

Douglas, MA Hazard Mitigation Plan (proposed layout)

Section 1: Introduction

Overview

- Hazard mitigation planning in general

Plan Purpose

- Benefits of hazard mitigation planning

Mission statement

- Create

Goals

- Create

Planning Process

- Overview of approach/process of the project
 - o Local Hazard Mitigation Committee Meetings
 - o Public Workshops
 - o Municipal Interviews
 - o Survey

Community Profile

- Geographic location
- History
- Demographics
- Government Structure

History of Disaster Declarations

- Federal Emergency and Major Disaster Declarations for the County

Recent Disaster Declarations

- Recent (2016 – forward) Federal Emergency and Major Disaster Declarations for the County

Section 2: Hazard Identification and Risk Assessment

Introduction

- Which hazards merit special attention
- What actions might be taken to reduce the impact(s) of those hazards
- What resources are likely to be needed

Hazard Identification

- Required to evaluate all hazards identified in the State Plan...anticipated list:
 - o Riverine/Flash Flooding
 - o Heavy Rain/Inland and Urban Flooding
 - o Dam Failure
 - o Beaver Activity
 - o Blizzards/Heavy Snow/Winter Weather/Nor'easters
 - o Ice Storms
 - o Extreme Cold
 - o Hurricanes/Tropical Storms
 - o Tornadoes

- High Winds
- Lightning/Thunderstorms
- Hail
- Earthquakes
- Drought
- Extreme Heat
- Brushfires/Wildfires
- Invasive Species (aquatic plants/vector-borne)
- Not addressed:
 - Coastal Flooding
 - Coastal Erosion
 - Avalanche
 - Expansive Soils
 - Land Subsidence
 - Volcanoes
 - Tsunamis
- Climate Change will be included in each hazard as 'Climate change impacts on...'

Hazard Profiles

- Review of NOAA's National Centers for Environmental Information (<http://www.ncdc.noaa.gov/>) 'Storm Events' database and develop tables based on hazard type, date, level/description and damages to develop a Hazard Index (January 1, 2015 – August 1, 2023).
 - Flood Related
 - MVP Climate Change Projections on Precipitation to be added.
 - Winter Related
 - MVP Climate Change Projections on Extreme Cold Temperatures to be added.
 - Wind Related
 - Hail and TORRO Hail Intensity Scale to be added.
 - Geologic Related
 - Drought Related
 - Extreme Heat Related
 - MVP Climate Change Projections on Extreme Heat to be added.
 - Brushfire/Wildfire Related
 - Invasive Species Related
- Evaluate the location/history/probability of future occurrence of hazards (consistent with the state plan)

Criteria for Frequency Categorization:

<i>Very Low (1):</i>	events that occur less frequently than once in 100 years (less than 1% per year).
<i>Low (2):</i>	events that occur at least once in the next 100 years (1% to 10% per year).
<i>Moderate (3):</i>	events that occur at least once in the next 10 years (10% to 40% per year).
<i>High (4):</i>	events that occur at least once in the next year (40% to 70% probability).
<i>Very High (5):</i>	events that occur more than once in the next year (70% to 100% probability).

Criteria for Location and Extent:

<i>Small:</i>	Less than 10% of the town affected
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Medium: 10 to 50% of the town affected
Large: More than 50% of the town affected

Criteria for Severity Categorization:

<i>Minor (1):</i>	Very few injuries if any Minimal disruption on quality of life Shutdown of critical facilities and services temporary Minor property damage
<i>Limited (2):</i>	Injuries and/or illness do not result in permanent disability Complete shutdown of critical facilities for more than a day Property severely damaged/destroyed < 25%, > 10%
<i>Critical (3):</i>	Multiple injuries possible Complete shutdown of critical facilities for more than a week Property severely damaged/destroyed < 50%, > 25%
<i>Catastrophic (4):</i>	Multiple deaths/injuries possible Complete shutdown of facilities for 30 days or more Property severely damaged/destroyed > 50%

- Mapping will also be updated
 - o Environmental Justice areas to be added?
 - o Critical Facilities/Vulnerable Populations
 - o FEMA Flood Zones/Repetitive Flood Loss Areas
 - o Snowfall, Hurricane/Tornado paths, etc.

Vulnerability

- Evaluates vulnerability of built environment, social and environment.

Development Trends

- o Changes over time, future development plans (residential/commercial/industrial)

Economic Vulnerability

- o Impacts of FEMA flood zones (Economic by land use type, land/building values)

Social Vulnerability

- o Impacts to built/natural environment and that relationship to the social structure of the community
- o Infrastructure/Emergency lifelines
- o Evacuation/Populations at risk

Environmental Vulnerability

FEMA Disaster Grant Assistance

- Has the Town received any financial assistance from MEMA/FEMA/EOEEA/MVP?

Section 3: Capability Assessment

Introduction

- Documents local, state and federal department, agency and program capabilities in terms of pre- and post-disaster activities

Planning/Regulatory Capabilities

- Planning documents

- Regulations/Bylaws
- Building Code

Administrative Capabilities

- Emergency Management Plan
 - o Emergency Operations Center/Shelter
- Municipal Website
- Coordination with Neighboring Communities
- Municipal Structure/Staff

Financial Capabilities

- Federal/State Grant Opportunities

National Flood Insurance Program

- NFIP/Compliance with NFIP

Existing Protection Matrix

- Summary of all above

Section 4: Mitigation Strategy

Introduction

Mitigation Activities

- Requires an action for every vulnerability identified in the plan

Mitigation Action Plan

- Categories
 - o Public Education and Awareness
 - o Property Protection
 - o Natural Resource Protection
 - o Structural Projects
 - o Emergency Services
 - o Planning and Prevention
 - Time Frame
 - o Short Term = 0 to 6 Months
 - o Medium Term = 6 to 18 Months
 - o Long Term = 18 Months to 5 Years
 - Cost Estimate
 - o Staff Time – municipal personnel time
 - o Minimal – less than \$50,000
 - o Moderate – more than \$50,000, but less than \$100,000
 - o Significant – over \$100,000
 - Prioritization of Actions (abbreviated Benefit/Cost Analysis)
- STAPLEE Criteria**
- o **Social:** Is the action compatible with present and future local community needs and values?

- **Technical:** Is the action feasible with available local resources (or as supplement by outside resources as necessary)?
 - **Administrative:** Does the community have the administrative capacity to implement the action?
 - **Political:** Is there strong public support to implement and maintain the action?
 - **Legal:** Does the community have the legal authority to implement the action?
 - **Economic:** Is the action cost-effective?
 - **Environmental:** Does the action impact environmental resources, and is the impact positive, negative, or neutral?
- **Action Description**
 - Action Type:
 - Priority Score:
 - Lead:
 - Supporting:
 - Time Frame:
 - Financing Options:
 - Cost Estimate:
 - Benefit:
 - Vulnerable Area:

Section 5: Plan Implementation/Maintenance

Implementation/Evaluation/Revision

- **Implementation**
 - Following municipal adoption
- **Evaluation**
 - Annually
- **Revision**
 - Every 5 years/after a major event

Continued Public Involvement

- Posted on Town's website
- Annual Town Meeting