

Town of East Greenwich, RI Hazard Mitigation Plan Public Workshop



Craig Pereira, CFM
Project Manager – Horsley Witten Group

Wednesday, June 2, 2021
Virtual



Welcome...

WELCOME!



Horsley Witten Group
Sustainable Environmental Solutions

Virtual Platform



A Request of Participants...

- **In the Chat area to Lea Hitchen:**
 - Your Full Name
 - Are you a resident, business owner, municipal employee?
 - Expectations you have for the workshop

Town of East Greenwich Local Hazard Mitigation Committee

- Andrew Nota, Town Manager
- Stephen Brown, Police Chief
- Bernard Patenaude, Fire Chief
- Joseph Duarte, Director of Public Works
- James Fogell, Highway Superintendent
- Ernest Marinaro, Building Official
- Fred Gomes, Special Projects Manager
- Mark Conboy, Assistant Town Engineer
- Lisa Bourbonnais, Director of Planning
- Lea Hitchen, Assistant Town Planner
- Aaron Lindo, Planning Technician

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.

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 East Greenwich, RI

- Riverine/Flash Flooding
- Heavy Rain/Inland and Urban Flooding
- Climate Change
- Dam Failure
- Sea Level Rise
- Coastal Flooding
- Coastal Erosion/Shoreline Change
- Blizzards/Heavy Snow/Winter Weather/Nor'easters
- Extreme Cold
- Ice
- Hurricanes
- Storm Surge
- Tornadoes/High Winds
- Lightning/Thunderstorms
- Hail
- Tropical Storms
- Earthquakes
- Drought
- Extreme Heat
- Urban Fire/Wildfires
- Invasive Species



Hazards Classification and Probability

- Flood-Related Hazards
 - Riverine/Flash Flooding: Moderate
 - Heavy Rain/Inland and Urban Flooding: High
 - Climate Change: Moderate
 - Dam Failure: Low
 - Sea Level Rise: Moderate
 - Coastal Flooding: High
 - Coastal Erosion/Shoreline Change: High

Hazards Classification and Probability

- Winter-Related Hazards
 - Blizzards/Snow/Nor'easter: High
 - Ice: Moderate
 - Extreme Cold: Low

Hazards Classification and Probability

- Wind-Related Hazards
 - Hurricanes: High
 - Storm Surge: High
 - Tornadoes: Low
 - High Winds: High
 - Lightning/Thunderstorms: Moderate
 - Hail: Moderate
 - Tropical Storm: Moderate
- Geologic-Related Hazards
 - Earthquakes: Low

Hazards Classification and Probability

- Drought-Related Hazards
 - Drought: Moderate
 - Extreme Heat: Moderate
- Urban Fire/Wildfire-Related Hazards
 - Urban Fire/Wildfire: High
- Invasive Species-Related Hazards
 - Multiple: Moderate

Assess Risks...

Risk and Vulnerability Assessment - Assets

- **Economic Assets**
 - Businesses/employers
 - Tourist destinations

- **Social Assets**
 - Vulnerable populations
 - Cultural locations

Assess Risks...

Risk and Vulnerability Assessment - Assets

■ **Natural Resources**

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

■ **Essential Buildings and Critical Facilities**

- Government buildings
- Hazardous facilities
- Roadways
- GIS Mapping

Mitigation Process

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

Vision Statement/Mitigation Goals

■ Vision Statement...

“Preserve and enhance the quality of life, property, and resources by identifying areas at risk from natural hazards and implementing hazard mitigation actions to protect East Greenwich’s population, infrastructure, and historical, cultural, and natural resources.”

■ Mitigation Goals...

- Implementing actions to protect the lives and property of the residents of East Greenwich.
- Implementing actions to protect East Greenwich’s critical facilities and infrastructure.
- Implementing actions to protect East Greenwich’s cultural, historical, natural and economic environment.

Establish Goals...Mitigation Measures

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

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...STAPLEE

- **Social**...is the action socially acceptable?
- **Technical**...is the action technically feasible and provide appropriate level of protection?
- **Administrative**...does the Town have the capability to complete the action?
- **Political**...will the Town support or oppose the project?
- **Legal**...does the Town have the legal authority to complete the action?
- **Economic**...is the action cost-effective?
- **Environmental**...will the action affect the natural environment?

Identify Projects/Actions...

Implementation

- Town's Capability
- Plan Adoption/Incorporation into Existing Plans

Mitigation Process

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



2015 Plan Report Card

Vulnerable Area: Dams

- Action #1: Annual inspection and sustainment of the Frenchtown Park Dam...an earthen dam with a stone retaining wall on the downstream side and an earthen pedestrian trail on the crest of the dam.
(Completed...remains ongoing, move to Capability Assessment)
- Action #2: Notify dam owners of their responsibility for inspection, maintenance and repair of their dams. *(Not Completed...carry forward into update)*
- Action #3: Identify evacuation routes around all dams.
(Not Completed...carry forward into update)

2015 Plan Report Card

Vulnerable Area: Essential Services

- Action #4: Continue training exercises consistent with the Southern New England Mutual Aid for fire personnel. *(Completed...remains ongoing, move to Capability Assessment)*
- Action #5: Reduce the vulnerability of utility and communications lines. Enhance the annual tree-trimming program to focus on trimming trees adjacent to utility lines to avoid power and communications outages and trimming overhanging limbs and branches to reduce the risk of blocked evacuation routes.
(Completed...remains ongoing, move to Capability Assessment)
- Action #6: Maintain the Town's existing program for efficient snow removal on town streets and roads. *(Completed...remains ongoing, move to Capability Assessment)*
- Action #7: Develop and implement public/staff education and outreach programs for preparedness and emergency response. *(Completed...remains ongoing, move to Capability Assessment)*

2015 Plan Report Card

Vulnerable Area: Essential Services con't.

- Action #8: Implement a public education series focusing on available building code resources, compliance and retrofitting. *(Not completed...carry forward into update)*
- Action #9: Bury electrical wires and other suspended cables.
(Completed...remains ongoing, move to Capability Assessment)
- Action #10: Update/upgrade/improve the DPW internal communication system, antennas and equipment to improve overall communications and integrate the DPW with the other town essential services during emergency periods.
(Partially completed...carry forward into update with modified description)

2015 Plan Report Card

Vulnerable Area: Culverts

- Action #11: Pending funding and implementation of Actions 12 & 14, increase focus on culvert inspection and grading system.
(Completed...remains ongoing, move to Capability Assessment)
- Action #12: Implement repairs/cleaning to culverts with a grade of 1, 2 or 3 based on condition. (Completed...remains ongoing, move to Capability Assessment)
- Action #13: Identify evacuation routes around all culverts.
(Not completed...carry forward into update and modify to include top five problematic culverts)
- Action #14: Monitor, plan and execute an upgrade/upsized for the Middle Road/South County Trail culvert. (Not completed...carry forward into update)
- Action #15: Monitor, plan and execute an upgrade/upsized for the culvert by the Boesch Farm on South Road. (Completed...remains ongoing, move to Capability Assessment)

2015 Plan Report Card

Vulnerable Area: Bridges

- Action #16: Review RIDOT bridge work plans and provide traffic control as required.
(Completed...remains ongoing as part of municipal protocol, remove)

Vulnerable Area: Critical Roads

- Action #17: Identify alternate routes in the event of critical road closures due to flooding. (Not completed...carry forward into update)

Vulnerable Area: Wastewater Treatment Facility

- Action #18: Monitor the facility and perform routine maintenance.
(Completed...move to Capability Assessment)

Vulnerable Area: Detention Basins and Drainage Ditches

- Action #19: Monitor and clear town detention basins, catch basins and drainage ditches. (Not completed... carry forward into update and modify)

2015 Plan Report Card

Vulnerable Area: Residential and Commercial Land Use

- Action #20: Require all new floodplain construction to meet FEMA guidelines for floodplain construction. Discourage variances from flood regulations for new residential or commercial construction located within a floodplain.
(Completed...remains ongoing, move to Capability Assessment)
- Action #21: Utilize school curriculum to educate students and their parents about hazard risks. Develop brochures to distribute to students.
(Not completed...carry forward into update)
- Action #22: Participate in the FEMA National Flood Insurance Program's Community Rating System. *(Not completed...carry forward into update)*

Project Schedule

Draft Update available for comment
– anticipated late fall 2021

Draft Update to RIEMA
– anticipated winter 2021

Project Webpage/Survey

Hosted on the Planning Department's webpage:

<https://www.eastgreenwichri.com/163/Planning-Department>

Online Community Survey:

<https://www.surveymonkey.com/r/EastGreenwichHazardMitigationPlanUpdate>



Contact Us...

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THANK YOU!