

Town of Cumberland, RI  
Natural Hazard Mitigation Plan  
2011- Update

Public Workshop  
September 28, 2015  
6:00 pm  
Cumberland Public Library



# Why Hazard Mitigation Planning?

Disaster Mitigation Act of 2000, Interim Final Rule, 44 CFR Parts 201 and 206 states, “All communities must have an approved Multiple Hazards Mitigation Plan in order to qualify for future federal disaster mitigation grants”.

Reduction or elimination of long-term risk to life, property, and the environment.



# Cumberland Local Hazard Mitigation Committee

- William Murray, Mayor
- Anthony Silva, Director EMA/Chief of Staff Office of Lieutenant Governor
- Kelley Nickson Morris Esq., Director Community Planning/Development
- Joshua O'Neill, Town Planner
- John Desmarais, Police Chief
- Patricia Tweedie, Police Department
- Kenneth Finlay, Fire Chief
- George Stansfield, Chief of Staff
- Craig Dwyer, Town Council
- Bob Anderson, DPW Director
- Chris Champi, Water Department
- David Carr, Sewer Superintendent
- Frank Stowik, Highway Department
- Chris Collins, Pawtucket Water Supply Board
- Mike Crawly, Director Senior Services/Parks and Recreation
- Sean Thompson, Cumberland Rescue
- Peter Scorpio, Building Official
- Alan Bourgette, CERT
- Michael Plasse, CERT
- Brad Dean, Local Business Owner
- Leslie Taito, Hope Global
- Mark Lindgren, Resident
- Jess Stimson, State Hazard Mitigation Officer
- Craig Pereira, Consultant – Horsley Witten Group



# Mitigation Process

- **Assess Risks**
- Establish Goals
- Identify Projects/Actions
- Update/Maintain Plan



Assess Risks...

## **Risk and Vulnerability Assessment**

### *Natural Hazard:*

“Any event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, and agricultural loss, damage to the environment, interruption of business, or other types of harm and/or loss”.



# Hazards Affecting Cumberland (2011 Plan)

- Flood Related
  - Flooding along the Blackstone River and other smaller streams and brooks pose a risk to the community during periods of heavy rain, and threaten both residential and industrial properties.
  - Dam Failure...several dams along the Blackstone River, and upstream from the Town could pose a risk to the Town. The Arnold Mills Dam on the Pawtucket Reservoir also poses a major risk to sections of Town.
- Winter Related
  - Severe Winter Storms... Heavy snow and winter storms continue to increase in frequency and severity. Power outages are a primary concern.



# Hazards Affecting Cumberland (2011 Plan)

- Wind Related

- Hurricanes...Flooding, downed trees, power outages.
- Tornadoes...the risk of tornado is minimal, yet real.
- High Winds...strong winds can create debris problems including downed power lines.

- Geologic Related

- Earthquakes...Town is susceptible, but unlikely to occur.

- Fire Related

- Wildfires...pose a risk in certain large dense forested areas of Town, particularly at Diamond Hill Park and the Pawtucket Reservoir areas.
- Drought...Town is susceptible, older adults and young children more likely to be affected.

Hazards affecting Cumberland will be updated to include climate change.



# Hazard Index (2016 Update)

The Local Hazard Mitigation Committee (LHMC) will be evaluating each of the hazards affecting Cumberland to establish a **Hazard Index** – the natural hazards posing the most risk to the community, based on historical frequency and severity. To date, the top three hazards include:

- Heavy Rains/Flooding
- Nor'easter/Snowstorms
- Wind Events



Assess Risks...

## Risk and Vulnerability Assessment

### Identification of Assets

- **Economic Assets**

- Businesses/major employers
- Tourist destinations

- **Social Assets**

- Vulnerable populations
- Cultural locations

- **Natural Resources**

- Lifeline and utility systems
- Wetlands
- Conservation and recreation lands



Assess Risks...

Risk and Vulnerability Assessment

**Identification of Assets**

▪ **Essential Buildings and Critical Facilities**

- Municipal buildings
- Hazardous facilities
- Roadways



# Mitigation Process

- Assess Risks
- **Establish Goals**
- Identify Projects/Actions
- Update/Maintain Plan



# Establish Goals...

## Mitigation Strategy

### **Review Existing Hazard Mitigation Activities:**

- Coordination with local business community
- Coordination with neighboring communities
- Cumberland Comprehensive Plan, 2015 Update
- Flood Hazard Development Permit/Standards
- Land Development & Subdivision Regulations



# Establish Goals...

## Mitigation Strategy

### **Review Existing Hazard Mitigation Activities:**

- *SafeWater* RI: Ensuring Safe Water for RI's Future
- CRMC's Section 145 Climate Change and Sea Level Rise Policy
- RI Climate Change Commission



## Establish Goals... **Mitigation Goal**

*“To preserve and enhance the quality of life, property values and resources by identifying all potential natural hazards in Cumberland and mitigating their effects to reduce the loss of life, as well as, losses of economic, historical, natural, and cultural resources.”*



# Establish Goals...

## Mitigation Measures

- Planning and Prevention
- Property Protection
- Natural Resource Protection
- Structural Projects
- Emergency Services, and
- Public Education and Awareness

\* Proposed approach to reconfigure the format/layout of the updated plan.



# Mitigation Process

- Assess Risks
- Establish Goals
- **Identify Projects/Actions**
- Update/Maintain Plan



## Identify Projects/Actions...

### Identification of Mitigation Actions

Mitigation actions to be developed based on review of the Town's identified risks and vulnerabilities to natural hazards.

Each action incorporates a brief description of the intended action, who the responsible parties are, a proposed time frame for completion and potential funding sources.



# Identify Projects/Actions...

## Prioritization of Actions

- **Social**
- **Technical**
- **Administrative**
- **Political**
- **Legal**
- **Economic**
- **Environmental**



## Identify Projects/Actions... Implementation

- Town Capability
- Plan Adoption/Incorporation into Existing Plans



# Mitigation Process

- Assess Risks
- Establish Goals
- Identify Projects/Actions
- **Update/Maintain Plan**



## Update/Maintain Plan...

- Maintain periodically, recommended annually
- Update every 5 years per DMA 2000



# 2011 Plan Report Card

## Vulnerable Area #1 – Integrity of Water Supply

### ***Action 1- Evaluation of Structural Integrity***

Conduct an evaluation of the dam to determine its structural integrity-High Priority. Due to the poor appearance of the dam, it is suspected that it is in poor condition and susceptible to failure in the event of a prolonged heavy rains, a hurricane, large snow-melt or an earthquake. Therefore a structural evaluation needs to be conducted.

**...Completed.**

### ***Action 2- Research Use of Computer Based Models to Simulate Dam Failure***

In order to properly mitigate a potential dam failure, a simulation of where the water is projected to flow needs to be conducted-High priority.

**... RIDEM Office of Dam Safety provides water simulation/modeling and inundation zones for both private and public dam owners.**

### ***Action 3- Public Education and Outreach***

In the event that the dam is found to be structurally compromised, provide those individuals in the path of projected water flow with materials to educate them on how to protect themselves in the event of a failure and where to seek shelter-High priority.

**...Not completed.**



# 2011 Plan Report Card

## Vulnerable Area #2 – Sanitary Sewers

***Action 4: The Town Public Works Department should acquire funding for the purchase and installation of back-up generators to power the pumping stations during times of power loss.***

**... Completed.**

## Vulnerable Area #3 – Residential Problems

### ***Action 5 – Evaluate New Development/Projects for Drainage and Runoff Issues***

(A) Establish procedure to review new developments/projects with respect to drainage and run-off issues - High priority. When new developments are proposed, establish a standard to review not just the proposed development, but the entire surrounding area to evaluate how the development will affect drainage and run-off in surrounding areas.

**...In progress through Planning and Community Development Department.**

(B) Change Town Ordinance for new construction from 25 year flood event to 100 year flood event.

**...In progress through Planning and Community Development Department.**



# 2011 Plan Report Card

## Vulnerable Area #3 – Residential Problems continued

### ***Action 6 – Public Education and Outreach for Residents***

(A) In conjunction with the Fire Districts, determine which areas are prone to repetitive basement flooding and target these areas to educate homeowners on how they can minimize losses (e.g. elevating utilities and furnishings, installing sump-pumps, etc.) –Medium priority.

**...Completed.**

(B) Develop a pamphlet to be distributed to all residents and business owners that describes the natural hazards that threaten our community and describes steps they can take for each hazard to mitigate damages to their property. Natural hazards include nor'easter/snowstorm, heavy rain and flooding, ice storm and extreme cold, wind event, hurricane, wildfire, tornado, extreme heat, drought, hail, lightning, and earthquake. Specific mitigation activities may include: elevation of utilities to prevent flood damage, planting of appropriate vegetation to prevent damages from wind, or roof strapping and installing reinforced windows. Include evacuation routes and shelter locations along with items that can and cannot be taken to the shelters as well as information regarding the risk to our community for brush/forest fires and how residents can help prevent them. – Medium priority .

**...Not completed.**



# 2011 Plan Report Card

## Vulnerable Area #3 – Residential Problems continued

(C) Develop an Emergency Management Agency website for the town. The website will include the Hazard Mitigation Plan, Emergency Operations Plan, as well as phone numbers and information on what to do in case of emergencies.

**... In progress. Initial phase launched 9/18/15, additional phases to follow.**

(D) Create an Emergency call number for residents and businesses to call during emergencies. The town will create a volunteer program to staff the phone lines.

**... In progress as part of EMA website Action above. Will access state's 'Code Ready' system.**

(E) Create a public information campaign during times of drought. This will include how to implement and enforce a water ban.

**... Completed, as part of PWSB's Water Supply System Management Plan.**

(F) Prepare a list of cooling centers and shelters. Also enter into Memorandums of Understanding (MOU's) with any sites that may not be owned by the Town for use during times of extreme heat or extreme cold.

**...Not completed.**



# 2011 Plan Report Card

## Vulnerable Area #3 – Residential Problems continued

### ***Action 7- Repetitive Loss Properties***

(A) The Town of Cumberland's highest priority for a buyout is a property on Wildwood St. The home was devastated by flooding in 2005 and again in 2010 totaling over \$130,000 in damages. Upon approval of the Mitigation Plan, the Town of Cumberland will explore grant opportunities to buyout this property.

**...Completed.**

(B) There are eleven repetitive loss properties that have been identified by the NFIP. The cause of these losses should be identified and investigated to determine if measures can be taken to reduce or eliminate the cause.

**... Not completed.**

### ***Action 8 – National Flood Insurance Program***

(A) Adoption and Enforcement of Floodplain Management Requirements to ensure continued compliance with the NFIP.

**...In progress through Planning and Community Development Department.**

(B) Gain entrance into the Community Rating System in order to lower resident's insurance premiums.

**...Not completed.**



# 2011 Plan Report Card

## Vulnerable Area #3 – Residential Problems continued

### ***Action 9 – Electrical Wires***

The Town would like to study and implement a project to bury electrical wires and other suspended cables. The Town would like to take the above ground utilities and place them underground. This is not a project that is financially feasible at this time; however, it is a long-term goal especially if federal funding is available to implement the project. This would eliminate property damage and protect life safety from downed utility lines and protect from lightning storms.

**... Not completed.**

## Vulnerable Area #4 – Industries in the Floodplain

### ***Action 10 – Industry in the Floodplain Prone to Flooding***

The Hazard Mitigation Committee decided to list Hope Global as a mitigation action due to the amount of jobs the business creates in the town. The March flooding caused \$1 million in damage at Hope Global only five years after an earlier flood caused \$6 million in damage. The 125-year-old textile company that makes products such as straps for automotive companies and shoelaces for the military employs about 300 people in its factory along the Blackstone River in Cumberland.

**... Elevation of equipment completed, ACOE determined the non-structural alternative is not compliant with USACE single-owner policy (no combined public benefit).**

Horsley Witten Group



# 2011 Plan Report Card

## Vulnerable Area #5 – Local Roads Subject to Flooding

### ***Action 11- Property and Streets Subject to Flooding From Poor Drainage and Run-Off***

Establish a priority list of streets that are subject to repetitive flooding- Medium priority. Determine what mitigation activities (berms, culverts, drainage, etc.) can alleviate the problem while creating the most benefit to the community. (e.g. address those roads that are part of the town evacuation route first, then main thoroughfares, etc.).

... Ongoing.

## Vulnerable Area #6 – Businesses

### ***Action 12- Public Education and Outreach for Businesses***

(A) Establish a public information campaign city-wide to properties and areas of town that are subject to flooding, which will advise owners of measures they can take to minimize damage caused when the River rises. This information will also be posted on the town's website. Medium Priority

... Ongoing.

(B) The Town highway department should continue to keep drainage basin clear around the businesses in areas that are prone to flooding. The DPW should also ensure that culverts are cleared on a regular basis to ensure an un-obstructed flow of water during times of heavy rains.

...Ongoing,.



# 2011 Plan Report Card

## Vulnerable Area #7 – Public Facilities

***Action 13 - Create a comprehensive response to adverse weather events for all Town agencies. Include all natural hazards that could potentially affect the town (nor'easter/snowstorm, heavy rain and flooding, ice storm and extreme cold, wind event, hurricane, wildfire, tornado, extreme heat, drought, hail, lightning, and earthquake).***

(A) The Town EMA will meet with all Town agencies prior to the arrival of any adverse weather event. The weather will be monitored to assist in determining when it will be best to incorporate a parking ban, and limit other town services.

(B) The Town EMA will also work with the school department to determine if it is best to cancel school for the duration of the storm and clean-up. The high School and Middle Schools serve as temporary shelter during storm emergencies.

(C) The Town EMA will coordinate with the Highway, Fire and Rescue departments to coordinate a response plan during the height of the storm. A task force consisting of a fire engine, and EMS unit and a Highway Department plow can be created to respond together during the height of the storm.

(D) The Town EMA should ensure that all agreements with the Red Cross, our shelter management partner, are up to date. The EMA should also ensure that the CERT is up to the task to assist in the management of any opened shelter. Finally the EMA should develop a public message about the opening of any shelter, the location of the shelter, and what citizens should bring with them to the shelter.

(E) The Town DPW should develop a comprehensive debris management plan to deal with the large amount of debris that any type of weather event can create. Part of this plan should include the training of several Town employees in debris management planning.

**... A through D are ongoing as part of Town's EOP. ...E not completed.**



# Project Schedule

Draft Update available for public comment – **mid January 2016**

Draft Update to RIEMA – **March 2016**



# Contact Us...

**If you have general questions and/or comments about the Hazard Mitigation Plan Update, please contact:**

Joshua O'Neill—Town Planner  
Town of Cumberland  
45 Broad Street  
Cumberland, RI 02864  
joneill@cumberlandri.org  
Phone: (401) 728-2400 Ext. 146

Craig Pereira—Project Manager  
Horsley Witten Group  
55 Dorrance Street, Suite 403  
Providence, RI 02903  
cpereira@horsleywitten.com  
Phone: (401) 272-1717

**Thank You!**