time officers, and six part-time officers (one of which also serves as the part-time Animal Control Officer). The Department is supported by a secretary who assists with administrative work. Hampton Falls has mutual aid agreements with police departments in numerous neighboring communities should additional emergency assistance be necessary, but depends on Hampton, Kensington, Seabrook and Exeter police departments for backup.

The Town currently relies on the Rockingham County Sheriff's office for dispatch services. The system works well and there are no plans by the Department to assume that duty.

As shown in Table Community Facilities and Services-3, Police Department activity--both the total amount and the type of activity--fluctuates over time but has seen an overall increase over the past several years. Some of these activities, such as accidents, motor vehicle stops, and house checks are related to increases in population and business growth (in Hampton Falls and/or the larger region).

TABLE Community Facilities and Services-3
POLICE DEPARTMENT CALL STATISTICS: 2013-2017

Type of call	2013	2014	2015	2016	2017
911	19	10	25	17	17
Accidents	97	109	100	122	118
Alarms	197	236	180	196	182
Arrests	135	89	89	124	96
Assist another PD	214	203	124	170	102
Burglaries	14	10	4	10	8
Citizen assists	151	186	134	166	165
Assist with fire/rescue	140	125	148	118	158
House checks	4,255	4,495	3,926	3,653	2530
Motor vehicle stops	1,225	1,241	1,563	1,990	1,930
Radar checks	897	880	991	774	613
Suspicious activity	126	166	146	166	132
Thefts	29	35	26	3	5
Other*	4,303	4,337	4,491	3,208	3,913
Total calls	*12,062*	*13,465*	*12,709*	*12,934*	*10,868*

* Includes animal calls, assaults, criminal mischief, domestic, lockouts, phone calls, summons, unarmed robbery, unattended death and unwanted person.

Source: Hampton Falls Police Dept.

Staffing levels are a significant concern for the Hampton Falls Police Department. The Department currently provides a police officer on duty for 16 hours a day, generally between the hours of 8 a.m. and midnight. During the hours when there is no officer on duty, calls for assistance are forwarded to the New Hampshire State Police. The State Police's policy is to prioritize and cover all emergency calls (i.e. accident, burglary in progress) in their patrol area of Rockingham County received during communities' off-duty hours. If State police officer coverage is limited, non-emergency calls (i.e. noise complaint, suspicious person or vandalism report) received from Hampton Falls may be passed to an off-duty Town officer, or the caller directed to contact the Hampton Falls Police Department in the morning when officers are back on duty. Response time during the overnight hours can be quite long depending on the location of the State officer when dispatched to Hampton Falls, or the nature of the call and which agency responds.

Continued growth—both residential and commercial—will only increase the demand for police services. In addition, the Town's proximity to Seabrook Station, the Naval Shipyard, Interstate 95 and the cities of Boston, Portland and Manchester presents unique policing challenges in what is otherwise a small and quiet community.

Additional Programs

The Department maintains a continual training effort, with officers taking Department-sponsored courses as well as courses sponsored by the New Hampshire Police Academy. Officers take classes on force training, terrorism, prosecution, interrogation, breath test operator, stalking and crime scene response.

Other activities include animal control (handling incidents involving animals), a vacation watch program, a senior driver program, distribution of free gun locks and participation in the Crimeline for the Hamptons program (a reward program for tips which help solve crimes). Under the vacation watch program, a resident can submit a form indicating dates that the home will be vacant, and Hampton Falls police officers will conduct security checks on the property. The senior citizen driver refresher program is offered once or twice a year for residents aged 55+, in conjunction with the American Association of Retired Persons.

Facilities and Equipment

The Police Department occupies approximately 1,180 sq. ft. of the Public Safety Building. It should be noted that the public safety complex was not designed with many of the facilities a modern police department would have. There is no area for detaining individuals securely and areas such as the evidence room have been created as workable spaces but do not conform to industry standards. These shortcomings should be addressed in the future. The Police Department shares use of the garage on the Town Hall parking lot for storage with the Fire Department. As mentioned in section 2.2 above, the Department has identified the need for additional space. The existing building is constrained in office space, as well as for storage of files, equipment and evidence.

The Department routinely submits equipment requests for consideration in the annual update of the Town's Capital Improvements Plan. For example, the Department attempts to adhere to a patrol car replacement schedule so that vehicles are replaced at the 100,000-mile mark. Other equipment needs involve keeping current with technology. These types of equipment needs, including computer hardware and software upgrades in patrol cars and office computers, and digital car and portable radios, improve the efficiency, effectiveness and ease of policing, but require considerable financial resources.

3.3 Office of Emergency Management

The Town's Office of Emergency Management is responsible for mobilizing personnel and equipment to deal with nuclear, terrorist, chemical, explosive, biological or natural disasters. It is also the point of contact for all communications with federal agencies and the State government to mobilize resources or personnel in dealing with these types of disasters. The Fire Chief currently serves as the Emergency Management Director.

The Office of Emergency Management maintains a local emergency plan which addresses many possible man-made and natural disasters, as well as chemical and biological attacks. The Office coordinates with the Nuclear Regulatory Commission and the NH Office of Emergency Management on training in preparation for any emergency at the Seabrook Station. The Town conducts a training session, two drills and a graded exercise every two years for teams of Fire, Police and Town employees. This exercise is held in each of the 22 communities that are within a ten-mile radius of the Seabrook Station.

3.4 Highway Department

The Highway Department is based out of the Town highway shed at the intersection of Drinkwater and Parsonage Roads. It is headed by a Road Agent appointed by the Board of Selectmen. While the Road Agent is a Town employee, all the equipment used for roadway maintenance is owned and maintained by the Road Agent. Highway Department employees are part-time and hired as needed. During the winter season, the Town contracts with a private firm to provide snow removal. The Town highway shed has only electric and telephone service and has room to house up to three highway vehicles. The property is also used to store gravel, loam and salt. Salt is stored underneath a fabric tent structure; concrete blocks are also used to contain the salt and prevent run-off.

The primary duty of the Highway Department is the maintenance of approximately 26.4 miles of Class V (local) public roadways in Town.[1] This involves sanding and salting; maintenance of culverts and drainage swales; replacement of culverts and cross-pipes; reclaiming and repaving town roads; roadway patching; sweeping intersections; removing roadside brush; cutting tree limbs and branches along Town roads; and repair and replacement of road signs.

In addition to the above duties, every year the Department reviews and prioritizes its listing of roads in the greatest need of repair. This information is submitted to the CIP Committee for funding consideration in the CIP update process. Lastly, the Department also coordinates the disposal of brush at the brush dump and disposes of litter and large items that are sometimes left along roadways in Town.

The Department works closely with the Town engineer during the development of new subdivision roads, especially when the road is at the stage to be turned over to the Town for ownership and maintenance. Acceptance of these roads requires maintenance during the winter months, which in turn adds to the expense of the Highway Department budget. As additional residential subdivisions are approved, and new roads constructed, the number of miles of Class V (local roads) continues to increase.

[1] See Chapter 5-Transportation for a complete description of the roadway classification and inventory.

4.0 OTHER FACILITIES

4.1 Cemeteries

There are seven public cemeteries in Hampton Falls: Oak Lawn, Old Westview, Baptist Church, Brookside, Old Brookside, Hawes, West View and Pike Cemeteries (see Map MFS-1). All are maintained by the Town Cemetery Trustees. The newest-Oak Lawn Cemetery-is the only public cemetery with burial plots available for sale. The cemetery is a 6-acre parcel with room to expand. Based upon the remaining land area at Oak Lawn Cemetery, the Town's cemetery needs appear to be met well into the future.

5.0 SCHOOLS

Hampton Falls is a member of School Administrative Unit 21. Students in grades Kindergarten through 8 attend Lincoln Akerman School in Hampton Falls while students in grades 9 through 12 attend Winnacunnet High School in Hampton. There are also numerous private schools in the area. The following sections describe the public schools that accept residents of Hampton Falls.

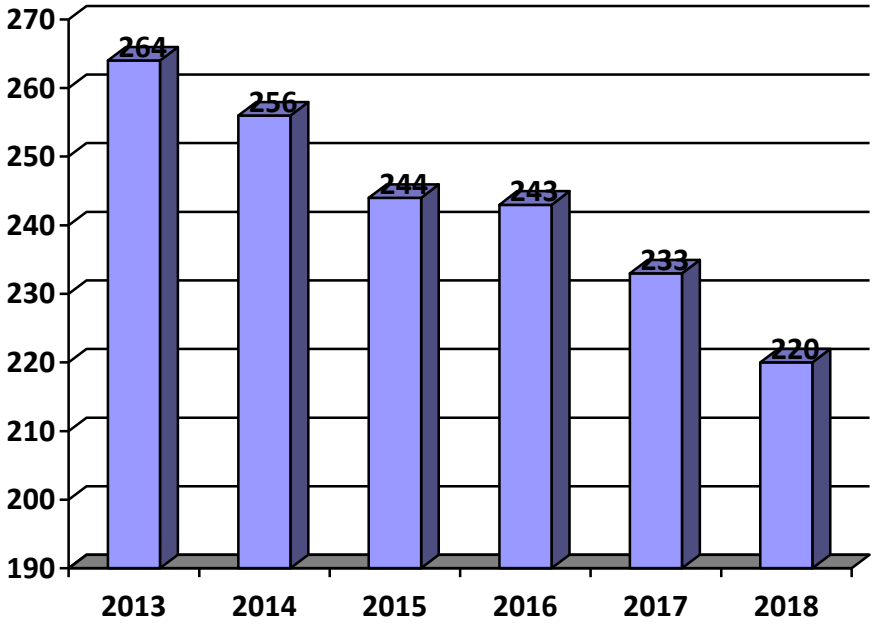
5.1 Lincoln Akerman School

The Lincoln Akerman School is an elementary school located on Exeter Road (Rte. 88) and is operated by the Hampton Falls School District. The school educates children in grades Kindergarten through 8. In addition to classrooms, administrative/office space, storages spaces and teacher lounges, the school has a library, a gymnasium that doubles as a cafeteria, a resource room and an outdoor playground and sports fields. A bond to address space needs was passed in 2018 with a stated goal of creating a separate gymnasium and cafeteria, enabling additional classrooms and a music room. SAU 21 hosts an Internet website with a link to the Lincoln Akerman School webpage.

Certified staff at Lincoln Akerman for the 2018 school year include a principal, 25 full-time teachers, 4 part-time teachers, one full-time and one part-time Guidance staff and a full-time school nurse.

Program capacity of the school, or recommended capacity to allow for adequate instruction, is presently set at 280 students. **Figure-1** shows school enrollment trends for Lincoln Akerman School for the years 2013-2017. Enrollment peaked in the year 2013 with 264 students and has shown a slight decline since then.

Figure 1 - Enrollment for Lincoln Akerman School
Source: SAU 21



5.2 Winnacunnet High School

Hampton Falls students in grades 9 through 12 attend the Winnacunnet High School in Hampton. A cooperative school, it accepts students from Hampton, Hampton Falls, North Hampton and Seabrook. In October 2018, 101 students from Hampton Falls were enrolled at Winnacunnet High School.

6.0 PUBLIC INFORMATION / ACCESS

The Town should explore the feasibility of developing a government access network and programming. This would allow the Town the opportunity to televise the various Board and committee meetings and publicize meeting notices and community news, thus increasing public access to community information.

7.0 RECREATION

7.1 Existing Recreational Facilities

Hampton Falls has several recreational facilities which accommodate activities from youth sports programs to picnicking. The following is a description of the primary Town-owned, state-owned and other facilities in the Town or surrounding areas that are used for recreational purposes.

Town-Owned Recreation Facilities

Many of the recreation areas in Hampton Falls are natural areas used for passive recreational activities such as walking, hiking and picnicking. The Town owns a number of these parcels of land which are open for public use. In recent years the Town has made strides toward creating additional recreational opportunities for resident of all ages. The following is a description of Town-owned recreation areas and facilities.

Town Forest – The largest Town-owned recreation area is the Town Forest located off Drinkwater Road. Purchased by the Town in 1978, the Town Forest consists of 111 acres of forested land. Several small tributaries to the Taylor River run through the property. The parcel was purchased from the Janvrin family using funds from the Town, a Heritage Conservation and Recreational Services grant, a Ford Foundation Grant, and a partial donation from the landowner.

Town Common- The Town Common as the junction of Route 1 and Route 88 is a small parcel of 1.45 acres. The Hampton Falls Veterans Memorial Bandstand, located on the western end of the Common, was dedicated and presented to the Town on June 3, 2000. The Bandstand was constructed entirely with private donations and funds raised by the Hampton Falls Bandstand Commission. The Town Common and the Bandstand are used for summer concerts, the Annual Bandstand Yard Sale, Memorial Day services, fairs, parades, and similar events.

Depot Road Boat Launch – The small Town-owned parcel on Depot Rod provides public access to Hampton Harbor through the Hampton Falls River, for recreational uses such as fishing, canoeing and pleasure boating. There is a gravel loading ramp for boats and limited auto parking. In addition, the location offers an uninterrupted view across saltmarshes to the ocean. There are no plans for additional improvements.

Governor Weare Park – This 15.7-acre parcel, located on Exeter Road just west of the Lincoln Akerman School, was purchased by the Town in 1995. The Park has been developed with two unlit, regulation soccer and field hockey fields, and a 70-foot base path baseball field with dugouts. The fields are bordered by several acres of woodlands. Neither the Recreation nor Conservation Commission currently has plans to develop walking trails in the wooded area. The Town provides a portable toilet for the use of outdoor program participants during non-school times.

Raspberry Farm - The Raspberry Farm located on Route 84 is a great spot for summer and winter hiking and snow shoeing and a great place for walking your dog. There is a small parking lot on Route 84. If you cross the field to the wood line you will find a few different short trails through the woods.

Fogg Park (Volunteer Fire Association Park) – The Town owns this 4-acre park off Route 84, which was given to the Hampton Falls Volunteer Fire Association for use by residents of Hampton Falls and Seabrook.

Lincoln Akerman School – The Lincoln Akerman School is one of the major recreational facilities for the community, used for both youth and adult sports and town activities. The school has an outdoor playground and multi-purpose athletic field that is used for school-organized soccer, baseball, softball and field hockey, as well as for soccer, baseball, softball and t-ball organized by the Hampton Youth Association (HYA). Water fountains and restrooms are available inside the school building only when the school is open.

The school has a joint use cafeteria (with kitchen)/gymnasium with a full-size basketball court, used for both youth and adult sports activities. Organized youth basketball is offered by both the school and the HYA, and school officials open the gymnasium for adult pick-up basketball on Wednesday evenings during the school year. In addition to school, HYA and adult sport programs, the school is used for Town Meeting and other events. Scheduling of the fields and gymnasium is handled by Lincoln Akerman School staff, rather than by the Recreation Commission. The HYA and adult basketball programs are not charged a fee for use of the facilities; however, the HYA has contributed funds for improvements.

Whittier Pond – Whittier Pond is a 12.4-acre freshwater public water body located between Route 1 and Route 84. Although it is a public water body, the land surrounding the pond is privately owned and there is no formal public access to the pond. The pond is used for fishing, boating and ice skating. A private landowner near the pond allows limited public parking and access to the pond.

Conservation Commission Land – The Hampton Falls Conservation Commission oversees many acres of land which are used for passive recreation such as hiking, walking, bird watching and picnicking. The Town either owns outright a number of these parcels of land which are open for public use, or the Conservation Commission oversees conservation restrictions or easement for land protection on other properties. Chapter 8 – Natural Resources contains more information on Town-owned conservation land.

8.0 RECOMMENDATIONS

8.1 Municipal Complex

The Town should pursue negotiations with property owners to purchase land abutting the existing Municipal Complex.

8.2 Town Hall

The Board of Selectmen should monitor the need for converting storage space to office space.

8.3 Public Safety Building

Creation of a municipal parking lot between the Public Safety Building and the Library to enable sufficient parking for first responders using the Public Safety Building and address safety concerns created by Library patrons parking off-site and walking night along Drinkwater Road.

8.4 Free Library

The Library should continue to participate in the annual CIP update process by submitting requests for technical equipment purchases.

8.5 Original Hampton Falls Free Library

The Town should continue leasing the property to the Hampton Falls Historical Society.

8.6 Fire Department

1. The Fire Department should continue to participate in the annual CIP update process by submitting requests for equipment purchases.
2. Department resources and staff training should be kept up to date as necessary to comply with Homeland Security measures.

8.7 Police Department

1. The Police Department should continue to participate in the annual CIP update process by submitting requests for equipment purchases.
2. Department resources and staff training should be kept up to date as necessary to comply with Homeland Security measures.

8.8 Office of Emergency Management

1. The Town should continue its present training program for emergency scenarios and ensure the Town's compliance with Homeland Security measures.
2. The Town should establish an off-site Emergency Operations Center as recommended in the Town's Continuity of Operations Plan (COOP).

8.9 Highway Department

The Highway Department should continue to participate in the annual CIP update process by providing a prioritized listing of roads in need of repair and submitting requests for equipment purchases.

8.10 Cemeteries

The Cemetery Trustees should develop a program for restoring and repairing old gravestones.

8.11 Schools

The School Board should appoint a committee to develop a recommended plan of action for future needs of the Lincoln Akerman School.

8.12 Public Information / Access

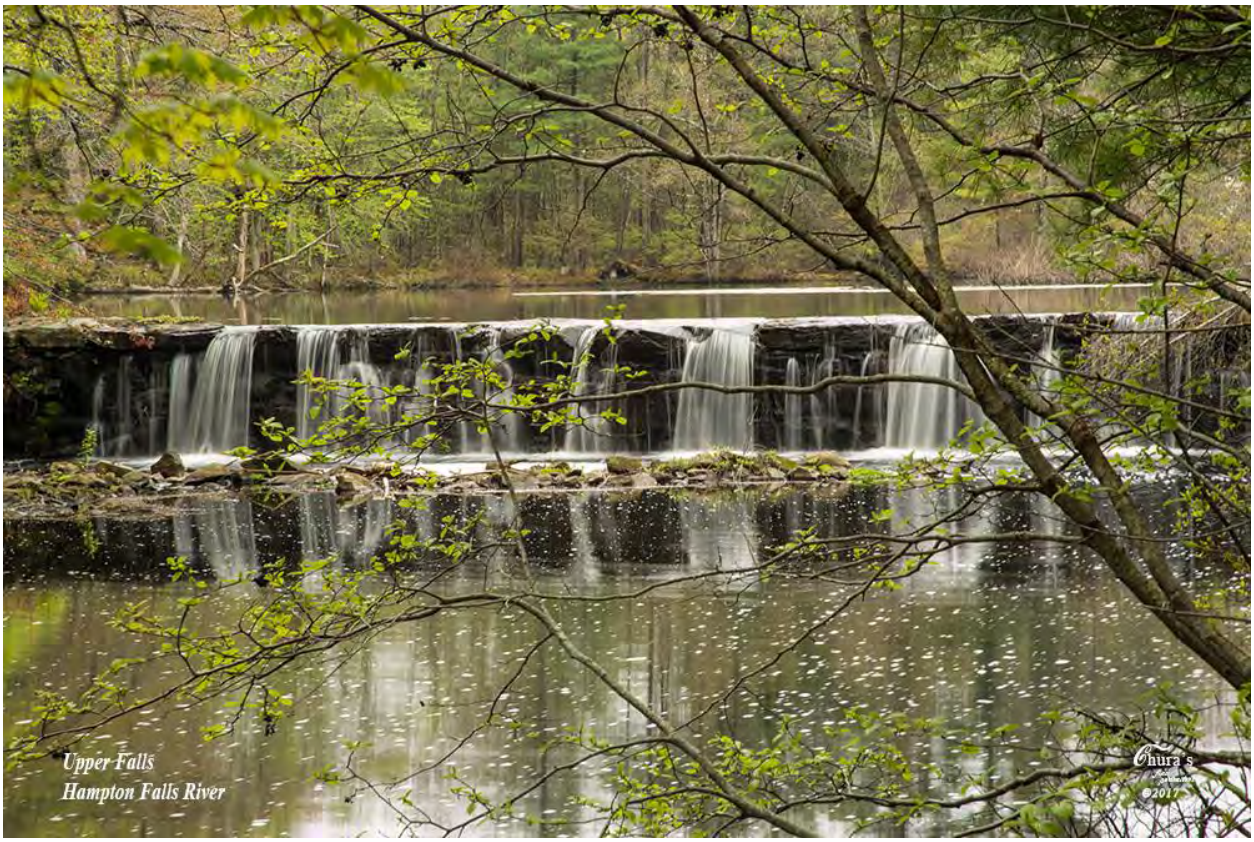
The Board of Selectmen should explore the feasibility of developing a government access cable television network and programming.

8.13 Recreation

1. The Town should continue its current approach of meeting recreational activity with self-supporting, volunteer-oriented programs
2. The Recreation Commission should conduct a yearly assessment of the condition of each town-owned recreation facility and include major improvements and upgrades in the Town's capital improvements program.
3 The Recreation Commission should periodically review the need to expand or alter existing programs based on demonstrated interest and the ability to gain support for the programs through user fees or other means.

4. The Recreation Commission should coordinate with the CIP/Master Plan Committee to expand recreational facilities as needed.
5. The Recreation Commission should work with the Board of Selectmen and other municipal officials to seek funds, including grants, to acquire necessary facilities or additional program support to carry out the objectives of any Recreation Committee projects included in the Town's Capital Improvement Plan.
6. The Town should continue to work with NH Seacoast Greenway to development a trail along the abandoned rail line linking New Hampshire to Maine and Massachusetts.

NATURAL RESOURCES



Upper Falls, Hampton Falls River

1.0 INTRODUCTION

1.1 Summary of Natural Resources of Hampton Falls

Hampton Falls lies within two of New Hampshire's major watersheds: 7,359 acres in the Coastal Watershed and 514 acres in the Exeter River Watershed. Refer to Map 1-Base Map in Appendix B.

Hampton Falls has a high percentage of wetlands (29%) and undeveloped lands (48%) which includes water and agricultural lands, and unfragmented lands (58.7%). Undeveloped lands include 2,920.6 acres of forests (comprising 36.2 percent of the total acreage).

Hampton Falls has a dense drainage network of approximately 58.5 linear miles of both freshwater and tidal rivers, streams and brooks.

Table 1. Summary of natural resources in Hampton Falls

Resource Type	Units	% total area
Aquifers	194.6 acres	2.4
Coastal Watershed	7,359 acres	93
Conserved Lands	1,168 acres	15
Core Focus Areas (The Land Conservation Plan for NH Coastal Watersheds)	3207 acres	39.7
Great Bay Watershed/Exeter River Watershed	514 acres	6.3
Ponds	25 acres	0.3
Public Water Supply Wells	0	
Rivers/Streams (linear feet)	308,880 feet	58.5 miles
Undeveloped/Agricultural Lands/Water	3,879 acres	48
Unfragmented Lands	4,747acres	58.7
Wetlands (National Wetlands Inventory)	2,340 acres	29
Exemplary Habitat Areas (NH Wildlife Action Plan)	6,486.2 acres	80
Total Area of Land = 7,911.3 acres; Total Area of Water = 166.7 acres; Total Area =8,078 acres		

Note: Resource type may appear in more than one category

1.2 Population Growth and Land Use Change

Population Growth

Hampton Falls experienced a 63 percent increase in population from 1980 to 2010, from 1,372 residents in the 1980 U.S. Census to 2,236 in the 2010 U.S. Census. The NH Office of Strategic Initiatives estimates the population will be 2,482 by 2030.

As buildable lands become scarcer, it is important to consider the potential consequences when increased development pressures compete with natural resource protection.

Land Use

Currently, the dominant land cover and land uses in Hampton Falls include forested (36.2%) and wetlands (29.0%). The other land cover and land uses listed in Table 1 comprise the remaining 34.8 percent of the total land area of Hampton Falls.

1.3 Significant Threats

Sprawl and Landscape Fragmentation

Construction of new homes in Hampton Falls has resulted in development spread through out town and the conversion of fields and forests into roads, driveways, and buildings. As a result, large blocks of forest and farmland have been broken into fragments, disrupting wildlife habitat and the corridors wildlife need to move safely.

Impervious Surface Coverage and Water Quality

Impervious surfaces are parking lots, roadways and roofs. During rain storms and snow melt, water running off of impervious surfaces carries pollutants and sediments into streams, lakes, and estuaries. To keep waters clean, the NH Department of Environmental Services recommends no more than 10% impervious cover in a town. The 2018 *State of Our Estuaries Report*, produced by the Piscataqua Region Estuaries Partnership, estimates impervious cover in Hampton Falls to be 5.2%, or 403 acres, based on high resolution mapping conducted in 2015. https://www.stateofourestuaries.org/

Hampton Falls has set limits on how much of a lot can be developed or be impervious surface, with a limit of 65% in the Town Common District, 70% in the Business District South, and 75% in the Business District North. Within the Agricultural-Residential District, impervious surface cover is restricted by lot size. Lots less than three acres have a maximum lot coverage of 30%, lots between three and four acres have a maximum lot coverage of 25%, lots between four and five acres have a maximum lot coverage of 20%, and lots over five acres have a maximum lot coverage of 15%.

Climate Change

The increasing trend of carbon dioxide concentrations in our atmosphere in recent decades has caused concern over its effect on environmental ecosystems and climate worldwide. Alterations to our climate in the northeast U.S. could result in changes or decline in certain sectors of the economy, and health costs associated with respiratory health and heat related illnesses.

Climate change and sea-level rise are factors to consider in the long-range planning for Hampton Falls' natural resources. Climate change predictions for our area include increasing average temperatures and storm intensity. It has been confirmed and documented that sea level in the Gulf of Maine has risen over the past century, and future rise in sea level is predicted to continue. These phenomena of nature could result in changes in certain sectors of our local economy, including winter and summer tourism and agricultural production. Coastal real estate values may also be affected.

The current configuration and characteristics of the natural resources currently existing are also subject to change as a result of environmental influences. Potential changes include the types of trees and forest

communities which will be viable in Hampton Falls, as well as changes associated with higher ocean temperatures and increased migration of saltwater inland.

2.0 Natural Conditions

2.1 Natural Conditions

Rockingham County includes the coastline of New Hampshire and extends inland to the Merrimack River Valley. The climate in this region is notoriously variable. The geology of the Seacoast region consists of fractured metamorphic bedrock that is overlain by glacial materials deposited during the last glaciation, which ended between 12,000 and 5,000 years ago. Glacial stratified-drift aquifers (consisting of layers of sand, gravel, clay, and silt) cover about 18 percent of the Seacoast region. These deposits are generally more productive source of water than the local bedrock aquifer.

2.2 Soil Types and Conditions

Soil Types

The Rockingham County Soil Survey was completed in 1994 by the U.S. Department of Agriculture Soil Conservation Service in cooperation with the New Hampshire Agricultural Experiment Station. Developed according to the National Cooperative Soil Survey standards by soils scientists, the soil survey identifies distinct properties and characteristics of different soil types, from which certain predictions are made about the suitability of a soil for different uses. The soil survey also includes a soils map showing the distribution of soil types.

One important characteristic of a soil is its drainage class which relates to the ability of water to pass through the soil (soil permeability). Drainage class can indicate the presence or absence of wetlands and poorly drained soils, the ability of soil to infiltrate stormwater runoff, and the capacity of soil to filter pollutants. This information is invaluable to the Planning Board in evaluating development proposals and planning for growth in areas where soil conditions are appropriate for development.

Drought

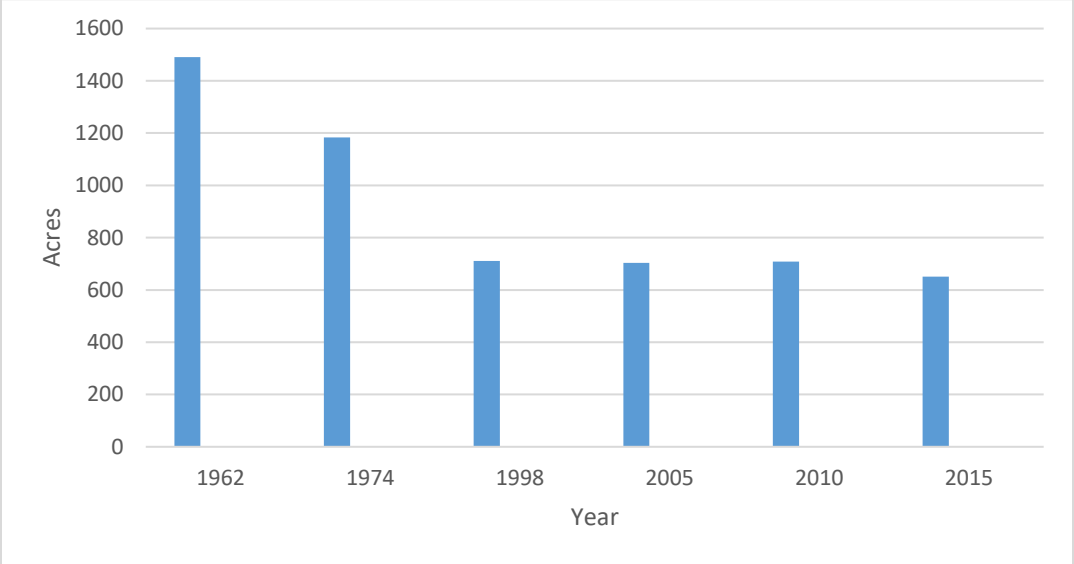
Drought is a prolonged period of abnormally low rainfall, leading to a shortage of water. The State of New Hampshire Homeland Security and Emergency Management identifies drought as a low hazard risk for Hampton Falls. However, five droughts of significant extent and duration have occurred in town since 2001, and droughts in 2016 and 2017 in southeastern New Hampshire resulted in drinking water wells going dry and the enactment of bans on outdoor watering by municipalities and water providers.

2.3 Agricultural Soils

Agriculture has been a large part of Hampton Falls' history since the Town's first settlement in 1722. Once considered to be a farming community, agriculture declined in Hampton Falls as economics and land values compromised the viability of the small farm throughout the Seacoast region. Farmers have sold their land for development or stopped farming and allowed their fields to grow wild again. However, the town has taken proactive steps to help preserve some of its historical agricultural roots through the purchasing a 102-acre conservation easement on Applecrest Farm and Orchard, the donation of an

easement on the Tonry Farm by the Tonry family, and the purchase of both the Raspberry Farm and Marsh Lane properties. Since 1962, Hampton Falls has lost approximately 850 acres of active agricultural lands (Figure 1).

Figure 1. Active agriculture in Hampton Falls from 1962 to 2015



One farmstead of historical importance in Hampton Falls is Applecrest Farm and Orchard which was purchased by Walter B. Farmer in 1913. Applecrest is the oldest continuously-operated apple orchard in America.

Agricultural land comprises approximately 651 acres in Hampton Falls (Table 8). Hampton Falls citizens have in the past voted to contribute town funds towards the preservation of three farms (Applecrest Farm and Orchard, Tonry Tree Farm and the Raspberry Farm) by helping to secure easements ensuring the land cannot be developed in the future.

Farmland Soils

In New Hampshire, agricultural soils are identified in three categories and are described below: Prime Farmland Soils, Farmland Soils of Statewide Importance, and Farmland Soils of Local Importance. Hampton Falls has 1,197 acres of Prime Farmland soils, 1,434 acres of Farmland Soils of Statewide Importance, and 2,087 acres of Farmland Soils of Local Importance. Farmland soils in Hampton Falls comprise 5 percent of the total acres of farmland soils in Rockingham County. The farmland soil types are summarized in Table 2.

Prime Farmland Soils

Prime Farmland is land which is of the highest quality and has the best combination of physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed crops. Additionally, it must be available for production (i.e. cropland, pastureland, rangeland, forest land, or other land but not urban built-up land or water).

Farmland Soils of Statewide Importance

Farmland of Statewide Importance is land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. Criteria for defining and delineating this land are to be determined by the appropriate state agency or agencies. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Farmland Soils of Local Importance

Farmland of Local Importance is land other than land of national or statewide importance that is of local concern for the production of food, feed, fiber, forage, and oilseed crops. Farmland of Local Importance is land other than Prime Farmland or Farmland of Statewide Importance. This land may be important to the local economy due to its productivity or value. These lands are to be identified by the appropriate local agencies or agencies.

Table 2. Farmland soil types in Hampton Falls and Rockingham County

Farmland Soil Type	Acres in Hampton Falls	% total land area of Hampton Falls	Acres in Rockingham County
Prime Farmland Soils	1,197	15	21,727
Farmland Soils of Statewide Importance	1,434	18	40,508
Farmland Soils of Local Importance	2,087	26	26,020
Total	4,718	***59***	***88,255***
Total Area of Land = 7,911.3 acres; Total Area of Water = 166.7 acres; Total Area =8,078 acres			

Prime farmland soils and Farm Soils of Statewide Importance are predominantly located in the uplands in the central area of town northwest of the salt marsh, and in the western areas of town. Most of the Farm Soils of Statewide Importance appear to be located along Route 88, with several isolated tracts along the borders of Hampton Falls and Exeter, and Hampton Falls and Seabrook. Tracts of Farmland of Local Importance are located throughout Hampton Falls, with several larger tracts in the northern area of town and in the eastern portion of town before the salt marshes.

3.0 Surface Waters

Surface water systems are any type of standing or flowing body of water above the ground, including streams, rivers, ponds, lakes and freshwater and tidal wetlands. Surface waters are important because they provide flood retention and groundwater recharge functions, and ecological, scenic and recreational value to the community as a whole. Hampton Falls contains approximately 166.7 acres of surface water area or 2.1 percent of the total area of the town. Hampton Falls is home to several ponds, however, due to their shallow nature the use of these ponds is mainly limited to fishing and winter recreation (ice skating and cross-country skiing.) While Hampton Falls has limited open surface waters, it has an extensive network of wetlands. Refer to Map 4-Surface Water Resources in Appendix B.

Because surface waters collect runoff from adjacent land areas, they are highly susceptible to pollution from both point and nonpoint sources. Surface water systems can be highly disrupted by development within a watershed.

3.1 Regional and Local Watersheds

A watershed is an area of land that drains all the rivers, streams, rainfall and snowmelt to a common outlet, such as a major river or harbor. Hampton Falls has 58.5 miles of rivers, streams and brooks and lies within two regional watersheds: the majority of the town falls within the Coastal Watershed and a small portion in the northwest corner of town is part of the Exeter River Watershed. The watershed boundaries depicted on Map 4-Surface Water Resources show that only a small portion of the northwest part of Hampton Falls is located within the Exeter River Watershed. The Coastal Watershed includes the remaining areas of town and consists of three local sub-watersheds described below.

- *Taylor River Sub-watershed*. The largest of the sub-watersheds, the Taylor River Sub-watershed contains eleven named perennial watercourses including Ash Brook, Clay Brook, Grapevine Run, and Kenney Brook. The entire watershed area is 14,437 acres, of which 5,138 acres are in Hampton Falls.

- *Hampton Falls River Sub-watershed*. Within Hampton Falls, the Hampton Falls River Sub-watershed contains two perennial watercourses and five ponds. One perennial watercourse is unnamed, and the other is Winkley Brook. Big Dodge Pond (also known as Whittier Pond) and a series of four ponds named the Hampton Falls Ponds are all located along the Hampton Falls River. The entire watershed area is 3,996 acres, of which 1,577 acres are in Hampton Falls.

- *Brown's River Sub-watershed.* The Brown's River Sub-watershed contains a large area of salt marshes. Swains Creek and two unnamed watercourses are located within the watershed. There are no surface water bodies in the watershed. The total watershed area is 1,517 acres, of which 691 acres fall in Hampton Falls.

Stream Buffers

A stream buffer, also known as a riparian buffer, is a vegetated area alongside surface waters. The vegetative zone serves a buffer, filtering pollutants entering the water from runoff from parking lots, roads, and yards. The study *Stream Buffer Characterization in Coastal NH* by the University of New Hampshire Complex Systems Research Center (Justice, 2007) evaluated the condition of 150 foot and 300-foot buffers to rivers and streams in Hampton Falls. The data from this study is summarized in Table 3. The Center for Watershed Protection recommends the protection of vegetated stream buffers to help filter polluted runoff, control erosion, and provide essential fish and wildlife habitat.

Table 3. Condition of 150-foot and 300-foot buffers to rivers and streams in Hampton Falls

Buffer Width	Buffer (acres)	% intact	% mostly intact	% somewhat intact	% altered
150 foot buffer	774	8.9	1.0	0.2	89.9
300 foot buffer	1,752	16.9	4.4	1.3	77.4

Dams

Hampton Falls has a total of 11 active dams, the largest of which is the Taylor River Dam with an impoundment area of 30 acres and a dam height of 21 feet. All dams in Hampton Falls are classified as

having low or very low hazard ratings, meaning there is minimal potential risk to property or loss of life if a dam were to fail. None of the dams within the town are considered flood control dams. Dam locations are on Map 4, Appendix B.

NH Shoreland Water Quality Protection Act

The NH DES Shoreland Program implements RSA 483-B, the Comprehensive Shoreland Water Quality Protection Act (CSPA). The CSPA establishes minimum standards for land use activities within the Protected Shoreland, Natural Woodland Buffer, and Waterfront Buffer. The Protected Shoreland extends 250 feet from the reference line located at the highest observable tide line for coastal waters or ordinary high-water mark for lakes and ponds. The Natural Woodland Buffer extends from 50 to 100 feet from the reference line, and the Waterfront Buffer extends 50 feet from the reference line. For more information, refer to the NHDES Shoreland Program website: http://des.nh.gov/organization/divisions/water/wetlands/cspa/.

In Hampton Falls, the Hampton River, Taylor River, Taylor River Ponds, and Big Dodge Pond are under the jurisdiction of the NH Shoreland Water Quality Protection Act.

Table 4. Public waterbodies under jurisdiction of the NH Shoreland Water Quality Protection Act (NHDES, 2016)

Waterbody	*Type*	*Comment*	*Areas (acres or miles)*
Big Dodge Pond	Impoundment of 10 acres or more	Whittier Pond	18 acres
Taylor River Pond (dam)	Impoundment of 10 acres or more	--	45 acres
Taylor River Pond	Impoundment of 10 acres or more	Coffins Mill	10 acres
Hampton River	Fourth order and higher rivers	At juncture with Taylor River	1 mile
Taylor River	Fourth order and higher rivers	At juncture wish Ash Brook in Hampton	10.6 miles

3.3 Water Quality

Surface Water Quality Assessments

The NHDES Surface Water Quality Assessment Program submits two surface water quality documents (303(b) Report and 303(d) List) to the US Environmental Protection Agency every two years as part of an integrated report on water quality (NHDES, 2016). The most recently adopted report for New Hampshire is 2016. Surface water bodies are listed under one of five categories based on the availability of data and the ability of that waterbody to support designated uses. Designated uses include aquatic life, swimming, boating and fish consumption. Impaired waters, or waters not meeting state water quality standards, may

be considered either severely impaired for one or more designated uses or marginally impaired for one or more designated uses. It is possible that some waters are identified as being impaired or not impaired simply due to a lack of available data.

Results of the 2016 report for the Hampton Falls segments of the Great-Brook-Exeter River, Taylor River-Hampton River, and Hampton Harbor watersheds are known to be slightly impaired or severely impaired. Segments of the Hampton Falls River, Taylor River, Browns River, Back Creek, and Swains Creek in Hampton Falls were listed as impaired waters. Information on impaired waters is available on the NH DES website: https://www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm

Effects of Development on Surface Water Quality

Non-Point Source Pollution
Non-point source pollution is collected in surface runoff when rainfall, snowmelt, or irrigation flows over land or through the ground, mobilizes pollutants, and introduces them into surface water bodies or groundwater. The impacts of nonpoint source pollutants on surface water and groundwater vary temporally and spatially. However, it is well documented in scientific literature that nonpoint source pollutants at certain concentrations can have harmful effects on human health, drinking water supplies, recreation, fisheries, and wildlife. Major sources of non-point source pollution include stormwater runoff, fertilizer application, and septic systems.

3.4 Floodplains and Flood Hazard Areas

Floodplains

Floodplains are low-lying areas adjacent to surface water which may experience flooding during periods of heavy rain or rapid snowmelt. Hampton Falls has 1,541.8 acres of land within the 100-year floodplain and 45.6 acres are within the 500-year floodplain (Zone X500). New Hampshire Homeland Security and Emergency Management has determined flooding is a high hazard risk in Hampton Falls due to the high severity and high frequency of flooding to occur in a 25-year period. Structures within the 100-year floodplain, culverts, basement, erodible soils, and repetitively flooded roads are more prone to flooding. Hampton Falls has experienced several severe inland and coastal flooding events in the past decade.

Floodplain Ordinance

Article 3, Section 9 Floodplain Development Ordinance provides protection of floodplains and flood hazard areas. The Floodplain Development Ordinance applies to all lands considered special flood hazard areas by the Federal Emergency Management Agency (FEMA) 2005 Flood Insurance Rate Maps (FIRM).

Areas of Special Flood Hazard are all lands in the floodplain subject to a 1 percent or greater possibility of flooding in any given year. Following Article 3, Section 9.5, building permits for all new construction or substantial improvements for proposed building sites in the special flood hazard areas are subject to review by the building inspector.

Flood Hazard Areas

In Hampton Falls, the primary flood hazard areas are within the 100-year and 500-year floodplain and areas affected by wave action in immediate coastal areas, as identified on the Digital Flood Insurance

Rate Map (DFIRM). Several homes and businesses are located in flood prone areas. Development in flood prone areas is problematic as it:

- risks damage to life and property;
- reduces flood storage capacity of the floodplain, thus intensifying flood conditions elsewhere; and
- contributes to water quality problems.

These problems can be controlled or alleviated through the adoption of floodplain regulations as part of the National Flood Insurance Program. Hampton Falls has adopted such regulations in Article III, Special Flood Hazard Area of the zoning ordinance, which require any development to meet strict federal building codes specific to construction in flood hazard areas. These regulations discourage unsound development in the flood hazard areas by protecting the functions of the 100-year floodplain.

3.5 Stormwater Management

In New Hampshire and Rockingham County, stormwater runoff is the single, largest source of water pollution (NH Department of Environmental Services, 2008). Stormwater runoff refers to rain and snowmelt that runs off impervious surfaces, such as buildings, roads, and parking lots, and over land that ends up in nearby streams, rivers, lakes, wetlands, or tidal waters. This runoff carries pollutants such as sediment, road salt, chemicals, fertilizers and other harmful substances that can degrade water quality if it is not treated.

In the region, 47.9 percent of the waterbodies with documented water quality problems are related to the pollutants commonly found in stormwater. An additional 42.2 percent of waterbodies have problems related to an intermingling of stormwater and other types of pollutants sources. The water pollution can be directly related to stormwater runoff and impervious surface coverage. See Section 3.3 for more detail.

MS4 Stormwater Permit

The federal MS4 Stormwater Permit for municipalities is formally known as the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4). This federal permit is intended to address and reduce stormwater pollution originating from municipally-owned infrastructure, including local roads. This reduction in stormwater pollution reaching surface waters is accomplished by:

- Requiring municipalities to identify sources of stormwater.
- Monitoring and retrofitting existing stormwater sources to reduce pollution.
- Eliminating new sources of stormwater.
- Conducting public outreach about how to reduce stormwater pollution.

In 2013, EPA released new draft permit requirements and the areas required to comply with the new permit were amended due to changes in population from the 2000 Census to the 2010 Census. In 2013, Hampton Falls was granted a waiver from needing to comply with the permit due it its small urbanized area, however, this waiver may be revoked by EPA at any time. If the population were to increase. It is in the best interest of the Town to proactively minimize additional stormwater loading for both water quality purposes and loading onto Town roads and property because the Town would be responsible for treating under the MS4 Permit.

4.0 Wetlands

A diverse range of wetlands are found in Hampton Falls; including, tidal marshes, mud flats, freshwater swamps, and bogs. Hampton Falls began protecting wetland resources at the local level through zoning in 1988.

4.1 Functions and Values of Wetlands

RSA 482-A:2 defines a wetland as an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetlands are valuable resources and worthy of protection from degradation or inappropriate uses. Wetlands provide critical ecological and socially valuable functions including:

- Flood water and stormwater storage areas;
- Removal and storage of silt and other sediments;
- Removal and uptake of nutrients and pollutants from surface waters; and
- Habitat and reproductive areas for plants, fish and wildlife.

Hampton Falls has significant areas of freshwater, tidally influenced and tidal wetlands. Tidal wetlands or saltwater marshes are subject to daily tidal flooding of sea water. Tidally influenced wetlands are also subject to daily tidal cycles but contain brackish or fresh water.

Wetlands cover 29 percent of the total area of Hampton Falls. Tidal and tidally influenced wetlands are found in the southeastern portion of town, while freshwater most freshwater wetlands are located in the northern portion of town. Refer to Map 4-Surface Water Resources in Appendix B.

4.2 Freshwater Wetlands

Freshwater wetlands cover 1,253 acres of land or 15.5 percent of the total area of Hampton Falls. Freshwater wetlands are located in the interior areas of town adjacent to the Hampton Falls and Taylor River and their tributaries or as isolated wetlands in upland areas.

Freshwater wetland types include: emergent (standing water, wet meadow), forested (dominant vegetation, lacustrine (lake environments), palustrine (swamps, marshes, potholes, bogs, or fens) and scrub-shrub (dominant vegetation).

4.3 Tidal Wetlands

Because of its coastal location, Hampton Falls has a large amount of tidal wetlands. Tidal marshes cover 1,086.7 acres or nearly 13.4 percent of total land area of Hampton Falls. Tidal and tidally influenced wetlands are located in the Hampton Falls River and Browns River drainage. Tidal or saltwater wetland types include: estuarine (vegetated and non-vegetated brackish and saltwater marsh, shrubs, beach, bar, shoal or flat) and marine (deep water, open water estuary, bay, sound, open ocean). The tidal marsh in Hampton Falls is part of the Hampton-Seabrook Estuary.

4.4 Prime Wetlands

Following the 2006 Prime Wetland Inventory Report completed by Gove Environmental Services (GES), these wetlands were evaluated using the *Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire* (1991, the NH Method). The fourteen functions and values outlined in the NH Method were evaluated for the seven candidate wetlands in Hampton Falls, including: ecological integrity, wetland wildlife habitat, fish habitat, education potential, visual/aesthetic quality, water-based recreation, flood control potential, groundwater use potential, sediment trapping, nutrient attenuation, shoreline anchoring and dissipation of erosive forces, urban quality of life, historical site potential, and noteworthiness.

In 2008, West Environmental Inc. (WEI) worked with the Hampton Falls Conservation Commission to identify six additional wetlands and prepare the Town's Prime Wetlands Designation (PWD) zoning amendment.[11] The study recommended ten wetlands for prime designation. These wetlands comprise 1,270 acres or 15.7 percent of the wetlands evaluated in the study.

Table 5. Wetlands evaluated as part of the 2006 GES and 2008 WEI prime wetlands studies. (All 10 wetlands have been recommended for designation as prime wetlands under the GES and/or WEI studies.)

Wetland Name	Acres	% total area
Big Dodge Pond Complexes	73.5	0.9
Grapevine Run Complex	40.7	0.5
Grapevine Run Headwaters	113	1.4
Hampton Falls River Complex	40.5	0.5
Hampton Falls Salt Marsh	Undetermined	-
Taylor River Complex (Central)	244.9	3.0
Taylor River Complex (West)	221.4	2.7
Taylor River Headwaters Complex	141.5	1.8
The Cove Complex	186.9	2.3
Winkley Brook Complex	208.4	2.6
Total	***1,270.8***	***15.7***

The Hampton Falls Salt Marsh Complex is within the Hampton Falls River and Browns River sub-watersheds. The wetland complex consists of a braided network of flats, marsh, and channels. The sheer size of this wetland complex, coupled with the rarity of salt marsh in New Hampshire, greatly elevates the value of this wetland. Many other wetlands in Hampton Falls drain to this wetland system. This wetland supports abundant populations of wading birds and other waterfowl, serves as a breeding ground and habitat for many species of baitfish and crustaceans, and is important habitat for larger fish species such as striped bass. Additionally, this wetland complex (contiguous with the Hampton Salt Marsh Complex) provides significant flood storage and protection from tidal storm surges. While the Hampton Falls Salt

Marsh Complex is protected by a state-regulated tidal buffer zone[1], it is also protected by additional local regulations in the Hampton Falls Zoning Ordinance.

4.5 Protection and Threats

Local Protection

In 1988, Hampton Falls adopted Article III Section 8 Wetlands Conservation District to protect the ecological integrity and function of wetlands through regulation and land use guidance within wetlands and in areas adjacent to wetlands. This ordinance was amended in 2015. The purpose of the ordinance is to protect the valuable functions provided by wetlands and their buffers including habitat for fish, wildlife and flora, ground water recharge and quality, stormwater and flood control, nutrient and pollution reduction, recreation and aesthetic enjoyment.

The ordinance provides for a 10-foot vegetated buffer from the boundary line of surface waters, non-tidal wetlands, very poorly drained soils and poorly drained soils. State statutes apply to prime wetlands, coastal waters and tidal wetlands. The ordinance also limits the percent of wetlands, very poorly drained soils and poorly drained soils that can be included in the minimum area for new lots, and requires setbacks for septic systems, structures and impervious surfaces.

The following uses are permitted in inland (freshwater) wetlands consistent with best management practices: forestry and tree farming, agriculture, wells for water supply and water impoundments, wildlife habitat management, conservation areas, nature trails, parks and passive recreation. By Special Use Permit roads, driveways, access ways, utilities and power lines may be constructed providing certain conditions are met, impacts are minimized, and remediation is provided where indicated.

State Protection

The State regulates wetlands by RSA 482-A and administers a wetlands permitting program through NH Department of Environmental Services (NH DES), Wetlands Bureau under Env-Wt 100-800 Wetlands Rules. Since 1967, New Hampshire has required permits for activities that impact or result in the loss of wetlands. While state law requires that dredging and filling of jurisdictional wetlands must be avoided and impacts minimized, more than 2,000 permits each year are issued by the State of New Hampshire for unavoidable impacts.

Threats

The Planning Board and Conservation Commission recognize the ongoing need to protect wetlands in Hampton Falls and work diligently to minimize the loss of this critical natural resource. Although state and local protection exists, valuable wetlands are nonetheless lost to development each year. Land development and other human activities that require dredging, filling, and construction in wetland and surface water resources can result in significant impacts on the environment. These impacts affect the functions and values of wetlands and surface waters, such as wildlife habitat, water quality renovation, or flood storage.

[1] Wt-202.90 "Tidal Buffer Zone" means the area extending landward 100 feet from the highest observable tide line. This area can contain wetlands, transitional areas, and natural and developed upland areas.

In the past, the salt marsh system was altered often creating restrictions in the natural flow of water and tide. Hampton Falls has taken steps to actively restore the quality of the saltmarsh. The Audubon Society owns parcels of conservation land that are scattered throughout the saltmarsh (Hampton Falls Master Plan, 2003). The NH Department of Environmental Services, Wetlands Bureau implements the state's Wetland Mitigation Program. The purpose of mitigation is to achieve no net loss of wetland functions and values resulting from development and other forms of land alteration for which the NHDES issues a permit.

Invasive Species Control

Several non-native invasive plants, including perennial pepperweed, Asiatic bittersweet, Japanese knotweed, and glossy buckthorn, disrupt ecosystems within Hampton Falls (Hampton Fall Conservation Commission, 2009). Hampton Falls residents are urged to contact the Hampton Falls Conservation Commission for more information on controlling invasive species. The Coastal Watershed Invasive Plant Partnership (CWIPP) within the New Hampshire Coastal Program is a partnership of state and federal agencies and nonprofit conservation groups. The CWIPP was formed to reduce the threat of invasive species in New Hampshire's coastal watersheds.
https://www.des.nh.gov/organization/divisions/water/wmb/coastal/cwipp/

5.0 Groundwater Resources and Water Supply

5.1 Groundwater Resources

Protection

In Hampton Falls, the entire population is dependent upon groundwater as a drinking supply; therefore, the protection and wise use of water resources are of critical concern to the Town. It is the responsibility of the Town to take reasonable precautions to protect groundwater resources from the potential harmful effects of certain land use and activities to protect the health and general welfare of the community.

Aquifers

Groundwater is recharged through precipitation, snowmelt, and surface water infiltration. Aquifers are found where these materials and fractures are filled or saturated with water. Aquifers of medium to high potential for groundwater yield occur in the seacoast region as glacial deposits of sand and gravel (unconsolidated materials) or in fractured bedrock.

Stratified Drift Aquifer

Unconsolidated materials, called stratified drift deposits, contain sorted layers of gravel, sand, silt and clay. These deposits have high potential groundwater yield due to their permeability, or the abundance of interconnected pore spaces where water is stored.

1n 1993, the United State Geological Survey (USGS) completed a study of the region's groundwater resources. The report, *Geohydrology and Water Quality of Stratified Drift Aquifers in the Lower Merrimack and Coastal River Basins, Southeastern NH*, identified three stratified drift aquifers within Hampton Falls. The report also estimates the transmissivity of each aquifer. Transmissivity is a measure of the rate of the flow of water. The Great Hill Aquifer spans an area of 110 acres with a saturated thickness of 52 feet and is located entirely within Hampton Falls. The Great Hill Aquifer has a

transmissivity of less than 1,000 feet squared per day and is comprised of coarse-grained and fine-grained stratified drift. The Newfound Hill Aquifer is located in the southwest corner of Hampton Falls and extends into Seabrook. The aquifer spans 44 acres, of which 34 acres fall in Hampton Falls. The aquifer has a saturated thickness of 26 ft and a transmissivity of less than 1,000 feet squared per day, and mainly consists of materials ranging from medium sand to cobble. The Crank Road Aquifer is located towards the center of Hampton Falls and is 60 acres in size. The saturated thickness of the aquifer is unknown, and the transmissivity is estimated to be less than 1,000 feet squared per day.

5.2 Sustainability and Availability

Sustainability of water resources requires that water use be balanced with water availability, ensuring that our natural water systems (watershed, groundwater, lakes, rivers, wetlands) and the systems we have built to manage, clean and deliver water are able to tolerate disturbance, restore balance, and adapt to change. The New Hampshire Water Sustainability Commission was established by Governor John Lynch in April 2011 and charged with developing recommendations to ensure the quality and quantity of New Hampshire's water. The Commission released its final report in December 2012, and recommended municipalities adopt a stormwater ordinance to treat and minimize stormwater runoff; evaluate existing water infrastructure and develop management plans that reduce the need for investment; encourage innovative technologies that reduce costs or water consumption; explore the benefits of cooperative agreements between municipalities to address water-related needs, including stormwater management; and, promote landscaping that uses native plants and replaces lawns with less water-intensive planting.

In 2017, the Town of Hampton Falls supported a successful Application for Groundwater Reclassification submitted by the Town of Seabrook to the NH Department of Environmental Services. Seabrook's municipal water system relies on wells that include wellhead protection areas that fall within the boundaries of Hampton Falls. Staff from the Town of Hampton Falls participated in surveys of potential contamination sources within the wellhead protection areas. The Town of Hampton Falls has adopted an Aquifer Protection Ordinance that encompasses the aquifer serving the wells used by the Town of Seabrook.

5.3 Drinking Water Supply

Hampton Falls residents receive their water from groundwater sources. A majority of residents use domestic water wells; however, the Seabrook Water Department supplies water to several residential homes located along the Seabrook border. There are eleven non-community, transient systems which are considered public water systems by RSA 485:1. These wells serve only their businesses. Avesta Housing has its own well.

In the Master Plan Survey 32% of respondents agreed that the Town should finance water infrastructure along the NH Route 1 corridor, while 67% of respondents agreed that the Town should allow existing and potential businesses to finance water infrastructure along the NH Route 1 corridor, subject to an analysis of the impacts of an increase water use and in groundwater withdrawal from aquifers.

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5.4 Local Protections

Aquifer Protection District Ordinance

Hampton Falls adopted an Aquifer Protection District Ordinance (Article III, Section 13) in 2007 The purpose of this ordinance is to protect, preserve and maintain potential groundwater sources and recharge areas within known aquifers from land use practices which would contaminate or reduce the aquifer. The ordinance acknowledges that future growth and development of the town, in accordance with the Master Plan, must assure the future availability of private and public water supplies and encourage uses that can be appropriately and safely located in aquifer recharge areas. The ordinance provides development related standards including requirements for the following:

Table 6: Description of Aquifer Protect District Requirements

Standard	Description of Requirements
Minimum Lot Size	Two acres, or 87,120 square feet
Hydrogeologic Study	A hydrogeologic study shall be performed by a registered hydrogeologist for development proposals within the Aquifer Protection District
Maximum Lot Coverage	Impervious surfaces: 20% of a single lot.
Use of De-icing Chemicals	Dumping of snow containing de-icing chemicals prohibited, except if permitted as a non-conforming use
Prohibited Uses	Twelve uses that pose a high risk of contamination of groundwater and soils, including disposal of solid waste, storage and disposal of hazardous waste and septage, subsurface storage of petroleum, dry cleaning and engine repair
Permitted Uses	Eight uses permitted in accordance with the purposes and intent of the ordinance, including residential development, natural resource conservation, farming, and outdoor recreation
Special Uses	Industrial, manufacturing and commercial uses; multi-family residential uses; sand and gravel excavation and other mining

6.0 Coastal Resources

6.1 Coastal Character

The coastline of New Hampshire is predominantly rocky with sandy beaches and some sand dunes. Directly inland from the coast are low hills, broad lowlands, and estuaries. Tidal marshes are widespread throughout the estuaries and behind the coastal beaches. Small low-gradient rivers, such as the Taylor River, drain most of these low lying areas. Great Bay, Hampton Harbor and the Piscataqua and Squamscott Rivers are prominent bodies of tidal water. The average daily tidal range of Hampton Harbor is 8.3 feet.[2]

6.2 Hampton-Seabrook Marsh and Estuary

The Hampton-Seabrook estuary lies within the Taylor River and Hampton River subwatershed of the greater Coastal watershed. The estuary is the largest tidal resource in New Hampshire and comprises 5,000 acres, of which 1,252 acres are in Hampton Falls. The estuary represents nearly 15.5 percent of Hampton Falls' total area and contains several water courses and waterbodies including Hampton River, Taylor River, Hampton Falls River and Brown's River. The marsh estuarine system provides habitat for several rare and endangered plants and animal species, migratory birds and other wildlife. It is an

[2] Rockingham County Soil Survey, U.S. Department of Agriculture Soil Conservation Service in cooperation with the New Hampshire Agricultural Experiment Station, 1994

important fish and shellfish production area. The marsh provides flood protection for adjacent uplands and protects water quality by trapping and removing pollutants from runoff. The tidal waterbodies and watercourses are also highly valued for open space, recreation, educational, historical and archeological purposes.

6.3 Salt Marsh Restoration Projects

The following are examples of the tremendous success that New Hampshire Natural Resource Conservation Service (NH NRCS) and its partners have had with salt marsh restoration along the New Hampshire coastline, as identified in the NH NRCS *Evaluation of Restorable Salt Marshes in New Hampshire* (2001). Salt marsh restoration projects that have been completed, are currently in progress, or have been identified in Hampton Falls are described below. For the vast majority of completed projects, NH NRCS provided biological and ecological guidance on native ecosystem restoration, engineering technical assistance on salt marsh hydrology and flood damage reduction, and cost-sharing through the NRCS Wetlands Reserve Program.

7.0 Wildlife and Ecological Resources

7.1 Wildlife and Ecological Resources

NH Wildlife Action Plan

The New Hampshire Fish and Game Department collaborated with partners in the conservation community to revise the state's Wildlife Action Plan in 2015. The Plan, which was mandated and funded by the federal government through the State Wildlife Grants Program, provides New Hampshire decision-makers with important tools for restoring and maintaining critical habitats and populations of the state's species of conservation and management concern. The New Hampshire Wildlife Action Plan is at: https://wildlife.state.nh.us/wildlife/wap.html

Refer to Table 6 below for a summary of natural habitat communities and protected lands and as shown on Map 7-New Hampshire's Wildlife Action Plan, Appendix B.

Table 7. Important ecological communities identified in the NH Wildlife Action Plan by the NH Fish & Game (2015)

Wildlife Action Plan	Acres	Conserved Acres	% Conserved
Highest ranked habitat in biological region	2038	494	24.2
Highest ranked habitat in NH (by condition)	847	155	18.3
Supporting landscapes	1552	279	18

As reported in the *New Hampshire Wildlife Action Plan*, Hampton Falls has the following natural habitat communities. Collectively these natural habitat communities comprise nearly 55 percent of the total area of Hampton Falls.

Below are descriptions of the natural habitat communities in Hampton Falls. More information can be found in the 2015 Wildlife Action Plan.

- *Appalachian Oak Pine.* Appalachian oak-pine forests include oak, hickory, mountain laurel, and sugar maple, and are typically associated with warmer and drier climatic conditions found mostly below 900 ft. elevation in southern New Hampshire. These forests are fire-influenced landscapes with nutrient-poor, dry, sandy soils. They are home to hognose snakes, whip-poor-wills, silver-haired bats and other species of concern. Intense development has dramatically reduced the area of this forest type, which comprises some 10% of the state's total land area, in New Hampshire's southern tier.

- *Floodplain Forests.* Floodplain forests occur in valleys adjacent to river channels and are prone to periodic flooding. Also referred to as riparian forests, they support diverse natural communities, protect and enhance water quality by filtering and sequestering pollution, and control erosion and sediment. Their rich soils have been used in agriculture for centuries, such that many floodplains are no longer forested wildlife habitat.

- *Grasslands.* Extensive grasslands are defined as areas greater than 10 hectares (~ 25 acres) that are dominated by grasses, wildflowers, and sedges with little shrub or tree cover. Some examples include hayfields, pastures, and cropland (cornfields and other row crops). Grasslands in NH must be mowed to prevent them from becoming shrublands or forests. Only 8 percent of NH grasslands are currently under conservation easements.

- *Temperate Swamp.* Temperate swamps were included as a subset of peatlands in the 2005 Wildlife Action Plan; however, these ecosystems are unique from peatlands. The greatest concentration of temperate swamps is in the Seacoast region. The dominant vegetation in theses swamps includes red maple, tall shrubs, and Atlantic white cedar which are rare in New Hampshire.

- *Peatlands.* Peatlands have water with low nutrient content and higher acidity caused by limited groundwater input and surface runoff. Conservation of the 11 different natural communities that comprise peatlands is vital to the continued existence of many rare plant and wildlife species in New Hampshire. The most challenging issues facing peatlands habitat are development; altered hydrology (amount and flow of water); non-point source pollutants such as road salt, lawn fertilizers, and pesticides; and unsustainable forest harvesting.

- *Salt Marsh*. Salt marshes are grass-dominated tidal wetlands existing in the transition zone between ocean and upland. They are among the most productive ecosystems in the world and are nurseries for several fisheries. Salt marshes also help protect coastal areas from storm surges.

- *Wet Meadow/Shrub Wetland.* Emergent marsh and shrub swamp systems have a broad range of flood regimes, often controlled by the presence or departure of beavers. This system, which is an important food source for many species, is often grouped into three broad habitat categories: wet meadows, emergent marshes, and scrub-shrub wetlands. Marsh and wetlands filter pollutants, preventing them from getting into local streams, and help hold water to reduce flooding.

NH Natural Heritage Bureau

The NH Natural Heritage Bureau Rare Plants, Rare Animals, and Exemplary Natural Communities in New Hampshire Towns (2013) report lists the following species and communities for Hampton Falls: https://www.nhdfl.org/DRED/media/Documents/TownList-(1).pdf

- 6 Estuarine Natural Communities
- 25 Plants
- 3 Birds (vertebrates)
- 3 Fish (vertebrate)
- 2 Insects (invertebrates)
- State Listed: 7 threatened species, 22 endangered species, 6 species of concern
- Federal listed: 0 threatened species

The complete listing of species by the Natural Heritage Bureau is included in Appendix A.

7.2 Fisheries

Public access to Hampton Falls River and Hampton Harbor is provided at the Depot Road boat launch. These areas are used for recreation purposes, such as fishing. The most commonly targeted species for fishing in the estuary and along the coastline include Striped Bass and Winter Flounder. Eels, Alewife and Shad are found in the estuary but are rarely harvested.

7.3 Shellfish

In New Hampshire, the management of shellfish sanitation, harvesting, and resource health is divided among three state agencies. DES is responsible for determining which growing areas meet standards for human consumption of molluscan shellfish. The Fish and Game Department is responsible for issuing harvesting licenses, managing the shellfish resources, and enforcing the open/closed decisions made by DES. The Department of Health of Human Services regulates various aspects of the commercial shellfish industry, including shucking, packing and shipping. The NHDES Bureau of Environmental and Occupational Health issues shellfish and finfish consumption advisories (for high levels of mercury) and general safe eating guidelines for common species of saltwater and freshwater species. The status of shellfish beds in the Hampton-Seabrook Estuary is decided on a weekly basis.

Shellfish and crustaceans harvested from the tidal waters of Hampton Falls include:

Shellfish	***Crustaceans***
Blue Mussels	Rock/Jonah Crabs
Softshell Clams	Green Crabs
Sea Scallops	Horseshore Crabs
Oysters	Lobsters
Whelks	Northern Shrimp

Department of Environmental Services Shellfish Program

The NH Department of Environmental Services (DES) established the Shellfish Program to ensure that the shellfish harvested from the state's tidal waters meet standards for consumption. https://www.des.nh.gov/organization/divisions/water/wmb/shellfish/index.htm

To ensure the protection of public health, the Shellfish Program maintains a number of monitoring programs in the seacoast area, including in Hampton Falls/Seabrook Harbor. Supplemental sampling of seawater and shellfish is conducted following pollution events such as heavy rain, accidental sewage discharges, and others, in order to properly manage temporary closures of harvesting areas.

NH Department of Health and Human Services, Bureau of Food Protection

The NH Bureau of Food Protection ensures that all shellfish harvested from New Hampshire coastal waters is safe for consumption. The Bureau works in cooperation with the Department of Environmental Services Shellfish Program, with other state agencies and UNH Jackson Estuarine Laboratory to monitor and enforce closings of the Hampton Falls Harbor and sections of the Little Bay clam flats on a conditional basis.

8.0 Forestland Resources

8.1 Forests and Forest Resources

Forested land is a major renewable resource which contributes environmentally to the Town. The amount of forested land in Hampton Falls has increased from 4,293 acres in 1962 to 4,391 acres in 2015. Proper management of both public and privately-owned forests through forest management plans will help ensure the continued availability of this resource for habitat.

Current Forested Areas

Currently, the Town of Hampton Falls owns approximately 111 acres of Town Forest on Drinkwater Road. Additionally, there are six designated tree farms (approximately 520 acres of forest in total) within Hampton Falls which have long-term forest management plans. In a survey completed by the Planning Board in 2015, an overwhelming 93% of Hampton Falls residents agreed that agricultural and forestry practices should be encouraged. In the 2015 fall and 2016 winter. Forest Management Plans were completed for the Raspberry Farm and Town Forest. Refer to Map 9-Open Space and Unfragmented Lands in Appendix B.

Aesthetic and Scenic Quality and Rural Character

In Seacoast New Hampshire this is a rarity and significant for protection efforts. The forested landscapes of New Hampshire help define and enrich our quality of life by providing social, ecological and economic benefits. Forests are also a living landscape in our region where managed woodlands, farms, pastures, meadows and fields are an integral part of the landscape. Forested lands help sustain dynamic communities with clean water and air, forest and agricultural products, habitat for native plants and animals, scenic beauty, jobs, and recreational opportunities.

American Liberty Elm Tree Restoration Project

In 2007 an elm tree planting program was established in Hampton Falls with the planting of six elm trees along Route 88 and a Liberty Tree Memorial Plaque and tree on the Town Common. The goal of the project is to restore the historic elm tree in the Town that were lost to Dutch Elm Disease. The Hampton Falls Board of Selectmen has continued the project as part of the Town's Tercentenary Celebration in 2022 with the goal of planting up to 100 Liberty Elms throughout the town. The trees have been purchased from the Liberty Elm Research Institute and will be delivered in 2020.

9.0 Open Space and Land Conservation

9.1 Overview

By traditional definition, open space can be defined as land which has not been developed or altered from its natural state. By broader definition, open space may also include farms, playing fields and recreational facilities, reclaimed lands, and stormwater retention areas. The value and benefits of open space to a community is diverse including: scenic beauty, wildlife habitat, aquifer protection, buffers between developed areas, flood control, recreational opportunities, forestry, and agriculture. For this Chapter, open space is any land which the town believes of value and benefit to protect from development.

As reported in the Table 8, below, Hampton Falls has approximately 48% or 3,856 acres of open space lands. With the addition of water and wetlands, open space lands increase to almost 79% or 6,374.6 acres of the total area of the town.

Table 8. Open Space by Land Cover and Land Use in 2015

Land Cover/Use	Acres	% total area
Active Agricultural	651.1	8.1%
Forest	2,943.8	36.4%
Vacant/Idle	261.4	3.2%
Sub-total	***3856.3***	***47.7%***
Water	161.7	2.0%
Wetlands	2,356.6	29.2%
Total Open Space	***6,374.6***	***78.9%***
Total Land and Water	***8,078.0***	

To maintain the value and benefit to the community, open space must have some sort of permanent legal protection which guarantees the integrity of the land and its resources. Although the town may expend money to acquire and preserve open space, which also generates little tax revenue, the benefits outweigh the costs. Open space improves the quality of life and character of a community, enhances property values overall, and requires less in municipal services (i.e. roads, sewers, schools, emergency services). The preservation of open space should be viewed as an asset to the town, an investment in the future sustainability of land and resources, and a balance to the demands of growth. In support of protecting open space while still allowing property owners to develop their land, the town established a Residential Open-space – Conservation Subdivision ordinance in 2007. The purpose of this ordinance is: "(1) encourage environmentally sound planning to protect open space and natural resources and create attractive living environments and (2) through creative placement of dwelling units, discourage consumption of scenic, forested, agricultural, and recreational land for development, thus maintaining the rural character…"

Town residents appear to support the use of at least some open space for passive recreation. Of the residents surveyed, 78% of residents either agreed or were neutral that the Town should raise money to acquire additional open land for conservation, and 60% agree that the Town should identify and maintain conservation areas, especially those with walking trails. Nearly all residents, or 95%, stated that maintaining Hampton Falls rural character is important.

As growth continues in the Seacoast region, development is working its way into difficult areas, those with marginal soils, adjacent to wetlands and aquifers, and with other environmental constraints. It has been believed in the past that these lands would remain open space because of the expense and difficulty to develop them; however, these marginal lands are now being developed, particularly in areas where water and services have been extended.

Historically, open space has been lost primarily through the development of farmlands and tidal wetlands. Today with improved state and local regulation and land acquisition by the town, state agencies and private environmental organizations, approximately 1,300 acres of tidal wetlands are preserved in Hampton Falls.

Protection of Open Space

In Hampton Falls, the Town boards, especially the Conservation Commission, play an integral role in protecting natural resources, including open space. In the past, the Conservation Commission has held workshops and distributed brochures on conservation practices to land owners.

The Town has established open space and land conservation policies in Article III. Wetlands Conservation District and Article III Section 5 which defines the minimum amount of open space required in each zoning district. In order to preserve the little remaining open space, the town should consider adopting innovative land use controls, both in ordinance and regulations, to promote open space preservation. The town may also consider implementing a transfer of development rights (TDR) program to further encourage voluntary open space preservation.

9.2 Conservation Lands

In the last twenty years Hampton Falls has conserved the 14 parcels, totaling approximately 296 acres, listed in Table 9.

Table 9. Town-owned and Privately-owned Conservation Lands

Name of Last Owner	Location	Tax Map & Lot	Acreage	Land Type	Year Acquired
Janvrin	Parsonage Road	2-16	14.17	forest	2004
Janvrin	Drinkwater Road (Town Forest)	4-7	107.4	forest	1978
Merrill	Depot Road	3-24	2.50	marsh	2005
Heal	Depot Road	3-26	3.50	marsh	2005
Niebling	Nason Road	4-57	8.00	forest	2004
Applecrest	Route 88	5-14	102.00	farm	2005
Hurd	Taylor River	5-41	12.00	forest	2005
Hurd	Taylor River	6-63	6.00	forest	2005
Bates	Wild Pasture Road, Kensington	6-18	45.00	forest	1989
Hamel	Sanborn Road	6-2	2.00	forest	1997
Bryer	Off Exeter Road	6-68	6.04	forest	1987
Tonry	Exeter Road	6-34	65.09	forest	2007
Tonry	Exeter Road	6-36-02	125.00	forest	2007
Tonry	Exeter Road	6-36-03	15.75	forest	2007
Kopka	Marsh Lane	9-9	14.00	marsh, upland	2007
Wheeler	Route 84	1-53	45.00	forest	2010

9.3 Goals and Objectives for Land Protection

Hampton Falls Conservation & Public Lands Inventory

In 2005, Hampton Falls received assistance from the Piscataqua Region Estuaries Project and Rockingham Planning Commission to complete an assessment of prime wetlands in the town. In 2007, Hampton Falls received a grant from the New Hampshire Coastal Program at the Department of Environmental Services to help purchase 14 acres of land along the Taylor River and enlarge the Marsh Lane Preserve (NHDES, 2007).

9.4 Preservation Techniques for Consideration

Hampton Falls as well as its landowners and citizens may have similar reasons for protecting certain lands from development and for preserving vital natural resources. Depending on what type of protection and what is being protected, there are several methods for long-term conservation, including conservation easements, deed restrictions, or transferring full ownership to the town or a local or regional land trust such as the Southeast Land Trust of New Hampshire. www.seltnh.org

- *Conservation easements* allow a landowner to retain ownership while ensuring the permanent conservation of a property. A conservation easement limits the uses of the property and conveys certain rights to a qualified non-profit organization like the Southeast Land Trust or to a governmental agency, who agrees to monitor and enforce the terms of the easement.
- *Deed restrictions* are placed on a property at the time of conveyance to another party. Deed restrictions are only enforceable by the landowner and the landowner's heirs and adjacent landowners who benefit from the restriction. Deed restrictions are simpler to execute than conservation easements, but do not offer as strong protection of the land and its resources.
- *Transferring full ownership* of land to the town or another qualified conservation organization, either through a donation, will, or sale, can best secure the long-term conservation of certain properties.

10.0 Regional Land Conservation Plans

10.1 The Land Conservation Plan for New Hampshire's Coastal Watersheds

To advance the long-term protection of New Hampshire's coastal watersheds, the State of New Hampshire, acting through the NH Coastal Program and the NH Estuaries Project, developed a comprehensive, science-based land conservation plan for the state's coastal watersheds in 2006. The State also engaged a partnership of The Nature Conservancy, Society for the Protection of New Hampshire Forests, Rockingham Planning Commission, and Strafford Regional Planning Commission to develop the plan. The New Hampshire Charitable Foundation's Piscataqua Region supported this effort as a regional approach to setting land conservation priorities and strategies and provided funding for the project. The overarching goal of this land conservation plan is to focus conservation on those lands and waters that are most important for conserving living resources - native plants, animals, and natural communities - and water quality in the coastal watersheds.

The Land Conservation Plan for New Hampshire's Coastal Watersheds prioritizes coastal watershed areas and offers regional strategies for maintaining diverse wildlife habitat, abundant wetlands, clean water, productive forests, and outstanding recreational opportunities into the future. The Plan identifies

Conservation Focus Areas and Supporting Landscapes - areas considered to be of exceptional significance for the protection of living resources and water quality in the coastal watersheds including Forest Ecosystems, Freshwater Systems, Irreplaceable Coastal and Estuarine Resources, and Critical Plant and Wildlife Habitat. Each Conservation Focus Area is comprised of a Core Area that contains the essential natural resources for which the focus area was identified. The Supporting Landscapes are lands adjacent to and which provide support functions to the Core Focus Areas. The Plan is available online: https://www.epa.gov/sites/production/files/2015-09/documents/piscataqua_land_conservation_plan.pdf

Hampton Falls is part of three Core Focus Areas –Taylor River and The Cove, Upper Taylor River, and the Hampton Falls Marsh – totaling 10,350 acres in Hampton Falls and surrounding communities. The Core Focus Areas are described in detail in Table 10. Refer to Map 8 in Appendix B.

Table 10. Description of the Conservation Focus Areas located partially within Hampton Falls Land Conservation Plan for New Hampshire's Coastal Watersheds, 2006

Conservation Focus Area	Description of Resources	
Hampton Marsh (portions located in Hampton Falls, Seabrook and Salisbury, MA)	▪ 7,490 acres (total) ▪ Unfragmented forests blocks: 920 acres and 1,750 acres ▪ Coastal forest blocks: 1 of >500 acres, 1 of >1,000 acres ▪ High quality stream watersheds: 586.8 ▪ Coastal shoreline: 2.5 miles ▪ Estuarine shoreline: 2.2 miles ▪ Undeveloped shoreland (within 1,000 feet): 165 acres ▪ Saltmarsh: 3,310.8 ▪ Significant wildlife habitats: dunes, grassland, marsh, peatland, ridge/talus ▪ High yield aquifer: 30.5 acres ▪ Water supply: 3 public wells, 206.1 acres of wellhead protection areas ▪ Favorable gravel well sites: 11.9 acres ▪ Farmland Soils – 160.9 acres of prime, 77.8 acres of statewide importance ▪ Permanently protected lands (natural): 346 acres ▪ Permanently protected lands (managed forest): 518 acres ▪ Conserved lands (managed extractive uses): 10 acres	<u>Plants of Conservation Concern</u> Salt-marsh Gerardia, Missouri Rock Cress Sea-beach Needle Grass, Tall Wormwood Yellow Thistle, Gray's Umbrella Sedge Small Spike-rush, Salt-loving Spike-rush Hairy Hudsonia, Slender Blue Flag <u>Animals of Conservation Concern</u> Saltmarsh Sharp-tailed Sparrow Seaside Sparrow, Willet Piping Plover, Horned Lark Osprey, Common Tern, Arctic Tern <u>Exemplary Natural Communities</u> Bayberry-beach plum maritime shrubland (S1) Beach grass shrubland (S1) Brackish marsh (S2) Coastal inter-dunal marsh/swale (S1) Coastal shoreline strand/swale (S2) Dry Appalachian oak-hickory forest (S3) High and low salt marsh (S3) Maritime wooded dune (S1) Saline/brackish intertidal flat (S3) Saline/brackish subtidal channel/bay bottom (S3)
Taylor River and The Cove (portions located in Hampton Falls,	▪ 2,420 acres ▪ Unfragmented forests blocks: 70% of a 1,460 acre block and 80% of a 1,550	<u>Plants of Conservation Concern</u> Small-crested Sedge <u>Animals of Conservation Concern</u>

Kensington and Exeter)	acre block ▪ Aggregated forest block: part of a 11,800 acre block ▪ Rivers and streams: 6.4 miles of 1st order, 6.5 miles of 2nd order, 2.2 miles of 3rd order, 0.9 miles of 4th order ▪ High yield aquifer: 31.5 acres ▪ Water supply: 3 public wells, 83.9 acres of wellhead protection areas ▪ Favorable gravel well sites: 12.5 acres ▪ Farmland Soils – 323.2 acres of prime, 193.3 acres of statewide importance ▪ Permanently protected lands (managed forest): 305 acres ▪ Conserved lands (managed extractive uses): 111 acres	Great Blue Heron (rookery) Exemplary Natural Communities None known
Upper Taylor River (portions located in Hampton Falls and Kensington)	▪ 440 acres ▪ Unfragmented forests blocks: 70% of 630 acre block ▪ Aggregated forest block: part of a 11,800 acre block ▪ Rivers and streams: 2.1 miles of 1st order, 1.2 miles of 2nd order, 0.7 miles of 3rd order ▪ High yield aquifers: <1 acre ▪ Water Supply: 439 acres for Seabrook Water Department, 0.1 acres of favorable gravel well sites ▪ Farmland Soils: 85.9 acres of prime farmland, 101.2 acres of statewide importance ▪ Conserved lands (not permanently protected): 93 acres Conserved lands (managed extractive uses): 11 acres	Plants of Conservation Concern Small-crested Sedge Animals of Conservation Concern Great Blue Heron (rookery) Exemplary Natural Communities None known

10.2 Hampton -Seabrook Estuary Restoration Compendium

The Hampton-Seabrook Estuary Restoration Compendium is a compilation of information on the historic and current distributions of salt marsh and sand dune habitats and diadromous fishes within the Hampton-Seabrook Estuary Watershed. Developed by the University of New Hampshire Jackson Estuarine Laboratory with funding from the NH Coastal Program and the New Hampshire Estuaries Project, the compendium is a tool to help communities and organizations restore sand dunes, salt marsh, and diadromous fish in the Hampton-Seabrook Estuary Watershed. The Hampton-Seabrook Estuary Restoration Compendium presents:

- A narrative describing the methods used and the results of analyses;
- A series of maps detailing change in sand dune and salt marsh extent over time;
- The current and historic distribution of seven target diadromous fish species; and
- Identifies examples of prominent restoration opportunities within the Hampton-Seabrook Estuary Watershed.

The Hampton-Seabrook Estuary Restoration Compendium was completed in 2010, and the maps and figures for this study are currently available for viewing and download as PDF files on the New Hampshire Coastal Program website at:
http://des.nh.gov/organization/divisions/water/wmb/coastal/restoration/compendiums.htm#hampton.

11.0 Climate Change and Adaptation Planning

11.1 Hampton Falls Vulnerability Assessment

As highlighted in Chapter 2, Existing and Future Land Use, the *Tides to Storms Vulnerability Assessment* project completed by the Rockingham Planning Commission in 2015 produced maps and statistical data about the potential impacts to Hampton Falls from climate changes, including impacts from sea-level rise and storm surge to infrastructure, critical facilities transportation systems, and natural resources. The Assessment evaluated the inland extent and depth of flooding, impacts to natural and human systems and changes in impacts between different flood levels. Potential impacts to freshwater and tidal wetlands, aquifers and wellhead protection areas, conservation land and critical wildlife habitat were estimated.

Hampton Falls takes pride in efforts to protect wetlands, floodplains and open spaces from development. Increased daily tidal flooding of tidal marsh systems diminishes their flood storage capacity during storm events. This may be partially offset by the inundation of freshwater wetlands.

There are currently 823 acres of salt marsh within Hampton Falls. There is the potential for 114 acres of new marsh to form as sea levels rise at the 3.9 feet scenario by 2100 scenario, and for 165 acres to form with the 6.6. feet scenario. Protecting land where salt marsh can potentially migrate is a good strategy for enhancing coastal resiliency. Upland refers to land above the mean higher high-water mark. The upland areas most susceptible to flooding even at the lowest 1.7-foot sea-level rise scenario are located east of Route 1, in the interior fringe areas of Hampton-Seabrook Estuary. Sea-level rise will produce additional flooding within the current 100-year and 500-year floodplains. Table 11 reports the potential impacts to natural resources in Hampton Falls estimated by the Vulnerability Assessment.

Table 11: Tides to Storms Vulnerability Assessment
Impacts Associated with Coastal Flooding and Storm Surge

Sea-Level Rise (SLR) Scenarios Tides to Storms Vulnerability Assessment	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Upland (acres)	121.3	187.4	252.3	237.4	305.6	383.7
Freshwater Wetlands (acres)	3.3	12.1	18.4	17	23.4	29.2
Tidal Wetlands (acres)	119.7	122.5	122.7	122.7	122.8	122.8
Conserved and Public Lands (acres)	49.7	67.7	82.3	79.3	91	98.9
100-year floodplain (acres)	1105.7	1203.3	1207.8	1207.4	1208.2	1208.6
500-year floodplain (acres)	1105.7	1203.7	1234	1232.7	1236	1237.1

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11.2 Adaptation Planning

Changes in New Hampshire's climate are well documented in local records of sea level, growing seasons, precipitation and temperature. The state has experienced more extreme weather events including floods, drought, and rising tides. Coastal municipalities such as Hampton Falls are confronted by a particularly challenging set of land use and hazard management concerns that include extreme weather events and loss of key coastal habitats. The town and communities across New Hampshire have many opportunities and time to prepare and adapt to a changing climate. This effort will require understanding of recent climate projections and assessment, applying technology and data to solve problems, and learning from other states that have successfully implemented effective strategies and solutions.

12.0 Recommendations

12.1 Continue to hold developers to the regulations enacted by the Town to prevent the degradation of wetlands and other natural resources.

12.2 The town may consider updating a growth and planning study to evaluate build-out conditions under current zoning, and alternative buildout scenarios that would provide necessary protection of important natural resources while accommodating project growth and associated development

12.3 Evaluate ordinances and regulations to determine the level of protection and/or conservation of important farmland soils, and revise if current requirements are not adequate to meet the town's goals for protection of the resource.

12.4 Encourage new agricultural uses of land by adopting zoning and site plan regulations that minimize restriction on agriculture.

12.5 The town should consider the quantity of water available to meet existing and projected demand when considering growth management options.

12.6 The town should continue work to protect buffer areas around surface waters to protect water quality and wildlife habitat and consider exploring increased protection for wetland functions.

12.7 When possible, the town should take a watershed approach to protecting water resources and managing stormwater and other drainage issues.

12.8 The town should participate in and encourage regional coordination in addressing water supply needs and water resource management.

12.9 The town should continue to consider taking steps to limit stormwater pollution and loading onto town owned facilities and roads.

12.10 The Conservation Commission should conduct an evaluation of freshwater wetlands to identify potential mitigation opportunities that will enhance water quality and habitat, and other wetland functions. These pre-identified sites could be considered by the NHDES to fulfill the requirement for compensatory mitigation as part of wetland permits issued for sites in Hampton Falls.

12.11 The Conservation Commission should develop a public outreach and awareness program aimed at residents to promote stewardship on private property with emphasis on protecting wetland buffers.

12.12 Increase protection of wetland areas to help filter pollutants.

12.13 Adopt buffers and setbacks that adequately separate development and infrastructure from tidal wetlands, freshwater wetlands and surface waters to sustain flood storage capacity, and allow for inland migration of tidal marsh systems and conversion of freshwater systems to tidal systems to accommodate projected changes in sea-levels. Incentives to further protect wetlands may include applying increased buffers and setbacks as mitigation for wetlands impacts from development. (Note: This recommendation is also found within the Vulnerability Assessment recommendations in Section 11.)

12.14 Evaluate the projections reported in the study *Methods for and Estimates of 2003 and Projected Water Use in the Seacoast Region, Southeastern New Hampshire* (2008) to determine whether there is a need to conduct any long-term land use and growth planning related to future availability of groundwater resources.

12.15 Conduct an audit of ordinances and regulations to identify any conflicting requirements and determine whether adequate protections exist to maintain high quality groundwater resources.

12.16 Promote public education and outreach efforts regarding water conservation, especially those that emphasis minimizing non-essential outdoor water uses for businesses and residence.

12.17 Utilize information regarding the existing and potential flood hazards and measures to mitigate the effects of sea level rise and storm events.

12.18 Evaluate the extent and distribution of invasive species of plants, insects and animals in town including but not limited to Phragmites, Pepperweed, Japanese Knotweed, Purple Loosestrife, and Japanese Shore Crab.

12.19 Continue educational and outreach efforts to increase awareness of the public and others about the negative effects of invasive species.

12.20 Review ordinances and regulations to identify opportunities to strengthen preservation of forested lands and identify opportunities to implement reforestation as part of development approvals (i.e. landscaping requirements and site design techniques).

12.21 Identify and establish open space connections with open space or conserved land in town and with contiguous open space or conserved lands in neighboring communities.

12.22 Maintain and improve walking trails on town-owned properties.

12.23 Promote the use of walking trails on town-owned properties through the creation of trails maps.

12.24 Consider adopting innovative land use controls, both in the zoning ordinance and subdivision and site plan regulations, to promote open space preservation.

12.25 Consider implementation transfer of development rights (TDR) program to further encourage voluntary open space preservation.

12.26 Promote protecting and conserving land near water resources to protect open space, wildlife habitat, and protect water resources.

12.27 Identify opportunities to strengthen protection of the Core Focus Areas identified in *The Land Conservation Plan for New Hampshire's Coastal Watersheds* (i.e. implementation of conservation subdivisions, conservation overlay districts, site design for non-residential development).

12.28 Elevate Structures 2 feet Above Base Flood Elevation. Adopt standards in floodplain zoning and/or Site Plan Review and Subdivision Regulations that require all new development and redevelopment to be elevated 2 feet above the base flood elevation. Two feet of additional

elevation will ensure that structures are protected from flooding based on the highest sea-level rise projection of 2 feet by 2050.

12.29 Coastal Flood Hazard Overlay District**.** Adopt in the town's zoning ordinance a Coastal Flood Hazard Overlay District that includes performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. Establish the overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high-risk flood areas mapped by the Tides to Storms Vulnerability Assessment. (Also see similar recommendation in the Community Outreach and Engagement section below.)

12.30 Coastal Buffers and Tidal Marshes. Adopt buffers and setbacks that adequately separate development and infrastructure from tidal wetlands, freshwater wetlands and surface waters to sustain flood storage capacity and allow for inland migration of tidal marsh systems and conversion of freshwater systems to tidal systems to accommodate projected changes in sea-levels. Incentives to further protect wetlands may include applying increased buffers and setbacks as mitigation for wetlands impacts from development.

12.31 Natural Hazards Mitigation Plan. Incorporate the vulnerability assessment information and recommendations from the Tides to Storms profile report in the Town's next Natural Hazards Mitigation Plan update. Continue revising and updating the assessment information and climate adaptation recommendations in future updates of the Plan.

12.32 Capital Infrastructure and Investments. Incorporate consideration of impacts from sea-level rise and coastal storm surge flooding in current and future capital infrastructure projects. Incorporate the Tides to Storms vulnerability assessment information into transportation and other infrastructure management plans and capital improvement plans.

12.33 Retreat Through Land Conservation**.** Land conservation offers the greatest opportunities to provide for adaptation to the effects of sea-level rise and coastal storm flooding and climate change impacts. Identify lands in high risk areas to purchase for the purpose of removing development and infrastructure and restoring the land to a natural condition. This is a way to gradually retreat from areas highly susceptible to coastal flooding.

12.34 Wetlands Mitigation Site Inventory. Identify and inventory lands where protection of tidal and freshwater wetlands would provide tangible benefits to protect against flooding, and restoration opportunities to remove barriers to tidal function and marsh and migration. This inventory will allow the town to pre-identify and prioritize sites that can be permanently preserved as a mitigation strategy for wetland impacts from development in high risk coastal areas.

12.35 Coastal Flood Hazard Overlay Map**.** Use the Coastal Flood Hazard Overlay District as a tool to inform property owners of existing and future risks and hazards based on projected sea-level rise and coastal storm surge flooding.

12.36 Historical and Cultural Resources Inventory**.** Inventorying historical and cultural resources is the first step toward developing strategies to protect and preserve them.

12.37 Require all road contractors providing snow removal services to be "Green Snowpro" certified by NH Department of Environmental Services to ensure road treatment does not result in excess use of salt, which threatens water quality.

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APPENDIX A

Rare Species and Exemplary Natural Communities
Town of Hampton Falls, New Hampshire
Source: Natural Heritage Bureau

Flag	Species or Community Name	Listed Status		# Locations Reported in last 20 years	
		Fed	State	Town	State
Natural Communities – Estuarine					
**	Brackish marsh	--	--	2	12
***	High salt marsh	--	--	1	14
***	Low salt marsh	--	--	1	6
***	Saline/brackish intertidal flat	--	--	1	5
**	Subtidal system	--	--	1	3
***	Salt marsh system	--	--	1	6
Plants					
	Blunt-leaved pondweed (Potamogenton obtusifolius)	--	E	Historical	2
	Broad-winged sedge (Carex alata)	--	E	Historical	2
	Bulbous bitter-cress (Cardamine bulbosa)	--	E	Historical	5
	Climbing hempvine (Mikania scandens)	--	E	Historical	11
**	Crested sedge (Carex cristatella)	--	E	1	12
	Dragon's mouth (Arethusa bulbosa)	--	E	Historical	21
	Drum-heads Milkwort (Polygala cruciate ssp. aquilonia)	--	E	Historical	3
	Dwarf Glasswort (Salicornia bigelovii)	--	E	Historical	7
	Engelmann's Quillwort (Isoetes engelmannii)	--	E	Historical	15
**	Field wormwodd (Artemisia campestris ssp. caudata	--	E	1	4
	Great bur-reed (Sparganium eurcarpum)	--	T	Historical	20
	Greater fringed-gentian (Gentianopsis crinita)	--	T	Historical	28
	Hollow Joe-Pye weed (Eutrochium fistulosum)	--	E	Historical	10
	Ivy-leaved duckweed (Lemna trisulca)	--	E	Historical	5
	Large whorled pogonia (Isotria verticillata)	--	E	Historical	4
	Little-headed spikesedge (Eleocharis parvula)	--	T	Historical	23
	Northern tubercled bog-orcid (Platanthera flava var. herbiola)	--	E	Historical	11
	Nuttall's reed grass	--	E	Historical	6
	One-glumed spikesedge (Eleocharis uniglumis)	--	T	Historical	12
*	Perennial glasswort (Salicornia ambigua)	--	E	1	4
	Prolific yellow-flowered knotweed (Polygonum ramosissimum ssp. prolificum)	--	E	Historical	10
	Saltmarsh agalinis (Agalinis maritima)	--	E	1	10
	Slender blue iris (Iris prismatica)	--	E	1	11
	Stout dotted smartweed (Persicaria robustior)	--	E	Historical	6
	Yellow thistle (Cirsium horridulum)	--	E	Historical	3

	Vertebrates – Birds				
	Common Tern (Sterna hirundo)	--	T	Historical	9
**	Saltmarsh Sparrow (Ammodramus caudacutus)	--	SC	1	8
**	Willet (Catoptrophorus semipalmatus)	--	SC	1	5
Vertebrates – Fish					
**	American Eel (Anguilla rostrate)	--	SC	2	177
	Banded Sunfish (Enneacanthus obesus)	--	SC	Historical	29
**	Redin Pickerel (Esox americanus americanus)	--	SC	1	32
Invertebrates – Dragonflies & Damselflies					
**	Carolina Saddlebags (Tramea Carolina)	--	--	1	4
**	Seaside Dragonlet (Erythrodiplax Berenice)	--	--	1	12

Listed Codes

E = Endangered T – Threatened

SC = Species of Special Concern, a label used by NH Fish & Game to identify species that are not Threatened or Endangered but are in need of conservation.

Flags **** = Highest Importance
*** = Extremely High Importance
** = Very High Importance
* = High Importance

These flags are based on a combination of (1) how rare the species or community is and (2) how large or healthy its examples are in that town.

APPENDIX A Natural Heritage Bureau Report (July 2013)

Rare Species and Exemplary Natural Communities
Town of Hampton Falls, New Hampshire
Source: Natural Heritage Bureau

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APPENDIX B Map Set

Map 1. Base Map
Map 2. General Soils, and Soil Potential and Suitability for Development
Map 3. Agricultural Soils
Map 4. Surface Water Resources
Map 5. Surface Waters Under the Comprehensive Shoreland Protection Act
Map 6. Groundwater Resources
Map 7. New Hampshire's Wildlife Action Plan
Map 8. The Land Conservation Plan for New Hampshire's Coastal Watersheds
Map 9. Open Space and Unfragmented Lands
Map 10. Color Orthophotograph
Map 11. Sea-level Rise Scenario
Map 12. Sea-level Rise Scenario with Storm Surge