

# Little Boar's Head Village District Master Plan Coastal Hazards & Adaption Chapter



King Tide, October 2019. Photo credit: Martha Lardent

Adopted May 17, 2022

## Acknowledgements

A key part of the development of this project was the participation of the Steering Committee made up of representatives and officials from the Town of North Hampton and Little Boar's Head Village District. The Steering Committee meet regularly during the project to provide input to the content of the master plan chapters and public outreach. The development of this chapter was possible thanks to the volunteer and staff time contributions made by the following individuals:

- North Hampton Planning Board - Valeria Gamache
- Little Boar's Head Planning Board - Rob Omberg
- North Hampton Select Board - James Sununu
- Little Boar's Head Village District Commissioners - Brian Goode
- North Hampton Zoning Board of Adjustments - Rick Stanton
- Conservation Commission - Lisa Wilson
- Heritage Commission - Jeff Hillier
- Agricultural Commission - Audrey Prior
- Town Administrator – Michael Tully
- Emergency Management Director/Fire Chief - Jason Lajoie
- Police Chief – Katherine Mone
- Planning & Zoning Administrator – Rick Milner

This chapter was developed with assistance from Rockingham Planning Commission, UNH Cooperative Extension and NH Sea Grant.



This project was funded, in part, by NOAA's Office for Coastal Management under the Coastal Zone Management Act in conjunction with the NH Department of Environmental Services Coastal Program.





# Coastal Hazards and Adaptation

## Master Plan Chapter

Little Boar's Head Village District - Adopted May 17, 2022

### Introduction

The Town of North Hampton (Town) and the Little Boar's Head Village District (LBH) in recent years have experience multiple storm and flooding events along the coast that have had direct impacts on roadways, infrastructure, public and private structures, recreational facilities, and natural resources. While North Hampton has always experienced the hazards of being a coastal community, there is growing awareness amongst residents and officials that the current and future impacts will be more significant. There is recognition amongst Town and LBH officials, staff and residents that specific coordinated efforts to deal with impacts of have been largely reactive instead of proactive.



*Plowing rocks on Route 1A after a coastal storm in November 1944. Source: North Hampton Historical Society*

The unique planning and zoning authority of the LBH coupled with the Town's authority and responsibilities means that any efforts to implement most coastal hazard mitigation and adaptation efforts must be done through a joint effort. The intent of this chapter, developed concurrently with the Town of North Hampton to increase the knowledge of coastal impacts and to develop a set of coordinated actions and goals that officials, staff and residents from both the Town and LBH can use to help mitigate impacts, better adapt to changes, and ultimately become a more resilient community.

This chapter was developed with the support from the following boards and departments within the Town and LBH, all of whom contributed volunteer participation, staff time, and extensive knowledge about North Hampton and Little Boar's Head:



*Broken walkway along the Route 1A shale piles after a coastal storm in March 2018. Photo credit: Rich Beauchesne.*

- North Hampton Select Board
- LBH Village District Commissioners
- North Hampton Planning Board
- Little Boar's Head Planning Board
- Conservation Commission
- Heritage Commission
- Town Administrator
- Emergency Management Director
- Fire Department
- Police Department
- Public Works Department
- Planning & Zoning Department
- Building Department

Additionally, multiple public information and input session were held between January 2020 and final adoption of the chapters by the North Hampton Planning Board on May 17, 2022, and Little Boar's Head Planning Board on May 17, 2022. Public feedback received is summarized in Appendix A.

## Vision

The residents of Little Boar's Head seek to protect their community from the impacts of coastal hazards, climate change and sea-level rise to preserve and enhance the character, heritage, and natural resources within the Village District. Proactive planning of resources, funding and actions can address these issues in a way that minimizes losses to property, protects the environment, avoids unnecessary expenses, and allows for adaptation.

This can be accomplished by:

- Ensuring that the best available information, including continual feedback from residents, landowners and businesses is used for decisions. This information and feedback will help to ensure the best outcomes with an engaged and involved community.
- Acting early to reduce costs, maximize investment and increase resiliency.
- Determining the level of acceptable impacts and risks to minimize those impacts to residents, landowners, businesses, and for nature.
- Promoting actions that serve multiple benefits for the Village District. The development of these actions must include engaging the community to enhance action development and to communicate benefits.
- Collaborate with the Town, neighboring municipalities, and regional, state and federal partners to use resources efficiently and maximize impact of actions.
- Being flexible as knowledge and conditions change and planning to revisit goals and actions often.
- Including everyone (residents, landowners, businesses, visitors, etc.) in meeting these goals through education, communication, and participation. Important in this endeavor is that all residents have a part to play, as an observer and a participant, and can take actions.

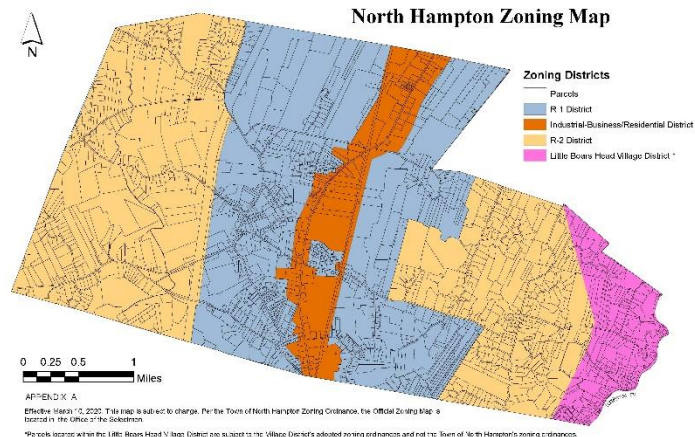


*Fish houses and Little River tidal culvert near North Hampton State Park during the King Tide, October 2019. Photo credit: Martha Lambert.*

## Background

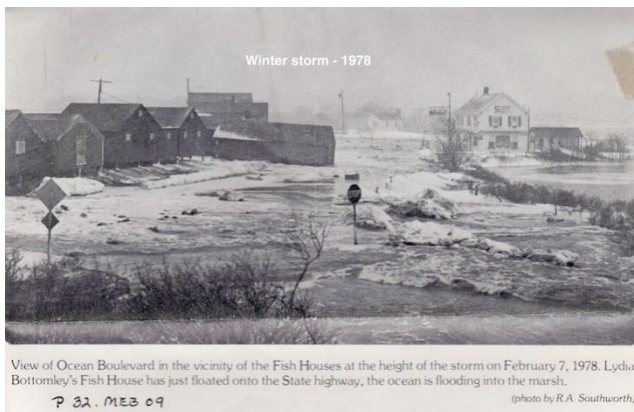
North Hampton is a suburban and rural coastal community that lies in the heart of the seacoast of New Hampshire. The town encompasses 8,923 acres of land (approximately 14 square miles) and 55 acres of open water. North Hampton is predominantly drained by two main watersheds: the Winnicut River watershed that drains into the larger Great Bay-Piscataqua River watershed, and the coastal drainage to the Atlantic Ocean via the Little River, Philbrick's Pond, Berry's Brook and Bailey's Brook. North Hampton's land use pattern has largely been determined by its natural resources, which in turn influenced its transportation and commerce development. Like many New England towns, North Hampton developed in the area adjacent to freshwater and coastal waterways, with major town facilities located near adjacent upland areas.

Within the boundaries of the Town of North Hampton, is the Little Boar's Head Village District (LBH). LBH was formed by an act of the NH Legislature in 1905 and encompasses the seaward extent of the town (depicted in pink on the North Hampton Zoning map to the right). LBH legally exists as an independent political entity that has autonomous zoning authority and is responsible for the walkways and streetlights within the LBH boundaries. The Town of North Hampton continues to have responsibility for emergency service, education and health services, infrastructure oversight, and maintenance of local roadways within Little Boar's Head.



A key difference between the Town and LBH are that they maintain separate master plans and zoning ordinances as they have separate authority to enact zoning regulations. For example, North Hampton maintains participation in the National Flood Insurance Program (NFIP) administered by FEMA by having floodplain development regulations within North Hampton's Zoning Ordinance. In 2017, the Little Boar's Head Village District became a participant in the NFIP as an independent political entity for zoning authority and adopted its own floodplain regulations. LBH's floodplain regulations are effectively identical to the Town's floodplain regulations.

While the Town and LBH have separate master plans and zoning regulations, many of the goals of both jurisdictions express similar intents to protect natural resources, preservation of community character, and ensure proper investment in community services and capital expenses. An overarching intent in this chapter, and within both the Town and LBH master plans, is to promote understanding of coastal hazards to encourage informed decisions by community members for better community resiliency.



The following information is a summary of key state, regional and local planning documents and studies that address coastal hazards and topics. The body of information regarding the impacts of coastal hazards from climate change and sea level rise continues to grow and thus North Hampton and Little Boar's Head will need to consider updates to knowledge when making decisions on planning and projects efforts.

*Lydia Bottomley's fish house floated onto Route 1A during a coastal storm February 7, 1978. Source: North Hampton Historical Society.*

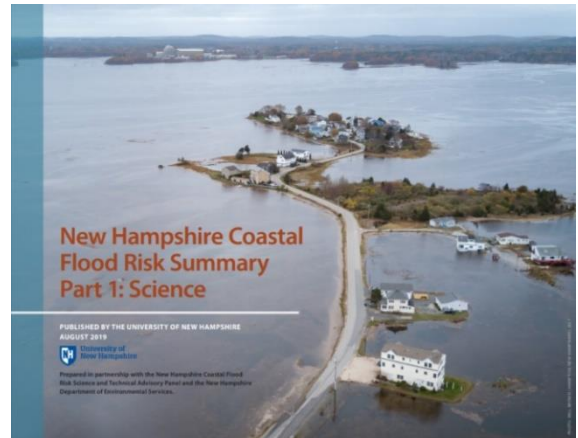


### New Hampshire Coastal Flood Risk Summary – Part 1: Science (2019)

In 2019, the NH Department of Environmental Services updated the 2014 Coastal Risk and Hazard Commission Science and Technical Advisory Panel Report with the publication of the [2019-2020 New Hampshire Coastal Flood Risk Summary](#), including “Part I: Science” and “Part II: Guidance for Using Scientific Projections.” Together, Part I and Part II of the New Hampshire Coastal Flood Risk Summary fulfill the requirements of RSA 483-B:22, that requires NHDES to update the 2014 Coastal Risk and Hazard Commission report every five years.

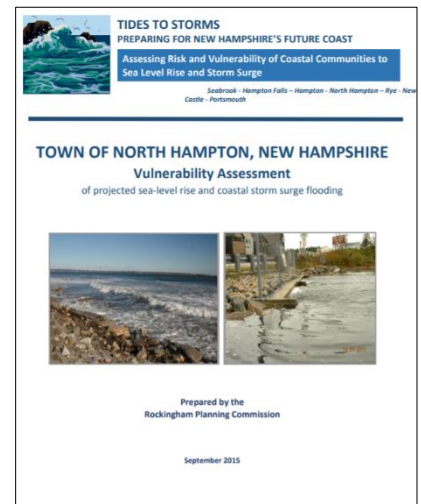
The New Hampshire Coastal Flood Risk Summary – Part 1: Science provides a synthesis of the state of the science relevant to coastal flood risks in New Hampshire. Key findings of the report related to projected sea-level rise, coastal storms, groundwater rise, precipitation changes and flooding include:

- Relative sea level in New Hampshire is rising and in coastal New Hampshire is projected to rise for centuries. The rate of ice mass loss from the Greenland and Antarctic ice sheets is accelerating, and land ice is now the primary contributor to sea-level rise.
- Inland and coastal impacts from storm surge in coastal New Hampshire will increase with sea-level rise
- Future storm surge increases as extreme storm intensity increases. And current 100-year return period storm surge estimates vary.
- Coastal groundwater levels will rise with sea-level rise, with the magnitude of groundwater rise decreasing with distance from the coast.

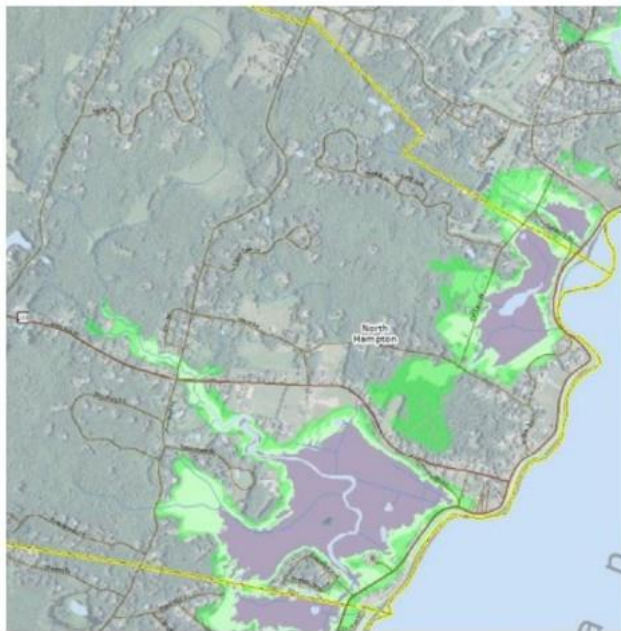


### TIDES TO STORMS: Assessing Risk and Vulnerability to Sea-level rise and Storm Surge (2015) – North Hampton, NH Vulnerability Assessment

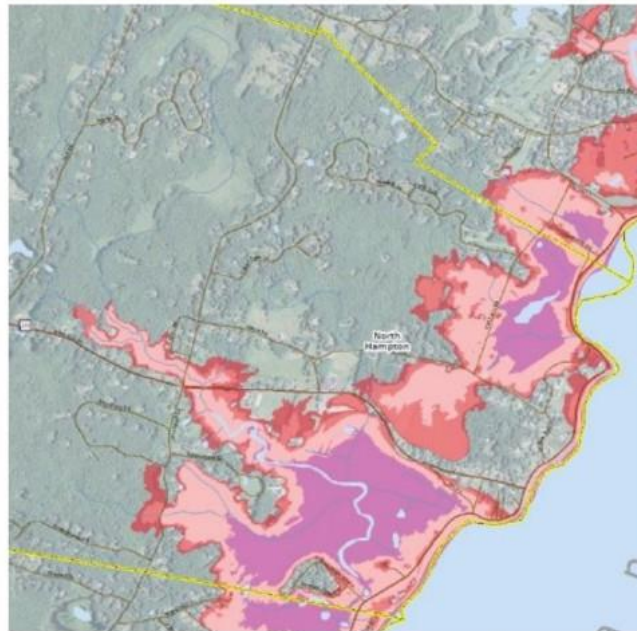
In 2015, Rockingham Planning Commission released TIDES TO STORMS: Assessing Risk and Vulnerability to Sea-level rise and Storm Surge, an assessment of vulnerable areas and infrastructure in coastal New Hampshire. Coastal municipalities were provided maps and an assessment of risks to roadways and supporting transportation infrastructure, critical facilities and infrastructure, and natural resources. [North Hampton's Tides to Storms Vulnerability Assessment \(2015\)](#) included recommended actions that municipalities can take to help adapt and improve resiliency to changing conditions caused by storm surge and sea-level rise. The figure below depicts the identified areas of concern and the extent of areas potentially threatened by sea-level rise and storm surge in North Hampton.



Sea-Level Rise Scenarios 1.7 feet, 4.0 feet and 6.3 feet



Sea-Level Rise Scenarios 1.7 feet, 4.0 feet and 6.3 feet plus storm surge



*Note: Storm surge is the area flooded by the 100-year/1% chance storm event.*

*North Hampton's Tides to Storms Vulnerability Assessment (Rockingham Planning Commission, 2015)*

The sea-level rise projections used in the Tides to Storms study are based on a study completed in 2011 by Wake et al., but are similar to report issued by the NH Coastal Risks and Hazards Commission's Science and Technical Advisory Panel in 2014. Key findings for the Town of North Hampton and Little Boars Head Village District are reported in the table below based on evaluation of the 1.7 feet intermediate-low, 4.0 feet intermediate, and 6.3 feet highest sea-level rise projections at the year 2100 and these sea-level rise projections with the 100-year storm surge.

Sea-Level Rise (SLR) Scenarios	SLR 1.7 feet	SLR 4.0 feet	SLR 6.3 feet	SLR 1.7 feet + storm surge	SLR 4.0 feet + storm surge	SLR 6.3 feet + storm surge
Infrastructure (# of sites)	1	7	9	10	15	16
Critical Facilities (# of sites)	1	2	2	2	4	7
Roadways (miles)	0.0	0.7	1.3	1.3	2.6	3.3
Upland (acres)	67.8	135.3	215.9	193.5	283.9	358.6
Freshwater Wetlands (acres)	32.5	49.4	71.5	61.9	84.2	95.5
Tidal Wetlands (acres)	18.1	21.3	21.9	22.1	22.1	22.2
Conserved and Public Lands (acres)	8.8	14.8	19.3	19.1	28.4	37.6
100-year floodplain (acres)	69.5	69.5	69.5	69.5	69.5	69.5
500-year floodplain (acres)	135.7	135.7	135.7	135.7	135.7	135.7

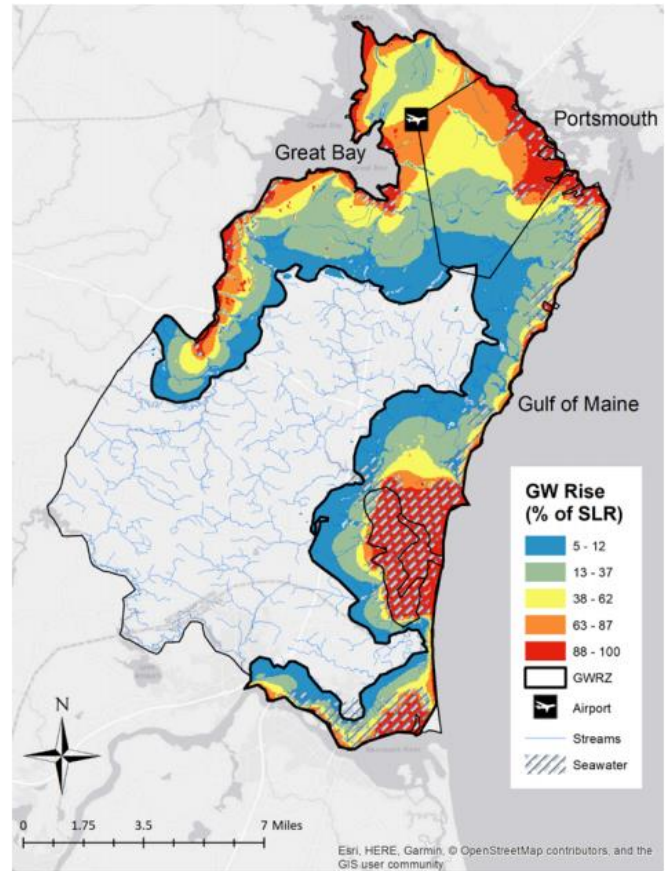
*Notes: Storm surge is the area flooded by the 100-year/1% chance storm event. Upland refers to land above mean higher high water (highest tidal extent) and excluding wetlands. 500-year floodplain impacts were calculated based on flooding beyond the extent of the 100-year floodplain impacts.*



## Groundwater Resource Impacts

Climate change in New England is forecast to include more frequent and intense precipitation events, with a slight decrease to little change in total precipitation, and increasing temperatures. The effects of this potential future climate change on the Seacoast hydrologic system would likely include reduced base flows and fresh ground-water discharges to tidal areas and lowered ground-water levels. The effects of these climate changes by 2025 were estimated to be greater than the potential effects of increased water demands. The analyses indicated that there are potential issues of concern for future use of water resources in the Seacoast region. The models developed and demonstrated in this investigation can provide water-resource managers and planners tools with which to assess future water resources in this region. The findings regarding the effects of increasing water demand and potential climate change on ground-water availability may be transferrable to other regions of the nation with similar hydrogeologic and climatic characteristics. (*Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire*, 2001. US Geological Survey)

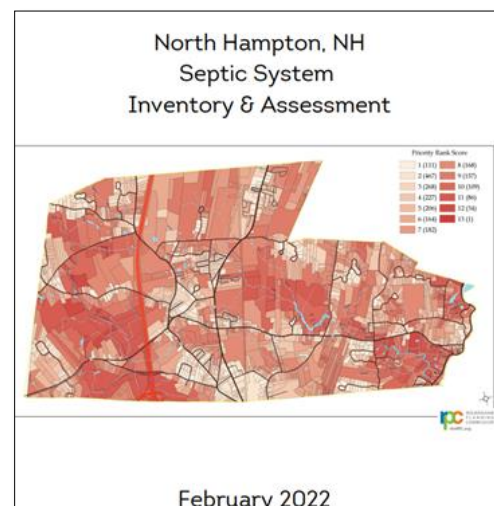
The 2019 [New Hampshire Coastal Flood Risk Summary, Part I: Science](#) considered several impacts of climate change, but specifically looked at the impact of sea-level rise on groundwater levels as saltwater displaces fresh groundwater resources. The conclusion is that coastal groundwater levels will rise with increase sea-level rise.



Extent of Groundwater rise as a percent of sea-level rise. Source: *New Hampshire Coastal Flood Risk Summary, Part I: Science* (NHDES 2019).

Within North Hampton groundwater rise and saltwater intrusion have the potential to impact several topics include:

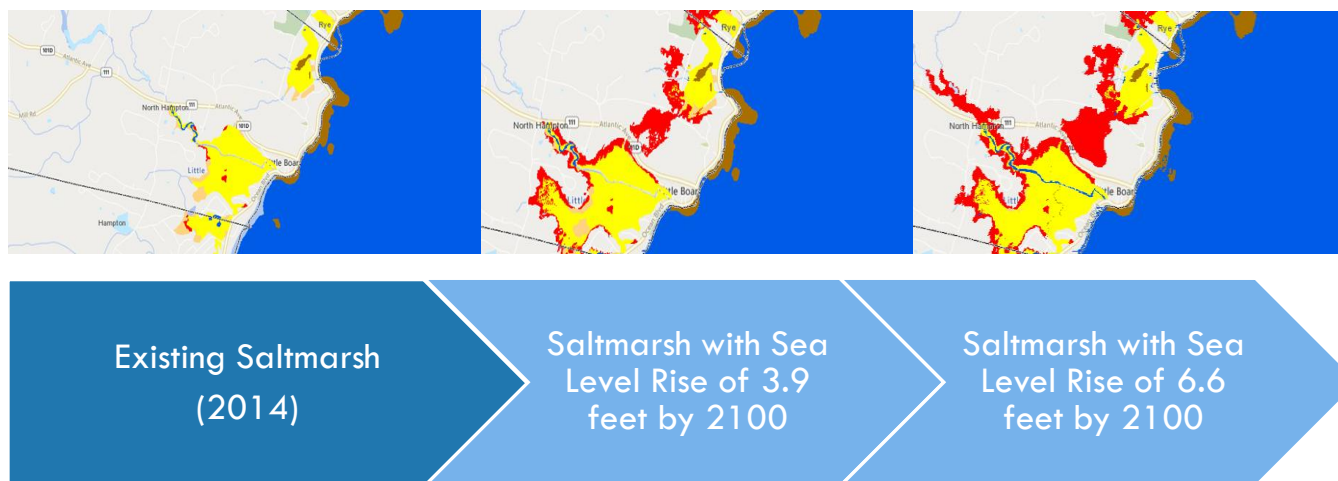
- **Drinking water resources:** The eastern portion of North Hampton and all of Little Boar's Head are serviced by drinking water wells from the Aquarian Water Company, with most of their wells located in the northwest corner of North Hampton and south of Mill Road near the Hampton border. Additional wells are located within the town of Hampton. The wells located in Hampton and those located near Mill Road are projected to be the most susceptible to impacts from groundwater rise.
- **Septic systems:** North Hampton relies entirely upon on-site septic systems for wastewater disposal. As groundwater rises septic systems become increasingly at risk for failure if they have insufficient separation between groundwater levels and the bottom of the septic system. A recent evaluation of septic system risk in North Hampton conducted by Rockingham Planning Commission for the Conservation Commission found that 229 developed parcels within North Hampton and Little Boar's Head may be susceptible for impacts due to their location within existing flood zones.



- **Road impacts:** Coastal roads are susceptible to damage from groundwater rise as the water movement impacts the base materials of the roadway (NH Coastal Flood Risk Summary, 2019). These impacts are in addition to the damage caused by flooding and storm surge that coastal roads are increasingly subject to. (See Seacoast Transportation Corridor Vulnerability Assessment section on page 12 for additional detail.)

### Coastal Wetlands

In 2015, the N.H. Fish & Game used a modeling tool - [Sea Level Affecting Marshes Model \(SLAMM\)](#) - to project where saltmarsh may persist or migrate inland based on changes in sea level. Currently, salt marsh lie within North Hampton is located predominantly within the Little River Marsh and Philbricks Pond; however, at the 3.9 feet sea level rise by 2100 scenario there is potential for marsh to form inland further up the Little River and Chapel Brook, and at the 6.6 feet scenario there is potential for marsh migration further inland as far as the Mill Pond Dam.



Rising sea levels are considered a threat to salt marsh habitats, but if not blocked by development or infrastructure marshes have the ability to migrate inland in many cases. The benefit of allowing inland marsh migration is twofold: allowing the inland migration helps to preserve the unique marsh habitat and allows the marsh to continue to provide natural services such as flood retention, water filtration, and reduction in erosion caused by wave action.



Philbrick Pond restoration site walk. Source: North Hampton Conservation Commission

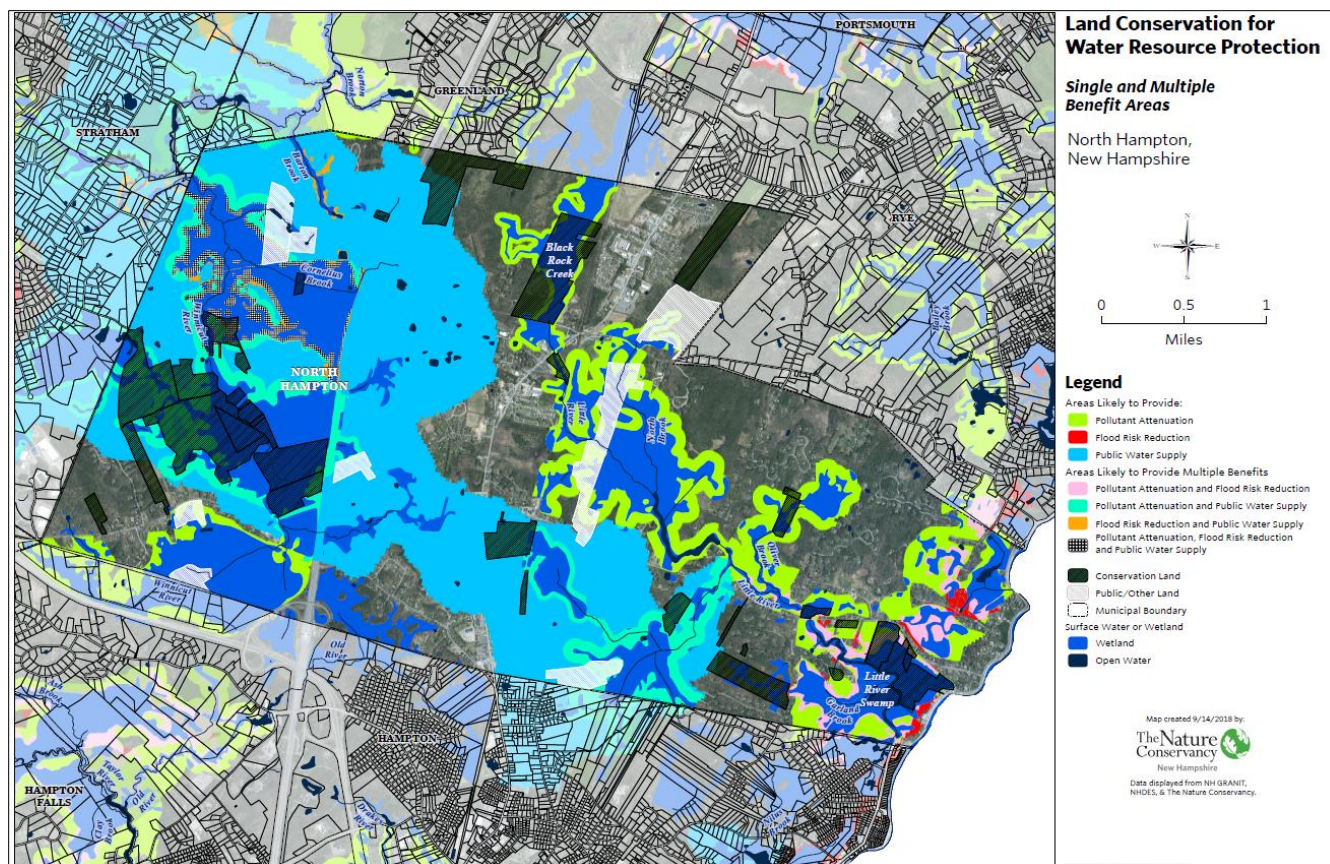
### Coastal Water Resources Protection & Land Conservation

In 2016, The Nature Conservancy created a supplement to *The Land Conservation Plan for New Hampshire's Coastal Waters* (TNC, 2005) to identify land conservation opportunity areas that provide the greatest benefits to protect coastal water resources. Decline in water quality and land development are linked as increased development increases pollution and flood risks, while the loss of natural areas decreases the capacity of natural ecosystem services (water purification, flood water retention, and groundwater recharge). When combined with the effects of climate change, the effects of development on water quality are amplified.

Stormwater runoff is the leading cause of water pollution in New Hampshire and North Hampton. Reducing stormwater runoff by limiting impervious surfaces- such as rooftops, parking lots and roadways – and protecting shoreland areas to help filter existing runoff are effective ways of reducing impacts to coastal and freshwater resources.

As of 2015, North Hampton's land area is 8.3% impervious, with the Industrial/Business - Residential Zoning District being 26% impervious. Ten percent is considered a benchmark indicating severe impacts to water quality .





Land Conservation for Water Resource Protection – Single and Multiple Benefit Areas. Source: The Nature Conservancy (2017).

## New Hampshire Seacoast Transportation Corridor Vulnerability Assessment (April 2022)

Coastal storms and flooding already threaten state and local transportation infrastructure in New Hampshire's seacoast. These risks are expected to increase with sea-level rise, causing potential daily inundation of some transportation assets within the next 80 years. Sea-level rise and other climate change impacts will need to be considered as municipalities and NHDOT maintain or replace aging existing transportation assets and design and construct new systems. Route 1A, Route 1, and I-95—the primary roadways running from North/South—the primary evacuation routes running East/West along NH's coast—are all vulnerable to sea-level rise and sea-level rise induced groundwater rise in certain areas. Route 1A—a road that runs immediately adjacent to the Atlantic Coast and within Little Boar's Head Village District.

The findings of the Tides to Storms (2015) report noted previously, found that 43% of the 18 miles that make up Route 1A will be inundated twice daily by 2100 under a high sea-level rise scenario of 6.6 feet. This flooding will significantly impact transportation networks and their derived services, including the 18,000 drivers that use the road every day in peak summer season. Route 1 and I-95 are situated further inland and are fortunately less vulnerable to flooding; however, they are vulnerable to sea-level rise along specific road segments, see higher traffic volumes than Route 1A, and are expected to absorb additional traffic burden in the event parts of Route 1A are closed.

The goal of the [Seacoast Transportation Corridor Vulnerability Assessment](#) is to enhance regional coordination in New Hampshire for transportation networks vulnerable to sea-level rise and other coastal hazards in order to maximize information sharing, identify opportunities to fill data gaps, and develop shared understanding of options for future transportation planning. The final report, expected in March 2022 will include a set of recommendations begin addressing impacts to the region's roadways and future transportation network needs.

Within North Hampton and Little Boar's Head there are only a few locations directly impacted with projected sea-level rise. These include low areas along Route 1A near North Hampton State Beach and Bass Beach. However, several state and local roadways will see increased traffic as routes within Hampton and Rye become cut off and force alternate routes. For example, at with 1.7 feet of sea-level rise, Route 111 is expected to see a ten percent increase in traffic as a significant east-west route for the coast.



*Areas of impacted roadways in North Hampton under projected sea-level rise scenarios. Source: Rockingham Planning Commission.*



Town	Site	Map number	SLR Impact level
Hampton/North Hampton	Ocean Blvd	14	4'
Hampton	Cusack Road	15	1.7'
Hampton	High Street	16	1'
Hampton	Winnacunnet Rd/Ocean Blvd	17	4'
Hampton	NH 101/Church St/Highland Ave/Brown Ave	18	1'
Rye	NH 1A/ Locke Road	13	4'

### North Hampton Natural Hazard Mitigation Plan (2018)

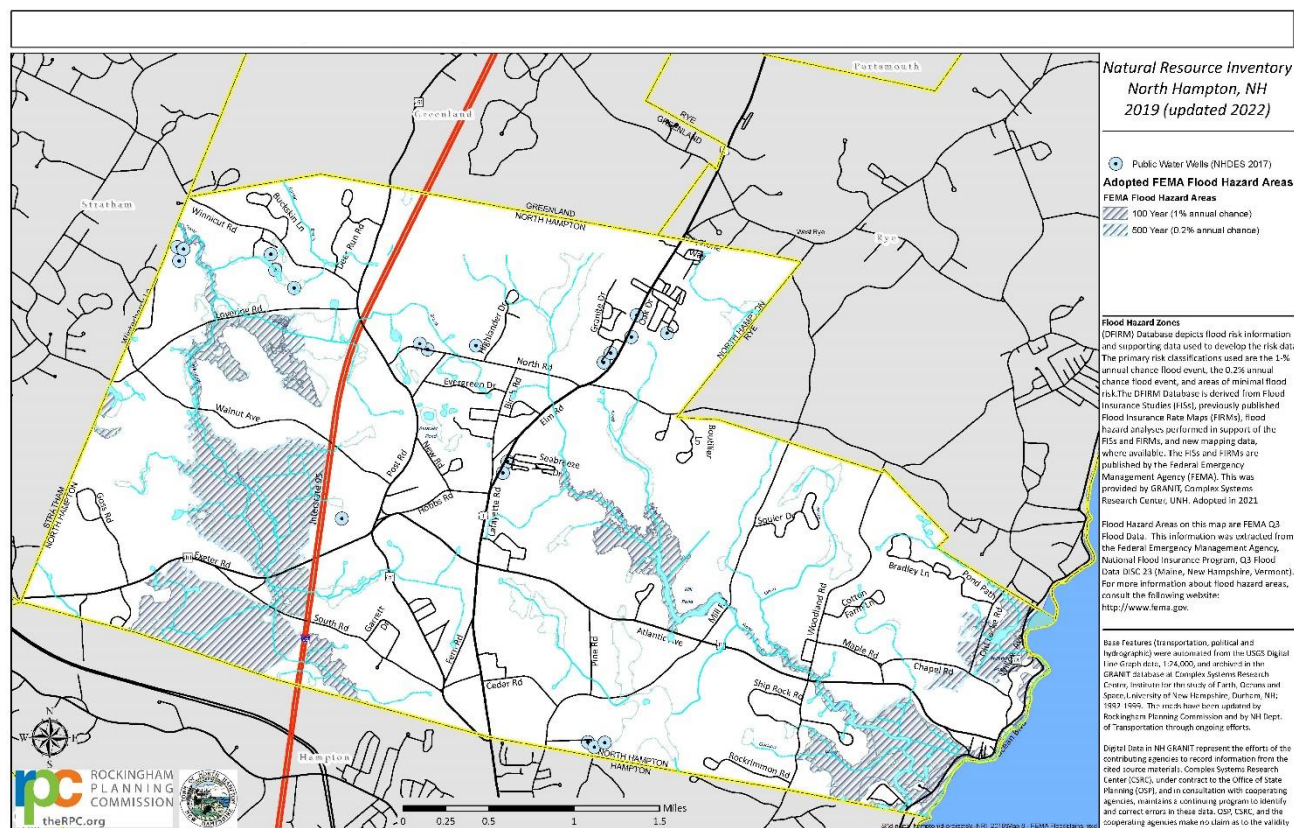
The [North Hampton Hazard Mitigation Plan](#) was prepared by participants from the Town of North Hampton Hazard Mitigation Planning Committee (including Little Boars Head Village District) under the guidance of Section 44 CFR 201.6 and Federal Emergency Management Agency requirements. The Plan serves as a strategic planning tool for use by the Town of North Hampton in its efforts to identify and mitigate the future impacts of natural and/or man-made hazard events. The Plan references several hazards related to coastal hazards, specifically flooding, high wind events, and severe storms as causing high impacts in North Hampton.

Specifically called out are the impacts of climate change and sea-level rise related to many of the natural hazards that already occur, specifically to flooding through coastal storms and storm surge due to increase precipitation and rising sea-level. The extent and potential losses of these hazards is just beginning to be calculated. However, the extent of potential flood losses within the 100 and 500 year floodplains are estimated between \$2.1 and \$53.7 million depending on the level of flooding.



North Hampton State Park, March 2018 storm. Photo credit: Margaret Schoenberger





North Hampton FEMA adopted flood zones, January 2021. Source: FEMA, map by RPC.

The primary actions contained within the North Hampton's Natural Hazard Mitigation Plan that directly coastal hazards include:

- Development of a coastal hazards master plan chapter.
- Incorporate the findings and recommendations of the NH Coastal Risks and Hazards Commission's report *Preparing New Hampshire for Projected Storm Surge, Sea-Level Rise, and Extreme Precipitation* into town planning documents.
- Identifying projects included in the North Hampton Capital Improvement Program (CIP) as being part of the Hazard Mitigation Plan.
- Coordination between the Town and Little Boar's Head to ensure compliance of floodplain regulations with the National Flood Insurance Program (NFIP).
- Maintaining culvert maintenance program (ongoing) and replacement of culverts known to have flooding (deferred due to funding).
- Continued protection of aquifer, drinking water, and wetland resources through land use regulations, including coordination between the Town and Little Boar's Head.
- Invest joining the Community Rating System (CRS) to reduce flood insurance cost and reduce future flood risk. (Little Boar's Head is specifically identified to consider joining the CRS.)

**Base Flood Elevation (BFE):** The elevation to which floodwater is anticipated to rise during the base flood. Base Flood Elevations (BFEs) are shown on Flood Insurance Rate Maps (FIRMs) – the gray areas on the map at the top of the page.

In other words, the base flood areas are where there is a 1% annual chance of flooding.

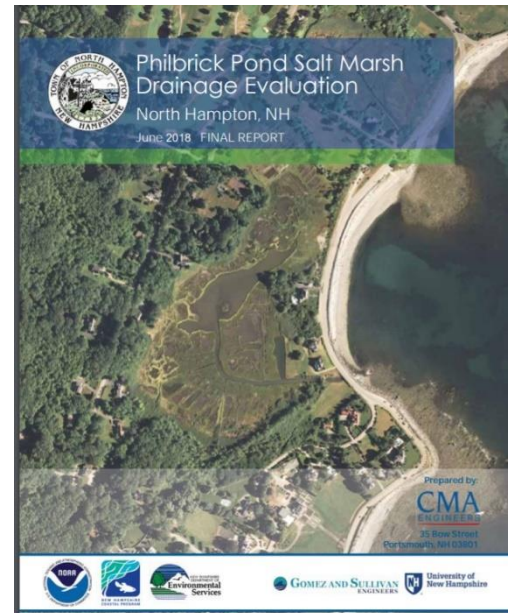
### Philbrick Pond Salt Marsh Restoration

In 2006, during the “Mother’s Day” flood event Philbrick Pond flooded due to flow limitations and resulted in flood impacts that isolation of more than 40 homes for more than three days from vehicular traffic, including ambulance and fire vehicles. An existing berm and two culverts limit flow into and out of the marsh during normal tidal cycles, and limit flood levels in the marsh during storm surge conditions. In 2018, the Town of North Hampton obtained a grant through NOAA and NH Department of Environmental Services to evaluate design alternatives and develop a conceptual design for the replacement of the trolley berm culvert at Philbrick Pond salt marsh, accounting for sea-level rise in their evaluation and design alternatives.

CMA Engineers completed the study of Philbrick's Pond and the surrounding salt marsh. For years, the salt marsh has been declining in health, and the study determined this is due, in part, to reduced tidal range because of the stone weir at the inlet of the 4-ft by 4-ft box culvert of the Chapel Brook culvert crossing at Route 1A at elevation 2.1 ft. Additionally, there's an abandoned trolley berm approximately 100 feet upstream of the Route 1A culvert, and Chapel Brook flows under the trolley berm through a 30-in CMP culvert at invert elevation 1.14 ft. Because the Route 1A culvert is higher than the trolley berm culvert, and because of the stone weir, a high spot in the stream channel has been created between the two culverts.

One of the primary recommendations for the restoration of Philbrick Pond was the need to consider sea level rise implications on the marsh and the infrastructure. “In the long run, both the Town of North Hampton and the NH DOT will need to carefully consider the impacts on infrastructure of sea level rise in other North Hampton drainage basins. Assessment of the adequacy of seawalls and “shale piles” will be required on the part of NHDOT, and raising road grades in other locations will likely require consideration both by NH DOT and the Town.” (CMA Engineers, 2018)

The Town of North Hampton is currently continuing work with NHDOT, NHDES and property owners adjacent to the two tidal culverts to address design feasibility to improve the drainage and tidal restrictions that negatively impact Philbrick Pond and increase hazards for adjacent homes and infrastructure. In June 2021, North Hampton applied for a NHDES Wetland's permit to remove the stone weir that is inhibiting the daily tidal range in the saltmarsh upstream of the Chapel Brook crossing of Route 1A. This will be accomplished by replacing the stone weir with a concrete slab set to the culvert's inlet elevation. An intensive study of the Philbrick's Pond salt marsh determined the tidal range will increase by about 11-inches in the salt marsh that will be a significant benefit to the salt marsh. Final removal of the weir took place in January 2022.



Removal of the stone weir in early 2022. Photo credit: Frank Arcidiacono, North Hampton Conservation Commission.



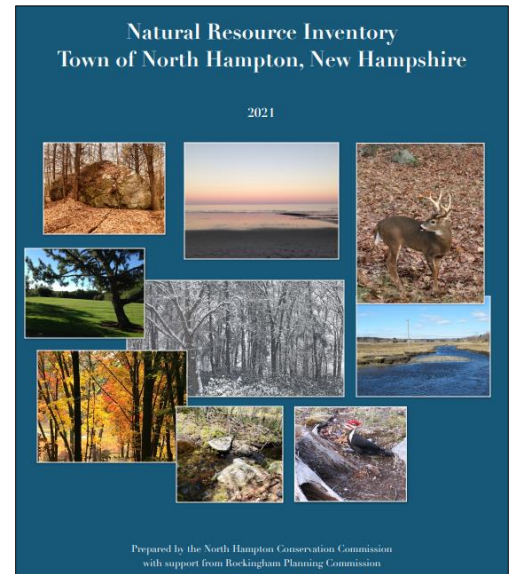
### North Hampton Natural Resource Inventory (2021)

The North Hampton Conservation Commission finalized the update to the town's [Natural Resource Inventory](#) (NRI) in 2021 with assistance from Rockingham Planning Commission and UNH Cooperative Extension. NRI's are intended to provide an inventory, description and commonly maps of the natural resource found within an community; North Hampton's NRI encompasses the entire town, including Little Boar's Head Village District.

Several of the topics and references included in this chapter are included within the NRI with additional detail and maps.

The primary findings and recommendations contained within the North Hampton's Natural Resource Inventory that are associated with coastal hazards include:

- **Groundwater:** Incorporate sea level rise into groundwater planning efforts. Adopt recommendations for the siting of drinking water wells and septic system design, placement, and maintenance.
- **Land Conservation:** Partner with land conservation organizations and surrounding municipalities in the region to protect critical areas identified in the Land Conservation Plan for New Hampshire's Coastal Watersheds.
- **Buffer Protection:** Promote protection of wetland, shoreline and riparian habitats for multiple benefits, including wildlife.
- **Habitat Protection:** Use available climate change and sea-level rise data, tools and resources to learn more about the impacts of climate change on natural resources, and use them to prioritize areas for wildlife protection and inform adaptive management planning, habitat, water quality protection, and flood storage.
- **Surface Water:** Adopt buffers and setbacks that adequately separate development and infrastructure from tidal wetlands, freshwater wetlands and surface waters to sustain flood storage capacity, and allow for inland migration of tidal marsh systems and conversion of freshwater systems to tidal systems to accommodate projected changes in sea- levels. Incentives to further protect wetlands may include applying increased buffers and setbacks as mitigation for wetlands impacts from development.
- **Land Conservation:** Land conservation offers the greatest opportunities to provide for adaptation to the effects of sea-level rise and coastal storm flooding and climate change impacts:
  - Identify lands in high-risk areas to purchase for the purpose of removing development and infrastructure and restoring the land to a natural condition. This is a way to gradually retreat from areas highly susceptible to coastal flooding.
  - 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 purchase. • Identify and inventory lands where protection of tidal and freshwater wetlands would provide tangible benefits to protect against flooding, and restoration opportunities to remove barriers to tidal function and marsh and migration.
- **Shoreline Protection:** Maintaining natural shorelines is an effective way to preserve the functions of shoreline systems (marshes, dunes, estuaries) in providing valuable services including flood storage, recreational areas, and commercial harvesting of fish and shellfish.
  - Provide information to property owners about living shorelines and the importance of retaining the functions of natural shorelines, and implementing landscaping best practices.
  - Implement living shorelines projects on town lands to demonstrate best practices, and the benefits and effectiveness of living shorelines approaches





## Coastal Hazards & Adaptation Chapter Goals & Actions

The following section includes the goals and actions developed to help ensure that coastal hazards are addressed by North Hampton and Little Boar's Head using the best available information, to meet the desires expressed by residents, and are consistent with the overall Master Plan. The North Hampton and Little Boar's Head Master Plan Chapters require separate adoption by the each jurisdictions' Planning Boards. However, both chapters were developed concurrently with the purposeful intention that they contain the same background information, vision, and compatible goals and actions. There are goals and actions within each jurisdiction's chapter that are different. The differences reflect the different roles, responsibilities, and authority that the Town of North Hampton and the Little Boar's Head Village District have.

The goals and actions listed below are those of Little Boar's Head. For ease of understanding the complimentary nature of both chapters the goals and actions of both jurisdiction's chapter listed in Appendix B.

In addition to these goals and actions, a set of action plans has been developed for specific Town and Little Boar's Head commissions and boards, town official and staff. These action plans included detailed information about responsible parties, timeframes, next steps and metrics for tracking progress. The action plans are available in Appendix C.

### Goal 1 - Communicate Information and Actions with Public

All work associated with coastal hazards resiliency needs to include communication and engagement with the public. Outreach should be done with a variety of tools and platforms to maximize accessibility. Information about general coastal hazards should be routinely communicated, and specific efforts should be made to ensure that the public understands potential impacts, resiliency options and actions being proposed on specific planning or project efforts. This communication is key in developing public support for regulatory changes and investments in resiliency.

#### Actions:

1. Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.
2. Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.
3. When updates are made to the Coastal Hazards Master Plan Chapter due to changes in information or priorities, the process should include seeking input from the community. If actions require coordination with departments, boards, or community stakeholders, ensure that their input is sought.
4. Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.
5. Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.
6. Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.
7. Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an *ad hoc* work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.

## **Goal 2 - Understand Impacts on Town and Little Boar's Head Owned Properties and Align Investments**

Evaluate the impact of coastal hazards on Village District owned or maintained infrastructure to determine potential mitigation opportunities, adaptation strategies, and risk level for near and long-term investments.

### **Actions:**

1. Investments in Village District infrastructure -- including, walkways lighting or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The [NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections](#) be used to evaluate potential capital investments. Evaluate the impact of coastal hazards on Village District owned or maintained infrastructure to determine potential mitigation opportunities, adaptation strategies, and risk level for near and long-term investments.

## **Goal 3 - Understand Impacts and Identify Actions that Residents and Businesses Can Take**

Identify opportunities residents, property owners and businesses can take on their own properties to mitigate impacts of climate change and sea-level rise. Educate individuals about how their actions help the community. Encourage individual actions that spur greater willingness to invest in Town and Village District resiliency efforts.

### **Actions:**

1. Implement outreach efforts to promote regular inspection, pumping, and maintenance of septic systems and to help ensure the long-term health of coastal water quality.
2. Develop outreach materials to owners of fish houses to ensure that septic holding tanks are installed, properly maintained, regularly pumped and have working alarms to indicate full tanks.
3. Develop outreach materials and hold workshops to promote restoration or maintenance of shoreland buffer areas on private property. This outreach should use channels identified in Goal 1. This outreach should also use existing materials and programs, such as the coastal landowners technical assistance program through UNH Cooperative Extension.
4. Identify historical resources and properties that are susceptible to impacts from coastal hazards. Target outreach towards affected property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.
5. Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.
6. Identify opportunities to distribute information to residents and businesses that are identified in the work plan under Goal 1, Action 7.

## **Goal 4 - Consider Modifications to Land Use Regulations to Minimize Impacts**

Incorporate the latest science and information on climate change and sea-level rise impacts into land use regulations and modify these when appropriate to minimize impacts on natural resources and property. Land use regulations should set standards that match acceptable levels of risk from potential impacts and should be reevaluated routinely. Land use regulations should be coordinated between the Town and the Village District.

### **Actions:**

1. Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet or more above the base flood elevation in existing FEMA flood zones. Additional elevation helps ensure that structures are protected from flooding based on the highest sea-level rise projection by 2050. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate the exact amount of elevation necessary to meet risk tolerance.
2. In the Town's and Village District's respective zoning ordinances adopt Coastal Flood Hazard Overlay Districts that include performance-based standards that protect against flood impacts from sea-level rise

and coastal storm surge. As a guide for risk tolerance, establish overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas based on NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections.

3. Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.
4. Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.
5. Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.
6. Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.
7. Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.
8. The Village District should evaluate the need to adopt site plan regulations that incorporate design standards that minimize the susceptibility of impacts to the limited commercial properties within the Village District.

#### **Goal 5 - Ensure Existing Municipal Efforts, Projects and Activities That Incorporate Coastal Hazards Considerations are Communicated and Coordinated.**

Many current efforts by the Town and Little Boars Head, various municipal boards and commissions, and community groups individually consider impacts associated with climate change and sea level rise. However, if these efforts are not coordinated, they can reduce the impact of aggregate investments or projects. Increase communication among the Town and Village, various local boards and commissions, and community groups to reduce duplicative efforts and maximize effectiveness of actions.

##### **Actions:**

1. Use the North Hampton Natural Resources Inventory (NRI, 2021) to identify properties for conservation that help mitigate impacts from climate change -- including flooding, storm surge, and salt-marsh migration. Prioritize protecting areas identified in the NRI and the NH Coastal Land Conservation Plan Water Resources Supplement (The Nature Conservancy, 2016). Give highest priority to land that provides multiple benefits.
2. Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.
3. Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.

#### **Goal 6 - Consult with Local, Regional and State Partners on Coordinate on Coastal Resiliency Efforts**

To improve coastwide resiliency, the Village District should consider working with neighboring communities, regional partners, and state agencies on planning efforts and specific projects. Municipally initiated projects should not adversely impact neighboring communities or the region. Collaboration should be encouraged when goals of the Village District residents are consistent with those of neighboring communities, regional partners, or state agencies.



**Actions:**

1. Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.
2. Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.
3. With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.
4. With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.

## Appendix A – Public Input Summary (January 2022)

In January 2022, two online public input forums were held to provide North Hampton and Little Boar's Head residents the opportunity to discuss the draft recommended goals and actions within the two draft Master Plan chapters. This feedback was used to help prioritize the actions within the document. The summary of the participants and feedback received is available in this appendix.

Note that the goals and actions presented at the public input sessions are slightly different than the of the final chapter goals and actions. The difference is due to modifications made as a result of the public feedback and feedback from the Town and Little Boar's Head Planning Boards.

# Share Your Input

Help North Hampton & Little Boar's Head prepare for a changing climate

**Please join one of two virtual public input sessions:**  
January 13, 8:30-10am  
or  
January 20, 4:30-6pm  
via zoom

In case of weather-related power/internet issues with either of the above dates, a backup date has been scheduled for January 26, 4:30-6pm



**Register here:**  
[tinyurl.com/NHamptonZoom](https://tinyurl.com/NHamptonZoom)

Registration is required in order to receive the zoom link.

**Questions?**  
About registration: [Lisa.Wise@unh.edu](mailto:Lisa.Wise@unh.edu)  
About the project: [JRowden@therpc.org](mailto:JRowden@therpc.org)

**Project website** (will be live 12/23)  
[publicinput.com/ClimateReadyNHamptonLBH](https://publicinput.com/ClimateReadyNHamptonLBH)



For persons with disabilities requiring accommodations, prior to the event please contact [Lisa.Wise@unh.edu](mailto:Lisa.Wise@unh.edu). Given ample time, we will make any reasonable effort to make accommodations.

**Please join us for a virtual input session to share your feedback on the coastal hazards master plan chapters for North Hampton and Little Boar's Head.**

The Town of North Hampton and the Little Boar's Village District are preparing for impacts from hotter temperatures, flooding from more intense rainfall events, and rising sea levels.

At this public input session, you will have an opportunity to discuss the draft recommended actions addressing climate change impacts on a variety of issues - from critical infrastructure and natural resources to the local economy, public health, historic resources, and community investments. Your feedback can help prioritize recommended actions to build resilience to these impacts.



## North Hampton and Little Boar's Head – Coastal Hazards Master Plan Chapters

### PUBLIC INPUT SESSIONS – January 2022

#### SUMMARY

##### 30 participants:

- 16 LBH residents, 7 North Hampton residents (other 7 unknown)
- 4 town staff (town administrator, planning and zoning administrator, police chief, fire chief)
- 7 town board or committee members:
  - LBH: Planning Board
  - Town: Planning Board (2),
  - Combined: Heritage Committee (2), Conservation Commission, Capital Improvements Committee

##### Key questions:

- Do you have questions or comments about any of the draft actions?
- Are there any actions that should be added?
- What do you like about the goal/actions? Do you have any concerns about the actions?
- Are there any goals/actions that rise to the top (priorities)?

##### Overarching comments:

- I think it is pretty good and comprehensive.
- How do we get involved more? What are the next steps?
- There wasn't much discussion on flood insurance programs and rates. Should there be or is it integrated into other items?
- Is there more information about the culverts identified as being insufficient? Yes – add
- With regards to LBH – setting up a listserv would be great. That seems to be the most direct way for most to receive information and participate in implementation. Biweekly email people are more likely to address it. Would have helped with publicizing these input sessions.
- The cell phone issue should be a priority. Add to the communication and infrastructure goal.
- How to address more communication of groundwater rise?
- Who is going to take the lead of this? (Action Plans to be developed)
- How often is the document updated? Is it live?



## **GOAL 1: Communicate Information and Actions with Public**

- 1 Use existing Town outreach tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the weekly electronic newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.**
  - Suggested additional channels: other local newspapers such as the Hampton Union, WMUR, the mailed community newsletter
  - Create a central place on the town's website to point people to for this information.
- 2 Communicate actions identified within the existing North Hampton Natural Hazard Mitigation Plan, and subsequent updates, that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.**
- 3 When updates are made to the Coastal Hazards Master Plan Chapter due to changes in information or priorities, the process should include seeking input from the community. If actions require coordination with departments, boards, or community stakeholders, ensure that their input is sought.**
- 4 Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in North Hampton with emphasis on how those recommendations provide multiple benefits for community resiliency to climate change.**
- 5 Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and resources available for mitigation and recovery.**
- 6 Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services.**
  - Explore other methods of technology for outreach in emergency events such as automated phone calls/ voice messages and text messages to residents, a community-wide email chain / email blast. Facebook is currently very effective.
  - The Seabrook Power Plant provides physical packets of information on what to do in an emergency but the packets are too long. The town should consider a similar method of distributing materials to residents w/emergency information. Something succinct to put on fridge.
  - Residents aren't aware of the various communication channels and services in town.
- 7 Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an ad hoc work group that includes representatives from Town and Village committees, municipal staff, and community members.**

### **OTHER FEEDBACK**

- Pretty comprehensive. We've put a lot of work into this. The actions reflect what the steering committee has discussed.
- Is there an easily accessible way or location to get this information?
- What communication methods can we use to access and understand what is going on (specifically for LBH) ongoing and during its adoption?

## GOAL 2: Understand Impacts on Town and Little Boar's Head Owned Properties and Align Investments

1	<p><b>Add criteria to the Capital Improvement Program to evaluate the risk level to capital expenses associated with coastal flood risk potential. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments</b></p> <ul style="list-style-type: none"> <li>What is that criteria? What does it mean? Suggest clarifying.</li> </ul>
2	<p><b>Assess the capacity of existing town-owned stormwater infrastructure to handle precipitation events and susceptibility to flooding from storms. If infrastructure is found to be under capacity or inadequate, structures should be prioritized for upgrades.</b></p> <ul style="list-style-type: none"> <li>Question about examples of existing town-owned stormwater infrastructure – perhaps incorporate into this action for clarification.</li> <li>Is there a map of town-owned stormwater infrastructure? Can it be added?</li> </ul>
3	<p><b>Prioritize retrofits of culverts identified in the 2018 North Hampton Natural Hazard Mitigation Plan as susceptible to flooding, particularly those culverts and stream crossings that may cut off access to specific areas.</b></p> <ul style="list-style-type: none"> <li>The Hazard Mitigation Plan is four years old. Conduct a quick review of the plan to ensure the goals and actions align with this Master Plan update even though the plan isn't due for an update for another year. Is there anything else to add that isn't in the 2018 plan?</li> <li>Why was the culvert maintenance and replacement deferred in the hazard mitigation plan, and why it is in the goals and actions? The culvert replacement is listed as a goal in the hazard mitigation plan (2018) but was deferred due to funding constraints. Having that listed as an action here was done to help keep the goal active as funding opportunities arise.</li> </ul>
4	<p><b>Use the findings of the Seacoast Transportation Corridor Vulnerability Assessment to identify the town-owned roadways that may see impacts from increased traffic over time if existing roadways become unusable for periods of time or indefinitely due to sea-level rise or storm surge. The town-owned roadways may require more frequent maintenance or upgrades due to increased usage.</b></p>
5	<p><b>When conducting maintenance or repair on local roads ensure that roadways are being upgraded using the most up to date materials and techniques that account for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in NH. Design criteria for new roadways being developed should be incorporated into land use regulations under Goal 4.</b></p> <ul style="list-style-type: none"> <li>The group indicated that Action #5 is very important.</li> </ul>
6	<p><b>Identify opportunities to conserve land, particularly lands that serve multiple ecological and community benefits through Town investments, including seeking out available grants, loans, and partnerships to leverage funding.</b></p>
*LBH 1	<p><b>Investments in Village District infrastructure such as sidewalks, streetlights and coastal walkways should be evaluated for impacts from coastal flooding to evaluate the risk to the investment to the tolerance for impact to the infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments.</b></p> <ul style="list-style-type: none"> <li>This is important to include. These are some of the key places that people (from North Hampton and beyond) will notice as impacted and they are an investment of taxpayer money.</li> </ul>

- Town has worked with RPC to help find federal dollars to rebuild. We need to know that when we rebuild those, we know that it will also get taken out by a future storm. Plan for something better, instead of just planning to rebuild the same thing.
  - How would this be communicated to the public? When we did this in 2018 we worked with LBH to look at building it better. The state and federal agencies were also involved. To better get it coordinated with LBH we need to keep the communication going and to have people participate. Important to understand the process and communication the next time it happens. How can community members participate? Town works after federally declared disaster under hazard mitigation funds, but the state has the final say as it is their roadway. Goal will be to start the planning process now – unfortunately the Town doesn't always have control of all of it.

## OTHER FEEDBACK

- Questions:
  - Who takes on the next steps? This project includes developing action plans for officials/departments and the adoption process of the chapter itself. Moving this forward will rely on officials, staff, residents and businesses.
  - Confusion about the mixture of the LBH and North Hampton goals/actions since they are different in this goal.
  - What is the timeline is for each of these actions and how should they be prioritized? Note that many of these actions are already being implemented in one way or another e.g., culvert maintenance and identification through MS4 work, flood risk and hazards being incorporated into town's CIP, etc. – it's just not in writing yet.
- It would be helpful if there was a LBH specific email list.
- There are many issues/projects that the town has little control over such as flooding and damage at North Hampton State Beach, which is the State's responsibility to maintain. Funding shortages at the state and federal levels often mean that projects don't get completed in a timely manner nor do they get done the way they're supposed to. Should North Hampton's master plan identify how to work with the State to improve these conditions and get critical issues and projects addressed faster? (relevant to Goal 6) Note that communication with NHDOT is ongoing with project prioritization especially with the ten-year planning process. Strengthening / maintaining relationships with the state should be incorporated into goals and actions.
- Potential additions:
  - Add something about the septic tanks explicitly as an action, maybe in action 4 or reference the items in Goal 3.
  - Should telecommunications be part of this? The town has had difficulties with its lack of cell coverage, especially on LBH. Also the phone lines are buried in LBH so there could be impacts from water infiltration.
    - This (cell phone/ land line) should be included in the infrastructure conversation. Comcast can go down for days – talking about the investment in public infrastructure.
    - Glad that we are looking ahead on these improvements. We think about it when the weather is nice; also need to when it is not.
  - Should investments in resources *other* than town-owned property and infrastructure be included, such as emergency management equipment and resources to deal with increased flooding events? E.g., EMD has purchased inflatable boats, water rescue gear and other equipment to prepare for major flooding events in town. Also noted the mutual aid partnership with Rye.



### GOAL 3: Understand Impacts and Identify Actions that Residents and Businesses Can Take

1	<p><b>Promote the regular inspections and maintenance of septic systems through outreach efforts to ensure the long-term health of coastal water quality.</b></p> <ul style="list-style-type: none"><li>• The only way to have the regular septic inspection is to offer financial incentive.</li><li>• The Conservation Commission puts out regular communications. Trying to promote inspections/pumping because it saves homeowners money in the end and then will be promoting the septic inventory database.</li><li>• What kind of inspection is this? Is it a special inspection? It's a regular inspection, but if there is a bacteria bloom, can do further investigation (e.g., dye test) with the health officer. How much does an inspection cost? \$200, just for inspection, not pumping. Can have it pumped the week before to get better inspection results.</li><li>• The town has become much more concerned about septic tanks in general. Even 3 miles inland from the coast, groundwater rise is a potential impact. Having a regular check made me feel better.</li><li>• Mandating an inspection of septic systems would be hard or illegal – is that correct? Sometimes we can if needed, but a routine inspection is not quite possible due to time, cost, and personnel. We are starting but have a lot of work ahead of us.</li></ul>
2	<p><b>Develop outreach materials to the owners of the fish houses to ensure that septic holding tanks are installed, are properly maintained, are regularly pumped and have working alarms to indicate full tanks.</b></p> <ul style="list-style-type: none"><li>• The town should inspect the septic systems occasionally. If I had a fish house, I wouldn't know how to evaluate the system. Maybe the town ought to inspect them every 4 or 5 years.</li><li>• The town has started a project about contamination at the Beach, and the fish houses are part of the review. We are reaching out to the fish houses for septic plans; we have about half that information. There are limitations on the town inspecting septic systems. The project meets the current issue of bacterial contamination and long-term issues with climate change. Goes with what the conservation commission has been doing to evaluate septic systems. The interesting part of this is that the problem is from a small source.</li><li>• Can we ban new septic installations? It is the older system that are more likely the problem. Restricting the properties diminishes property owners' rights, that probably wouldn't hold up.</li><li>• The Fish Houses are not allowed to have septic systems; have to have a tank.</li></ul>
3	<p><b>Develop outreach materials and hold workshops to promote the restoration or maintenance of shoreland buffer areas on private property. This outreach should be promoted through channels identified in Goal 1.</b></p>
4	<p><b>Identify historical resources and properties that are susceptible to impacts from coastal hazards and target outreach towards those property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.</b></p>
5	<p><b>Encourage reduction of stormwater runoff from private property through voluntary actions by residents and businesses.</b></p> <ul style="list-style-type: none"><li>• Clarify and provide concrete examples of what property owners can do voluntarily to reduce stormwater runoff from their properties.</li><li>• The NRI has specific resources about actions that can be taken (p. 26). Perhaps put into the Conservation Commission's action plan.</li><li>• Do property owners already have to comply with new MS4 performance standards? Should that be incorporated into this action?</li></ul>

**6 Identify opportunities to distribute information to residents and businesses as identified in the work plan developed under Goal 1, Action 7.**

**OTHER FEEDBACK**

- Note that many of these actions are already ongoing in town. For example, there's bacterial issues at the beach every summer, ongoing communication with fish houses and NHDES to make sure septic tanks are adequate, RPC is working with the town on a septic system inventory, and the Planning Board enforces stormwater management standards in the town's regulations. Outreach to residents and businesses about septic system maintenance could be better.
- Suggestion to incorporate the coastal landowners technical assistance program (UNHCE/NHSG/NHCP) – e.g., Appledore neighborhood (LBH)
- It is so important that we are communicating with community members on this. My property has limited but regular flooding from tides. I don't think I've received information from the Town/ LBH about what I can do, and what can happen. I don't think we've done a great job in the past.
- What communication vehicle would be best? Items are on the website, but not many read it. Challenge – can't make people read it, but the weekly newsletter, Facebook, and paper are all options. Put it out there as much as possible.
- How can residents/homeowners reduce stormwater runoff on their properties? Neighborhood or town-wide information sessions that bring in expertise on stormwater runoff/climate change and other topics would be helpful so that residents can learn ways to minimize impacts on their own property. Are there ways residents and businesses who don't know anything about the significance of stormwater runoff or climate change to learn or be informed. The Planning Board has done extensive research on rain gardens for new development and perhaps that information could be disseminated to residents.
- The Rye sewer line runs along Route 1A has anyone looked at it? Yes, but we don't have a plan in place yet.
- Has the town considered moving to a town-wide sewer system? Yes, the town has investigated this, but cost is a major issue. The town is also located on an aquifer. Adding a sewer system would deplete the aquifer faster than it can be recharged as opposed to septic systems where, by design, the water reinfilters into the ground. Underground sewer infrastructure would also be vulnerable to sea-level rise.
- Are there any town committees/groups focused on climate change mitigation or green energy? The town used to have an energy committee, but it hasn't been active in a while. The town is implementing green energy practices such as changing street and building lights to all LED to save money, and the Select Board will be having a presentation soon on a possible solar project for the Fire House and other town buildings.

#### GOAL 4: Consider Modifications to Land Use Regulations to Minimize Impacts

1	<p><b>Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet above the base flood elevation. Two feet of additional elevation will ensure that structures are protected from flooding based on the highest sea-level rise projection of 2 feet by 2050.</b></p> <ul style="list-style-type: none"><li>• (Comments for both actions #1 &amp; #2) The town already has a robust floodplain development ordinance and there may be local pushback for adopting stricter development standards today based on studies that project severe impacts thirty years out and beyond. There is the example of Durham’s coastal hazards overlay district that recommends but doesn’t require higher standards. Recommended standards may be more appealing than required. Come time to adopt these regulations, extensive public outreach and education is needed.</li><li>• Comment from Nathalie: Re: Goal 4 #1 – I would recommend using the Guidance to determine the appropriate Design Flood Elevation (feet of freeboard) to adopt. I'd have to double check and run the numbers, but I'm not 100% sure 2 feet above base flood elevation is sufficient to account for 2 feet of sea-level rise by 2050. 2 feet above base flood elevation is typically considered best practice for today's conditions and does not necessarily account for future conditions.</li><li>• My family owns one of the fish houses – it was moved off its foundation from Monday’s storm. If these regulations are in place, would we be subject to this?</li><li>• What exactly is the base flood elevation – is there a map that shows this?</li><li>• Is 2 feet enough and should that include a buffer for surging tides?</li><li>• My family owns one of the bathhouses – we want to move it back but have to rebuild on the original footprint. Can’t move it due to regulations. LBH won’t let us. That needs to be changed.</li><li>• Would this apply to existing structures? No – just new development and redevelopment. Would this be enforced by the flood insurance companies? If required to have flood insurance, yes.</li></ul>
2	<p><b>Adopt in the Town’s and Village District’s respective zoning ordinance a Coastal Flood Hazard Overlay District that includes performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. Establish the overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas using the NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections as a guide for risk tolerance.</b></p>
3	<p><b>Continue to promote protection of groundwater resources by limiting uses that pose potential contamination risks.</b></p> <ul style="list-style-type: none"><li>• There’s a need to educate people more about flood and groundwater risk.</li></ul>
4	<p><b>Continue to promote the limiting of impervious surfaces to reduce stormwater runoff through stormwater management standards and consider upgrades to design standards to accommodate climate change impacts.</b></p> <ul style="list-style-type: none"><li>• Re: impervious surfaces – Ocean Blvd tilts and water dumps to the sidewalks. DOT has repaved it so the water throws the runoff inland. The road is tilted, but the properties also drain onto the walkway. There is a project underway to raise the walkway and improve the drainage – that is happening now. That doesn’t solve all the problems. Aware, however the state is also limited on funding. The town is working with LBH to address what we can outside of the state funding constraints.</li></ul>



	<ul style="list-style-type: none"> <li>North Hampton recently updated its stormwater management standards – specifically took out the ability for developers to mitigate runoff elsewhere and now enforces runoff mitigation on the site.</li> </ul>
5	<b>Minimize disturbance of shoreland areas by encouraging the maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise using the Sea-Level Marsh Migration Model (SLAMM).</b>
6	<b>When available, incorporate the latest information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.</b>
7	<p><b>Consider land use regulations or amendments that further incentivize restoration of wetlands that have been degraded or filled in over time to help restore their ecological functions, including those that mitigate impacts from climate change and sea-level rise.</b></p> <ul style="list-style-type: none"> <li>The town’s new zoning ordinance language incentivizes commercial developers to mitigate wetland impacts – that could tie into this action.</li> <li>Open to evaluating my property for restoration – start with Conservation Commission (also see NRI as a resource).</li> </ul>
8	<b>LBH: The Village District should evaluate the need to adopt site plan regulations that incorporate design standards that minimize the susceptibility of impacts to the limited commercial properties within the Village District.</b>
<b>OTHER FEEDBACK</b> <ul style="list-style-type: none"> <li>There is an annual land use board meeting in June. Many of these actions cross multiple boards – this should be discussed at that annual meeting.</li> <li>Look at Island Path in Hampton – what strategies are they using to deal with flooding?</li> <li>How involved in this process is Aquarion? They should be. They haven’t been involved in these chapters but that can be part of the action plan for the conservation commission or water commission.</li> <li>Should incentivizing residents to move to renewable energy be included as a goal in this master plan? Clarification that this chapter is focused on coastal hazards and adaptation, but that could fit in an energy chapter or other chapter of the master plan.</li> </ul>	

## **GOAL 6: Consult with Local, Regional and State Partners to Coordinate on Coastal Resiliency Efforts**

- |          |   |
|----------|---|
| <b>1</b> | <b>Identify existing projects proposed by NH Department of Transportation to identify new projects associated with state roads and infrastructure occurring in North Hampton that may be impacted by coastal hazards and advocate for project design that incorporate impacts from sea level rise and climate change.</b> <ul style="list-style-type: none"><li>• What are the “existing” projects?</li></ul> |
| <b>2</b> | <b>Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes, such as ongoing efforts at Philbrick’s Pond, to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding.</b>  |
| <b>3</b> | <b>Work with the NH State Parks to evaluate the impacts to the North Hampton State Beach from coastal storms, the impact of sea-level rise to cut off access to the beach area, and the impacts from changes to tidal flow.</b>   |
| <b>4</b> | <b>Continue to work with regional and state partners to identify sources of water pollution impacting the Little River and Winnicut River Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</b>  |

### **OTHER FEEDBACK**

- Is there federal funding available for some of these? Yes, but often projects require putting together several funding sources, including local funds.
  - E.g., the Philbrick project cobbled lots of sources together. We had a plan from 2018, and the project is now moving forward. Having the project ready to go helped with getting funding.
- Is there some sort of joint effort of the municipalities on the coast to coordinate with the state on coastal issues? Just reflecting on the state efforts with Route 1A. Perhaps to petition for a larger project. RPC serves as a regional voice for DOT and works with other state agencies.
  - I wonder if the individual boards from the towns met formally or informally to tackle these issues would be useful. Would that be of use for other boards? There is a heritage commission annual meeting in the region. Amanda – There is a regional Cons Com roundtable (by Jay Diener) that meets quarterly(?).
  - Add Mutual Aid partnership with Rye
- Other partners:
  - Add language about enhancing/maintaining partnerships with UNH Cooperative Extension for helping with and promoting public outreach and education.
  - Add language about maintaining and/or identifying partnerships with organizations such as RPC, NHCP, and others who can help the town access potential funding sources/opportunities for coastal resiliency.
  - Add other organizations such as The Nature Conservancy for expertise on environmental issues and potential grant funding. The town is already working with TNC on Philbrook Pond project – they’ve been a great partner and are managing the grant.
- This is the most critical goal because everything comes down to funding.

## GOAL 5: Ensure Existing Municipal Efforts, Projects and Activities That Incorporate Coastal Hazards Considerations are Communicated and Coordinated

- |          |  |
|----------|--|
| <b>1</b> | <p><b>Use the North Hampton Natural Resources Inventory (NRI) (2021) to identify properties for conservation to help mitigate impacts from climate change such as flooding, storm surge, and salt-marsh migration. Prioritize protection of areas identified in the NRI and the NH Coastal Land Conservation Plan Water Resources Supplement (The Nature Conservancy, 2016) as providing multiple benefits.</b></p> <ul style="list-style-type: none"> <li>Who is responsible for this action? The Conservation Commission has been working on conserving land in town and continues to identify areas in need of protection.</li> <li>Add date of the NRI</li> </ul>  |
| <b>2</b> | <p><b>Identify the susceptibility of groundwater resources to groundwater rise and saltwater intrusion in North Hampton. The purpose will be to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can inform the need to make modifications to regulations for the siting requirements of wells, criteria for septic systems, or roadways design, and the vulnerability of historic resources and structures.</b></p> <ul style="list-style-type: none"> <li>Add specificity as to how the town will accomplish this e.g., “pursue funding to conduct a groundwater rise study,” or similar language.</li> </ul> |
| <b>3</b> | <p><b>Consider participation in FEMA’s Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan to reduce flood insurance rate costs by implementing climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</b></p> <ul style="list-style-type: none"> <li>Can we further explain the CRS program involves and who would implement it? Why are we not involved?</li> <li>Why are we not already participating – that should be a priority.</li> </ul>   |

### OTHER FEEDBACK

- The overarching goal language could be modified because Actions 2 and 3 aren’t an “existing municipal effort, project or activity” right now (i.e. Actions 2 and 3 aren’t something the town is doing now but they’re existing programs or areas of research the town could get engaged in)
- CIP committee does a 6-year plan for capital funding expenses – what role does the CIP play here? Revise our project worksheet? Re: Philbrick Pond we definitely talked about it through CIP and before that project we had never really incorporated environmental items into projects. Note that incorporation of coastal hazards in the CIP is in Goal 2, Action 1.
- What has Aquarian’s role has been in this process? Is that company addressing the projected impacts of sea-level rise and climate change? As a business, they would have a vested interest in protecting the water. Michael said he can follow up on this.



## Appendix B – North Hampton and Little Boar's Head Goals and Actions Comparison

The differences between the two jurisdictions' goals and actions are limited to:

- Goal 2
- Goal 4, Action 8.
- Goal 6

North Hampton Goals and Actions	Little Boar's Head Goals and Actions
<p><b>Goal 1 - Communicate Information and Actions with Public</b> All work associated with coastal hazards resiliency needs to include communication and engagement with the public. Outreach should be done with a variety of tools and platforms to maximize accessibility. Information about general coastal hazards should be routinely communicated, and specific efforts should be made to ensure that the public understands potential impacts, resiliency options and actions being proposed on specific planning or project efforts. This communication is key in developing public support for regulatory changes and investments in resiliency.</p> <p><b>Actions:</b></p> <ol style="list-style-type: none"> <li>1. Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</li> <li>2. Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</li> <li>3. When updates are made to the Coastal Hazards Master Plan Chapter due to changes in information or priorities, the process should include seeking input from the community. If actions require coordination with departments, boards, or community stakeholders, ensure that their input is sought.</li> <li>4. Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in</li> </ol>	<p><b>Goal 1 - Communicate Information and Actions with Public</b> All work associated with coastal hazards resiliency needs to include communication and engagement with the public. Outreach should be done with a variety of tools and platforms to maximize accessibility. Information about general coastal hazards should be routinely communicated, and specific efforts should be made to ensure that the public understands potential impacts, resiliency options and actions being proposed on specific planning or project efforts. This communication is key in developing public support for regulatory changes and investments in resiliency.</p> <p><b>Actions:</b></p> <ol style="list-style-type: none"> <li>1. Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</li> <li>2. Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</li> <li>3. When updates are made to the Coastal Hazards Master Plan Chapter due to changes in information or priorities, the process should include seeking input from the community. If actions require coordination with departments, boards, or community stakeholders, ensure that their input is sought.</li> <li>4. Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in</li> </ol>

<p>North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.</p> <p>5. Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.</p> <p>6. Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.</p> <p>7. Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an <i>ad hoc</i> work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.</p> <p><b>Goal 2 - Understand Impacts on Town and Little Boar's Head Owned Properties and Align Investments</b></p> <p>Evaluate the impact of coastal hazards on Town owned facilities, infrastructure (roads, stormwater controls, water/wastewater systems, etc.), and properties to determine potential mitigation opportunities, adaptation strategies, and risk level for near and long-term investments.</p> <p><b>Actions:</b></p> <p>1. Add information to the Capital Improvement Program to evaluate the risk level to capital investments associated from coastal flooding. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments.</p> <p>2. Assess the capacity of existing Town-owned stormwater infrastructure (drainage swales, culverts, catch basins, etc.) to handle precipitation events and their susceptibility to flooding from storms. If infrastructure is found to be under capacity or inadequate, these structures should be prioritized for upgrades.</p> <p>3. Review status of culverts identified in the 2018 North Hampton Natural Hazard Mitigation Plan. Identify those that are susceptible to flooding, particularly those culverts and stream crossings that may cut off</p>	<p>North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.</p> <p>5. Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.</p> <p>6. Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.</p> <p>7. Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an <i>ad hoc</i> work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.</p> <p><b>Goal 2 - Understand Impacts on Town and Little Boar's Head Owned Properties and Align Investments</b></p> <p>Evaluate the impact of coastal hazards on Village District owned or maintained infrastructure to determine potential mitigation opportunities, adaptation strategies, and risk level for near and long-term investments.</p> <p><b>Actions:</b></p> <p>1. Investments in Village District infrastructure -- including, walkways lighting or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections may be used to evaluate potential capital investments.</p>
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<p>access to specific areas, and prioritize retrofits. Continue the culvert maintenance plan.</p> <p>4. Use findings of the Seacoast Transportation Corridor Vulnerability Assessment (2022) to identify Town-owned roadways that sea-level rise or storm surge may render unusable temporarily or indefinitely. Identify alternate roadways that may require more frequent maintenance or upgrades to accommodate increased usage when necessary.</p> <p>5. When maintaining or repairing local roads, ensure that they are upgraded using up-to-date materials and techniques that prepare them for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in New Hampshire. Up-to-date design criteria for new roadways should be incorporated into land use regulations under Goal 4.</p> <p>6. Identify opportunities for the Town to invest in conserving land, particularly land that has multiple ecological and community benefits. Seek grants, loans, and partnerships to leverage funding from the Town.</p> <p>7. Investments in Town infrastructure -- including telecommunications, water or stormwater management, roadways, sidewalks, energy production, or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections may be used to evaluate potential capital investments.</p> <p><b>Goal 3 - Understand Impacts and Identify Actions that Residents and Businesses Can Take</b></p> <p>Identify opportunities residents, property owners and businesses can take on their own properties to mitigate impacts of climate change and sea-level rise. Educate individuals about how their actions help the community. Encourage individual actions that spur greater willingness to invest in Town and Village District resiliency efforts.</p> <p><b>Actions:</b></p> <p>1. Implement outreach efforts to promote regular inspection, pumping, and maintenance of septic systems and to help ensure the long-term health of coastal water quality.</p>	<p><b>Goal 3 - Understand Impacts and Identify Actions that Residents and Businesses Can Take</b></p> <p>Identify opportunities residents, property owners and businesses can take on their own properties to mitigate impacts of climate change and sea-level rise. Educate individuals about how their actions help the community. Encourage individual actions that spur greater willingness to invest in Town and Village District resiliency efforts.</p> <p><b>Actions:</b></p> <p>1. Implement outreach efforts to promote regular inspection, pumping, and maintenance of septic systems and to help ensure the long-term health of coastal water quality.</p>
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<p>2. Develop outreach materials to owners of fish houses to ensure that septic holding tanks are installed, properly maintained, regularly pumped and have working alarms to indicate full tanks.</p> <p>3. Develop outreach materials and hold workshops to promote restoration or maintenance of shoreland buffer areas on private property. This outreach should use channels identified in Goal 1. This outreach should also use existing materials and programs, such as the coastal landowners technical assistance program through UNH Cooperative Extension.</p> <p>4. Identify historical resources and properties that are susceptible to impacts from coastal hazards. Target outreach towards affected property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.</p> <p>5. Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.</p> <p>6. Identify opportunities to distribute information to residents and businesses that are identified in the work plan under Goal 1, Action 7.</p>	<p>2. Develop outreach materials to owners of fish houses to ensure that septic holding tanks are installed, properly maintained, regularly pumped and have working alarms to indicate full tanks.</p> <p>3. Develop outreach materials and hold workshops to promote restoration or maintenance of shoreland buffer areas on private property. This outreach should use channels identified in Goal 1. This outreach should also use existing materials and programs, such as the coastal landowners technical assistance program through UNH Cooperative Extension.</p> <p>4. Identify historical resources and properties that are susceptible to impacts from coastal hazards. Target outreach towards affected property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.</p> <p>5. Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.</p> <p>6. Identify opportunities to distribute information to residents and businesses that are identified in the work plan under Goal 1, Action 7.</p>
<p><b>Goal 4 - Consider Modifications to Land Use Regulations to Minimize Impacts</b></p> <p>Incorporate the latest science and information on climate change and sea-level rise impacts into land use regulations and modify these when appropriate to minimize impacts on natural resources and property. Land use regulations should set standards that match acceptable levels of risk from potential impacts and should be reevaluated routinely. Land use regulations should be coordinated between the Town and the Village District.</p> <p><b>Actions:</b></p> <p>1. Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet or more above the base flood elevation in existing FEMA flood zones. Additional elevation helps ensure that structures are protected from flooding based on the highest sea-level rise projection by 2050. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate the exact amount of elevation necessary to meet risk tolerance.</p>	<p><b>Goal 4 - Consider Modifications to Land Use Regulations to Minimize Impacts</b></p> <p>Incorporate the latest science and information on climate change and sea-level rise impacts into land use regulations and modify these when appropriate to minimize impacts on natural resources and property. Land use regulations should set standards that match acceptable levels of risk from potential impacts and should be reevaluated routinely. Land use regulations should be coordinated between the Town and the Village District.</p> <p><b>Actions:</b></p> <p>1. Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet or more above the base flood elevation in existing FEMA flood zones. Additional elevation helps ensure that structures are protected from flooding based on the highest sea-level rise projection by 2050. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate the exact amount of elevation necessary to meet risk tolerance.</p>



<p>2. In the Town's and Village District's respective zoning ordinances adopt Coastal Flood Hazard Overlay Districts that include performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. As a guide for risk tolerance, establish overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas based on NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections.</p> <p>3. Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.</p> <p>4. Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.</p> <p>5. Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.</p> <p>6. Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.</p> <p>7. Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.</p> <p><b>Goal 5 - Ensure Existing Municipal Efforts, Projects and Activities That Incorporate Coastal Hazards Considerations are Communicated and Coordinated.</b></p> <p>Many current efforts by the Town and Little Boars Head, various municipal boards and commissions, and community groups individually consider impacts associated with climate change and sea level rise. However, if these efforts are not coordinated, they can reduce the impact of aggregate investments or projects. Increase communication among the Town and Village, various local boards and commissions, and</p>	<p>2. In the Town's and Village District's respective zoning ordinances adopt Coastal Flood Hazard Overlay Districts that include performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. As a guide for risk tolerance, establish overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas based on NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections.</p> <p>3. Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.</p> <p>4. Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.</p> <p>5. Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.</p> <p>6. Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.</p> <p>7. Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.</p> <p>8. The Village District should evaluate the need to adopt site plan regulations that incorporate design standards that minimize the susceptibility of impacts to the limited commercial properties within the Village District.</p> <p><b>Goal 5 - Ensure Existing Municipal Efforts, Projects and Activities That Incorporate Coastal Hazards Considerations are Communicated and Coordinated.</b></p> <p>Many current efforts by the Town and Little Boars Head, various municipal boards and commissions, and community groups individually consider impacts associated with climate change and sea level rise. However, if these efforts are not coordinated, they can reduce the impact of aggregate investments or projects. Increase communication among the Town and Village, various local boards and commissions, and</p>
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<p>community groups to reduce duplicative efforts and maximize effectiveness of actions.</p> <p><b>Actions:</b></p> <ol style="list-style-type: none"> <li>1. Use the North Hampton Natural Resources Inventory (NRI, 2021) to identify properties for conservation that help mitigate impacts from climate change -- including flooding, storm surge, and salt-marsh migration. Prioritize protecting areas identified in the NRI and the NH Coastal Land Conservation Plan Water Resources Supplement (The Nature Conservancy, 2016). Give highest priority to land that provides multiple benefits.</li> <li>2. Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.</li> <li>3. Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</li> </ol> <p><b>Goal 6 - Consult with Local, Regional and State Partners on Coordinating Coastal Resiliency Efforts</b></p> <p>To improve coastwide resiliency, the Town should consider working with neighboring communities, regional partners, and state agencies on planning efforts and specific projects. Municipally initiated projects should not adversely impact neighboring communities or the region. Collaboration should be encouraged when goals of the Town's residents are consistent with those of neighboring communities, regional partners, or state agencies.</p> <p><b>Actions</b></p> <ol style="list-style-type: none"> <li>1. Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.</li> </ol>	<p>community groups to reduce duplicative efforts and maximize effectiveness of actions.</p> <p><b>Actions:</b></p> <ol style="list-style-type: none"> <li>1. Use the North Hampton Natural Resources Inventory (NRI, 2021) to identify properties for conservation that help mitigate impacts from climate change -- including flooding, storm surge, and salt-marsh migration. Prioritize protecting areas identified in the NRI and the NH Coastal Land Conservation Plan Water Resources Supplement (The Nature Conservancy, 2016). Give highest priority to land that provides multiple benefits.</li> <li>2. Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.</li> <li>3. Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</li> </ol> <p><b>Goal 6 - Consult with Local, Regional and State Partners on Coordinate on Coastal Resiliency Efforts</b></p> <p>To improve coastwide resiliency, the Village District should consider working with neighboring communities, regional partners, and state agencies on planning efforts and specific projects. Municipally initiated projects should not adversely impact neighboring communities or the region. Collaboration should be encouraged when goals of the Village District residents are consistent with those of neighboring communities, regional partners, or state agencies.</p> <p><b>Actions</b></p> <ol style="list-style-type: none"> <li>1. Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal</li> </ol>
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<p>2. Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.</p> <p>3. With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.</p> <p>4. With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</p>	<p>hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.</p> <p>2. Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.</p> <p>3. With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.</p> <p>4. With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</p>
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## **Appendix C – Action Plans**

To aid in the implementation of the goals and actions identified with this chapter, a series of action plans for all Town and LBH officials, and staff have been developed. Actions are based on the content of the chapter and include a range of audiences for implementation – individuals, community groups, businesses, staff, and specific Town and LBH boards.



## North Hampton and Little Boar's Head – Coastal Hazards & Adaptation Master Plan Chapters

### TOWN AND VILLAGE OFFICIALS AND STAFF ACTION PLANS FOR IMPLEMENTING GOALS AND ACTIONS OF THE CHAPTER

- CIP
- Code enforcement officer
- Conservation commission
- DPW
- Emergency services (EM, PD, FD)
- Heritage commission
- LBH Commissioners
- Select Board + Town administrator
- Town planning board/ZBA, LBH planning board/ZBA, + planning and zoning administrator
- Water Commission

### COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

#### ACTION PLAN TEMPLATE: [BOARD/DEPARTMENT]

ACTIONS WHERE [BOARD/DEPARTMENT] IS A RESPONSIBLE PARTY			
Action	Metric/ Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal X, Action X</b> <i>Action text</i>  <i>Note related actions (if applicable)</i>		<ul style="list-style-type: none"> <li>• Ongoing: Actions which are continuous or already being carried out</li> <li>• 1-3 years: Actions which should be started within 1 year</li> <li>• 3-5 years: Actions which should be started in 2-3 years</li> <li>• 5+ years: Actions which will take more than 3 years to initiate and complete</li> <li>• As opportunities arise</li> </ul>	

ACTIONS WHERE [BOARD/DEPARTMENT] IS A SUPPORTING PARTY			
Action	Metric/ Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)

#### RELEVANT RESOURCES

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## ACTION PLANS

<b>ACTION PLAN: CONSERVATION COMMISSION</b>	<b>9</b>
<b>ACTION PLAN: TOWN PLANNING BOARD/ZBA, LBH PLANNING BOARD/ZBA, + PLANNING AND ZONING ADMINISTRATOR</b>	<b>12</b>
<b>ACTION PLAN: CAPITAL IMPROVEMENTS COMMITTEE</b>	<b>16</b>
<b>ACTION PLAN: SELECT BOARD + TOWN ADMINISTRATOR</b>	<b>18</b>
<b>ACTION PLAN: LBH COMMISSIONERS</b>	<b>22</b>
<b>ACTION PLAN: DPW</b>	<b>24</b>
<b>ACTION PLAN: CODE ENFORCEMENT OFFICER</b>	<b>26</b>
<b>ACTION PLAN: HERITAGE COMMISSION</b>	<b>27</b>
<b>ACTION PLAN: EMERGENCY SERVICES (POLICE DEPARTMENT, FIRE DEPARTMENT, EMERGENCY MANAGEMENT)</b>	<b>28</b>
<b>ACTION PLAN: WATER COMMISSION</b>	<b>30</b>
<b>ACTION PLAN: AD HOC OUTREACH WORK GROUP</b>	<b>31</b>

GOAL 1: Communicate Information and Actions with Public		Timeframe	Responsible Parties (supporting parties)
1	Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.	Ongoing	All staff and boards
2	Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.	Ongoing	Emergency Management, Select Board/LBH Commissioners (Conservation Commission, Town & LBH Planning Boards)
3	When updates are made to the Coastal Hazards Master Plan Chapter due to changes in information or priorities, the process should include seeking input from the community. If actions require coordination with departments, boards, or community stakeholders, ensure that their input is sought.	5+ years	Town & LBH Planning Boards
4	Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.	Ongoing	Conservation Commission
5	Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.	Ongoing	Emergency Management (Town Administrator)
6	Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.	Ongoing	Emergency Management (Town Administrator, Conservation Commission)
7	Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an <i>ad hoc</i> work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.	Ongoing	Ad hoc outreach work group

GOAL 2: Understand Impacts on Town/LBH Owned Properties and Align Investments		Timeframe	Responsible Party
1	Add information to the Capital Improvement Program to evaluate the risk level to capital investments associated from coastal flooding. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments.	1-3 years	CIP committee (Town Administrator)
2	Assess the capacity of existing Town-owned stormwater infrastructure (drainage swales, culverts, catch basins, etc.) to handle precipitation events and their susceptibility to flooding from storms. If infrastructure is found to be under capacity or inadequate, these structures should be prioritized for upgrades.	1-3 years	DPW (Town Administrator/ Select Board)
3	Review status of culverts identified in the 2018 North Hampton Natural Hazard Mitigation Plan. Identify those that are susceptible to flooding, particularly those culverts and stream crossings that may cut off access to specific areas and prioritize retrofits. Continue the culvert maintenance plan.	Ongoing	DPW / Emergency Services
4	Use findings of the Seacoast Transportation Corridor Vulnerability Assessment (2022) to identify Town-owned roadways that sea-level rise or storm surge may render unusable temporarily or indefinitely. Identify alternate roadways that may require more frequent maintenance or upgrades to accommodate increased usage when necessary.	Review ongoing, action required 5+ years	Select Board/DPW (Town & LBH Planning Boards)
5	When maintaining or repairing local roads, ensure that they are upgraded using up-to-date materials and techniques that prepare them for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in New Hampshire. Up-to-date design criteria for new roadways should be incorporated into land use regulations under Goal 4.	Ongoing	DPW (Town & LBH Planning Boards & CIP)
6	Identify opportunities for the Town to invest in conserving land, particularly land that has multiple ecological and community benefits. Seek grants, loans, and partnerships to leverage funding from the Town.	As opportunities arise	Conservation Commission (Town & LBH Planning Boards)
7	Investments in Town infrastructure -- including telecommunications, water or stormwater management, roadways, sidewalks, energy production, or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections may be used to evaluate potential capital investments.	Ongoing	Select Board, LBH Commissioners, CIP



Town of North Hampton and Little Boar's Head Village District  
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<b>*LBH 1</b>	Investments in Village infrastructure -- including, walkways lighting or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections may be used to evaluate potential capital investments.	1-3 years	LBH Commissioners
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<b>GOAL 3: Understand Impacts and Identify Actions that Residents and Businesses Can Take</b>		<b>Timeframe</b>	<b>Responsible Party</b>
<b>1</b>	Investments in Town infrastructure -- including telecommunications, water or stormwater management, roadways, sidewalks, energy production, or other items -- should be evaluated for impacts from coastal flooding. Evaluate risks to investments and tolerance for impacts on infrastructure by Village District and Town residents. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections may be used to evaluate potential capital investments.	Ongoing	Conservation Commission
<b>2</b>	Develop outreach materials to owners of fish houses to ensure that septic holding tanks are installed, properly maintained, regularly pumped and have working alarms to indicate full tanks.	Ongoing	Conservation Commission
<b>3</b>	Develop outreach materials and hold workshops to promote restoration or maintenance of shoreland buffer areas on private property. This outreach should use channels identified in Goal 1. This outreach should also use existing materials and programs, such as the coastal landowners technical assistance program through UNH Cooperative Extension.	1-3 years	Conservation Commission
<b>4</b>	Identify historical resources and properties that are susceptible to impacts from coastal hazards. Target outreach towards affected property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.	1-3 years	Heritage Commission
<b>5</b>	Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.	1-3 years	Conservation Commission and Select Board (through MS4 Permit requirements)
<b>6</b>	Identify opportunities to distribute information to residents and businesses that are identified in the work plan under Goal 1, Action 7.	Ongoing	Ad hoc outreach work group? (Goal 1, Action 7)

GOAL 4: Consider Modifications to Land Use Regulations to Minimize Impacts		Tmeframe	Responsible Party
<b>1</b>	Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet or more above the base flood elevation in existing FEMA flood zones. Additional elevation helps ensure that structures are protected from flooding based on the highest sea-level rise projection by 2050. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate the exact amount of elevation necessary to meet risk tolerance.	3-5 years	Town & LBH Planning Boards
<b>2</b>	In the Town's and Village District's respective zoning ordinances adopt Coastal Flood Hazard Overlay Districts that include performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. As a guide for risk tolerance, establish overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas based on NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections.	3-5 years	Town & LBH Planning Boards
<b>3</b>	Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.	Ongoing	Town & LBH Planning Boards (Code Enforcement Officer, Water Commission)
<b>4</b>	Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.	Ongoing	Town & LBH Planning Boards (Both ZBAs)
<b>5</b>	Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.	1-3 years	Town & LBH Planning Boards (Conservation Commission)
<b>6</b>	Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.	3-5 years	Town & LBH Planning Boards (DPW)
<b>7</b>	Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.	1-3 years	Town & LBH Planning Boards (Conservation Commission)
<b>LBH # 8</b>	The Village District should evaluate the need to adopt site plan regulations that incorporate design standards that minimize the susceptibility of impacts to the limited commercial properties within the Village District.	1-3 years	LBH Planning Board

GOAL 5: Ensure Municipal Efforts, Projects and Activities That Incorporate Coastal Hazards Considerations are Communicated and Coordinated		Timeframe	Responsible Party
1	Use the North Hampton Natural Resources Inventory (NRI, 2021) to identify properties for conservation that help mitigate impacts from climate change -- including flooding, storm surge, and salt-marsh migration. Prioritize protecting areas identified in the NRI and the NH Coastal Land Conservation (The Nature Conservancy, 2021). Give highest priority to land that provides multiple benefits.	1-3 years	Conservation Commission
2	Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.	3-5 years	Town & LBH Planning Boards and Water Commission <i>(note: consider coordination with Hampton/Aquarion Water Company)</i>
3	Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.	1-3 years	Town & LBH Planning Boards <i>(Select Board, Emergency Management)</i>

GOAL 6: Consult with Local, Regional and State Partners to Coordinate on Coastal Resiliency Efforts		Timeframe	Responsible Party
1	Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.	1-3 years, ongoing	Select Board/LBH Commissioners
2	Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.	Ongoing	Conservation Commission with Select Board/LBH Commissioners
3	With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.	3-5 years	Select Board and LBH Commissioners

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4	With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.	Ongoing	Conservation Commission ( <i>Select Board/LBH Commissioners</i> )
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**NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS**  
**ACTION PLAN: CONSERVATION COMMISSION**

<b>ACTIONS WHERE CONSERVATION COMMISSION IS A RESPONSIBLE PARTY</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Primary Responsible Parties (Supporting Parties)</b>
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 1, Action 4</b> <i>Communicate the recommendations found within the Natural Resource Inventory to promote overall health of natural resources in North Hampton with emphasis on how these recommendations provide multiple benefits for community resiliency to climate change.</i>		Ongoing	<b>Conservation Commission</b>
<b>Goal 3, Action 1</b> <i>Implement outreach efforts to promote regular inspection, pumping, and maintenance of septic systems and to help ensure the long-term health of coastal water quality.</i>		Ongoing	<b>Conservation Commission</b>
<b>Goal 3, Action 2</b> <i>Develop outreach materials to owners of fish houses to ensure that septic holding tanks are installed, properly maintained, regularly pumped and have working alarms to indicate full tanks.</i>		Ongoing	<b>Conservation Commission</b>
<b>Goal 6, Action 2</b> <i>Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.</i>		Ongoing	<b>Conservation Commission, with Select Board/LBH Commissioners</b>
<b>Goal 6, Action 4</b> <i>With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</i>		Ongoing	<b>Conservation Commission (Select Board/LBH Commissioners)</b>
<b>Goal 3, Action 3</b>		1-3 years	<b>Conservation Commission</b>

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<i>Develop outreach materials and hold workshops to promote restoration or maintenance of shoreland buffer areas on private property. This outreach should use channels identified in Goal 1. This outreach should also use existing materials and programs, such as the coastal landowners technical assistance program through UNH Cooperative Extension.</i> <i>*RELATED ACTION: GOAL 1, ACTION 1</i>			
<b>Goal 3, Action 5</b> <i>Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.</i>		1-3 years	<b>Conservation Commission and Select Board</b> (through MS4 Permit requirements)
<b>Goal 5, Action 1</b> <i>Use the North Hampton Natural Resources Inventory (NRI, 2021) to identify properties for conservation that help mitigate impacts from climate change -- including flooding, storm surge, and salt-marsh migration. Prioritize protecting areas identified in the NRI and the NH Coastal Land Conservation (The Nature Conservancy, 2021). Give highest priority to land that provides multiple benefits.</i>		1-3 years	<b>Conservation Commission</b>
<b>Goal 2, Action 6</b> <i>Identify opportunities for the Town to invest in conserving land, particularly land that has multiple ecological and community benefits. Seek grants, loans, and partnerships to leverage funding from the Town.</i>		As opportunities arise	<b>Conservation Commission</b> (Town & LBH Planning Boards)

<b>ACTIONS WHERE CONSERVATION COMMISSION IS A SUPPORTING PARTY</b>			
<b>Action</b>	<b>Metric/Measurement</b> (if applicable)	<b>Timeframe</b>	<b>Responsible Parties</b> (and Supporting Parties)
<b>Goal 1, Action 2</b> <i>Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</i>		Ongoing	<b>Emergency Management, Select Board/LBH Commissioners</b> (Conservation Commission, Town & LBH Planning Boards)
<b>Goal 1, Action 6</b>		Ongoing	<b>Emergency Management</b>

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<i>Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.</i>			<i>(Town Administrator, Conservation Commission)</i>
<b>Goal 4, Action 5</b> <i>Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.</i>		1-3 years	<b>Town &amp; LBH Planning Boards</b> <i>(Conservation Commission)</i>
<b>Goal 4, Action 7</b> <i>Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.</i>		1-3 years	<b>Town &amp; LBH Planning Boards</b> <i>(Conservation Commission)</i>

**RELEVANT RESOURCES**

- [2021 NH Coastal Conservation Plan](#)
  - [North Hampton Map](#)
- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)
- [SOAK Up the Rain](#)
- [Planting Guide for Tidal Shoreline Erosion Management in NH](#)
- [Resilient Tidal Stream Crossings](#)
- [Living Shorelines](#)
- [Outreach resources re: septic systems and other topics](#)

**NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS**  
**ACTION PLAN: TOWN PLANNING BOARD/ZBA, LBH PLANNING BOARD/ZBA, + PLANNING AND ZONING ADMINISTRATOR**

<b>ACTIONS WHERE TOWN PLANNING BOARD/ZBA, LBH PLANNING BOARD/ZBA, OR PLANNING AND ZONING ADMINISTRATOR IS A RESPONSIBLE PARTY</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Responsible Parties (and Supporting Parties)</b>
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 4, Action 3</b> <i>Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.</i>		Ongoing	<b>Town &amp; LBH Planning Boards (Code Enforcement Officer, Water Commission)</b>
<b>Goal 4, Action 4</b> <i>Continue to promote limiting impervious surfaces to reduce stormwater runoff. Adopt stormwater management standards and upgrades to design standards to accommodate climate change impacts.</i>		Ongoing	<b>Town &amp; LBH Planning Boards (Both ZBAs)</b>
<b>Goal 4, Action 5</b> <i>Minimize disturbance of shoreland areas. Use the Sea-Level Marsh Migration Model (SLAMM) to encourage maintenance of natural vegetative buffers within 100 feet of waterways and wetland areas, particularly in areas identified for tidal wetland migration as sea-levels rise.</i>		1-3 years	<b>Town &amp; LBH Planning Boards (Conservation Commission)</b>
<b>Goal 4, Action 7</b> <i>Consider new land use regulations or amendments that increase incentives to restore wetlands that have been degraded or filled in to help restore their ecological functions, especially those that mitigate impacts from climate change and sea-level rise.</i>		1-3 years	<b>Town &amp; LBH Planning Boards (Conservation Commission)</b>
<b>Goal 4, Action 8 (*LBH chapter)</b>		1-3 years	<b>LBH Planning Board</b>



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<i>The Village District should evaluate the need to adopt site plan regulations that incorporate design standards that minimize the susceptibility of impacts to the limited commercial properties within the Village District.</i>			
<b>Goal 5, Action 3</b> <i>Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</i>		1-3 years	<b>Town &amp; LBH Planning Boards</b> <i>(Select Board, Emergency Management)</i>
<b>Goal 4, Action 1</b> <i>Adopt standards in floodplain regulations to require all new development and redevelopment to be elevated two feet or more above the base flood elevation in existing FEMA flood zones. Additional elevation helps ensure that structures are protected from flooding based on the highest sea-level rise projection by 2050. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate the exact amount of elevation necessary to meet risk tolerance.</i>		3-5 years	<b>Town &amp; LBH Planning Boards</b>
<b>Goal 4, Action 2</b> <i>In the Town's and Village District's respective zoning ordinances adopt Coastal Flood Hazard Overlay Districts that include performance-based standards that protect against flood impacts from sea-level rise and coastal storm surge. As a guide for risk tolerance, establish overlay district boundaries based on current flood hazard areas on FEMA Flood Insurance Rate Maps and projected future high risk flood areas based on NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections.</i>		3-5 years	<b>Town &amp; LBH Planning Boards</b>
<b>Goal 4, Action 6</b> <i>Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.</i>		3-5 years	<b>Town &amp; LBH Planning Boards</b> <i>(DPW)</i>
<b>Goal 5, Action 2</b> <i>Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify</i>		3-5 years	<b>Town &amp; LBH Planning Boards and Water Commission</b> <i>(note: consider coordination with Hampton/ Aquarion Water Company)</i>

Town of North Hampton and Little Boar's Head Village District  
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<i>standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.</i>			
<b>Goal 1, Action 3</b> <i>Identify opportunities for the Town to invest in conserving land, particularly land that has multiple ecological and community benefits. Seek grants, loans, and partnerships to leverage funding from the Town.</i>		5+ years	<b>Town &amp; LBH Planning Boards</b>

<b>ACTIONS WHERE TOWN PLANNING BOARD/ZBA, LBH PLANNING BOARD/ZBA, OR PLANNING AND ZONING ADMINISTRATOR IS A SUPPORTING PARTY</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Responsible Parties (and Supporting Parties)</b>
<b>Goal 1, Action 2</b> <i>Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</i>		Ongoing	<b>Emergency Management, Select Board/LBH Commissioners</b> <i>(Conservation Commission, Town &amp; LBH Planning Boards)</i>
<b>Goal 2, Action 5</b> <i>When maintaining or repairing local roads, ensure that they are upgraded using up-to-date materials and techniques that prepare them for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in New Hampshire. Up-to-date design criteria for new roadways should be incorporated into land use regulations under Goal 4.</i> *RELATED ACTIONS: GOAL 4, MULTIPLE ACTIONS		Ongoing	<b>DPW</b> <i>(Town &amp; LBH Planning Boards &amp; CIP)</i>
<b>Goal 2, Action 4</b> <i>Use findings of the Seacoast Transportation Corridor Vulnerability Assessment (2022) to identify Town-owned roadways that sea-level rise or storm surge may render unusable temporarily or indefinitely. Identify alternate roadways that may require more frequent maintenance or upgrades to accommodate increased usage when necessary.</i>		Review ongoing, action required 5+ years	<b>Select Board/DPW</b> <i>(Town &amp; LBH Planning Boards)</i>

<b>Goal 2, Action 6</b> <i>Identify opportunities for the Town to invest in conserving land, particularly land that has multiple ecological and community benefits. Seek grants, loans, and partnerships to leverage funding from the Town.</i>		As opportunities arise	<b>Conservation Commission</b> <i>(Town &amp; LBH Planning Boards)</i>
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#### RELEVANT RESOURCES

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)
- [SOAK Up the Rain](#)
- [More information re: the Community Rating System](#)
- [Planting Guide for Tidal Shoreline Erosion Management in NH](#)
- [Resilient Tidal Stream Crossings](#)
- [Living Shorelines](#)
- [Outreach resources re: septic systems and other topics](#)
- [UNH Center for Infrastructure Resilience to Climate](#)
- Seacoast Transportation Corridor Vulnerability Assessment
- Resilient Land Use Guide for NH: Adapting to Climate Change and Coastal Hazards
- [NH Flood Hazards Handbook: A Guide for Municipal Officials](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS& ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: CAPITAL IMPROVEMENTS COMMITTEE

ACTIONS WHERE CAPITAL IMPROVEMENTS COMMITTEE IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 2, Action 1</b> <i>Add information to the Capital Improvement Program to evaluate the risk level to capital investments associated from coastal flooding. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments.</i>		1-3 years	<b>CIP committee</b> (Town Administrator)

ACTIONS WHERE CAPITAL IMPROVEMENTS COMMITTEE IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 2, Action 5</b> <i>When maintaining or repairing local roads, ensure that they are upgraded using up-to-date materials and techniques that prepare them for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in New Hampshire. Up-to-date design criteria for new roadways should be incorporated into land use regulations under Goal 4.</i>		Ongoing	<b>DPW</b> (Planning Boards & CIP)

RELEVANT RESOURCES

- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)





NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: SELECT BOARD + TOWN ADMINISTRATOR

ACTIONS WHERE SELECT BOARD AND TOWN ADMINISTRATOR ARE RESPONSIBLE PARTIES			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	All staff and boards
<b>Goal 1, Action 2</b> <i>Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</i>		Ongoing	Select Board/LBH Commissioners, Emergency Management, (Conservation Commission, Town & LBH Planning Boards)
<b>Goal 6, Action 2</b> <i>Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.</i>		Ongoing	Select Board/LBH Commissioners with Conservation Commission
<b>Goal 2, Action 4</b> <i>Use findings of the Seacoast Transportation Corridor Vulnerability Assessment (2022) to identify Town-owned roadways that sea-level rise or storm surge may render unusable temporarily or indefinitely. Identify alternate roadways that may require more frequent maintenance or upgrades to accommodate increased usage when necessary.</i>		Review ongoing, action required 5+ years	Select Board/DPW (Town & LBH Planning Boards)
<b>Goal 2, Action 7</b> <i>Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an ad hoc work group that includes representatives from Town and Village</i>		Ongoing	Select Board, LBH Commissioners, CIP

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<i>committees, municipal staff, and community members. A central location should be included as part of the work plan.</i>			
<b>Goal 6, Action 1</b> <i>Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.</i>		1-3 years, ongoing	<b>Select Board/LBH Commissioners</b>
<b>Goal 3, Action 5</b> <i>Encourage voluntary actions by residents and businesses to reduce stormwater runoff from their private property. Examples of actions found in the Natural Resource Inventory (2021) and elsewhere should be included.</i>		1-3 years	<b>Select Board and Conservation Commission</b> (through MS4 Permit requirements)
<b>Goal 6, Action 3</b> <i>With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.</i>		3-5 years	<b>Select Board and LBH Commissioners</b>

<b>ACTIONS WHERE SELECT BOARD AND TOWN ADMINISTRATOR ARE SUPPORTING PARTIES</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Responsible Parties (and Supporting Parties)</b>
<b>Goal 6, Action 4</b> <i>With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</i>		Ongoing	<b>Conservation Commission</b> (Select Board/LBH Commissioners)
<b>Goal 1, Action 5</b> <i>Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.</i>		Ongoing	<b>Emergency Management</b> (Town Administrator)
<b>Goal 1, Action 6</b> <i>Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.</i>		Ongoing	<b>Emergency Management</b> (Town Administrator, Conservation Commission)

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<b>Goal 5, Action 3</b> <i>Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</i>		1-3 years	<b>Town &amp; LBH Planning Boards</b> <i>(Select Board, Emergency Management)</i>
<b>Goal 2, Action 1</b> <i>Add information to the Capital Improvement Program to evaluate the risk level to capital investments associated from coastal flooding. The NH Coastal Flood Risk Summary: Part 2 Guidance for Using Scientific Projections can be used to evaluate potential capital investments</i>		1-3 years	<b>CIP committee</b> <i>(Town Administrator)</i>
<b>Goal 2, Action 2</b> <i>Assess the capacity of existing Town-owned stormwater infrastructure (drainage swales, culverts, catch basins, etc.) to handle precipitation events and their susceptibility to flooding from storms. If infrastructure is found to be under capacity or inadequate, these structures should be prioritized for upgrades.</i>		1-3 years	<b>DPW</b> <i>(Town Administrator/ Select Board)</i>

## RELEVANT RESOURCES

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)
- [SOAK Up the Rain](#)
- [Planting Guide for Tidal Shoreline Erosion Management in NH](#)
- [Resilient Tidal Stream Crossings](#)
- [Living Shorelines](#)
- [More information re: the Community Rating System](#)
- [Outreach resources re: septic systems and other topics](#)
- [UNH Center for Infrastructure Resilience to Climate](#)
- [Ready NH](#)

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Coastal Hazards and Adaptation Master Plan Chapters – Appendix C Action Plans

- [NH Volunteer Beach Profiling Report – North Hampton State Beach \(2020\)](#)
- Seacoast Transportation Corridor Vulnerability Assessment
- Resilient Land Use Guide for NH: Adapting to Climate Change and Coastal Hazards
- [NH Flood Hazards Handbook: A Guide for Municipal Officials](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: LBH COMMISSIONERS

ACTIONS WHERE SELECT LBH COMMISSIONERS ARE RESPONSIBLE PARTIES			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools, and consider new tools, to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 1, Action 2</b> <i>Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</i>		Ongoing	<b>LBH Commissioners/Select Board, Emergency Management</b> <i>(Conservation Commission, Town &amp; LBH Planning Boards)</i>
<b>Goal 1, Action 7</b> <i>Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an ad hoc work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.</i>		Ongoing	<b>LBH Commissioners, Select Board, CIP</b>
<b>Goal 6, Action 2</b> <i>Continue to work with NH Department of Environmental Services to identify opportunities to improve tidal culverts and marshes and to improve wetland health and remove tidal restrictions that exacerbate storm surge flooding. Ongoing efforts at Philbrick's Pond exemplify this approach.</i>		Ongoing	<b>LBH Commissioners/Select Board with Conservation Commission</b>
<b>Goal 6, Action 1</b>		1-3 years, ongoing	<b>LBH Commissioners /Select Board</b>



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Coastal Hazards and Adaptation Master Plan Chapters – Appendix C Action Plans

<i>Identify existing projects proposed by NH Department of Transportation and propose new projects associated with state roads and infrastructure in North Hampton that may be impacted by coastal hazards. Advocate for project designs that take into account impacts from sea level rise and climate change.</i>			
<b>Goal 6, Action 3</b> <i>With NH State Parks evaluate the potential of coastal storms and sea-level rise to cut off access to the beach area and to change tidal flow.</i>		3-5 years	<b>LBH Commissioners and Select Board</b>

ACTIONS WHERE LBH COMMISSIONERS ARE SUPPORTING PARTIES			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 6, Action 4</b> <i>With regional and state partners continue to identify sources of water pollution in the Little River (2011) and the Winnicut River (2017) Watershed Management Plans to ensure long-term health of wetland and water resources within North Hampton.</i>		Ongoing	<b>Conservation Commission</b> (Select Board/LBH Commissioners)

**RELEVANT RESOURCES**

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)
- [Resilient Tidal Stream Crossings](#)
- [Ready NH](#)
- [NH Volunteer Beach Profiling Report – North Hampton State Beach \(2020\)](#)
- Seacoast Transportation Corridor Vulnerability Assessment
- [NH Flood Hazards Handbook: A Guide for Municipal Officials](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: DPW

ACTIONS WHERE DPW IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 2, Action 3</b> <i>Review status of culverts identified in the 2018 North Hampton Natural Hazard Mitigation Plan. Identify those that are susceptible to flooding, particularly those culverts and stream crossings that may cut off access to specific areas, and prioritize retrofits. Continue the culvert maintenance plan.</i>		Ongoing	<b>DPW / Emergency Services</b>
<b>Goal 2, Action 5</b> <i>When maintaining or repairing local roads, ensure that they are upgraded using up-to-date materials and techniques that prepare them for impacts from climate change and sea-level rise. Research in roadway construction techniques is currently in the early phases in New Hampshire. Up-to-date design criteria for new roadways should be incorporated into land use regulations under Goal 4.</i>		Ongoing	<b>DPW</b> <i>(Planning Boards &amp; CIP)</i>
<b>Goal 2, Action 2</b> <i>Assess the capacity of existing Town-owned stormwater infrastructure (drainage swales, culverts, catch basins, etc.) to handle precipitation events and their susceptibility to flooding from storms. If infrastructure is found to be under capacity or inadequate, these structures should be prioritized for upgrades.</i> NEXT STEPS: <ul style="list-style-type: none"> <li>• Publish the infrastructure map online (MS4 requirement)</li> </ul>		1-3 years	<b>DPW</b> <i>(Town Administrator/ Select Board)</i>
<b>Goal 2, Action 4</b> <i>Use findings of the Seacoast Transportation Corridor Vulnerability Assessment (2022) to identify Town-owned roadways that sea-level rise or storm surge may render unusable temporarily or indefinitely. Identify alternate roadways that may</i>		Review ongoing, action	<b>DPW/Select Board</b> <i>(Town &amp; LBH Planning Boards)</i>

Town of North Hampton and Little Boar's Head Village District  
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<i>require more frequent maintenance or upgrades to accommodate increased usage when necessary.</i>		required 5+ years	
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ACTIONS WHERE DPW IS A SUPPORTING PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 4, Action 6</b> <i>Incorporate the latest available information on roadway construction techniques and materials to ensure that new roadways are constructed to withstand projected coastal hazard impacts.</i>		3-5 years	<b>Town &amp; LBH Planning Boards</b> (DPW)

#### RELEVANT RESOURCES

- [NH Coastal Viewer](#)
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- [SOAK Up the Rain](#)
- [Planting Guide for Tidal Shoreline Erosion Management in NH](#)
- [Resilient Tidal Stream Crossings](#)
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- [More information re: the Community Rating System](#)
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- [Ready NH](#)
- Seacoast Transportation Corridor Vulnerability Assessment
- [NH Flood Hazards Handbook: A Guide for Municipal Officials](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: CODE ENFORCEMENT OFFICER

ACTIONS WHERE CODE ENFORCEMENT OFFICER IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>

ACTIONS WHERE CODE ENFORCEMENT OFFICER IS A SUPPORTING PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 4, Action 3</b> <i>Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.</i>		Ongoing	<b>Town &amp; LBH Planning Boards</b> <i>(Code Enforcement Officer, Water Commission)</i>

RELEVANT RESOURCES

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: HERITAGE COMMISSION

ACTIONS WHERE HERITAGE COMMISSION IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 3, Action 4</b> <i>Identify historical resources and properties that are susceptible to impacts from coastal hazards. Target outreach towards affected property owners about adaptations they can make to help protect their own property and help protect a key aspect of the community's character.</i>		1-3 years	<b>Heritage Commission</b>

RELEVANT RESOURCES

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)
- [Portsmouth Historic Properties Climate Change Vulnerability Assessment \(example\)](#)



**NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS**  
**ACTION PLAN: EMERGENCY SERVICES (POLICE DEPARTMENT, FIRE DEPARTMENT, EMERGENCY MANAGEMENT)**

<b>ACTIONS WHERE EMERGENCY SERVICES ARE A RESPONSIBLE PARTY</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Responsible Parties (and Supporting Parties)</b>
<b>Goal 1, Action 1</b> <i>Use existing Town outreach tools and consider new tools to promote the findings, goals and actions of the Coastal Hazards Master Plan Chapters. These tools should include the Town website, weekly electronic newsletter, mailed newsletter, emergency services social media accounts, community outreach channels, promotion through local cable access channel, and discussion at municipal meetings.</i>		Ongoing	<b>All staff and boards</b>
<b>Goal 1, Action 2</b> <i>Communicate actions identified in the current North Hampton Natural Hazard Mitigation Plan and in subsequent updates that address impacts associated with climate change and coastal hazards, including flooding, drought, extreme temperatures, and storm events.</i>		Ongoing	<b>Emergency Management, Select Board/LBH Commissioners</b> <i>(Conservation Commission, Town &amp; LBH Planning Boards)</i>
<b>Goal 1, Action 5</b> <i>Coordinate with emergency services to provide information about what residents and businesses should do to prepare for hazardous weather events, what to do during weather events, and what resources are available for mitigation and recovery.</i>		Ongoing	<b>Emergency Management</b> <i>(Town Administrator)</i>
<b>Goal 1, Action 6</b> <i>Communicate when high tide or storm events are expected to better prepare residents and businesses that may be impacted by closed roadways, flooded areas, potential property impacts, and disruption of services. This communication may include an automatic notification system (call/email/text alert) or alerts on the Town website or social media accounts.</i>		Ongoing	<b>Emergency Management</b> <i>(Town Administrator, Conservation Commission)</i>
<b>Goal 2, Action 3</b>		Ongoing	<b>Emergency Services/DPW</b>

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<i>Review status of culverts identified in the 2018 North Hampton Natural Hazard Mitigation Plan. Identify those that are susceptible to flooding, particularly those culverts and stream crossings that may cut off access to specific areas, and prioritize retrofits. Continue the culvert maintenance plan.</i>			
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ACTIONS WHERE EMERGENCY SERVICES ARE A SUPPORTING PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 5, Action 3</b> <i>Consider participation in FEMA's Community Rating System (CRS) program as identified in the 2018 North Hampton Hazard Mitigation Plan. to reduce flood insurance rate costs. Implement climate adaptation strategies that include planning and policy, regulatory, non-regulatory, and community outreach and engagement activities.</i>		1-3 years	<b>Town &amp; LBH Planning Boards</b> <i>(Select Board, Emergency Management)</i>

**RELEVANT RESOURCES**

- [More information re: the Community Rating System](#)
- [Ready NH](#)
- [NH Flood Hazards Handbook: A Guide for Municipal Officials](#)

NORTH HAMPTON AND LITTLE BOAR'S HEAD – COASTAL HAZARDS & ADAPTATION MASTER PLAN CHAPTERS

ACTION PLAN: WATER COMMISSION

ACTIONS WHERE WATER COMMISSION IS A RESPONSIBLE PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 5, Action 2</b> <i>Pursue funding to conduct a groundwater rise study specific to the Town that identifies groundwater resources susceptible to groundwater rise and saltwater intrusion. Use this study to aid in identifying impacts to drinking water sources, septic systems, infrastructure, and historic resources. The outputs of this investigation can identify and inform the need to modify standards for siting wells and septic systems and for roadway design. It can also identify vulnerable historic resources and structures. Coordination with the Town of Hampton and Aquarion Water Company should be a high priority.</i>		3-5 years	<b>Water Commission and Town &amp; LBH Planning Boards</b> <i>(note: consider coordination with Hampton/ Aquarion Water Company)</i>

ACTIONS WHERE WATER COMMISSION IS A SUPPORTING PARTY			
Action	Metric/Measurement (if applicable)	Timeframe	Responsible Parties (and Supporting Parties)
<b>Goal 4, Action 3</b> <i>Continue to promote limiting land uses that pose potential contamination risks to groundwater resources.</i>		Ongoing	<b>Town &amp; LBH Planning Boards</b> <i>(Code Enforcement Officer, Water Commission)</i>

RELEVANT RESOURCES

- [NH Coastal Viewer](#)
- [NH Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections](#)

**ACTION PLAN: AD HOC OUTREACH WORK GROUP**

<b>ACTIONS WHERE AD HOC OUTREACH WORK GROUP IS A RESPONSIBLE PARTY</b>			
<b>Action</b>	<b>Metric/Measurement (if applicable)</b>	<b>Timeframe</b>	<b>Responsible Parties (and Supporting Parties)</b>
<b>Goal 1, Action 7</b> <i>Develop a work plan for outreach efforts that includes information about existing outreach materials and resources. This effort may require the establishment of an ad hoc work group that includes representatives from Town and Village committees, municipal staff, and community members. A central location should be included as part of the work plan.</i>		Ongoing	<b>Ad hoc outreach work group</b>
<b>Goal 3, Action 6</b> <i>Identify opportunities to distribute information to residents and businesses that are identified in the work plan under Goal 1, Action 7.</i>		Ongoing	<b>Ad hoc outreach work group</b>