

Enfield

The Town of Enfield encompasses 33.4 square miles with an estimated population of approximately 44,600 people. Enfield is located along the Massachusetts border and is both in the main stem of the Connecticut River Watershed (eastern drainage) and the Scantic River Watershed which drains to the west. Elevation is approximately 154 feet above sea level. The main watercourses include the Grape, Pierce and Terry Brooks as well as the Connecticut and Scantic rivers. Parks in Enfield include: Powder Hollow Park, Scantic River State Park, Lafayette Park, and Hazardville Historic District. Interstate 91 travels north-south in Enfield while other main transportation routes are 190, 192 and 220. Industries include insurance, manufacture of toys, water filtration systems, specialized machinery, aluminum and magnesium castings, wooden reels for wire and cables, silk screening, games, greeting cards, tools and gauges, envelopes, laser beam welding, warehouse distribution of toys, clothing and pharmaceuticals, manufacture of electronic assemblies, processing of food and dairy products, ice cream, vegetable and tobacco farming.

Existing Strategies

The Town adopted a Flood Hazard Mitigation Plan (FHMP) in 2000 to assist the community in identifying localized flood prone areas, flood hazards and risks, and strategies for preventing the loss of life and reducing property damages. The Town updated and incorporated its FHMP into the 2008 Natural Hazards Mitigation Plan.

The Town of Enfield has several structural and regulatory flood mitigation tactics currently in place. The Town issued floodplain permits for 13 projects including applications to widen and replace bridges over the Scantic River. Other applications included temporary mobile offices, a loading dock, building additions, parking area modifications, and the rebuilding of an existing house. The Town requires flood compensation on all applications. There are several water bodies that still pose potential flood hazards. Beemans Brook, Waterworks Brook, Grape Brook, Freshwater Brook, Jawbuck Brook, Shaker Lake, Terry Brook, Boweyns Brook, Buckhorn Brook, and the Connecticut River are some of the major watercourses that have been researched for their previous flooding history and their current flooding potential.

The Town has completed, or is currently working on, most of the planned mitigation projects included in the 2000 FHMP, including drainage system improvements, dredging, catch basin cleanings, GIS implementation, and property acquisitions among other things. Equally important to these structural and property remedies are the education and outreach efforts that Enfield has made. All-hazard workshops are offered twice a year for emergency management personnel and non-profit organizations, and flood insurance policy seminars are available for homeowners.

The Town has also initiated a planning team to study and make recommendations to the Town Council regarding drainage and erosion capital improvement projects. Members of the team include staff from Public Works, Engineering, Highway, Finance, Planning and the Town Manager's office.

Challenges

Flooding remains the most significant hazard affecting the community. The National Flood Insurance Program has paid 55 property damage claims in Enfield totaling \$292,021 to-date. Enfield has had fifteen Repetitive Loss Property claims to-date on six properties totaling \$169,140.

The Town experienced significant flooding in October 2005, when the area received two significant rainfalls in a one-week period. Interstate 91 in Enfield was flooded and closed. Areas of Route 5 and the Enfield Square Mall, in addition to numerous residential areas also suffered severe flooding. The closure of the Interstate and flooding on Route 5 (the other major north-south route) resulted in serious traffic congestion that endangered public safety as emergency vehicles could not get through. The total damages to town infrastructure amounted to more than \$800,000. FEMA eventually awarded the Town disaster aid to help cover the costs of repairs to municipal infrastructure.

CRCOG used FEMA's Hazus-MH model to analyze the risks that the Town of Enfield might face from a major flood. The model estimates that economic losses to the town including residential and commercial damage and business interruptions due to a flood having a 1% chance of occurring any given year (the 100-year flood) would be over \$91 million. The impacts of such a flood are summarized below:

Estimated Damages from 100-Year Flood	Households Displaced	1,197
	People Needing Shelter	578
	Buildings at Least Moderately Damaged	135
	Total Estimated Economic Losses	\$91,120,000
	Total Residential Building & Content Losses	\$39,020,000
	Total Commercial, Industrial & Other Building & Content Losses	\$51,720,000
	Total Business Interruption Losses	\$45,000

Losses from strong hurricanes would also be significant. The model estimates that economic losses to the town including residential and commercial damage and business interruptions due to a Category 3 hurricane such as the 1938 Hurricane would be over \$183 million. The impacts of such a storm are summarized below:

Estimated Damages from a 1938 Strength Hurricane	Households Displaced	71
	People Needing Shelter	10
	Buildings at Least Moderately Damaged	1,509
	Buildings Completely Damaged	89
	Total Estimated Economic Losses	\$183,300,000
	Total Residential Building Losses	\$131,700,000
	Total Commercial, Industrial & Other Building & Content Losses	\$30,400,000
	Total Business Interruption Losses	\$21,200,000
	Total Debris Generated	57,113 tons
	Truckloads (at 25 tons/truck) of building debris	756

According to information from the Connecticut Department of Emergency Management and Homeland Security, the three federally declared natural disasters of 2011 resulted in total expenses to the municipality and other local agencies of over \$6 million. These expenses (shown in the following table) include debris and snow removal, emergency protective measures and repairs to damaged infrastructure and buildings but do not include damages experienced by private citizens and businesses.

2011 Disasters Damage Amounts Eligible for 75% Reimbursement Under FEMA Public Assistance Program				
Applicant Town and Other Agencies Other = Fire Districts, Schools, & Private Non-Profit Agencies	100% of Amount Eligible for 75% Reimbursement			Total Damages Eligible for Public Assistance Due to 2011 Disasters
	DR-1958-CT 2011 Snow	DR-4023-CT Irene August 2011	DR-4046-CT Severe Weather Oct 2011 Alfred	
Town of Enfield	\$99,370.97	\$66,936.15	\$5,602,310.18	\$5,768,617.30
Enfield Other	\$19,583.89		\$214,754.25	\$234,338.14
Enfield Total	\$118,954.86	\$66,936.15	\$5,817,064.43	\$6,002,955.44

Goals, Objectives and Strategies

GOAL: REDUCE LOSS OF LIFE AND PROPERTY AND NEGATIVE ECONOMIC CONSEQUENCES OF FLOODING

Objective 1:

Implement flood hazard mitigation projects identified in the 2000 Flood Hazard Mitigation Plan and subsequent hazard planning efforts.

The Town of Enfield has pursued a number of approaches to help reduce the community's vulnerability to flooding and prepare for emergencies. Examples of such actions by the Town in recent years include, but are not limited to the following accomplishments:

- Implemented a GIS system which both citizens and staff can access. This database provides detailed information, including wetlands.
- Continued its comprehensive road resurfacing/rebuilding program which was initiated in 2000. Any street contemplated for improvement under this program is also assessed for flooding problems, and corrected where such action is feasible.
- Implemented an erosion control effort for areas of Town vulnerable to rapid slope deterioration, particularly the area along the west bank of the Scantic River with its escarpment soils. One location in particular – Cloud Street has several residential properties threatened due severe erosion from rainfall runoff. An extensive slope stabilization project was implemented and completed in 2010 to save these properties.
- Conducted extensive stream clearing and bank stabilization work in Beeman's Brook which flows through a heavily development residential neighborhood.
- Trained over 150 Town of Enfield employees in the Red Cross Shelter Worker program.
- Established a local television station – E-TV to broadcast emergency alerts with a scrolling banner, commonly referred to as "Chy-Alerts."
- Implemented the Everbridge phone/message alert system to inform citizens of emergency situations in Enfield.
- Established and actively share important information with citizens through social media. Enfield Emergency Management Facebook wall presently has over 1,200 "likes."

- Established a Community Emergency Response Team (CERT), whose primary mission is shelter operations, with a secondary mission of providing emergency support such as HAM radio operations.
- Hosted the Capitol Region Full Scale Exercise in May 2010 which simulated an active shooter/hostage situation in a public school. Students (Grades 6, 7, and 8) actively participated in the exercise. This was the second time Enfield has hosted a full-scale exercise for the Capitol Region within 5 years, the first one occurring in May 2005.
- Completely revised its *Inland Wetlands and Watercourses Regulations* in March 2011.
- Continue to reduce the volume of storm-water entering the Town's Water Pollution Control's sanitary sewage system by systematic elimination of infiltration and inflow. Progress in recent years has not been as substantive as in prior time periods due to reduced funding.
- Totally reorganized its land-use review and regulation structure by creating a Development Services Department which is comprised of Planning, Zoning Enforcement, Inland Wetlands, Conservation Commission, Blight Enforcement, Building Code Inspection, Housing Code Enforcement, Economic Development and Community Development (CDBG). Tasked assigned to Development Services is the Assistant Town Engineer who also serves as the Town's NFIP Administrator.

Strategic Actions:

1.1 Continue to pursue funding opportunities to implement remaining projects.

Lead: Various

Priority: High

Status: Enfield's highest priority for flood mitigation is reducing the vulnerability from Freshwater Brook flooding, particularly the section from I-91 to Route 5. Enfield has twice attempted in 2012 to procure funding from the Federal government's Flood Hazard Mitigation Grant program. To date, the Town has not received notification from the State of Connecticut regarding the status of the Town's application. The timeframe to accomplish projects will be based on the award of any hazard mitigation grant funds to Enfield. The Town will continue to seek grant funds to pursue this project.

Potential Funding Sources: Hazard Mitigation Grants

Timeframe: 2014-2019.

1.2 Maintain currency of the Flood Hazard Mitigation Plan.

Lead: Administration

Priority: High

Status: The Town of Enfield will continue to participate in the Capitol Region's Natural Hazard Mitigation Plan efforts and be an active member in this regional collaborative effort.

Potential Funding Sources: Funding to accomplish this strategy will be a combination of general operating funds, Emergency Management Planning Grant (EMPG) funds to support emergency management personnel, Capital Improvement Project funds for major undertakings such as road/drainage improvements, and project-specific grant awards such as those supported under the Flood Hazard Mitigation Grant Program.

Timeframe: 2014-2019

Objective 2:

Ensure that future development does not increase flood risk.

Strategic Actions:

- 2.1 Continue to review development applications broadly, with administration's input.
- Lead: Planning, Administration
- Priority: High
- Status: The Town reorganized its land-use review and regulation structure by creating a Development Services Department which is comprised of Planning, Zoning Enforcement, Inland Wetlands, Conservation Commission, Blight Enforcement, Building Code Inspection, Housing Code Enforcement, Economic Development and Community Development (CDBG). Development Services is overseen by the Assistant Town Engineer who also serves as the Town's NFIP Administrator. The Town's Inland Wetlands & Watercourses Regulations were comprehensively revised in March 2011 and are now in effect. Additionally, the Town's Plan of Conservation and Development which was adopted in April 2011 identifies number of actions for the Town to undertake or continue to undertake which will help protect sensitive lands, people and infrastructure from flooding. Town Staff has and will continue their development review process which routinely assesses proposed development projects for floodplain, inland wetland and erosion control and sedimentation control impacts. It is recommended this strategic action be retained in Plan Update. This is an established practice which will occur as projects are submitted to the Town of Enfield's Development Services Department over the course of the Town's fiscal year. Site plans and subdivisions will continue to be reviewed for floodplain, inland wetland and erosion control and sedimentation control impacts, as development applications are received throughout the 2014-2019 plan period.
- Potential Funding Sources: General operating funds.
- Timeframe: 2014-2019

GOAL: REDUCE LOSS OF LIFE AND PROPERTY AND ECONOMIC CONSEQUENCES OF OTHER NATURAL HAZARDS

Objective 1:

Ensure adequate protection of all residents.

Strategic Actions:

- 1.1 Continue to involve the Visiting Nurses Association, the Housing Authority, and social service agencies in planning and training efforts.
- Lead: Administration, Emergency Management
- Priority: High
- Status: In addition to the accomplishments in the "bullet points" previously listed, Enfield Emergency Management will continue the training and public education

efforts listed in this strategy as public awareness is an ongoing effort. It is recommended this strategic action be retained in Plan Update.

Potential Funding Sources: Funding for this effort is through general operating budgets and the EMPG funds.

Timeframe: Meetings and training will occur at least twice a year during the 2014-2019 plan period.

1.2 Continue to maintain a list of special needs population.

Lead: Police - Communications

Priority: High

Status: This list is routinely updated as information is received on a daily basis. As information is received, the Enfield Public Safety Dispatchers (located at the Police Department) will continue to update their database to reflect citizens with special needs who may require assistance during an emergency. It is recommended this strategic action be retained in Plan Update.

Potential Funding Sources: Funding will come from the Department's annual operating budget.

Timeframe: 2014-2019

1.3 Monitor implementation of Reverse-911 system and use to its greatest potential.

Lead: Administration, Emergency Management

Priority: Medium

Status: Both the Town municipal government and Enfield Public Schools have implemented and are operating reverse telephone notification systems. The Town uses the Everbridge Municipal model and the Schools use School Messenger. Both systems can deliver phone call, e-mails and text messages. It is recommended this strategic action be retained in Plan Update.

Potential Funding Sources: Funding to maintain these systems will continue to come from the organizations' annual operating budgets.

Timeframe: 2014-2019: System updates will take place as required by the vendors and the organizations.

GOAL: REDUCE POWER OUTAGES AND ENSURE SAFETY OF PROPERTY AND LIFE AS A RESULT OF NATURAL HAZARDS

Objective 1:

Establish effective tree maintenance program for town right-of-way.

Strategic Actions:

1.1 Fund and institute routine maintenance of trees in town right-of-way either through town staff or private contractor.

Lead: Public Works, Administration

Priority: Medium

Status: New initiative. A routine program will be established and implemented annually through the budget process as funds become available.

Potential Funding Sources: General Budget

Timeframe: 2014-2019

Objective 2:

Ensure access to power for residents in emergency situations.

Strategic Actions:

2.1 Obtain generators for shelters.

Lead: Emergency Management

Priority: High

Status: This is a newly identified initiative in this plan. Efforts will be undertaken as grant funding becomes available.

Potential Funding Sources: Grants.

Timeframe: 2014-2019

2.2 Educate residents on emergency preparedness and services available in the event of an emergency through town website and workshops.

Lead: Emergency Management, Public Safety

Priority: Medium

Status: Although this is a newly identified initiative in this plan, the Town has offered all-hazard workshops twice a year for emergency management personnel and non-profit organizations, and flood insurance policy seminars are available for homeowners.

Potential Funding Sources: General Budget

Timeframe: All-hazards workshops will be held twice yearly during the 2014-2019 plan period; website to be updated seasonally and before expected storms.

2.3 Modify the Town of Enfield zoning & planning codes and ordinances to require group homes to have an emergency generator to provide power for essential home utilities, i.e. heat, refrigerator, lighting, etc. during power outages, thus enabling the residents to “shelter in place.”

Lead: Town of Enfield Development Services

Priority: Medium

Status: This is a new initiative which will require approval by various policy and land-use boards such as the Planning and Zoning Commission. Staff review of this initiative has not been started.

Potential Funding Sources: General Budget

Timeframe: 2014-2016

GOAL: ENSURE CAPACITY OF TOWN TO REMOVE SNOW

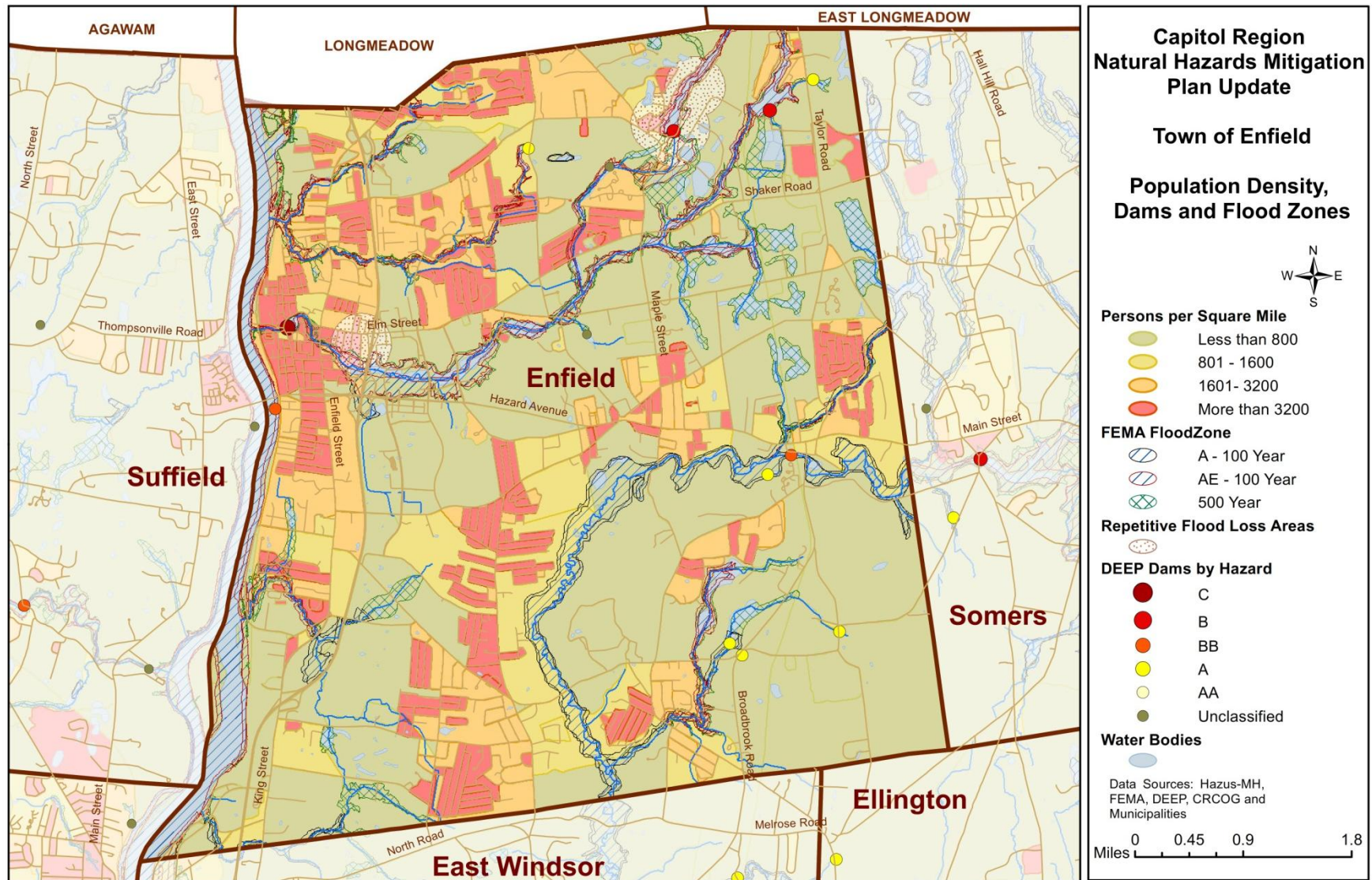
Objective 1:

Maintain an adequate staffing and fleet of trucks and equipment to clear roads in a timely manner.

Strategic Actions:

- 1.1 Upgrade and replace public works fleet.
Lead: Public Works, Administration
Priority: High
Status: This is a newly identified initiative in this plan. Implementation will be according to Vehicle Replacement Plan and subject to available funding
Potential Funding Sources: Surplus funding, sale of existing equipment, bonding, lease purchase, military surplus
Timeframe: 2014-2019
- 1.2 Fund adequate staff and private labor.
Lead: Public Works, Administration
Priority: Medium
Status: This is a newly identified initiative in this plan; however, the town has a current policy of maintaining on on-call list of private contractors to assist with snow removal.
Potential Funding Sources: General Budget
Timeframe: Annually through budget process (2014-2019).

Map 28: Enfield Population Density, Dams and Flood Zones



Map 29: Enfield Flood Plains, Repetitive Loss Areas, Dams and Important Facilities

