

Hampton New Hampshire 2021 Master Plan Update Coastal Resilience Report

Prepared by

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HOW TO USE THIS DOCUMENT

A Master Plan is a planning document that serves to guide the overall character, physical form, and development of a community. Coastal resources and resiliency can be addressed in a number of different ways in a Master Plan.

This *Coastal Resilience Report* does not directly address facets of coastal management such as public access and support of water-dependent uses, although they are addressed in the context of resiliency.

The Town of Hampton may append this document to its Comprehensive Master Plan and/or incorporate parts of it directly into the Comprehensive Master Plan.

This *Coastal Resilience Report* is intended to provide high level recommendations to help guide future decisions made by Hampton about Coastal Resilience. It is not intended to evaluate alternative adaptation strategies for specific locations, which would come out of a more detailed planning effort or an engineering study.

This *Coastal Resilience Report* is complemented by a *Coastal Resilience Comprehensive Supplement* that provides more details and background than are provided in this document.

The Town of Hampton and its Phase II Master Plan consultant, or its successors, may append, edit, cut/paste, and make changes of any kind to this document based on subsequent work necessary to complete the Town's Comprehensive Master Plan Update to the Town's satisfaction, without cost or penalty.

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1 BACKGROUND

The following document discusses current conditions along Hampton’s shoreline, and risks to the Town from climate change and sea level rise. It gives an overview of the challenges facing Hampton from coastal hazards now and in the future, providing the rationale for taking aggressive steps to build coastal resilience. A more detailed description of the local impacts of climate change and sea level rise can be found in the Town of Hampton Comprehensive Coastal Resilience Supplement, available through the Hampton Planning Office.

1.1 Current Conditions

Setting

Over the coming decades, accelerating sea level rise and worsening storms threaten to degrade the Town of Hampton’s iconic beaches and wetlands, damage its roads and buildings, stress its economy, and strain its municipal services. While the low-lying, coastal areas of Town are most directly at-risk, the entire community will be affected by future coastal hazards. Hampton’s coastal area is a major economic driver for the community and the region, so impacts to coastal property values, businesses, and tourism will affect the Town of Hampton as a whole. Strained municipal resources due to coastal stresses will affect municipal capabilities town-wide. Additionally, coastal residents and businesses may need to relocate away from hazard zones, and look to inland Hampton areas.

Coastal resilience is therefore central to the future of all of Hampton. Areas directly at risk will need to adapt to the impacts of flooding and storms, while inland Hampton will need to be able to absorb and recover from both the episodic shocks and the chronic stresses that will reverberate through the community from those at-risk areas.

Coastal resilience is the ability of a community to achieve community goals and social, economic, and environmental wellbeing over the long term in the face of a changing climate and coastal hazards.

Current Sea Levels

Based on NOAA tide gauge data (Hampton Harbor, Station ID: 8429489), Mean Higher High Water (MHHW; the average of the highest of the two high tides per day over a 19-year period) in Hampton is about nine (9) feet above Mean Lower Low Water (MLLW; the average of the lowest of the two low tides per day over the same 19-year period). The National Weather Service (water.weather.gov) identifies the following water levels as significant flood stages:

- **10 ft MLLW:** Action Stage (action should be taken to prepare for flooding)
- **11 ft MLLW:** Minor Flood Stage (onset of flooding on low-lying streets)
- **12 ft MLLW:** Moderate Flood Stage (low-lying roads flooded up to 1 foot)
- **13.3 ft MLLW:** Major Flood Stage (low-lying roads flooded up to 3 feet)

Winter Storm Greyson (January 2018) tides exceeded 13.2 feet, and Winter Storm Riley (March 2018) reached about 12.8 feet (NOAA).

Peak tides during the Blizzard of 1978 have been reported at about 14 feet (Lane Library).

According to preliminary analysis of the Hampton Tide Gauge data performed by the NH DES Coastal Program, tides in Hampton exceed the 10-foot Action Stage as many as 145 to 192 times each year (noting that some days may see multiple high tides above 10 feet). In 2018, Hampton experienced 40 high tides measuring between 11 and 11.9 feet, and seven high tides measuring 12 feet or higher.

Sea Level Rise

The New Hampshire Coastal Flood Risk Science and Technical Advisory Panel (STAP) has published a two-part document titled *New Hampshire Coastal Flood Risk Summary Part I: Science* was published in 2019 and provides



projections of local sea level rise, coastal storms, groundwater rise, precipitation, and freshwater flooding for New Hampshire (Wake, et. al., 2019). *Part II: Guidance for Using Scientific Projections* was published in 2020 and lays out an approach for incorporating these projections into planning, regulatory, and site-specific projects based on a “Tolerance for Flood Risk” framework (NH STAP, 2020).

Reviewing projected local sea level rise estimates presented in *Part II: Guidance for Using Scientific Projections* with respect to Hampton tide levels allows us to better understand how rising seas may impact the community.

Year	Relative Sea Level Rise (above 2000 levels)	Mean Higher-High Water (ft above <i>current</i> MLLW)
2000	0 feet	9 feet
By 2050	1.3 – 2.3 feet	10.3 – 11.3 feet
By 2100	2.9 – 6.2 feet	11.9 – 15.2 feet
By 2150	4.6 – 11.7 feet	13.6 – 20.7 feet

Relative Sea Level Rise projections from NH Coastal Flood Risk STAP (2020). *Part II: Guidance for Using Scientific Projections*. MHHW Levels estimated based on Relative Sea Level Rise projections and NOAA tide gauge data.

As local SLR accelerates, the frequency of high tide flooding will increase. As shown in the table above, MHHW (the average of the highest of the two high tides per day) in Hampton is expected to exceed the ten-foot “Action” stage by 2050.

Coastal Storms

The number of intense hurricanes that pass near Hampton is projected to increase in the future, though the impacts of climate change on other coastal storms remains uncertain. Despite the uncertainty around storms like nor’easters, it is clear that the impacts of storms will be greater due to higher sea levels. Storm-caused erosion is also expected to increase (Wake, et. al., 2019).

Groundwater Rise

Groundwater levels will rise as local sea levels rise. *Part I: Science* projects that the area impacted by sea-level-rise-induced groundwater rise will extend more than three miles inland along the New Hampshire Seacoast, as measured from any tidally influenced shoreline (Wake, et. al., 2019). Mean groundwater levels are projected to rise by:

- 66% of SLR up to 0.6 miles inland
- 34% of SLR from 0.6 to 1.2 miles inland
- 18% of SLR from 1.2 to 1.9 miles inland
- 7% of SLR from 1.9 to 2.5 miles inland
- 3% of SLR from 2.5 to 3.1 miles inland

Higher groundwater levels can negatively impact underground infrastructure, foundations, drainage systems, and aquifers. Groundwater rise can also alter wetland habitats.

Precipitation

Part I: Science reports that between 1901 and 2018 in nearby Durham, NH, annual precipitation amounts increased by 14%, and the maximum daily precipitation increased by 16%. It is projected that extreme precipitation events will increase in frequency in the future, with even more precipitation falling.

Part II: Guidance for Using Scientific Projections recommends planning for at least a 15% increase in extreme precipitation estimates for projects.



1.2 Local Impacts

Current and future coastal hazards have the potential to impact Hampton’s built environment, economy, society, and natural resources. These are briefly summarized below. More detailed analysis is presented in the 2021 Hampton Coastal Resilience Report Supplement.

Buildings

Floodwaters can cause massive damage to a building and its contents, destroying equipment, furniture, computer systems, documents, and other materials. Damp conditions foster mildew growth, contributing to respiratory illness. Pollutants can be carried by floodwaters and contaminate large areas. Outdoor items and landscaping can be washed away or destroyed. Additionally, wave energy can destroy a structure, and erosion can alter the ground surface. Wells and septic systems can be damaged or rendered useless.

The amount of debris produced by flooding can also be staggering, requiring disposal and replacement. Debris can be moved by floodwaters surge and damage nearby assets.

Municipal Services

Damage to critical facilities and municipal equipment, and flooding of roads, hampers the Town’s abilities to provide services and emergency response when needed, while rising seas and worsening storms put increasing pressure on those services over time.

Roadways

With higher sea level or storm surges, roadways may flood more frequently, drainage systems may become ineffective, and culverts may fail. The structural integrity of roads may also be undermined due to frequent inundation and elevated water tables.

Drainage Infrastructure

High sea-levels can prevent effective drainage of stormwater during a rain event, and in some cases high tide levels can push seawater backwards through drains causing flooding in areas thought to be protected. Increasing precipitation and expanding impervious cover may also overwhelm ageing drainage systems that were designed for historic rainfall patterns.

Economy

Hampton’s waterfront is a major economic driver for the community and the State, forming a large portion of the Town’s property-tax base, and attracting a seasonal visitor population that drives a local service and retail economy and generates much of the State’s Meals and Rooms Tax income. Coastal hazards can damage property, disrupt business operations, lower property values, and generally make the area less attractive to visitors and investors. The chronic stresses of sea level rise, including more frequent travel disruptions, increased infrastructure maintenance needs, and a higher demand on municipal services, will strain Hampton’s municipal budget and capabilities. A severe storm may require major investment from the Town to enable recovery; with the Town’s primary economic driver damaged, such recovery may be delayed. In some cases, recovery to pre-storm conditions may not be possible.

Seacoast Transportation Corridor Vulnerability Assessment and Plan

This RPC-led study is assessing impacts of sea level rise on the NH coastal road network, including traffic volume and patterns, as well as road capacity and conditions. The study will identify resilience strategies for priority sites. www.therpc.org/regional-community-planning/climate-change/STCVA

Resilient Tidal Crossings

In 2018, the NHDES Coastal Program and partners assessed all known tidal crossings in New Hampshire’s coastal communities in accordance with the NH Tidal Crossing Protocol. Tidal crossing assessment data were used to rank and prioritize sites based on structure condition, flood risk, and ecosystem health. Project results are available on the NH Coastal Viewer. www.nhcoastalviewer.org.



Society

Nearly all of the factors that affect one's vulnerability to coastal hazards are influenced by socio-economic status. Lower-income or other socially-marginalized communities are more vulnerable than the overall population. Such factors include:

1. **Exposure** to hazards.
2. **Access** to institutional and social services.
3. **Information** about risks and mitigation options.
4. **Agency**, or recognition of one's ability to affect change.
5. **Pre-Existing Hardships** that are exacerbated by a disaster.

Concerns in Hampton identified through the planning process include:

- In the winter, low-income residents reportedly rent homes located in risk zones, and have reported flood damage. Renters are typically less aware of flood risk information than owners.
- Residents with mobility challenges (including seniors, elderly) can be trapped during a flood. This is a particular problem for those with medical needs.

Social Vulnerability Index (SVI)

The SVI scores hazard vulnerability due to socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. Analysis shows that vulnerabilities in Hampton include older or disabled residents who may have difficulty accessing information and assistance, as well as low access to vehicles for evacuation in some areas.

<https://svi.cdc.gov/map.html>

A UNH-developed SVI found that Hampton Beach has a high number of residents who have disabilities, rent their homes, don't have health insurance, and don't have access to a vehicle (Kirshen, et al., 2018).

Cultural Resources

Historic and cultural resources are important to community identity and hazard recovery. Historic resources pose a hazard mitigation challenge, as actions that alter the character of a resource may reduce its historicity.

Tidal Wetlands

Rapidly rising seas threaten to drown tidal wetlands that are unable to accumulate peat fast enough to stay above sea level. Under certain circumstances, salt marshes are able to increase their elevation and "keep up" with sea level rise. One way this may be accomplished is for the marsh to migrate inland where possible. When seawalls, lawns, and structures are at the existing edge of the marsh, landward movement will be limited.

Beaches and Dunes

Beaches and dunes, which can mitigate some flood and wave impacts, are susceptible to erosion and scour during storms. This is particularly true when vegetation that stabilizes dunes is damaged, often by humans. Rising seas and worsening storms are expected to increase beach erosion. As with wetlands, beaches and dunes can migrate inland as sea levels rise; however, there are few areas with space for such migration to occur.

Open Space and Conservation Land

Open space vulnerabilities include interruptions to use, damage to facilities (such as at playing fields), and habitat alterations. Despite these vulnerabilities, open space that remains undeveloped is very adaptable, as future changes can take place with minimal economic costs or damages. Open space that is not protected as such is also vulnerable to development pressures associated with climate migration.

Freshwater Resources and Aquifers

Groundwater is at risk of increased saltwater intrusion due to sea level rise. Hampton receives its water through the Aquarion Water Company. Some of the system's wells are located in areas that are projected to be impacted by rising groundwater levels. However, many of the wells are drilled deep into bedrock, and so will be less impacted by sea level rise. Additionally, the interconnected, regional nature of the Aquarion system means that the risk to Hampton's drinking water supply is low, even if individual wells experience rising salinity levels.



2 RESILIENT HAMPTON STRATEGIES

Building community resilience requires utilizing a variety of approaches to address all of the different spheres of community life that are impacted by coastal hazards. The New Hampshire STAP *Part II: Guidance for Using Scientific Projections* (2020) lays out five categories of adaptation actions that can be combined to build community resilience. These are summarized below. No one approach is “better” than any other, and no single approach is sufficient to build resiliency; rather, a combination of all five approaches should be implemented.



Figure 3-1: Five Categories of Adaptation
Graphics adapted from www.coastadapt.com.au

Further discussion of these five categories of adaptation can be found in the Town of Hampton Comprehensive Coastal Resilience Supplement, available through the Hampton Planning Office.

Building a resilient community requires using a combination of all of these approaches, with each being implemented strategically as appropriate. Which approach is appropriate for a given project will depend partly on the **tolerance for flood risk** at that site, as described in the *Part II: Guidance for Using Scientific Projections* (NH STAP, 2020). The guidance defines tolerance for risk as “the willingness of decision makers to accept a higher or lower probability of flood impacts.” Tolerance for risk may be based on the following characteristics of an asset:

- Value or replacement cost
- Adaptive capacity
- Importance for public function or safety
- Sensitivity to flooding



How to Use these Strategies

The following section presents a set of **strategies**, **strategy components**, and **recommended actions**. This structure is intended to give Hampton the flexibility to pinpoint the specific set of goals, objectives, and actions it wishes to incorporate into its final Master Plan over the course of development of that document.

- **Strategies:** These are the big-picture themes recommended for Hampton to pursue in order to increase resiliency. They are equivalent to the Goals of a traditional Master Plan.
- **Strategy Components:** These identify changes needed to bring Hampton closer to fulfilling each Strategy, or to achieving each Goal. They are equivalent to the Objectives of a traditional Master Plan.
- **Recommended Actions:** These are more specific actions that Hampton should consider implementing to progress each strategy. Recommended Actions are categorized by Strategy, but most actually apply to multiple strategies.

The Town of Hampton is encouraged to pursue the eleven Resilient Hampton Strategies identified below by using whatever combination of specific actions the Town identifies as being appropriate and achievable. The Town may select specific actions from those recommended herein, identify alternative actions not listed, or use some combination of the two. The primary purpose of this information is to present a framework for resilience in the eleven Resilient Hampton Strategies.

The Resilient Hampton Strategies are:

1. **Focus Development and Investment in Low-Risk Areas**
2. **Protect Resilient Hubs and Connectors**
3. **Live with the Water**
4. **Address Drainage Systems**
5. **Facilitate Relocation**
6. **Strengthen Administrative Capabilities**
7. **Support Local Business Resiliency**
8. **Preserve and Enhance Coastal Habitats**
9. **Build Social Capital**
10. **Elevate Awareness**
11. **Leverage Regional and State Capacities.**

A table listing all Recommended Actions and which Strategies they are relevant to, as well as other implementation information, is included in the Implementation chapter.



2.1 Focus Development and Investment in Low-Risk Areas

2.1.1 Strategy Overview

This strategy calls for Hampton to identify low-risk areas of Town that can be targeted for future residential growth and other development. These target areas should be prioritized for development, redevelopment, and investment in the coming years.

This will help portions of the Town's community and economy that are not directly impacted by coastal hazards to be sufficiently robust to support those that are. This strategy will also allow Hampton to adjust to a shift of population away from risk zones over time. Investment in low-risk areas will enable property-owners migrating inland to remain within the community, and create opportunities for new owners wary of investing in risk zones.

2.1.2 Strategy Components

Identify Areas for Growth

Identify low-risk areas of Town that can be targeted for growth. Considerations should include changing traffic patterns, impervious surface impacts, municipal service capacities, and resident input.

Zone for Inland Density

Promote Density in Low-Risk Areas

Revise Zoning Regulations to allow for increased density within target areas. Changes may include reducing density limits, setbacks, height limits, lot sizes, parking requirements, and automatic incorporation of green infrastructure in the target area.

Discourage Density in High-Risk Areas

At the same time that low-risk areas are targeted for increased density, some types of development in high-risk areas should be discouraged. Changes may include strengthening density limits, setbacks, height limits, lot size requirements, and automatic incorporation of green infrastructure. Some of the tools listed below are already applied in Hampton. Promoting open space and water access can also decrease density while achieving other goals for the coastline.

Transfer of Development Rights

One tool that both promotes density in low-risk areas and discourages density in high-risk zones is a **Transfer of Development Rights** program (TDR). A TDR operates by allowing landowners in a "sending area" to sell the development rights from their land for use in a "receiving area". The land in the sending area is permanently protected through a conservation easement or a restrictive covenant. The development value of the receiving area land is enhanced by allowing for new or special uses; greater density or intensity; or other regulatory flexibility that zoning without the TDR option would not have permitted.

Invest and Incentivize Inland Development

Invest

Investing in services, capital improvement projects, and revitalization projects in areas located outside of hazard zones will signal the Town's commitment to those areas, make them more attractive, and enable more people to make the choice to settle in those areas. Actions the Town can take include:



- Expand utility services, such as water and sewer, to areas not currently served.
- Direct capital improvement funding to these target areas; more generally, consider risks when planning capital improvement projects.
- Invest in inland attractions, such as recreational opportunities and events.

Incentivize

Hampton can incentivize development and redevelopment within target areas. For example, the Town can implement tax credits, revolving loan funds, voluntary transfer of development rights programs, and other economic incentives to promote development in low-risk areas while acquiring or conserving property in high-risk areas.

Another step Hampton can take is to review its property assessment practices to ensure that assessed property values are accurately reflecting the impacts of sea level rise and coastal hazards on properties. Consideration of sea level rise in property assessment may lead to an increase in the valuation of inland property values relative to coastal properties, encouraging inland development (note that this may require action at the State level).

Inland Access to the Beach

Many residents, businesses, and investors are drawn to Hampton specifically because of its beaches and tidal wetlands, waterfront attractions, and New England beach community culture. In its efforts to attract such residents, businesses, and investors toward inland areas, the Town may be well-served by investing in easy access to the coast from these target areas. Improving coastal access town-wide will help reduce demand for and interest in properties located in risk areas closer to the coast.

Developing multi-use recreational paths should be one piece of this investment. Pursuing the development of bus, trolley, or shuttle services, possibly on a seasonal basis only, would also go a long way toward connecting inland areas to the coast; such services would also meet community goals laid out in the Master Plan vision. Increased use of recreational paths and public transit options would also contribute to reductions in local greenhouse gas emissions, reduction in traffic congestion, and increased town-wide accessibility. Reduction in congestion and the presence of mass-transit vehicles could also increase the Town’s emergency evacuation and response capabilities. Reduced parking needs may provide an opportunity for floodplain restoration or creation of flood storage areas.

2.1.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
1.01	Rezone to Facilitate Inland Migration	<p>Rezone so that all areas adjacent to tidal waters (including Taylor River, Drakes River, Nudds Canal, Brown’s River, the Seabrook-Hampton Estuary, Meadow Pond, and the Atlantic Ocean) are zoned differently from inland areas; this will facilitate efforts to focus higher-density development in inland areas, and to reduce the density of development in coastal areas. Examples of areas that might be altered include:</p> <ul style="list-style-type: none"> • RA areas east of Kings Highway and east of Ocean Boulevard north of High Street should be changed to a coastal residential zone (similar to RCS) • RA and G areas adjacent to the Seabrook-Hampton Estuary and the Taylor River (such as those along Landing Road, Fogg Lane, and Drakeside Road) should be changed to a coastal residential zone (similar to RCS). • Higher-density zones around the Town Center (POR, TC) should be expanded to encompass a larger area, and/or a new higher-density residential development zone should be created.



#	Title	Recommendation
1.02	Regulate for Density Inland	<p>In concert with rezoning to establish inland and coastal areas, the regulations for some inland areas should be revised to facilitate densification. Examples of changes may include:</p> <ul style="list-style-type: none"> Decrease minimum lot areas in some inland residential zones (such as POR, TC-S, TC-N, RAA, RA, G) Increase maximum height requirements in some inland residential zones (such as POR, TC-S, TC-N, and G) Decrease setbacks in some inland residential zones (such as POR and RA) Increase maximum number of dwelling units per structure in some inland residential zones (such as POR, TC, and RA zones) Allow multi-family dwellings (with review) in some inland residential zones where not currently allowed (such as TC and RA zones) <p>Article VIII of Hampton’s Zoning regulations, which list multi-family dwelling requirements, should be revised to permit more dense development of such dwellings (such development will be focused in inland areas through other recommended zoning changes). Revision may include:</p> <ul style="list-style-type: none"> Decreasing the amount of recreational space required per unit. Decreasing the required distance between buildings and parking areas (especially on the front side of the building). Decreasing the buffer requirements around buildings, preferably prioritizing preservation of the open space buffer and reduction in the size of the buffer between the open space buffer and the building (currently 20 feet each).
1.03	Tax Credits for Inland Development	Implement tax credits for multi-family residential developments constructed within identified target areas outside of risk zones (for example, the TC-S, TC-N, and POR zones; may also apply to inland G zones).
1.04	Transfer of Development Rights	Establish a voluntary Transfer of Development Rights program to incentivize development within inland target areas in place of at-risk areas.
1.05	Invest in Low-Risk Areas	Expand utility services, such as water and sewer, to inland areas that are not currently served. Direct capital improvement funding to inland target areas. Invest in inland attractions, such as recreational opportunities and events.
1.06	Connect Inland to the Coast	<p>Improve access to the coast from inland areas in order to make low-risk areas more attractive to potential residents, businesses, investors, and visitors.</p> <ul style="list-style-type: none"> Develop recreational paths between the beach and inland areas to increase pedestrian, bicycle, and other types of traffic. Create protected bike lanes on roads to the beach to encourage bike traffic. Pursue development of bus, trolley, or shuttle services between inland areas and the beach - possibly on a seasonal basis. Create inland parking areas in concert with such a service.
1.07	Property Assessment	Update property assessment practices to account for the impacts of sea level rise on future property values. Consideration of sea level rise in property assessment may lead to an increase in the valuation of inland property values relative to coastal properties, encouraging inland development.
1.08	Resilience in CIP	Develop a process or policy for staff and departments to follow to identify and account for climate change impacts when submitting a project for inclusion in the Capital Improvement Plan.



2.2 Protect Resilient Hubs and Connectors

2.2.1 Strategy Overview

Generally, it is not recommended that Hampton pursue flood protection measures; instead, the Town should focus on accommodating, avoiding, and retreating, as these are more resilient approaches over the long term. The “Protect Resilient Hubs and Connectors” strategy is intended to focus flood **protection** measures on resilient hubs and connectors, rather than having such measures applied in a more widespread manner.

Resilient Hubs are areas where residents and visitors can find shelter, services, and safety during storms, and will be launching areas for emergency services. Such areas may also include those for which the Town has a very low risk tolerance, or those that are without the space to implement other resiliency approaches. Resilient Hubs can be buildings or facilities, open spaces, or an area encompassing multiple structures. Critical Facilities should often, but not always, be included in a Resilient Hub.

The primary roads that provide access between resilient hubs and the rest of the community are **Resilient Connectors**. Identification of resilient connectors should focus on east-west roads that will enable fastest evacuation from the coast. Hampton should coordinate with the Rockingham Planning Commission’s “Seacoast Transportation corridor Vulnerability Assessment & Plan,” which is directly relevant to this strategy.

The utilities and other infrastructure that serve the resilient hubs will also need to be considered in this strategy. Protection of utilities against coastal storm conditions may be one approach to ensuring the continued operation of the resilient hubs; another may be installation of on-site backup services, such as backup power or emergency food and water.

Protection of resilient hubs and connectors can be advanced through structural flood protection measures such as levees and floodwalls, green infrastructure measures such as living shorelines, and property protection measures such as floodproofing and elevation. Structural flood protection measures should be avoided whenever possible (and near wetlands are prohibited under most circumstances), due to the damage they cause to ecosystems, the negative impacts on flood and erosion risk for adjacent sites, and the unsustainability of such measures over the long term.

2.2.2 Strategy Components

Identify

Resilient Hubs

Resilient Hubs should be areas that can provide essential services or serve as temporary gathering places during or following hazard events. During a flood event, these may be the areas where emergency response operations are staged, food and supplies acquired, and members of the public assembled as an evacuation is carried out.

Resilient Hubs should be characterized by some combination of the following:

- Relatively protected from flooding and coastal hazards
- Accessible by key transportation routes (see Resilient Connectors)
- Critical facilities or municipal services
- Stores that sell food or supplies that can assist with recovery
- Community facilities such as churches and schools



Example of areas that may be appropriate as Resilient Hubs include:

- 1. The Hampton Police Department and Fire Station:** while at-risk of flooding (and therefore not meeting the first qualification listed above) these critical facilities provide essential services and should therefore be protected. Maintaining connection between these facilities and the rest of the community may be a challenge due to the low elevations of Ashworth and Brown Avenues.
- 2. Hampton Beach State Park (the parking area at State Park Road):** this is a relatively high-elevation area that is already well-protected from flooding. Large open areas and state facilities can help the location temporarily support a large population during evacuation or emergency conditions, and its proximity to the Hampton Bridge can help facilitate evacuation.
- 3. End of Highland Ave:** this area includes public parking, public restrooms, recognized landmarks, food stores and restaurants, and hotels at the intersection of major roadways, including Route 101 that leads inland and away from hazard areas.
- 4. North Beach (Ocean Boulevard and High Street at Bicentennial Park):** this area encompasses public parking areas, restaurants and convenient stores, and hotels at the intersection of major roadways, including two that lead inland and away from hazard areas.
- 5. The Wastewater Treatment Plant and Public Works complex:** as with the Police and Fire Stations, these critical facilities provide essential services and should be protected, despite their susceptibility to current and future flooding.

Resilient Connectors

Resilient Connectors should be primary roadways that connect Resilient Hubs to one-another, and enable evacuation as tides rise. In particular, roads leading inland, away from coastal risks, should be designated as Resilient Connectors.

Examples of areas that may be appropriate as Resilient Connectors include:

- Ocean Boulevard from the Hampton Bridge to Church Street
- Highland Ave, Church Street, and Route 101
- Winnacunnet Road
- High Street
- North Shore Road

Note that most of the roads above are State-owned and maintained, so Hampton will need to coordinate with NH DOT on efforts to protect them from coastal hazards. North Shore Road is included despite not being identified in the Seacoast Transportation Corridor Vulnerability Assessment because it is under local jurisdiction, so Hampton has more authority to make alterations to it.

Protect

Critical Facilities

Facilities such as the Hampton Police Department, the Hampton Beach Fire Station, and other sites and structures that provide essential services to the community should be protected from coastal hazards. This protection must consist of limiting damage to these sites and structures, as well as maintaining the capabilities of the facilities to continue to provide services during or following storm events. Despite this protection, Hampton should recognize that over the long term, the Town may need to consider relocation of these facilities.

Structure and site protection can include building elevation or floodproofing. Detailed vulnerability assessments and alternatives analyses will be necessary to select the most effective and least environmentally impactful



flood protection measures. These critical facilities should be protected to a higher standard than is generally required for private properties; for example, elevation or floodproofing measures should include three feet of freeboard above the FEMA base flood elevation, or a design flood elevation should be calculated using the NH Coastal Flood Risk Guidance with the assumption of “Very Low Tolerance for Flood Risk.”

Operational protection can include installation of emergency power and fuel, upgrading on-site communication equipment, stocking the facilities with emergency supplies, and developing site-specific emergency operations plans.

Resilient Hub Areas

Protecting Resilient Hubs consists of limiting the impacts of flooding or erosion in a Resilient Hub area using protective approaches. Nature-based solutions and living shorelines should be used when possible, and in all cases should be considered in any alternatives-analysis performed to identify an appropriate mitigation strategy. New Hampshire’s wetland rules (Env-Wt 609.04) state that “tidal stabilization shall be accomplished using living shoreline techniques unless the applicant demonstrates that a living shoreline is not practicable.” Traditional hard infrastructure (such as floodwalls) and filling activities in coastal lands or tidal waters will likely encounter permitting challenges at both the state and the local level.

Resilient Connectors

As resilient hubs are protected, the roads to and from those properties will need to be made resilient as well. The Town can prioritize roads for elevation to maintain access during flood events.

Protecting roadways may include elevation and embankment protection, as well as traffic planning and reevaluation of emergency routes.

- Roadway Elevation – ensures viability despite rising flood levels. While a practical approach, private properties often remain at lower, flood-prone elevations. A higher road surface can impede drainage of floodwaters off properties. Elevating roadways may also require some amount of acquisition or modification of adjacent private properties to support road embankments. Cost is also a limiting factor.
 - The 2021 Hoyle, Tanner & Associates, Inc. (HTA) report recommends Hampton use a phased approach to road elevation, so that more impactful projects are conducted over the long term, while those with minimal impact on adjacent properties are conducted over the short term. (Hoyle, Tanner & Associates, Inc. 2021)
 - The HTA report also notes that elevating roadways creates secondary complications, including the need to elevate connecting roads, maintaining ADA-accessible tie-ins to adjacent buildings, and addressing impacts to underground and above-ground utility infrastructure. Consideration of these secondary impacts led HTA to determine that elevating Ashworth Avenue, for example, is not feasible.
- Traffic Planning – traffic direction and lane count can be altered on a temporary basis to facilitate emergency access and egress.
- Reevaluation of Emergency Access – some emergency access routes or evacuation routes may be shifted to follow alternate, less-vulnerable roadways.

It will be essential for Hampton to connect with RPC regarding identification and protection of resilient connectors to ensure the Town is consistent with the Seacoast Transportation Corridor Vulnerability Assessment. Hampton will also need to coordinate with NH DOT to be consistent with state efforts, such as the redesign of Ocean Boulevard currently underway.



Living Shorelines

Living shorelines should be utilized as much as possible to minimize negative impacts of protection measures on local habitats, reduce "reflectance" of wave energy on adjacent sites, increase the lifespan and decrease management requirements for the protection measure, and provide environmental benefits. Living shorelines can help curb erosion, but may not keep flood waters out of an area. Living shorelines are preferred in tidal areas by New Hampshire's Wetlands Program rules (Chapter Env-Wt 600).

2.2.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
2.01	Identify Resilient Hubs and Connectors	<p>Identify areas, facilities, and infrastructure that will be classified as Resilient Hubs and Connectors. This effort should be coordinated with the Hazard Mitigation Plan; specifically, critical facilities listed in the HMP should be considered in the list of Resilient Hubs and Connectors, and Resilient Hubs and Connectors should be noted in the HMP.</p> <p>Resilient Hubs may include areas that can provide essential services or serve as temporary gathering places during or following hazard events. During a flood event, these may be the areas where emergency response operations are staged, food and supplies acquired, and members of the public assembled as an evacuation is carried out.</p> <p>Resilient Connectors may include primary roadways that connect Resilient Hubs to one-another, and enable evacuation as tides rise. In particular, roads leading inland, away from coastal risks, should be designated as Resilient Connectors.</p>
2.02	Resilient Connector Protection	<p>Protect roads and utilities that are designated as Resilient Connectors. Protection measures may include road elevation, upsizing bridges and culverts, upgrading road drainage systems, and hardening utility lines against the impacts of high winds, flooding, erosion, and rising groundwater levels. Any alternatives analysis of protection measures must consider living shorelines and nature-based solutions in order to determine the approach that will have the least amount of negative environmental impact. Living shorelines should be utilized as much as possible to minimize negative impacts of protection measures on local habitats, reduce "reflectance" of wave energy on adjacent sites, increase the lifespan and decrease management requirements for the protection measure, and provide environmental benefits.</p> <p>Resilient connector protection efforts should consider the ability of the roads to provide evacuation and emergency access services during a storm or flood event.</p>
2.03	Resilient Hub Protection	<p>Implement coastal protection measures at Resilient Hubs to resist impacts from flooding and erosion. Measures may include bank protection, berm construction, elevating the site on fill, constructing floodwalls, and upgrading drainage systems. Any alternatives analysis of protection measures must consider living shorelines and nature-based solutions in order to determine the approach that will have the least amount of negative environmental impact. Living shorelines should be utilized as much as possible to minimize negative impacts of protection measures on local habitats, reduce "reflectance" of wave energy on adjacent sites, increase the lifespan and decrease management requirements for the protection measure, and provide environmental benefits.</p>



#	Title	Recommendation
2.04	Critical Facility Protection	<p>Implement site, structural, and operational protection measures at critical facilities in risk zones (including the Hampton Police Department and the Hampton Beach Fire Station). Measures should include structural floodproofing or elevation, provision of emergency power and supplies, and emergency operations and evacuation planning that address continuity of services, and protection of emergency equipment.</p> <p>Hampton can also work with owners of private businesses that may be able to provide essential services but are not themselves critical facilities (such as hotels, restaurants, food stores, or hardware stores), and are located in Resilient Hubs, to increase the resilience of those properties.</p> <p>Note that consideration of long term resilience options, including the possibility of eventual relocation of facilities, will also be necessary.</p>
2.05	Critical Facility Floodplain Standards	<p>Prohibit construction of critical facilities within high-risk Special Flood Hazard Area (SFHA) unless the project has been reviewed using the NH Coastal Flood Risk Guidance (using the "Very Low Tolerance for Flood Risk" standard) AND the following criteria are met:</p> <ul style="list-style-type: none"> (a) No feasible alternative location exists, (b) the facility is designed to higher protection standards, (c) an emergency operations plan, including evacuation procedures, has been developed.
2.06	Bicentennial Park Protection	<p>Address coastal risks to Bicentennial Park and its seawall. In 2016, the Town contracted with an engineering firm that determined that the Bicentennial Park seawall has shallow embedment into the beach and is supported on sand that is prone to storm erosion. It has been determined that under certain conditions the seawall could fail. Bicentennial Park is part of the area around the Ocean Boulevard and High Street intersection that is recommended as a Resilient Hub.</p> <p>Bicentennial Park may be a good candidate for living shoreline approaches to protection, and such measures should be explored. Seawall repair and improvement should be implemented only if living shorelines approaches are deemed infeasible.</p>



2.3 Live with the Water

2.3.1 Strategy Overview

There are many residential, commercial, and other structures along Hampton’s coast for which the more aggressive protection measures applied to resilient hubs and connectors will not be economically, environmentally, or technically feasible. Therefore, Hampton will have to undertake a major effort to retrofit the community to enable it to “live with water.”

2.3.2 Strategy Components

Zoning Ordinance & Building Codes

Freeboard

Freeboard standards require structures to be elevated higher than the level that FEMA requires through National Flood Insurance Program (NFIP) regulations. A freeboard standard of one or more feet provides additional protection against flooding and addresses difficult-to-determine factors like wave height.

The Town of Hampton and the State Building Code currently require properties in flood zones be elevated to at least one foot above the base flood elevation (one foot of freeboard). Increasing this requirement by one or more feet (two or more feet of freeboard) would provide more protection to buildings, and account for some rise in flood elevations over time as sea levels rise.

An approach that is both more flexible and more science-based is laid out in *Part II: Guidance for Using Scientific Projections* (NH STAP, 2020). Adopting the freeboard standards and design flood elevations in accordance with the Guidance will more accurately account for projected sea-level rise and coastal storms.

Building Height Standards

It is important to consider the relationship between building height regulations, flood-protection elevation standards, and the economic and social impacts that an exceptionally high structure could have on a neighborhood. Relaxing height limits may help developers or owners comply with both height standards and floodplain elevation requirements.

Hampton already allows for flexibility in its building height restrictions for buildings that are elevating their first floors to be in compliance with flood zone regulations. Hampton should ensure that these flexibilities remain in the Regulations.

Overlay Zones

A “Coastal Hazard Overlay District” (CHOD) may be delineated using projected extents of future daily inundation or future storms of a given intensity. Projections presented in *Part I: Science* (Wake, et. al., 2019) and visible through the New Hampshire Coastal Viewer platform should be used. Once adopted, Hampton would have the authority to enact requirements for development or redevelopment within the overlay to protect against flood impacts from sea level rise. One requirement within the overlay should be that developers utilize the NH Coastal Flood Risk Guidance to site and design projects.

Substantial Improvement/Substantial Damage

Substantial Damage is defined as any damage incurred by a structure that costs 50% or more of the value of the structure, before the damage, to repair. Substantial Improvement is defined as any project that costs 50% or more of the value of the structure before the project begins. Floodplain regulations require that any pre-



existing, non-conforming structure that experiences Substantial Damage or undergoes a Substantial Improvement project must be brought into compliance with the most recent regulations.

These requirements can be strengthened by extending the Substantial Improvement definition to include the cumulative costs of multiple projects occurring over a multi-year period; the definition can also be changed so that a lower cost threshold, such as 30% of the value of structure, triggers the requirement. Such a change in definition would then require that more structures be brought into compliance with the most recent regulations and codes as individual improvement projects are completed and tallied against the threshold.

Applying VE Zone Standards in AE Zones

Hampton can require that structures located in FEMA-mapped AE zones be constructed per VE zone standards. This means incorporating breakaway walls, certain pile foundations, and prohibitions on uses below the first floor, in many more structures than under current regulations. The application of more stringent codes not only protects a given structure, it also protects *nearby* structures from damage caused by collapsing or floating structures and debris.

Hampton should at minimum incorporate into its Zoning Regulations the NH State Building Code requirement to apply V-Zone construction standards to properties located in Coastal A Zones (these are identified in the new FEMA FIRMs for Hampton as A-zone areas located seaward of the Limit of Moderate Wave Action line (LimWA)). Ensuring this consistency between Hampton's Zoning Regulations and the locally-enforced State Building Code will facilitate consistent application and enforcement of these requirements.

Hampton can also consider applying V-Zone standards to all AE zones impacted by coastal flooding, including those inland of the LimWA. This would require new development and substantial improvements completed throughout all of Hampton's coastal communities to be constructed to V-Zone standards. Currently the Town requires application of V-Zone standards within the Tidal Wetland Conservation District (2021 Zoning Ordinance Section 2.3.4 H).

Permitting

Hampton can also build resilience considerations into its permitting practices, as laid out in its Zoning Regulations.

One possible change is to require that developers assess coastal flood risks and evaluate adaptation alternatives in accordance with the *Part II: Guidance for Using Scientific Projections* (STAP, 2020) for any proposed development or redevelopment within or near hazard zones. This requirement might not force developers to actually design a new development to those standards, but it will at least require them to understand the risks a development will face in the future, and familiarize them with the process of designing to the Guidance standards.

The Town can also incentivize resilient development by streamlining and expediting the permitting process for work that meets new standards of coastal resiliency.

Floodproofing

The National Flood Proofing Committee defines floodproofing as "any combination of structural or nonstructural changes or adjustments incorporated in the design, construction, or alteration of individual structures or properties that will reduce flood damages." Proper floodproofing measures can reduce flood vulnerability, however the only way to entirely prevent damage is to relocate the structures (i.e., retreat).



Numerous floodproofing measures may be used individually or in combination for most commercial buildings. The only floodproofing measures permitted to residences are relocation or elevation.

There are some situations in which a structure's use is more vulnerable than the structure itself, and the site can be made more resilient by changing the use and without significant alteration to the structure. Examples include:

- Making lower levels of a building commercial and upper levels residential.
- Elevating all uses to upper levels and creating a floodable first floor.
- Transitioning to a water-dependent use of at-risk buildings.
- Adaptive reuse of existing buildings, or constructing mixed-use buildings with commercial uses on lower floors and residential uses on higher floors, may also advance Hampton's goals with regards to housing availability and promotion of local businesses. Promoting water-dependent uses may compliment efforts to support Hampton's fishing and boating communities.

Hampton can coordinate with federal and state institutions to direct technical and financial assistance to residents pursuing property elevations. The Town passed Warrant Article 33 in 2019 to apply for a FEMA Pre-Disaster Mitigation grant in order to "establish a process to prioritize, manage and administer requests for Hazard Mitigation Grant Program funds by Hampton on behalf of those property owners interested in elevating their structures or selling their vulnerable properties to the Town within the FEMA flood hazard areas that are or will be subject to sea level rise utilizing private and Federal funds." Unfortunately, the Town's proposal was not selected for funding despite widespread public support. The Town can continue to pursue this project.

Funding Resiliency Projects

Community Resilience Incentive Zone

Hampton is encouraged to create a Community Resilience Incentive Zone (CRIZ; NH RSA 79-E) and a Capital Reserve Fund to be used for grant match and cost share for municipal repairs, upgrades, flood mitigation and resiliency projects identified in this Master Plan Chapter, the Hazard Mitigation Plan, and other local or regional flood studies.

New Hampshire State Statute RSA 79-E lays out four aspects of a Coastal Resilience Incentive Zone (CRIZ):

- **I.** Municipalities may use storm surge, sea-level rise, and extreme precipitation projections of the New Hampshire Coastal Risk and Hazards Commission to identify potentially impacted structures.
- **II.** The municipality shall determine the private property resilience measures it deems qualifying and may grant tax relief to the qualifying structure and property.
- **III.** Municipalities may acquire preservation or water control easements or establish tax increment financing districts.
- **IV.** Municipalities may create a nonlapsing CRIZ fund as a capital reserve fund or a town-created trust fund to provide funding for municipal costs associated with projected storm surge, sea-level rise, and extreme precipitation, and such funds may be used to support the coastal resilience incentive zone purpose.

Hampton will need to investigate the feasibility and identify mechanisms for granting tax relief for adaptation measures, per item II in RSA 79-E.



Stormwater and Flood Resilience Utility

Creation of a CRIZ fund will need to be matched with efforts to generate revenue to put into that fund. Hampton may consider establishing a stormwater utility (authorized in New Hampshire in 2008 through RSA 149-I) to collect fees from property owners based on the amount of stormwater runoff generated by that property (often based on impervious area). Fees collected would be used for stormwater management projects, as well as other coastal resilience efforts.

A stormwater utility fee may also incentivize implementation of stormwater best management practices, discussed in the “Address Drainage Systems” Strategy (Section 2.4).

Capital Improvement Planning

Hampton Capital Improvement planning can incorporate sea level rise considerations through the following:

- Consider impacts of saltwater exposure on construction materials.
- Plant saltwater-resistant vegetation where necessary.
- Optimize drainage once water levels drop.
- Require that high-value capital projects located in current or projected future risk zones be designed in accordance with *Part II: Guidance for Using Scientific Projections* (STAP, 2020) (the Town can identify a cost threshold over which this requirement would be instituted, for example).
- Harden underground utilities against rising groundwater levels and increased exposure to saltwater.

Pursue Community Rating System

Becoming a Community Rating System (CRS) community will reduce insurance premiums town-wide, and incentivize adoption of stricter floodplain zoning regulations in order to reduce premiums still further.

An essential step toward becoming a CRS community and sustaining that designation will be to increase the Town’s administrative capacity. This is addressed further in the Strengthen Administrative Capabilities Strategy presented in Section 4.6, later in this document.

Cultural Resource Protection

Historic and cultural resources include buildings, sites, and other features that provide an important contribution to a community’s connection to its history and identity. Examples in Hampton’s coastal area include the Hampton Beach Fire Station, the Hampton Beach Casino, the Sea Shell Stage, and many of the historic beach bungalows and cottages throughout the area.

Protection and preservation of historic sites is important to ensuring the community retains its sense of identity following storm events.

Hampton can take the following steps to protect historic and cultural resources from coastal hazards:

- Identify and survey cultural and historic resources and assess their vulnerability to coastal risk and hazards based on best available climate science.
- Integrate protection of cultural and historical resources into land use and management, engineering, regulatory components of municipal plans including hazard mitigation plans and design guidelines.
- Create adaptation strategies and guidelines for cultural and historic buildings affected by climate change, including plans for protecting or relocating resources, and strategies to compensate for the loss of historic assets to climate change impacts or adaptation needs.



Design Guidelines

Adopting design guidance for hazard mitigation retrofits to private property and municipal infrastructure will allow both private property owners and the municipality to protect individual assets they find important while integrating those actions with a town-wide resiliency strategy. Such guidance can make it easier for property owners to implement mitigation retrofits, increase the effectiveness of mitigation actions while avoiding negative impacts on neighboring properties, and maintain a sense of place and cultural identity for an area even while retrofits are being performed.

Guidance may include:

- **Design Best Practices:** guidance on measures to minimize negative outcomes from construction of new coastal infrastructure is essential. Factors such as the impacts a new structure will have on wave runup, inland ponding, and scour should be considered in the development of such guidance.
- **Materials:** provide information on the types of materials appropriate in different environments.
- **Methods to Minimize Neighboring Impacts:** flood protection measures can deflect wave energy or flood flows onto neighboring properties. Provide guidance on how to avoid or minimize this outcome.
- **Avoid, Protect, Accommodate or Relocate:** guidelines on when each of these approaches is appropriate can help property owners make the best decision for their project; protecting an asset as-is may not always be feasible, prudent, or safe.

Implement Flood Studies Next Steps

In 2021, Hampton completed two flood studies, each of which proposed a set of preferred alternatives for the Town to pursue to reduce risks from coastal hazards, as well as a series of next steps to advance those alternatives (Schiff, et. al. 2021; Hoyle, Tanner & Associates, 2021). The next steps presented in those reports should be pursued, as summarized in the Recommended Actions table below.

2.3.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
3.01	Coastal Hazard Overlay District	Establish a Coastal Hazard Overlay District with boundaries encompassing projected future flood hazard zones presented in the <i>Part I: Science</i> (Wake, et. al. 2019) and visible through the New Hampshire Coastal Viewer platform. The Coastal Hazard Overlay District should have higher regulatory standards to protect against flood impacts from sea-level rise and coastal storm surge. One requirement within the overlay should be that individuals who submit an application to the Planning Board, or the building inspector if no Planning Board approval is required, utilize the <i>Part II: Guidance for Using Scientific Projections</i> (STAP, 2020) to determine appropriate design elevations.
3.02	Community Resilience Incentive Zone	Create a Community Resilience Incentive Zone (CRIZ; NH RSA 79-E) and a Capital Reserve Fund with seed funding and a reliable revenue source to be used to help fund municipal repairs, upgrades, flood mitigation and/or resiliency projects identified in this Master Plan Chapter, the Hazard Mitigation Plan, and other local or regional flood studies. Investigate the feasibility and mechanisms for granting tax relief for certain adaptation measures, per CRIZ.
3.03	Coastal Resilience Utility	Establish stormwater utility fee to fund stormwater and other coastal resilience projects.



#	Title	Recommendation
3.04	Substantial Improvement	Define "Substantial Damage" and "Substantial Improvement" in the Town's Zoning Regulations as being calculated cumulatively over 10 or more years (or over the entire lifetime of the structure); consider also defining as 30% of the initial value, rather than 50%. This will increase the number of properties for which these SD/SI thresholds will be triggered, requiring more properties to be brought up to code as owners reinvest in the buildings.
3.05	Freeboard	<p>Adopt standards in the floodplain management ordinance that require all new development and substantial improvement within the SFHA (or the Coastal Hazard Overlay Zone) to be elevated either:</p> <ul style="list-style-type: none"> • 2 feet above the base flood elevation (freeboard). • To the Design Flood Elevation determined using the <i>Part II: Guidance for Using Scientific Projections</i> (STAP, 2020). <p>Additionally, consider requiring that construction or substantial improvement of any structure within the SFHA (as opposed to only structures in the Tidal Wetland Conservation District) comply with the standards of section 2.4.11-C.</p>
3.06	FEMA Community Rating System	<p>Join the FEMA Community Rating System (CRS), which provides discounts to annual flood insurance premiums for some residents and businesses as a reward for the community's activities.</p> <p>Qualifying for the CRS or increasing the Town's rating in the CRS program will involve continuing to work with out-of-compliance property owners to comply with the National Flood Insurance Program (NFIP), and implementing planning and policy, regulatory, non-regulatory, and community outreach and engagement activities that exceed the minimum requirements of the NFIP.</p> <p>Completing this action will likely require increasing Hampton's administrative capabilities. A Community Resilience & Floodplain Administrator position can manage the Town's CRS program, including tracking and identifying "points" for CRS qualification and rating increases. Being in the CRS program will also help drive compliance with floodplain management regulations, as FEMA will hire the Insurance Services Office (ISO) to annually review building permits and Elevation Certificates.</p>
3.07	Design Guidelines	Adopting design guidance for hazard mitigation retrofits to private property and municipal infrastructure will allow both private property owners and the municipality to protect individual assets they find important while integrating those actions with a town-wide resiliency strategy. Such guidance can make it easier for property owners to implement mitigation retrofits, increase the effectiveness of mitigation actions while avoiding negative impacts on neighboring properties, and maintain a sense of place and cultural identity for an area even while retrofits are being performed.
3.08	Assess Cultural Resources	<p>Identify and survey cultural and historic resources and assess their vulnerability to coastal risk and hazards based on best available climate science. Findings should be presented to the Planning Board and Heritage Commission through a report, and incorporated into the Hazard Mitigation Plan and Master Plan as those documents are updated. Coordinate with the State Division of Historical Resources.</p> <p>A review of cultural and historic resource vulnerabilities based on recent hazard events and updated climate change projections should be completed at a minimum every five years, to remain consistent with the Hazard Mitigation Plan update cycle. A comprehensive survey should be performed at minimum every ten years.</p>
3.09	Cultural Resources in Planning	<p>Integrate protection of cultural and historical resources into land use and management, engineering, regulatory components of municipal plans including hazard mitigation plans and design guidelines.</p> <p>The Best Practices Guide for integrating historic resources into resiliency planning, developed for the Connecticut State Historic Preservation Office in 2019 should be referenced. This guide is available at https://portal.ct.gov/DECD/Content/Historic-Preservation/01_Programs_Services/Hurricane-Sandy-Program/Resiliency-Planning.</p>



#	Title	Recommendation
3.10	Guidelines for Cultural Resources	Create adaptation strategies and guidelines for cultural and historic buildings affected by climate change, including plans for protecting or relocating resources, and strategies to compensate for the loss of historic assets to climate change impacts or adaptation needs.
3.11	Project Review Committee	Investigate opportunities to improve applicant, local board awareness of flood vulnerability by restructuring the project review process. Consider the merits of requiring Project Review Committee meeting before ZBA hearing.
3.12	Repetitive Loss Properties	Assist repetitive loss properties (i.e., education, technical assistance, grants. Etc.)
3.13	Meadow Pond Flood Mitigation	<p>Implement the suite of actions recommended by the 2021 Hampton Flood Mitigation Analysis Engineering Report (Schiff, et. al. 2021):</p> <ul style="list-style-type: none"> ➤ Improve Drainage along Kings Highway, Green Street, Gentian Road, and Meadow Pond Road (including stormwater pump station). ➤ Ditch/marsh remediation in the salt marsh. ➤ Install a berm behind Gentian Road (to mitigate flooding from "2050 Spring Tide"). ➤ Elevate flood-prone houses and managed retreat. <p>Note that the 2021 report recommends each of these actions as part of a long-term approach that calls for home elevations and retreat. Many of these actions are relevant to other Resilient Hampton Strategies. Refer to the 2021 Report for more details.</p>
3.14	Hampton Harbor Flood Mitigation	<p>Implement the suite of actions recommended by the 2021 <i>Hampton Harbor Flood Evaluation</i> (Hoyle, Tanner & Associates, Inc. 2021):</p> <ul style="list-style-type: none"> ➤ Evaluate feasibility of installing a permanent barrier, such as walls or vegetated earthen berms (to mitigate flooding from "2070 Spring Tide") at low areas of Glade Path, Island Path, Ashworth Ave, and north of Route 101 (in conjunction with storm drainage improvements). ➤ Explore acquisition of temporary barriers to be deployed in predetermined areas identified for successful implementation. ➤ Investigate elevation of the flood-prone roads of Glade Path and Island Path (to mitigate flooding from "2070 Spring Tide"), possibly in conjunction with installation of permanent barriers. ➤ Revise Zoning Ordinance and Site Plan Regulations to increase flood protection, and enforce floodplain management ordinance, reducing the number of variances permitted. ➤ Elevate flood-prone houses and buildings above a determined design flood elevation, in coordination with revisions to the Zoning Ordinances. ➤ Develop a formal managed retreat plan in conjunction with consideration of the other temporary and permanent flood mitigation strategies that the Town will implement. <p>Note that the 2021 Evaluation recommends each of these actions as part of a long-term approach that calls for home elevations and retreat. Many of these actions are relevant to other Resilient Hampton Strategies. Refer to the 2021 Evaluation for more details.</p>
3.15	Plaice Cove Mitigation	Reduce tidal flooding (based upon current engineering practices) at Plaice Cove area (Ocean Blvd., Beachplum Way, Ancient Hwy & Shaw St.), as identified in Hampton's 2016 Hazard Mitigation Plan.
3.16	Flood Insurance	Encourage property owners, business owners, and renters to get coverage for their buildings and building contents through the NFIP. Buildings and contents are typically covered separately. Renters can purchase insurance to cover their belongings.
3.17	Preferred Risk NFIP Policies	Encourage homeowners in moderate- to low-risk areas to purchase Preferred Risk NFIP Policies.



2.4 Address Drainage Systems

2.4.1 Strategy Overview

Hampton will need to address drainage issues created by rising seas and increasingly severe precipitation events through a combination of measures applied from catchment to outfall. Successful management of stormwater along the coast consists of three aspects:

- Slowing the flow of inland runoff to low-lying coastal areas
- Preventing seawater from entering the system
- Discharging stormwater from low-lying areas without allowing elevated seawater to surcharge into those areas.

Measures range from relatively passive green infrastructure approaches to installing stormwater pump systems to remove water during high tides.

2.4.2 Strategy Components

Slow the Flow

Slowing the downstream flow of stormwater can reduce flooding. Green Infrastructure defined by the Town of Hampton as “using environmentally friendly techniques to stormwater management” is one way to slow the flow. Vegetation, soil, and other elements slow and store stormwater, treat it on site, and encourage infiltration into groundwater. Examples include rain gardens, bioswales, and permeable pavement. Hampton promotes Green Infrastructure through the “Soak Up the Rain Hampton” initiative. Pursuing expansion of Green Infrastructure is recommended.

Stormwater retention is another approach to slowing the flow. This refers to storing water in ponds during a storm, then releasing it over time. This reduces the stress put on downstream areas.

Upsize Systems

Many drainage systems are sized based on historical rainfall data that is no longer applicable, and will not apply to future conditions. As systems are upgraded, they should also be resized based on more recent rainfall data, as well as projections for future severe precipitation amounts.

Hold Back The Sea

Placing a flap gate or duck bill structure on a pipe outlet prevents high seawater from entering the system, reducing surcharge risk with more limited capital and operating expenses than pumping stations.

Hampton already utilizes outflow gates on many of its stormwater outfalls. This should continue to be the practice, and these gates should be regularly inspected and maintained.

Additionally, the use of gasketed piping is recommended. Such piping is water-tight, preventing salt-water infiltration. It is common in both sewer and water supply systems.

Soak Up The Rain

Soak Up the Rain New Hampshire is a State program to raise awareness about nature-based stormwater solutions. Hampton participates in this program, and has helped construct rain gardens in Town. Two rain gardens are located at Lane Library. For more information visit: www4.des.state.nh.us/SoakNH/



Rain Garden at Lane Library



Pump

Hampton will need to install stormwater pumping stations where appropriate. An example of this is in the Kings Highway area, where the 2021 *Hampton Flood Mitigation Analysis Engineering Report* (Schiff, et. al. 2021) recommended installation of a stormwater pump station.

A stormwater pump station pushes water out of an area with enough force to overcome elevated seawater. Stormwater pump stations are feasible (and becoming more common with increasing sea levels) but costly to construct and operate, and represent an ongoing maintenance burden.

2.4.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
4.01	Green Infrastructure	Modify municipal standards to require implementation of stormwater best management practices (BMPs), green infrastructure (GI), passive aquifer recharge (PAR), and low impact development (LID) to manage stormwater inland, reduce the contribution of stormwater to flooding downstream, and minimize impacts to aquatic habitats.
4.02	Hazard Mitigation Plan Drainage Actions	Make drainage more resilient to current and projected future flooding, accounting for both sea level rise and increasing precipitation intensity. Specifically address areas identified in the Hampton Hazard Mitigation Plan (HMP). Areas identified in the 2016 HMP as being in need of drainage improvements include: <ul style="list-style-type: none"> the Brown Ave Area (Church St/Diane Lane/Joanne Lane/Suzanne Lane/Nudd Ave/William St) Campton, Portsmouth, and Plymouth Ave (which discharges into the ocean) Cogger, Mill, Barbour and Vanderpool Roads Ocean Boulevard at Great Boar's Head, in coordination with NH DOT Green St, Gentian Rd, Meadow Pond Rd, & Kings Highway (this action may require construction of a stormwater pump station to remove water during high tide events); see action 4.07 Lower End of High Street Nilus Brook Area (Northwest of Quinn Lane and North Shore Road) White Island (will require addressing sand and sediment management)
4.03	Open Space Preservation	Increase funding and resources for land conservation, land management programs, and land stewardship activities (Note: Land conservation scores very high as an activity in the FEMA Community Rating System program.). Utilize existing funding sources such as offset measures, or the state Aquatic Resource Mitigation fund for natural resource restoration. Assess existing and future recreational areas for their potential to provide storage for flood waters and stormwater runoff, and preserve areas that serve to minimize climate change impacts.
4.04	Open Space Development	Adopt land development regulations that reduce vulnerability and protect ecosystem services (e.g., open space/cluster development).
4.05	Incentivize Pervious Surfaces	Institute tax credits, expedited permitting, or other regulatory incentives to encourage developers to maintain or restore pervious surfaces, provide nutrient barriers, protect vegetated buffers, and maintain wildlife passage. Pervious surface incentivization should consider the impacts of groundwater rise.
4.06	Reduce SFHA Impervious Surfaces	Reduce impervious surface coverage limit within the SFHA (or the Coastal Hazard Overlay Zone) from 60-75% to 50% for all districts.
4.07	Meadow Pond Drainage	Improve Drainage along Kings Hwy, Green St, Gentian Rd, and Meadow Pond Rd (including stormwater pump station) as recommended by the 2021 Engineering Report (Schiff, et. al. 2021). Note that the 2021 Report recommends this action as part of a long-term approach that calls for home elevations and retreat. Refer to Action 3.13.



2.5 Facilitate Relocation

2.5.1 Strategy Overview

As sea level continues to rise, and properties in low-lying areas become progressively more costly to protect and maintain, it is inevitable that some property owners will wish to abandon those assets and investments. If this is done haphazardly, it may result in abandoned properties for which buyers cannot be found, or residents in need of housing following damaging storms.

Hampton can empower and encourage interested residents to take the steps required for relocation, when rising seas make it necessary, by adopting a managed retreat policy.

The “Focus Development and Redevelopment and Investment in Low-Risk Areas” strategy described in Section 4.1 above already addresses one side of relocation by providing “receiving areas” to which residents and others can relocate without leaving Hampton.

On the other side of relocation are the properties in hazard zones. This strategy presents actions to assist property owner who wish to relocate away from risk zones.

2.5.2 Strategy Components

Comprehensive Managed Retreat Plan

The 2021 Flood Studies (Schiff, et. al. 2021; Hoyle, Tanner & Associates, 2021) call for development of a Comprehensive Managed Retreat Plan, which should then be implemented within the next 10 to 20 years. Regardless of other near-term risk reduction actions performed, managed retreat will be a necessary part of long-term resiliency.

Limit Development

As sea level rise increases risks to low-lying areas, Hampton may decide to prohibit new development in certain hazard zones:

- V Zones.
- Coastal A Zones.
- Areas projected to be flooded to a certain depth at Mean Higher High Water (MHHW) under sea level rise projections in accordance with *Part II: Guidance for Using Scientific Projections* (STAP, 2020).
- Areas known to be frequently impacted by coastal storms, containing a high density of repetitive loss properties, or subject to chronic flooding and erosion.

Other possibilities may include variable setbacks and buffers or restrictions on what types of renovations or expansions may be permitted for existing buildings.

Identify Alternative Land Uses

Hampton can conduct a public visioning campaign to identify potential positive, alternative land uses and adaptive reuse opportunities for areas and properties that are anticipated to be impacted by sea level rise. This

The State of New Hampshire’s Tidal Buffer Zone (RSA 482-A: “the area extending landward 100 feet from the highest observable tide line”) and the Town of Hampton’s Wetland Conservation District (Hampton Zoning Ordinance Section 2.3.2.B: “the wet side of the ‘Highest Observable Tide Line’”) are both defined relative to the highest observable tide line; as sea level rise pushes the high tide line inland, these regulated zones will also migrate inland, effectively serving as rolling regulatory boundaries.



proactive approach will help the community recover the use of high-risk properties that become unusable or are vacated over time.

Property Acquisition

Acquire developed coastal properties and convert them to open space and public water-access points. In some cases, new open space should be set aside as natural areas to facilitate marsh migration and provide enhanced protection from coastal hazards to other properties. In other cases, open space can be converted into public parks. Both of the 2021 Flood Studies (Schiff, et. al. 2021; Hoyle, Tanner & Associates, 2021) discuss property acquisition as part of a larger managed retreat strategy.

Hampton should establish dedicated funds and a funding mechanism to support land preservation and acquisition of properties, easements, and development rights to convert vulnerable property to conservation lands when property owners seek that course. Re-applying for a FEMA Pre-Disaster Mitigation grant, as authorized by Town Warrant Article 33 passed in 2019, would be one approach to help fund property acquisition (see Section 4.3.2).

Consolidate Parking

It is worth noting that significant areas of Hampton’s coast are taken up by parking lots. Along with efforts to improve public transportation from inland areas, it is possible that constructing a multi-level parking garage in the Hampton Beach area would enable the Town to remove some other parking areas. A parking garage could also support the Town’s needs for emergency parking during high water events. Whether or not a parking garage fits within the Town’s larger vision for the beach area is beyond the scope of this chapter, and this is presented here simply for consideration, not as a recommendation.

2.5.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
5.01	Decrease Density in Coastal Areas	In concert with rezoning to establish inland and coastal areas, the regulations for some coastal areas should be revised to facilitate a decrease in density and gradual retreat from shoreline risk areas over time. Examples of changes may include: <ul style="list-style-type: none"> • Increase minimum lot areas in some coastal residential zones (such as BS) • Decrease maximum height requirements in some coastal residential zones (such as BS & BS-1) • Increase setbacks in some coastal residential zones (such as RCS, RB, BS, and BS-1) • Decrease maximum percentage of impervious cover in some coastal residential zones (such as RCS, RB, BS, and BS-1) • Note that care must be taken in zoning to decrease density in coastal areas, as some impacts may be disproportionately felt by lower-income property owners or renters. Any proposed changes should be made with community participation, and impacts on Hampton residents should be mitigated as possible.
5.02	Impact Fee	Within Hampton’s Impact Fee Ordinance, explicitly include “development and redevelopment within projected future flood hazard zones” as an activity subject to impact fee assessment. These future hazard zones can be identified formalized through the creation of a Coastal Hazard Overlay District, discussed in the “Live with Water” strategy. Hampton should also adopt a set of protocols to assist with calculation of an impact fee for development or redevelopment performed within the future flood hazard zone; this calculation should include road, utility, and infrastructure maintenance with rising sea levels and groundwater levels, as well as the risk of emergency response and rescue needs during coastal storm events. This action could be completed in addition to or in lieu of other funding mechanisms, such as creation of a stormwater utility (Action 3.03).



#	Title	Recommendation
5.03	Limit Development	<p>In addition to zoning to reduce density in coastal areas and taking other steps to discourage development in risk areas and encourage inland migration, Hampton should take the more proactive step of prohibiting any development in certain higher hazard zones, where any development at all will create an unacceptable level of risk. Such zones may include:</p> <ul style="list-style-type: none"> • VE Zones • Coastal A Zones • Areas projected to be flooded by a certain depth of water, in accordance with <i>Part II: Guidance for Using Scientific Projections</i> (STAP, 2020) • Areas known to be frequently impacted by coastal storms, containing a high density of repetitive loss of structures, or subject to chronic flooding and erosion.
5.04	Managed Retreat Plan	<p>Develop a Comprehensive Managed Retreat Plan to facilitate a thoughtful and equitable retreat approach over the coming decades. Note that the 2021 Flood Studies (Schiff, et. al. 2021; Hoyle, Tanner & Associates, 2021) present flood mitigation recommendations as part of long-term approach that calls for managed retreat. Next steps presented in those reports are:</p> <ul style="list-style-type: none"> • Collaborate on planning process to explore building elevation and voluntary buyout projects in coordination with NHDES, regional planning commissions and the Town (recent proposal to NOAA to do this work that could begin in October 2021). • Perform hydraulic analysis of new flood storage areas to guide planning. • Support community engagement process to implement these alternatives.
5.05	Managed Retreat Funding	<p>Establish dedicated funds and sources to support land preservation, acquisition of easements, and development rights to transfer vulnerable property to conservation lands.</p>
5.06	Alternative Land Uses	<p>Conduct a visioning effort to begin to identify potential positive, alternative land uses and adaptive reuse opportunities for areas and properties that are anticipated to be impacted by SLR.</p>
5.07	Property Acquisition	<p>Support retreat (structure, fill, and impervious cover removal, with floodplain restoration) from high risk areas by buying properties and restoring them to a natural condition.</p>



2.6 Strengthen Administrative Capabilities

2.6.1 Strategy Overview

The Town of Hampton has already made great strides in building coastal resiliency through identification of vulnerabilities and possible strategies, and adoption of zoning regulations. An essential step moving forward to implement actions already identified and expand resiliency efforts in the future will be to grow its municipal administrative capabilities. Hampton has already begun exploring the creation of administrative positions that may help its floodplain management and climate resiliency activities.

Hampton can further its resilience-building efforts by establishing new staff positions, developing operational procedures, directing funding toward resiliency projects, and securing additional funding through grants.

2.6.2 Strategy Components

Planning Capabilities

Incorporate climate change considerations into the Town's Emergency Plans, and develop additional plans as necessary. Documents that help formalize climate resiliency policies and practices in Hampton may include:

- Emergency Plans that address preparation, evacuation, emergency operations, and recovery
- Hazard Mitigation Plan
- Debris Management Plans
- Tree and Utility Maintenance Plans
- Mitigation Project Operation and Maintenance Plans
- Stormwater Infrastructure Inspection and Maintenance
- Open Space Plan
- Bicycle and Pedestrian Plans
- Neighborhood Master Plans
- Capital Improvement Plans

Establish Municipal Responsibilities

Hampton should clearly lay out municipal responsibilities with regards to climate resiliency, including:

- Updating maps of future hazard zones over time
- Monitoring and collect sea level rise rates and projections
- Identifying public assets at risk from sea level rise and coastal storms
- Incorporating sea level rise and coastal resilience into planning and decision making across all departments and commissions
- Improve transportation and utility infrastructure over time as sea levels rise

Staffing and Administration

Resiliency Coordinator

Creating a position for a Resiliency Coordinator may help implement some key aspects of this strategy, such as:

- Building Code Enforcement
- Check and File Elevation Certificates
- Monitor Private Property Improvements (relative to Significant Improvement thresholds)
- Community Rating System Administration



- Grant Writing and Funding
- Technical Assistance and Support
- Community Outreach Related to Floodplain Management Standards & Flood Insurance
- Intramunicipal and Regional Coordination

Technical assistance and support to Hampton residents and property owners can include providing assistance and guidance with regards to FEMA flood insurance. Even those who hold FEMA flood insurance policies often lose out on reimbursement following storm events because of mistakes made in the filing process; a Resiliency Coordinator may be able to assist Hampton residents and property owners with this process.

A Resiliency Coordinator should also coordinate the efforts of existing groups such as the Coastal Hazards and Adaptation Team (CHAT), the Hampton Beach Area Commission (HBAC), and municipal departments and commissions.

Climate Change Resiliency Commission

Hampton may also establish a standing commission to monitor the community’s changing risk profile, recommend best practices to mitigate and adapt to risks, and ensure coastal resilience efforts are integrated across municipal departments and committees. This commission would be similar to the existing CHAT, but would be integrated into Hampton’s municipal structure, and could carry more authority than CHAT does. CHAT was organized in 2019 to research flood management and adaptation strategies and present recommendations to the town’s municipal boards and commissions for consideration.

The Climate Change Resiliency Commission could review development proposals and capital development plans to provide input into maximizing the resiliency of such projects.

Procedural Capabilities

Ultimately, developing practices and procedures before a stress occurs can help facilitate effective response and recovery, taking some of the weight off of municipal administration. While some of the procedures listed below already exist in Hampton, it is recommended that they be reviewed, updated as necessary, and made easily accessible and useable for the Hampton public.

- Emergency procedures (including evacuation and traffic management procedures), and procedures for serving areas at risk of isolation from flooding (examples include stationing responders in isolation risk zones and acquiring high-water rescue vehicles).
- Continue to identify areas for resident parking during high tide flooding.
- Procedures for removing or otherwise protecting boats on moorings or docks before storm events.

Additionally, the 2021 *Hampton Harbor Flooding Evaluation* (Hoyle, Tanner & Associates, Inc., 2021) recommends Hampton pursue acquisition of temporary flood barriers, which could be strategically deployed during high water events to mitigate some flooding to limited areas. Temporary flood barriers can serve as a stop-gap measure to slow or reduce flooding in an area for a period of time; they are not permanent solutions to flood risks. Temporary flood barrier acquisition and deployment training may be an action within the “Strengthen Administrative Capabilities” strategy that integrates well with the “Protect Resilient Hubs and Connectors” strategy.



2.6.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
6.01	Community Resilience Administrator	Create a full time Community Resilience & Floodplain Administrator staff position. A percentage of this individual's role would be allocated to administering the floodplain ordinance (including enforcement) and a percentage would be allocated to building climate resiliency and educating about flood and climate resiliency. This individual can also oversee the Town's efforts to join and maintain its qualification in the Community Rating System (CRS).
6.02	StormReady	Hampton has, in the past, been designated by the National Weather Service (NWS) as a "StormReady" community. While this designation has lapsed, reapplying to the program can help maintain the Town's preparedness for severe weather events, increase public awareness about severe weather, and connect Hampton to other communities. The StormReady Program helps communities proactively plan for extreme weather by providing guidelines to emergency managers on how to improve hazardous weather operations. A StormReady Community must have: <ul style="list-style-type: none"> • A 24-hour warning point and emergency operations center • More than one way to receive severe weather warnings and forecasts and to alert the public • A system to monitors weather conditions locally • Community seminars promoting public readiness • A formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.
6.03	Service Continuity	Improve management, coordination, and delivery mechanisms to ensure continuity of services to essential facilities, people, businesses, and employment centers.
6.04	High Tide Procedures	Develop a set of practices and procedures to prepare low-lying areas for frequent high tide events, and to minimize the negative impacts of such events. These may include collecting trash and recycling, performing street cleaning, clearing drainage infrastructure, and securing outdoor objects. The Town and local residents can partner in implementation of these actions. Acquisition of temporary flood barriers may be explored as part of this action.
6.05	Emergency Parking	Amend Town of Hampton Code Section 805-9(M)(1) to lower the threshold for authorized parking in municipal parking lots when tides are in excess of 9.7 feet (as opposed to 10.0 feet).
6.06	Evacuation Planning	Prepare written evacuation plans and procedures for Hampton's at-risk areas. Ensure evacuation routes are well-publicized and understood by the public; mark evacuation routes with signage and communicate these routes to the public with information on the Town's website and printed maps. Evacuation routes should include possible receiving areas, if appropriate. Evacuation planning should account for seasonal changes in Hampton's population. Coordinate evacuation plans with other towns in the coastal region, as well as with the State and Seabrook Station.
6.07	High Tide Alerts	Expand upon the existing high tide alert system and fund, install, and maintain an improved high tide alert system to inform residents (through text message, automated phone calls, emails, mobile-app alerts, or sirens) of pending tide levels that may require them to prepare by moving vehicles, securing outdoor equipment, and changing plans.
6.08	Ocean Blvd Emergency Response	Plan for emergency responders to respond to ocean flooding at Ocean Blvd. Area (Kings Hwy, H Street, K Street, Surfside 30-493 Ocean Blvd) during high storm surge.
6.09	Resilience in HMP	Incorporate projected climate changes (including sea level rise, storm intensification, and shoreline changes) into future updates of the Hampton Hazard Mitigation Plan. Include relevant recommendations from this Master Plan chapter in that document.
6.10	Update SLR Projections	Review sea level rise and other climate change trends and projections on a five-year (or a maximum of ten-year) timeframe to ensure municipal planning around climate change is up-to-date. Amend this Master Plan chapter as necessary based on updated information.



2.7 Support Local Business Resiliency

2.7.1 Strategy Overview

Hampton's business community is essential to the Town's economic health, and many of those businesses are at risk from coastal hazards. Not only is the economic engine of Hampton Beach at risk from flooding, but many tourist-based industries are particularly vulnerable to changing climate conditions, and all Hampton businesses are vulnerable to interruption of transportation with flooding of the major State roads along the coast. For these reasons, Hampton should work to foster resilience within its business community.

Business resilience can be improved through implementation of risk reduction strategies that fall into the following categories:

- **Structural:** actions that increase the resilience of a business's physical site. These may include completing structural retrofits, elevation or floodproofing a building, installing flood barriers, upgrading drainage systems, acquiring a sump pump, storing emergency materials or supplies on site, securing outdoor items that could become debris, installing green infrastructure, or relocating a structure away from the risk zone.
- **Operational:** actions that increase the ability for a business to continue operations following an event. These may include diversifying services offered, securing multiple vendors, acquiring off-site storage locations, establishing partnerships with other businesses, writing up emergency preparation and response plans, installing backup generators, or backing up business files and data on the cloud.
- **"Fallout":** actions that minimize the impact that business interruption, site damage, or revenue loss will have on a business. These may include signing a flexible lease that protects a business from having to pay rent if the building is not accessible, or purchasing insurance policies that cover floods, contents, and business interruption.

Hampton can work with business owners to identify business resiliency needs and barriers. The Town can create a regulatory framework that encourages businesses to take the actions summarized above, and provide other incentives, assistance, and support. A selection of options available to businesses, sourced from a Statewide small-business risk-assessment and risk-reduction initiative performed in 2019 in Rhode Island, can be found at <http://climatechange.ri.gov/businesses/small-biz.php>.

2.7.2 Strategy Components

Small Business Resiliency Best Practices

The Town of Hampton can help guide small businesses to become more resilient by providing informational pamphlets such as those developed for the State of Rhode Island in 2019, referenced above.

Building Protection

Hampton can provide technical support and design guidance for local businesses to increase the resiliency of their properties. The Town can also facilitate resiliency actions by simplifying or expediting the permitting process for businesses making property improvements for resiliency purposes. Resiliency actions may include elevating building utilities, floodproofing structures, or installing sump-pumps. Temporary flood barriers may also be appropriate for some commercial structures as noted in the *2021 Hampton Harbor Flooding Evaluation* (Hoyle, Tanner, & Associates, Inc., 2021).



Operational Flexibility

Small businesses thrive on creativity, and the challenges created by coastal hazards can often be overcome within a regulatory environment that facilitates that creativity. An example of this idea was seen across the country during the COVID-19 Pandemic, when outdoor dining permits were made easier to obtain, allowing businesses to continue to operate. Similar actions can help businesses that may temporarily be unable to operate out of damaged buildings.

Water-Dependent Uses

Over the long term, Hampton can prioritize water-dependent uses in flood risk areas. Water-dependent uses generally refer to uses, often businesses, that depend on immediate access to waterbodies for their operations. Examples include marinas, fishing and aquaculture operations, and recreational water uses. By their nature, these types of businesses are often better able to cope with flooding than other types of uses.

Prioritizing water-dependent uses in flood risk zones limits the risks to other types of uses, and also supports this important sector. Boating and fishing have been an important part of Hampton's identity, and ensuring continued access to the water for these activities will strengthen that part of the Town's identity, and support this important and unique industry, while also building resiliency.

2.7.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
7.01	Economic Development Plan	Develop an economic development plan that promotes resilience and sustainability planning as economic development strategies. The plan should include a detailed assessment of the impacts that coastal hazards, sea level rise, and climate change will have on Hampton's economy, including its effects on local businesses, the local tax base, tourism, retention or replacement of economic resources, at risk populations, and population migration.
7.02	Business Owner Education	Work with the Hampton Area Chamber of Commerce and the Hampton Beach Area Commission to educate business owners on steps they can take reduce the impact of hazards on their business properties and operations. This effort should include annual workshops, providing information through the Town website, and providing businesses with business-specific, step-by-step resiliency guides (similar to those available through the Rhode Island Division of Statewide Planning at http://climatechange.ri.gov/businesses/small-biz.php , but altered to provide local resources). Encourage businesses to incorporate best available climate science and vulnerability assessments in their decision making and preparedness plans.
7.03	Incentivize Business Resiliency	Incentivize resiliency actions by business owners through grant programs, tax incentives, and expedited permitting processes.
7.04	Permitting Flexibility	Develop a set of emergency permit options that enable local businesses to operate and enact "creative solutions" during relatively long disruptions caused by coastal hazards. Examples may include permits for outdoor operations or offsite operations for businesses rendered unusable or inaccessible by flooding. These permits would not be granted under normal conditions, but could easily be implemented following coastal hazard events.
7.05	Water Dependent Uses	Prioritize water-dependent uses in flood risk areas. Water-dependent uses generally refer to uses, often businesses, that depend on immediate access to waterbodies for their operations. Examples include marinas, fishing and aquaculture operations, and recreational water uses. By their nature, these types of businesses are often better able to cope with flooding than other types of uses.



2.8 Preserve and Enhance Coastal Habitats

2.8.1 Strategy Overview

Pressures from development, pollution, and sea level rise all threaten Hampton's coastal resources. This strategy calls for Hampton to proactively ensure its coastal ecosystems continue to thrive into the future by conserving existing resources, restoring ailing systems where necessary, and facilitating future growth and migration of these systems as sea levels continue to rise.

2.8.2 Strategy Components

Coastal Marsh Conservation, Restoration and Migration

Promote Marsh Migration

The Town of Hampton has already completed notable coastal marsh conservation efforts. Registering the Hampton Salt Marsh as Prime Wetland, adopting strict wetland protection and setback regulations, and using the permitting process to minimize development impacts to wetland areas, are all examples of this.

Marsh restoration may consist of marsh ditch remediation and other wetland remediation efforts.

With sea levels continuing to rise, sensitive tidal wetlands risk being drowned, as the natural growth rates of marshes through sediment capture and vegetative growth cannot keep up with sea level rise rates. Hampton can take a number of steps to help protect tidal wetlands into the future by both promoting their vertical growth, and facilitating inland migration of tidal wetland ecosystems as new areas, currently above the high tide line, become exposed to seawater.

Actions to facilitate inland marsh migration include:

- Open Space: Preserving upland open space currently located adjacent to tidal wetlands will allow those currently upland areas to transition to tidal marsh as sea levels rise.
- Barrier Removal: Many sections of marsh are abutted by hard shoreline protection structures that preclude inland marsh migration. Removal of such structures can enable inland migration. This action can also encompass conversion of currently developed space back to open space, when appropriate
- Elevation Enhancements: In some cases, it has been found to be possible to accelerate vertical growth of tidal marshes through careful addition of sediment on the marsh surface (for example, see <https://www.greatbay.org/enhancing-marsh-resilience-by-adding-sediment/>).
- Remove Restrictions: As occurs with hard shoreline protections, some sections of marsh are isolated from more upland and inland areas by flow restrictions, such as dams or undersized culverts. In 2012 and 2014 the NH Fish and Game Department and the Great Bay National Estuarine Research Reserve used the Sea Level Affecting Marshes Model (SLAMM) to identify areas along the New Hampshire coast that have the potential to support saltwater wetlands under future sea level conditions, if existing tide restrictions are mitigated or removed.

Examples of these areas in Hampton include the Taylor River Reservoir, wetlands along Drakes River north of Drakeside Road and Route 101, and the wetlands south of Huckleberry Lane. Maps of these areas can be viewed through the NH Coastal Viewer tool, as the layer titled "Salt Marsh Restoration Opportunities."



Removing these restrictions would open up new areas that could support tidal marshes under current conditions. By expanding the marsh under current conditions, more opportunities will be available for marsh migration in the future.

Buffers

Hampton can increase buffers and setbacks from tidal wetlands, freshwater wetlands, and surface waters to include consideration of climate change and adequately separate development and infrastructure. Such setbacks would help maintain ecosystem services such as flood storage, storm surge attenuation, and reduced impacts to public facilities and private property. These setbacks would also allow for inland migration of tidal marsh systems and conversion of freshwater systems to tidal systems to accommodate projected changes in sea-levels. Hampton already enforces buffers and setbacks based on high tide lines, so as high tide levels rise, these setbacks will migrate inland; increasing buffers and setbacks based on projected sea level rise will simply help the community be more proactive in accounting for this inland migration.

Hampton may also establish a marsh migration overlay zone to prohibit new development areas of predicted marsh migration under specific scenarios and timeframes.

Living Shorelines

NHDES Defines Living Shorelines as “a management practice that provides erosion control benefits; protects, restores or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill and other structural organic materials. This helps provide habitat value and protects against coastal hazards.”

Living Shorelines aim to defend against inundation and wave power by dissipating and absorbing energy, rather than deflecting or reflecting it. These techniques are also designed to enhance habitat and water quality, and to preserve the natural processes and connections between riparian, intertidal, and subaqueous areas.

The 2019 New Hampshire Living Shoreline Site Suitability Assessment (L3SA) Technical Report presents the results of a screening tool used to identify the suitability of sites all along New Hampshire’s coast for implementation of living shorelines. The report finds that sites along Meadow Pond and the back marshes of the Hampton-Seabrook estuary have the highest suitability for living shorelines.

Additionally, construction of new “hard” coastal protection infrastructure should be limited as much as possible. The shoreline is an incredibly dynamic environment, and coastal structures inevitably effect those coastal processes and cause undesired or unforeseen consequences. Hard structures deflect energy onto neighboring parcels, exacerbating erosion in those areas. Hard structures also interfere with important interactions between coastal wetlands and upland habitats, and disrupt the inland migration of those wetlands, a process necessary for the survival of those ecosystems with rising seas.

Open Space Acquisition

Coastal land acquisition should be pursued for both ecological protection and human use. Coastal land valuable for conservation includes that with ecological significance, existing or potential recreation opportunities, and exceptional or unique coastal conservation value. Factors to consider are the proximity to other protected lands and opportunities to accommodate sea level rise and tidal wetland migration. Sites to consider are undeveloped islands, intact tidal marshland, undeveloped tidally influenced riverine systems, coastal woodlands, bird habitat areas (especially waterfowl areas), anadromous and diadromous fish run areas, and sites that have been shown to have habitat for Federal or State listed threatened, endangered, or species of special concern.



2.8.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
8.01	Resilience in Open Space & Conservation	Develop natural resource restoration plans that explicitly consider future coastal risk and hazards, and the ecological services that they provide. Adopt a targeted scoring framework or incorporate new scoring criteria into existing land conservation prioritization efforts that consider climate adaptation benefits when evaluating land for conservation purposes.
8.02	Coastal Buffers and Tidal Marshes	Increase buffers and setbacks from tidal wetlands, freshwater wetlands and surface waters to include consideration of climate change and adequately separate development and infrastructure, to maintain ecosystem services (e.g. flood storage, storm surge attenuation, reduced impacts to public structures and facilities, and private property), and to allow for inland migration of tidal marsh systems and conversion of fresh freshwater systems to tidal systems to accommodate projected changes in sea-levels.
8.03	Conserve Land for Marsh Migration	Identify and inventory lands where protection of tidal and freshwater wetlands would provide tangible benefits to protect against flooding, or where conservation of open space will reduce flooding and promote inland migration of species and habitat such as tidal marsh. 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 and from rising sea levels reducing salt marsh viability. Prioritize land conservation initiatives in areas of projected marsh migration. Hampton may also establish a marsh migration overlay zone to prohibit new development areas of predicted marsh migration under specific scenarios and timeframes.
8.04	Remove Barriers to Marsh Migration	Remove or modify structures and facilities, such as dams, undersized channel crossings, and hard shoreline protection structures, that create barriers to tidal flow and marsh migration.
8.05	Living Shoreline Pilot Projects	Implement living shorelines projects (including vegetated bank protection structures and dune restoration) on Town lands to demonstrate best practices, and the benefits and effectiveness of living shorelines approaches. Bicentennial Park may be a good candidate for such measures.
8.06	Living Shoreline Education	Provide information to property owners about living shorelines and the importance of retaining the functions of natural shorelines, and implementing landscaping best practices.
8.07	Wetland Restoration	Evaluate and apply sediment application techniques, where feasible, to maintain tidal marsh systems. Perform ditch remediation where appropriate to restore marshes. Reduce and remove Phragmites populations with salt marsh restoration



2.9 Build Social Capital

2.9.1 Strategy Overview

This strategy specifically targets the unique challenges faced by socially and economically marginalized residents in Hampton. Promoting social equity in resiliency planning calls for consideration of both the specific needs of marginalized communities with regard to resiliency, as well as the potential secondary impacts of resiliency efforts on those communities.

Specific needs of marginalized individuals in Hampton may include evacuation assistance (residents with mobility challenges may be unable to leave their homes during high water events) and targeted awareness campaigns (residents who live in low-rent beach properties over the winter may not be aware of flood risks, or of what to do if a flood occurs).

Secondary impacts of resiliency efforts on marginalized individuals in Hampton may include rising rental costs (as risks are reduced for some properties, their values would be expected to increase) and accessibility issues (elevating residential homes can create barriers to accessibility).

The components of this capacity are intended to address both specific needs and potential secondary impacts.

2.9.2 Strategy Components

In addition to the set of components below, Hampton is encouraged to review the Georgetown Climate Center *Equitable Adaptation Legal & Policy Toolkit* at www.georgetownclimate.org/adaptation/toolkits. This toolkit can be used to guide action on the recommendations presented here.

Strengthen Communities Before Events

Supporting community-based organizations is one important step to protect marginalized communities from the enhanced risks they face due to their marginalization. These organizations assist community members under normal conditions, and are often essential first lines of defense during and following disasters; they check on residents, distribute supplies, and facilitate resident interactions with public services and bureaucracy.

Supporting these organizations can include:

- Conducting coastal hazard education and training events for organization leadership and members
- Developing liaison programs so that these organizations are able to easily interface with municipal staff
- Including organization leaders in stakeholder engagement efforts around hazard mitigation and climate resilience planning
- Encouraging participation in grassroots programs such as the Communities Responding to Extreme Weather network

Engage the Youth

Hampton can leverage its local schools and youth organizations to engage its youth in coastal resiliency planning, awareness, and action. Groups and organizations for the Town to coordinate with on this effort include:

- Winnacunnet High School Science and Civics Teachers
- The Winnacunnet High School Sustainability Club
- Local Ocean Science Education Institutions like the Oceanarium and Blue Ocean Discovery Center



Protect Public Services

Protecting the public services on which marginalized communities depend is another way to increase resilience. Possible actions relevant to this category include:

- Making the affordable housing stock hazard-resilient and safe.
- Ensure social services such as food and shelter assistance are prepared to operate following emergency events.
- Have mass transportation options available for evacuation for those who cannot rely on personal vehicles; this can be accomplished by developing a local public transit system or by developing agreements with local school bus or other transportation services.

Increase Participation & Awareness

Raising awareness and, even more importantly, appreciation of hazard risk is key to making people change behaviors to keep themselves safe.

An essential aspect of a public awareness campaign is requiring hazard zone disclosure to new homebuyers at the time of purchase, providing specifics about geographic areas of risk, and highlighting the severity and chances of occurrence of hazards. In order to serve populations who do not own property, Hampton should require hazard disclosures to renters as well. Disclosures should also inform renters and owners of steps to take before, during, and following coastal hazard events. Steps should include purchasing flood insurance, which is available to both owners and renters, and to residents both in and outside of FEMA-mapped hazard zones.

It is also important to solicit community participation in hazard assessment, mitigation planning, and the recovery process. Bringing more voices to the table will help ensure the needs of all populations are addressed to the greatest extent possible.

Equitable Distribution of Mitigation Resources

It is important to make recovery and mitigation funding mechanisms equitable. For example, HUD Community Development Block Grants typically require that 70% of the grant be spent supporting Low-Moderate Income communities. Grant disbursement should be based on the costs of repairs rather than the values of homes. Access should be made easier for low-income populations, with reduced bureaucracy and lowered credit standards following a disaster. Investment should be made in flood mitigation retrofits specifically for low-income housing and a means-tested voucher program for low-income residents to implement flood protection and to buy flood insurance should be instituted.

Support the Local Economy

Mitigation and recovery projects are often very expensive, and are completed with state and federal funding coming from outside the community. This is an opportunity to go beyond simple hazard mitigation and actually support the local economy. Municipalities should hire local contractors for mitigation projects, and consider establishing minimum “living wage” requirements that contractors must meet in order to ensure local workers are appropriately reimbursed. Job training programs can be run to train local residents to be able to perform this work, giving them skills that will last beyond the project.



2.9.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
9.01	Protect Public Services	Protect the public services on which marginalized communities depend. Actions include: <ul style="list-style-type: none"> • Making the affordable housing stock hazard-resilient and safe. • Ensure social services such as food and shelter assistance are prepared to operate following emergency events.
9.02	Community Organization Engagement	Include community-based organization leaders in stakeholder engagement efforts around hazard mitigation and climate resilience planning.
9.03	Community Organization Liaison	Develop liaison programs for community-based organizations, to enable them to easily interface with municipal staff.
9.04	Community Organization Education	Conduct coastal hazard education and training events for community-based organization leadership and members.
9.05	Grassroots Resiliency Networks	Encourage local community-based organizations to participate in grassroots programs such as the Communities Responding to Extreme Weather network
9.06	Engage Youth	Engage local youth in coastal resiliency planning, awareness, and action. Groups and organizations for the Town to coordinate with on this effort include: <ul style="list-style-type: none"> • Winnacunnet High School Science and Civics Teachers • The Winnacunnet High School Sustainability Club • Local Ocean Science Education Institutions like the Oceanarium & Blue Ocean Discovery Center
9.07	Provide Evacuation Services	Have mass transportation options available for evacuation for those who cannot rely on personal vehicles; this can be accomplished by developing a local public transit system or by developing agreements with local school bus or other transportation services.



2.10 Elevate Awareness

2.10.1 Strategy Overview

A climate-resilient community must be made up of members of the public, municipal staff, and municipal decision-makers who are well-informed about and engaged with climate risks, vulnerabilities, and resiliency strategies. Creating an informed and aware community can provide essential support for coastal resilience policies and programs, and can empower residents and business owners to proactively implement resiliency measures on their own. If those interested in buying property are fully aware of coastal risks, they may avoid putting themselves in a vulnerable position to begin with. And some measures - such as green infrastructure, mitigation funding opportunities, and evacuation planning - require an informed municipal staff and public.

This strategy calls for education, outreach, and awareness campaigns aimed at the public, municipal staff, and municipal decision-makers.

These campaigns should address the following:

- **Risk Awareness:** knowledge of hazards and vulnerabilities, understanding of sea level rise and climate change impacts, and appreciation of the consequences of inaction.
- **Resiliency Education:** an understanding of resiliency principles and options.
- **Preparation & Response Training:** information on how Town officials, property owners, and others can effectively prepare and respond to a coastal hazard event.

2.10.2 Strategy Components

Municipal Education & Training

It is important to educate and train municipal staff and elected officials about coastal hazards and climate change. Ensuring decision-makers understand the science of coastal resilience will allow them to make informed, science-based planning and policy decisions. Training municipal staff who are responsible for implementing resiliency measures will help them do so more effectively, and identify implementation gaps or issues more quickly.

Public Awareness & Education

Public education campaigns should be engaging and accessible. A variety of different tools and platforms should be used, with potential barriers such as language, technology, and timing taken into account. Some campaign options may include:

- **Outdoor art and installations:** These can include signs or gauges showing the elevations of historic flood events or projected future flood elevations; murals depicting impacts from historic storms; or informational kiosks describing living shoreline benefits. The RPC already has a high-water mark sign installed at the Hampton Transfer Station as part of its High Water Mark Initiative. Other examples of public installations include the Seacoast Remembrance Project in Durham, NH, and Dover Rising Waters in Dover, NH. Refer to the Comprehensive Coastal Resilience Supplement for more information.
- **Citizen Science:** Involving the public in analyzing coastal change can be a powerful way to increase awareness and understanding, while empowering the public by giving them ownership over the problem. Citizen scientists in Hampton can monitor tide levels, measure precipitation changes, evaluate sediment movement on beaches and dunes, and assess wetland health. The Coastal Research



Volunteers program through the University of New Hampshire (UNH) New Hampshire Sea Grant program is a great resource for these kinds of efforts (<https://seagrant.unh.edu/crv>).

- **Publicizing Success:** Public input during the development of this chapter identified a specific need for increased awareness of coastal resiliency success case studies, from which property owners can gain insights and inspiration. Hampton may want to compile examples of elevated homes, floodproofed commercial buildings, property buyouts, and other resiliency actions taken by private property owners to help inform others who may be interested in similar actions.
- **NH Coastal Landowner Technical Assistance Program (LTAP):** Hampton can encourage landowners to participate in the LTAP initiative available through the University of New Hampshire Sea Grant and NHDES Coastal Program. This initiative provides technical assistance, information, tools, and contacts to landowners to help them reduce risks to their properties, implement nature-based solutions, and restore habitats. <https://seagrant.unh.edu/LTAP>.
- **Public Information:** Hampton can help create a well-informed public by distributing informational pamphlets at public buildings, mailing informational newsletters to residents in current and projected future risk zones, posting information on its website and social media accounts, and regularly holding workshops where attendees can learn about coastal risks, resilience, and actions being pursued by the Town.

Property Disclosure

Disclosure of flood hazard exposure to new home buyers is an important way to make sure those buyers are prepared for the investment they are making in flood preparation and recovery.

New Hampshire State Law states that an agent selling a property is responsible for: “Disclosing to a prospective buyer or tenant any material physical, regulatory, mechanical, or on-site environmental condition affecting the subject property of which the licensee has actual knowledge” (N.H. Rev. Stat. § 331-A:25-b II.c).

This language is general enough to allow for flood hazard disclosures to be ignored or overlooked; additionally, it is unlikely to prompt disclosure of future flood risks based on sea level rise projections. Hampton can take the initiative to require disclosure of flood risks, including from projected sea level rise, to potential home buyers. The Town can also proactively provide information to new property owners about flood risk, available elevation information (such as elevation certificates), and important emergency procedures for the owners to follow when flooding is predicted or occurring.

In addition to informing new property owners of risk, it is essential to inform renters of those risks. Renters tend to have a lower capacity to adapt, withstand, or recover from hazard events because they tend to be less aware of the risks they face in homes they are renting temporarily, and hazard risks are compounded with other social and economic stresses that disproportionately weigh down renters.

The Town can use the Coastal Hazard Overlay District as a tool to inform owners and renters of both existing and future risks and hazards based on projected sea-level rise and coastal storm surge flooding. Hampton should include in the disclosure process information about how to prepare, respond, and recover from flooding as a private property owner and renter; this information could include emergency contacts, evacuation routes, emergency parking areas, and property protection strategies.

Hampton should also work with the State to promote disclosure requirements at the State level.



Emergency Procedures Education

In addition to education about hazards and resilience, it is important to educate the public about what to do when a flood occurs or is forecast. This type of education may include information on when private vehicles should be moved to higher elevation public parking areas, reminders to refill prescription before a flood event that may cut off access to pharmacies, and procedures to take if flood damage occurs.

The Town may consider producing signs or magnets with basic information to be put up in properties in risk areas, similar to emergency number magnets in many homes, or fire information signs in businesses.

2.10.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
10.01	Flood Hazard Disclosure	<p>Increase public awareness of flood risks through flood hazard disclosure to new property buyers, as well as to renters.</p> <p>Require disclosure through the Certificate of Occupancy Process described in Article XII of Hampton's Zoning Ordinances (add "informing occupants of coastal risks" to the criteria listed in Section 12.2). Include in the disclosure process information about how to prepare, respond, and recover from flooding as a private property owner and renter; this information could include emergency contacts, evacuation routes, emergency parking areas, and property protection strategies. Renters and property owners should be encouraged to purchase flood insurance through this disclosure.</p> <p>The Town can use the Coastal Hazard Overlay District as a tool to inform owners and renters of both existing and future risks and hazards based on projected sea-level rise and coastal storm surge flooding; disclosure can be required for all properties located within the CHOD, and Simply informing property owners and renters that their residence is located within the CHOD will serve to educate them on their risks.</p> <p>Work with the State to promote disclosure requirements at the State level.</p>
10.02	Public Outreach and Engagement	<p>Continue and enhance public outreach efforts to engage and inform community members of flood hazards, vulnerability, and opportunities to increase resiliency and to solicit input from residents. Education should cover what to do when a flood occurs or is forecast, and include information about when private vehicles should be moved to higher-elevation public parking areas, reminders to refill prescription before a flood event that may cut off access to pharmacies, and procedures to take if flood damage occurs.</p> <p>Specific actions may include:</p> <ul style="list-style-type: none"> • Update the Town's website to incorporate all hazard education. • Outdoor Art Installations. • Implementing the High Water Mark Initiative by documenting high water marks on public buildings or on permanently installed markers. • Citizen Science Opportunities. • Sending mailers to properties within the Coastal Hazard Overlay Zone. • Annual seminars held in May in cooperation with FEMA's National Hurricane Preparedness Week, or in September during FEMA's National Preparedness Month.
10.03	Property Owner Education	<p>Educate property owners on steps they can take reduce the impact of hazards on their properties. Encourage private property owners and to incorporate best available climate science and vulnerability assessments in their decision making and preparedness plans.</p> <p>Encourage property owners to participate in the UNH Landowner Technical Assistance Program (https://seagrant.unh.edu/LTAP)</p>



2.11 Leverage Regional and State Capacities

2.11.1 Strategy Overview

Hampton is home, or has close ties, to numerous State and regional organizations. Nearly all of Hampton's beachfront is under the jurisdiction of the New Hampshire Division of Parks and Recreation and important aquaculture resources draw the interest of New Hampshire Fish and Game Department. The Town includes many State Roads, and so has significant presence from the NH Department of Transportation (NHDOT). Nearby University of New Hampshire has conducted many research projects in Hampton, including many relevant to coastal resilience. Regional organizations like the Seabrook Hampton Estuary Alliance and, of course, the Rockingham Planning Commission, are priceless assets to Hampton. Even the Federal government has interests in the Town, with the Nuclear Regulatory Commission overseeing the Seabrook Station Nuclear Power Plant (this has relevance to coastal resilience both because of the regional evacuation planning required by the NRC, and because of the potential risks to the power plant itself from sea level rise and coastal storms.).

Hampton can leverage these State and regional resources to become a region-wide example in community coastal resilience. As New Hampshire and the region pursue resilience, Hampton should work to participate in State and regional efforts, learning from neighboring communities, benefiting from State and regional resources, and contributing to the coastal resilience field of northern New England.

2.11.2 Strategy Components

The strategy primarily calls for Hampton to continue to take steps it has taken in the past.

- Implement best practices and guidance from the State (such as the NH Coastal Flood Risk Guidance)
- Support regional resiliency organizations (such as SHEA) through participation and funding
- Invite state and regional representatives to tour resiliency projects and risk areas
- Participate in UNH research projects
- Host coastal resilience meetings or events that draw in practitioners from across the region (such as the Hampton Beach Coastal Resiliency Symposium in 2021)

2.11.3 Recommended Actions

The table below summarizes some of the specific actions that can be pursued to advance this Resilient Hampton Strategy. An implementation table listing all recommended actions is included in the following chapter.

#	Title	Recommendation
11.01	State, Regional, and Local Planning Consistency	Identify and reduce existing inconsistencies between municipal plans and state and regional plans, such as hazard mitigation plans, building codes, design standards, and evacuation plans.
11.02	NHCAW Partnership	Continue the Town's partnership with NH Coastal Adaptation Workgroup in climate adaptation activities that facilitate, coordinate, provide technical information, and convene public outreach events for the Estuary towns.
11.03	SHEA	Continue participating in and supporting the Seabrook-Hampton Estuaries Alliance.
11.04	Host Regional Resiliency Events	Host coastal resilience meetings or events that draw in practitioners from across the region (such as the Hampton Beach Coastal Resiliency Symposium in 2021)



3 IMPLEMENTATION

The following table summarizes all of the recommendations discussed above. Information in this table includes:

- **Number:** The Recommendation number identifies which Resilient Hampton Strategy (1 to 11), described in the previous section, each recommendation is associated with.
- **TITLE:** The title provides a short summary of the Recommendation. More information can be found in the Resilient Hampton Strategies descriptions in Section 4 of this document.
- **RELEVANT “RESILIENT HAMPTON STRATEGY”:** While each Recommendation is associated with one specific Resilient Hampton Strategy, most are actually relevant to multiple strategies. Each Resilient Hampton Strategy is listed in a separate column, and relevance to a given Recommendation is indicated with a highlighted table cell.
- **SOURCES SUPPORTING:** A number of reports and studies that present coastal-resilience actions for Hampton were reviewed during development of these Recommendations. Each of these sources is listed in a column in the table below. A highlighted cell indicates that the Recommendation presented was informed by actions found in that source. These sources are:
 - **TS 2015:** Rockingham Planning Commission 2015 Tides to Storms Report for Hampton
 - **CHAT 2020:** Coastal Hazards Adaptation Team 2020 Draft Recommendations
 - **CRHC 2016:** New Hampshire Coastal Risks and Hazards Commission 2016 Final Report
 - **FS 2021:** 2021 Flood Studies (Schiff, et. al., 2021; Hoyle, Tanner & Associates, Inc., 2021)
 - **HMP 2016:** Hampton Hazard Mitigation Plan 2016
 - **Public Input:** Public participation during the Hampton Master Plan Update Phase I
- **TIMEFRAME:** General timeframes for implementation of each Recommendation.
- **RESPONSIBILITY:** Municipal Departments or Committees suggested to be responsible for implementation of each Recommendation. Potential responsible parties are:

Assessing: Assessing Department	HBAC: Hampton Beach Area Commission
BOS: Board of Selectmen	Heritage: Hampton Heritage Commission
Build: Building Department	Lane: Lane Library
CIC: Capital Improvement Commission	P&R: Hampton Parks and Recreation Department
COC: Chamber of Commerce	Plan: Planning Department, Planning Board, or Zoning Board of Appeals
ConCom: Conservation Commission	SAU: SAU 90 or SAU 21
DPW: Department of Public Works	Wfr: Hampton Welfare Office
EMD: Emergency Management Director	

- **CROSSWALK:** The “Crosswalk” columns can be used to help tie each Recommendation to other chapters or sections of the Master Plan document. Some of the most common New Hampshire municipal Master Plan sections are listed (at the time that this Coastal Resilience document was being developed, the structure of the rest of the Master Plan was not known). The Recommendations presented in this Coastal Resilience document should be migrated to the relevant Master Plan section, as indicated by a the highlighted table cells.

The Town of Hampton should use this table to guide implementation of the recommendations presented in this document, and to integrate the Resilient Hampton Strategies with other municipal planning efforts.



4 SOURCES

While not all of the following sources are directly referenced in this Report, all were used in development of the Town of Hampton Comprehensive Coastal Resilience Supplement, which was consolidated to form this Report.

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