

13 Natural Hazards & Climate Change



13.1 Existing Conditions

Background

Newport, and Aquidneck Island as a whole, is geographically situated in an area that faces unique natural hazards. Newport has endured severe storm events throughout its history, many of which have caused substantial property damage and loss of life. While construction practices, forecasting technology and communications have evolved through the years, the threats to life and property remain and are also evolving. In the coming years the entire island will encounter various threats due to climate change, which creates oceanic warming, increased sea water acidity, and melting ice caps, which leads to sea level rise. Climate change has many impacts on bodies of water, which is especially concerning for coastal communities.

Founded in the seventeenth century, much of the city's infrastructure and housing stock is aged. The city's age, combined with its location on an island, puts Newport more at risk.

This chapter examines the natural hazards that impact Newport, the critical assets that are affected by these hazards and the ways in which climate change will affect the city over the course of the 20 year plan horizon and beyond.

Natural Hazards

In 2014, the City of Newport submitted a Natural Hazard Mitigation Plan (NHMP) to Rhode Island Emergency Management (RIEMA) for State and Regional review. At present the Plan has been approved at the State level and now resides at the Regional approval process level. The NHMP highlighted the hazards listed. It should be noted that the purpose and scope of the City's NHMP is somewhat different from how natural hazards and related issues are addressed in a comprehensive plan. However, the HMP provides a good foundation for the identification and analysis of relevant hazards, trends and issues. The current draft of the 2014 HMP may be found on the City's website at www.cityofnewport.com

Flood-Related Hazards

Flood related hazards remain the most prevalent and frequent natural hazard that impacts the state of Rhode Island. Newport has only a few small streams within its borders. Coastal flooding is primarily caused by storms such as hurricanes and nor'easters. As the eastern coastline of Newport is fairly rocky and steep, the risk of flooding is lower than that of the rest of the island, although eastern portions of the city are still subject to high winds, damaging waves and storm surge.



The flood zones along the western coastline extend far deeper into the city than they do on the eastern coastline, making the Narragansett Bay coast highly vulnerable to flooding.

The magnitude of the hazards relating to flooding in Newport is immense and can be seen in recent 2015 statistics:

- Nearly 54% of Newport's parcels are in or touch the floodplain.
- Nearly 20% of all the buildings in Newport are in a floodplain.
- Property in the 500-year floodplain is valued at \$3.8 billion.
- There are 968 historic properties in the 500-year floodplain, valued at \$559 million.
- Over 55% of the city's hotel and guest rooms are in areas prone to flooding, as are 585 private businesses, together accounting for about half of the city's accommodation industry business.

These existing conditions are projected to worsen over the course of the next decades. Data shows that just from 1930 to the present, sea level has risen over 9 inches. The serious implications of these continued changes are discussed in detail in the Issues and Trends section of this chapter. Map 13-1 displays the areas in Newport that are most at risk to flood hazards.

A 2010 economic study of the harbor area determined that City of Newport revenues per acre of land in the harbor area ranged from \$53,000/acre to \$135,000/acre. In 2009, patrons of Newport's harbor purchased approximately \$155 million dollars of goods and services.

Coastal Erosion

Coastal erosion is a constant natural process. Coastal areas are constantly changing due to tides, wave action, littoral currents, seasonal changes affecting the movement of ocean waters, rising sea levels, coastal flooding, storms, and various human impacts. These impacts are most common in sandy and level coastal areas, but impact more rocky coastlines as well. The concentration of energy and impacts on weaker rocky areas undermine coastal bluffs and escarpments. In Rhode Island, the average coastal erosion rate is 1.6 feet per year. Waterfront homes, businesses, roads, bridges, recreational trails, parking areas, stormwater drainage systems, and other public infrastructure are put at risk. The coast of Newport consists mainly of rocky cliffs, swamps, and sandy beaches, all of which are susceptible to coastal erosion; however, much of the coastline is protected by seawalls.

Coastal Flooding

Coastal flooding can occur as a result of storm surges and wind-driven waves created by hurricanes, tropical storms, and nor'easters. These coastal flooding events can occur throughout the year. In addition to flooding with sea water, surges from the ocean can block the downstream flow of rivers and stream, potentially resulting in these waterways to flood. Of particular concern is how coastal flooding may impact Newport's freshwater supply stored in Easton Pond. Importantly, Newport's shallow freshwater wetlands around Easton Pond as well as Easton's Beach provide an important first line of defense protecting from saltwater intrusion in the event of coastal flooding.



Seawalls are susceptible to storm surge damage. The FY 2016-2020 Capital Improvement Program includes a focus on repairing and upgrading seawall at Stone Pier at King Park, Storer Park, and Thames Street. Recently completed repairs to the Newport Cliff Walk were completed with federal funds.

To address flooding concerns, the City commissioned the Easton Pond Dam and Moat Study, by Fuss & O'Neill dated September 2007. The study notes that The Easton Pond Dam and Moat system is almost 70 years old after being reconstructed in the late-1930s after the 1938 hurricane. The City conducted repairs to the 5,500 foot long Easton Pond Dam. These repairs provide the desired protection while accommodating public access and minimizing environmental impact. The study further recommends short and long-term improvements to address potential coastal flooding in order to protect the City's potable water supply. This study should be updated regularly in order to reassess current and future conditions to ensure the appropriate level of improvements are planned and addressed in the current CIP.

Stormwater-Based Flooding

Stormwater-based flooding occurs when the soils are unable to absorb more water during storms. If a city does not have an adequate water drainage system, water can build up over hard surfaces, such as roads and pavements, leading to flooding. Flooding over impervious surfaces accumulates debris, chemicals, and other pollutants, which can then flow into bodies of water. This type of flooding can create water damage to buildings and infrastructure, as well as contaminate Newport's clean water supply.

Storm Surge

Storm surge is the abnormal rise in water level caused by a hurricane or nor'easter winds when currents are in the onshore direction and water begins to pile up onshore. Often times, surge is the most dangerous part of a storm, as it creates rapid and intense flooding. The last storm to create storm surge damage to Rhode Island was Hurricane Sandy in 2012, which mainly impacted southern communities of Newport and Washington Counties. Rhode Island is most affected by storm surge when storms pass through the west.

Climate Change and Sea Level Rise

In Newport, sea level has risen an average of 2.6 millimeters (0.1 inches) per year since 1930. In comparison, the global mean sea level has risen an average of 1.7 millimeters per year, and the rate of sea level rise (SLR) is expected to increase globally as well as locally in Rhode Island. Sea level rise is caused by thermal expansion of sea water and the addition of freshwater from melted land ice, both impacted by climate change. The rise in sea level is a problem for coastal communities as it increases the risk for flooding and the intensity of storm surge during hurricanes and nor'easters.

Winter-Related Hazards

Nor'Easters

The State of Rhode Island averages one to two Nor'easters per year. These storms most often occur during the winter and bring heavy snow, blizzards, high winds, sleet, ice or freezing rain, and depending on air temperatures, flooding. The impacts that Nor'easters have on Newport are intensified as the city is located on an island. Inhabitants rely on a series of bridges to get to the mainland, and all of the bridges that lead off of the island are shut down when there are wind speeds of 69 miles or more. Nor'easters often cause structural damage to buildings and power outages power lines get damaged.

Snow

Heavy snow is generally defined as the buildup of more than eight inches of snow in less than 24 hours. In Rhode Island, winter storm warnings are issued when it is expected that snowfall will accumulate more than four inches in 12 hours. Newport is located outside of the northeastern heavy snow regions and has a warmer winter than many other cities due to its maritime climate, receiving less snowfall on average than other northeastern cities. On average, Rhode Island gets about 36 inches of snow a year, almost half of the snowfall that northeastern states receive. Heavy snow can cause damage with its weight and create dangerous conditions for people and transportation, halting most community activity.

Ice Storms

Ice storms occur when rain freezes as it comes in contact with cold surfaces, causing accumulations of ice. This generally happens during winter storms, when storms create heavy snow and sleet elsewhere. Ice storms may result in power loss due to down power lines, creating dangerous conditions for those who rely on electricity for warmth and for communication. Icy conditions also create safety hazards for pedestrians and transportation.

Blizzards

Blizzards are the combination of heavy snowfall, high winds, extreme cold, and ice storms. The National Weather Service defines a blizzard as having winds over 35 mph and visibilities of less than ¼ mile for at least three hours. Low visibility is caused by high winds picking up fallen or falling snow and creates safety concerns for those who are traveling as well as halts the delivery of goods and services for a prolonged period. High winds in blizzards can create low wind chill levels, resulting in health concerns for those who are exposed to the weather.

Extreme Cold

Extreme cold in Rhode Island is generally classified as temperatures below zero degrees Fahrenheit. Extreme cold can be exacerbated by wind chill, making temperatures feel colder than they actually are. These conditions can create medical conditions such as hypothermia and frostbite and is usually more harmful to infants and those over 65 years old. Extreme cold can affect underground infrastructure and utilities if penetrated downward. Newport has a maritime climate, so it is warmer than other northeastern cities and has fewer instances of extreme cold conditions than other eastern cities.

Wind-Related Hazards

Hurricanes

The entire perimeter of Aquidneck Island has been designated a Zone A Hurricane Evacuation Area, and evacuation is highly recommended prior to an expected category 1 or 2 hurricane. There are also several portions of Newport, Middletown, and Portsmouth that have been designated as a Zone B Hurricane Evacuation Areas. This means that evacuation is highly recommended prior to an expected category 3 or 4 hurricane. Map 13-2 displays the areas of Newport that would be inundated with water from hurricanes of various severity and Map 13-3 shows the Zone A and Zone B evacuation areas within the city.

Hurricanes in this region are a fairly common occurrence. Being within the general path of a major hurricane can put a coastal community at risk of extensive damage and ensuing costs, even if it is not in the direct path. For instance, in 2012, the “eye” of Hurricane Sandy made landfall in New Jersey, however, over 120,000 Rhode Island residents were left without power and Newport was one of the hardest hit communities in the State. Over \$5 million was required to repair the damage Hurricane Sandy did to Newport’s famous Cliff Walk.

High Wind and Thunderstorms

In addition to hurricanes, high winds and thunderstorms can pose a serious threat to Newport. Throughout the course of a year, Newport averages about 21 thunderstorms. They can cause structural damage and power outages when they occur. In September 2013, a series of thunderstorms traveled through the state of Rhode Island and caused over 5,000 people to be without power. Lightning from thunderstorms can cause house fires and wildfires and heavy rains often create significant short term “flash” flooding in low areas.



Heavy rains can overwhelm the City’s stormwater systems, resulting in environmental damage and increased erosion. It is not uncommon for flooding caused by thunderstorms to damage local road surfaces, culverts, bridges, and even require temporary road closures. During high winds, especially over 58 mph, travel on Pell Bridge is restricted or prohibited. The bridge may be considered for closure if winds reach 69 mph.

Map 13-2

Map 13-3

Drought and Extreme Heat

A drought is a continuous period where an area receives significantly less rainfall than normal. Unlike other natural hazards that occur quickly and suddenly, droughts evolve over a period of months and can have significant economic, environmental, and social impacts. Droughts in Newport and in the State of Rhode Island do not occur very often, but the number of instances is increasing. Since 1929, there have only been six droughts in the state that lasted over a year.



Rising temperatures impact marine ecology, declines in traditional species and increases invasive species that favor warmer waters. This impacts local fish and shellfish businesses.

More evident are increasing periods of prolonged high temperatures during the summer, as well as highly variable seasonal temperatures overall. These conditions impact precipitation levels, the viability of native and other flora and the ecological communities they support.

Geologic Related Hazards

Earthquakes

There are no significant fault lines in New England, and Rhode Island is identified by the USGS Earthquake Hazards Program as being in a low seismic risk area. Although Rhode Island is not located near fault lines, it may be located within zones of weakness, which are weakened boundary regions within the interiors of plates. These zones can be responsive to stress from deeper within the crust or at the edges of the plate, causing an earthquake. Earthquakes do not occur frequently in Rhode Island and those that do often originate from other states, such as the Virginia Earthquake in August of 2011. The most recent earthquake to hit Rhode Island was a 2.3 magnitude earthquake with an estimated epicenter under Providence Harbor. Although there is low seismic activity in the area, the risk hazard is moderate, meaning that earthquake events may create moderate intensity shaking and can lead to property damage and safety concerns.

Climate Change

Newport and Aquidneck Island are particularly vulnerable to the effects of climate change. Throughout the last 80 years, Rhode Island has already experienced a rise in temperatures, precipitation, and flooding. A key indicator of climate change in Rhode Island is the steady increase in temperatures since 1930. The state is averaging a 1 degree Fahrenheit increase in temperature every 33 years. In addition to the increase in temperature, the average rainfall has also been increasing at a rate of more than one inch every ten years. The increase in rainfall has become an issue, as the increase in soil moisture decreases the amount of rainfall that can be absorbed. This can lead to increased flooding during wet seasons.

Situated on an island, Newport's principle concern regarding climate change is sea level rise. The sea levels in Newport are projected to rise around 3 to 5 feet by the year 2100. This puts the low-lying areas of Newport at the greatest risk. In a report conducted by Sasaki on Parks and Recreation in Newport, it was found that a one inch rise in sea level would affect 29 acres city-wide, 15 acres of park, and 27 parks or open space. A three inch level in sea level would affect 154 acres city-wide, 68 acres of park, 32 park or open space, 1 playground, and 2 sports fields. A five inch sea level rise would affect 439 acres city-wide, 272 acres of park, 51 parks or open space, 2 playgrounds, and four fields or courts.

Map 13-4 shows the areas of Newport that are at risk due to sea level rise. The following neighborhoods would be affected by just a one foot rise in sea level: Downtown, Harbor/Lower Thames, Long Wharf, Goat Island, Rose Island, Ocean Drive, the Fifth Ward, Easton's Beach, and the North End Commercial District.

Map 13-4

It is possible that Newport may see an increase in the frequency or severity of the natural hazards previously mentioned, such as hurricanes, thunderstorms, and nor’easters.

Table 13-1 highlights the effects climate change has had on Newport, Rhode Island, and the northeastern U.S.

Table 13-1 – Climate Change in Newport, Rhode Island, and the Northeastern U.S.

Air Temperature	Ocean Temperature	Sea Level Rise	Storm Intensity
Summer temperatures have increased in the northeastern U.S. by an average of 0.5 °F every decade since 1970	Ocean temperatures in the southern New England coast have increased by 2.2°F since 1970.	From 1931 to 2011, sea levels in Newport have risen at an average rate of 2.68 mm per year	Approximately 12 to 15 nor’easters hit the northeastern U.S. from November to March every year
Winter temperatures have increased in the northeastern U.S. by an average of 1.3 °F every decade since 1970	Winter water temperatures in Narragansett Bay have risen 4°F since the 1960s		Rhode Island has declared disasters due to hurricanes in 1954, 1955, 1985 1991 and 2005
			Federal emergencies were declared for coastal flooding in Rhode Island in 1993, 1996, 2003, 2005, 2010

Source: *Climate Change & Rhode Island’s Coasts*

Impacts of Natural Hazards and Climate Change

People

The most at risk population in terms of hazard vulnerability in Newport are those who require assistance due to disabilities, chronic conditions, and special healthcare needs. The Rhode Island Special Needs Emergency Registry (RIDOH), provided by the State of Rhode Island, is a registry of Rhode Islanders who require assistance during emergencies. Residents are encouraged to register so that effective and efficient assistance can be conducted during emergencies.

Built Environment

Newport has many assets that would be at risk to natural hazards and climate change. The HMP highlights Newport’s critical public facilities, which deliver vital public services, protect the population, and serve other important functions. Table 13-2 highlights such facilities.

The Newport Restoration Foundation has been active in addressing the potential damage that sea level rise can cause on historic buildings and neighborhoods, especially as storms increase in both frequency and magnitude. The Newport Restoration Foundation is discussed further in Chapter 9, Historic and Cultural Resources.

Table 13-2 – Newport’s Critical Facilities

Critical Infrastructure	Critical Historic Structures in Flood Zone	Nursing & Elderly Facilities	Public Utilities	Emergency Shelters
City Hall	Brick Market Place	Heatherwood Nursing and Subacute Center	Station 1 Water Treatment Plant	Newport Area Career and Technical Center
Fire Station 1, 2 & 5	Castle Hill Light House	St. Claire Home	Forest Avenue Pumping Station	Sheffield Elementary School
Newport Police Department	Sherman Clark House	Village House Nursing and Rehabilitation Center	Saint Mary’s Pumping Station	Pell School
Newport Hospital	Covell William King III House	John Clarke Retirement Center	Reservoir Road Water Storage Tank	Florence Gray Center
Newport Animal Hospital	Hunter House	Blenheim	Wastewater Treatment Facility	Emergency Shelter
Claiborne Pell Newport Bridge	Ida Lewis Rock Lighthouse	Scattered Elderly Housing Project	Washington Avenue Combined Sewer Overflow Facility	
Pell School	Newport Steam Factory, 449 Thames Street	Donovan Manor	Lawton Valley Water Treatment Plant and Water Storage Tanks	
Thompson Middle School	Perry Mill House	Mumford Manor	Paradise Pumping Station	
Rogers High School	Rose Island Lighthouse	John Clarke School Senior Apartments	Sakonnet Pumping Station	
Newport Area Career & Technical Center	Seaman’s Church Institute Market Square	Paramount Theatre Apartments	Goulart Lane Water Storage Tank	
Aquidneck Island Adult Learning Center		Festival Field Housing	Wellington Avenue Combined Sewer Overflow Facility	
Naval War College		Ahepa 245 I and II Senior Housing	13 Sewer Pumping Stations	
Naval Station Newport			West Howard Sub-station	
			Hospital Sub-station #146	
			Gate #2 Sub-station	

Source: Newport 2014 Hazard Mitigation Plan

Water Supply

Increased precipitation and storms can lead to inland flooding, causing problems for Newport’s water supply. Excessive water can cause dam breach for Newport’s drinking water reservoir dams.



The Easton Pond South dam is susceptible to dam breach and is designated as a high hazard by the Dam Safety Program report conducted in 2013. The high hazard designation means that a breach can result in the loss of human life.

In addition to dam breaches, water supply is also affected by hotter weather, which can lead to drought like conditions. Depleted reservoir levels and warming water temperatures would put strain on the water quality and quantity in Newport, which is already affected by the contamination of total trihalomethanes (THMs), which is a by-product of drinking water chlorination. Rhode Island as a whole is also vulnerable to short-term or long-term droughts. See Chapter 12 for more information on Newport’s water supply.

Natural Resources and Open Space

Coastal erosion and flooding can cause damage to vulnerable natural areas such as Hazards Beach and King Park, which are defining places in Newport. These two areas are vulnerable due to their exposure to waves caused by southwesterly winds.

2014-2019 Hazard Mitigation Plan Primary and Continuity Action Plan

The Natural Hazard Mitigation Plan 2016 Update lays out an action plan as part of the mitigation strategy to combat natural disasters. Table 13-3 displays the action plans that will be conducted by the City of Newport.

Table 13-3 – Newport’s Hazard Mitigation Primary and Continuity Action Plan

Action	Description	Priority	Pre/Post Disaster	Dept. Responsible	Funding Resources	Timeframe	Status
Primary Actions							
#1	Creation of evacuation service and support mechanisms for citizens unable to self-evacuate	Medium	Pre	Police	Police Budget	Near-term	Police and Fire established procedures. NEMA and First Student Act as backup. Expansion of services to be explored.
#2	Shelter study and acquisition of additional facilities if needed	Medium	Pre	Fire	Fire Budget	Near-term	Red Cross Shelter Study complete. Further study to assess demand vs. existing capacity.
#3	Increase resiliency of health care facilities during hazard events	High	Pre	Civic Investment	TBD	Near-term	Incomplete. Requires funding
#4	Information dissemination	Medium	Pre	Civic Investment and Engage Newport	Fire Prevention Budget	Near-term	“Code Red” emergency communication complete. Further study to explore other outreach opportunities.
#5	Protect historic structures and collections	High	Pre	Civic Investment and Engage Newport	TBD	Near-term	New action
#6	Categorize priority activities for City owned flood risk properties to develop sustainable and	Low	Pre	Building Official	TBD dependent on facility	Medium-term	Incomplete

Action	Description	Priority	Pre/Post Disaster	Dept. Responsible	Funding Resources	Timeframe	Status
	resilient facilities and infrastructure						
#7	Maintain, amend and enforce the Newport Zoning Code to manage land in vulnerable areas	Medium	Pre	Zoning Official	None required	Medium-term	New action
#8	Sea wall sustainment	High	Pre	Public Services	TBD	Near-term	Ongoing
#9	Eliminate flood risk to repetitive loss properties	Low	Pre	Building Official	Building Department Budget	Medium-term	Incomplete; working with CRC/CRMC to determine improvements
#10	Reduce urban fire threat	Medium	Pre	Fire	Fire prevention budget	Medium-term	Complete revision of RI fire code. Building code updates and removal of grandfather laws. Zoning code updates recommended.
#11	Protect and reduce the vulnerability of the waste water system infrastructure	High	Pre	Utility	TBD	Long-term	Working with RIDEM and EPA to develop system for master plan for long term control of combined sewer overflows.
#12	Protect and reduce the vulnerability of the potable water supply	High	Pre	Utility	TBD	Medium-term	New action
#13	Create a streamline process to expedite rebuilding following a disaster	Medium	Pre	Planning and Zoning	None required	Near-term	Incomplete
#14	Create a partnership with alternative agencies to identify at-risk properties that may be suitable for acquisition	Low	Post	Planning and Zoning	Operating Budget/ FEMA HMGP	Medium-term	Incomplete
#15	Develop a disaster recovery plan	High	Pre	Planning and Zoning	Operating Budget/ FEMA preparedness grant	Near-term	Incomplete
#16	Increase Shelter Capacity	High	Pre	Planning and Zoning	Operating Budget/ FEMA	Near-term	Incomplete

Action	Description	Priority	Pre/Post Disaster	Dept. Responsible	Funding Resources	Timeframe	Status
					preparedness grant		
Continuity Actions							
#16	Improvement of evacuation routes	High	Pre	Police	Police Department Budget	Near-term	Evacuation route created and posted by RIEMA. Ongoing maintenance and improvements desired.
#17	Evacuation route sustainment	High	Pre	Public Services	Public Services Department Budget	Near-term	Ongoing. Pavement management system instituted to monitor progress and give priority to damaged roads.
#18	Maintain roadside trees	High	Pre	City arborist	City arborist budget	Near-term	Ongoing
#19	Maintain debris management plan	Medium	Pre	Public Services	Public Services budget	Near-term	Ongoing

Source: Newport 2014 Hazard Mitigation Plan

As storm intensities increase going forward, the Newport Emergency Management Agency (NEMA) will be key in contributing to the safety of residents through the dissemination of emergency information.

Code Red Emergency Communication Network

Code Red is an emergency notification system, created to disseminate warnings to residents and businesses of emergencies. The system disperses notifications via phone message, text message, and/or email. Residents or business owners can enroll for free and are able to update their contact information.

Community Rating System

The Community Rating System (CRS) recognizes communities' efforts in exceeding the minimum National Flood Investment Program requirements for flood plain management. As part of the National Flood Insurance Program (NFIP), communities adopt their own flood hazards map and Flood Insurance Study (FIS). The CRS program is voluntary for communities. The goals of the CRS are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. Cities that participate can receive a discount for flood insurance premiums based on the efforts to reduce flood risk.

As of 2014, Newport was not a participating city, but has the intention of joining. The Federal Emergency Management Agency (FEMA) informed the city that FEMA has officially closed the Community Assistance Visit and Informed the Internal Organization for Standardization (ISO) that they may proceed with Newport's CRS Application. Currently, the City of Newport is working on a new application and is scheduled to meet with RIEMA in December 2016.

13.2 Goals and Policies

Goal NHCC-1

To be a resilient community, protecting its citizens, property and economy from the evolving threat of climate change and its associated hazards.

- Policy NHCC-1.1** The City shall work with a broad coalition of stakeholders to create, adopt, implement and refine an innovative, comprehensive and strategic plan to address sea level rise and its consequences.
- Policy NHCC-1.2** The City shall take local actions to implement to both adapt to and mitigate impacts climate change and its impacts.

Goal NHCC-2

To provide a governmental structure and processes that can track and integrate new concepts to address climate change and its effects including sea level rise.

- Policy NHCC-2.1** The City shall be guided by a comprehensive, long term Natural Hazard Mitigation Plan, which integrates climate change initiatives across all departments and functions.
- Policy NHCC-2.2** City departments and functions shall be informed and influenced by climate change related initiatives and shall define and communicate the roles, responsibilities and contributions of key departments.
- Policy NHCC-2.3** The City should institutionalize climate change education as part of a regular governmental effort, throughout City departments and functions.
- Policy NHCC-2.4** The City should give climate change initiatives priority .and should allocate sufficient resources to develop and implement related initiatives.
- Policy NHCC-2.5** The City shall work with all agencies in order to maximize support, efficiency and effectiveness in addressing the effects of climate change.
- Policy NHCC-2.6** The City shall encourage the development of systems that disseminate information regarding climate change and its effects to community members and visitors in a timely and effective manner through a wide variety of platforms and media.
- Policy NHCC-2.7** The City shall link to resources and information on climate change from the City's website

Goal NHCC-3

To be a leader in efforts to understand the nature and science of climate change and how it impacts the community.

Policy NHCC-3.1 The City shall make efforts of acquire, evaluate, maintain, use and share relevant scientific data related to climate change with governmental, educational and institutional entities.

Policy NHCC-3.2 The City shall actively seek out, identify, participate with and support local, regional, state and national efforts to address climate change and its impacts.

Goal NHCC-4

To achieve a FEMA Community Rating System that reduces the costs of flood insurance to residents and businesses.

Policy NHCC-4.1 The City shall actively coordinate and collaborate with FEMA, Rhode Island Emergency Management, property owners and insurance underwriters to design, implement and secure credit for any and all improvements which reduce flooding and other natural hazard risks.

13.3 Implementation Actions

The following are the implementation actions for the goals included in the Natural Hazards & Climate Change Element.

Goals & Actions	City Objectives							Priority	Time	Responsibility / CIP	
	Prosperous	Beautiful	Happy	Destination	Collaborative	Smart	Healthy				Resilient
								Cost			
GOAL NHCC-1: To be a resilient community, protecting its citizens, property and economy from the evolving threat of climate change and its associated hazards.											
A) Maintain an active leadership role within the state, region and nationally with respect to climate change mitigation.	■				■			■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Council • City Manager
B) Advocate for climate change issues, science, technology and networks in a variety of public, private, non-profit and institutional settings.	■				■	■		■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Council • EEC
GOAL NHCC-2: To provide a governmental structure and processes that can track and integrate new concepts to address climate change and its effects including sea level rise.											
A) Evaluate the City's current staffing, personnel, administrative organization and other related attributes to determine if they are ideally suited to accomplish climate change initiatives.	■				■	■		■	High ———— \$	Mid	<ul style="list-style-type: none"> • City Council • City Manager
B) Communicate program objectives clearly to staff and empower key staff, boards and commissions to make decisions necessary to accomplish climate change program objectives.	■				■	■		■	High ———— No Cost	Mid	<ul style="list-style-type: none"> • City Manager
C) Include program goals in departmental performance assessments. and recognize/celebrate success and innovation.	■				■	■		■	High ———— No Cost	Short & On-going	<ul style="list-style-type: none"> • City Manager
D) Seek out funding sources, collaborations and creative structures for accomplishing the City's climate change strategy.	■				■	■		■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Manager

Goals & Actions	City Objectives								Priority Cost	Time	Responsibility / CIP
	Prosperous	Beautiful	Happy	Destination	Collaborative	Smart	Healthy	Resilient			
E) Continue to educate local citizens, property owners and business interests regarding the impacts of climate change, the costs of failing to adapt and mitigate and the options available to successfully overcome the challenges.	■		■	■	■	■	■	■	High ———— No Cost to \$	Short & On-going	<ul style="list-style-type: none"> • City Council • City Manager • EEC • Chamber
F) Solicit support from the corporate community, federal and state government; local and regional institutions, neighborhood groups and others, for climate change initiatives.	■			■	■	■	■	■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Council
G) Survey constituents on a regular basis and/or as relates to specific climate change actions or initiatives, seeking their comments.	■		■		■	■		■	High ———— No Cost to \$	Short & On-going	<ul style="list-style-type: none"> • City Council
GOAL NHCC-3: To be a leader in efforts to understand the nature and science of climate change and how it impacts the community.											
A) Establish Newport as a “real life” beta-testing facility for climate changes study.	■			■	■	■	■	■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Council
B) Seek out, establish and support key technological, academic, government, institutional and commercial relationships that are necessary to fully and successfully implement the City’s climate change strategies.	■			■	■	■	■	■	High ———— \$	Short & On-going	<ul style="list-style-type: none"> • City Council
GOAL NHCC-4: To achieve a FEMA Community Rating System that reduces the costs of flood insurance to residents and businesses.											
A) Coordinate and collaborate with FEMA, RI Emergency Management, property owners and insurance underwriters to design, implement and secure credit for any and all improvements which reduce flooding and other natural hazard risks.	■			■	■	■	■	■	High ———— \$	Mid & On-going	<ul style="list-style-type: none"> • Property Owners • Chamber • RIEM • City Managements • Local Emergency Management Officials