Granby

Granby is a rural, low density residential community located in northwest Hartford County on the Massachusetts border. It covers a land area of 40.7 square miles and has an estimated population of 11,300. Granby is not only large in area, but it has a substantial variation in elevation. The Town’s many brooks serve as a drainage basin of the Farmington River. The main watercourses running through Granby include Beech, Bissell, Dismal, Higley, Hungary, Mountain and Salmon (East and West Branches) Brooks. Major transportation routes include state routes 10/202, 20, 189 and 219.

Since preparing the initial Natural Hazards Mitigation Plan in 2008, the Town has had unique opportunities to evaluate its ability to respond to natural hazards. These opportunities were presented in 2011 by Hurricane Irene, and by the 2011 Halloween nor’easter, sometimes referred to as Storm Alfred. To a lesser degree the Town was challenged by the 2008 Ice Storm which impacted homes within the higher elevations of the town. With the Ice Storm, the Department of Public Works was directed to re-open roads that were blocked by fallen trees and the Town’s emergency shelter was activated to assist those without power. It is recognized that most residents in Granby who are without power will also be without water. This is true for all residents living at the higher elevations. Following the storm, the Town’s YMCA was made available for residents to shower, and Town water was made available for residents to fill water containers. Within a few days the Town was mostly back to normal and it was felt that the Town could successfully respond to such an emergency. Connecticut Light and Power also responded quickly and effectively to this emergency.

With both Hurricane Irene and the Halloween Nor’easter, the Town’s emergency response team was activated and helped to coordinate the necessary response. CERT was formed in 2010, following the guidelines of Homeland Security. Hurricane Irene presented initial problems mostly related to flooding. Many roads were closed as the flood waters rose, but were quickly re-opened as the water receded. Power outages were limited to a few individual property owners, as was basement flooding. The Town did not need to provide emergency shelter. The Emergency Response Team was satisfied with their ability to respond to Hurricane Irene, but felt that they could have charted the flooding and road closers more effectively if they had better maps. They requested large plastic coated maps to assist with the future coordination of road closers. These were created through the Town’s GIS system and provided to every fire station along with multiple copies to the Police Department and CERT.

The Halloween Nor’easter hit the Town of Granby only two months after Hurricane Irene. With most of the trees still retaining their leaves and with the combination of high winds and heavy snow, trees broke apart throughout the town in all but the highest elevations. The trees took down power lines throughout the Town and the downed trees and power lines prevented the Town crews from plowing the roads. All over Town residents were trapped without power and emergency vehicles had little opportunity to reach them. The Town was fortunate that the weather quickly broke and was followed by somewhat warmer days and sunshine. However the electrical service was completely devastated throughout much of the region and CL&P was overwhelmed by the destruction. Restoring power was very slow and tedious. The Town opened its emergency shelter and quickly learned that it was not sufficient to service the large number of residents in need. Fortunately, as the roads were cleared, many residents were able to find accommodations outside of Town. CERT worked well with CL&P asking that they prioritize certain areas. A major electrical route of Route 10 was opened within 3 days, which solved some of the Town’s most serious problems. The YMCA opened and made showers available to all area citizens. Town facilities, operating on generators help residents as best they could. Generators
were in short supply and needed to be moved in order to clear waste from the Town’s sewer pump stations. Schools were closed for over a week.

Learning from the Halloween Nor’easter, the Town has added generators to all of its fire houses, the Senior Center and Schools. CERT is now working on a plan to utilize these buildings during future emergencies. The Town also has a better understanding of the areas which need to be prioritized during emergencies. These include the Meadowbrook Nursing Home and the water tanks and pumps that service the Salmon Brook Water District. Through the actions of the State, CL&P is also improving its plans to respond in future emergencies. It was reported that CL&P was not prepared for an event of this size and had planned for a worst-case scenario in which 100,000 customers lost power, only one-eighth of those who actually did.

**Challenges**

Granby’s population is spread out over 40+ square miles resulting in a population density of only 284 persons per square mile. While some Granby citizens reside in areas of less than 200 feet above sea level, others live above 1000 feet. In Connecticut where winter weather often hovers around 32 degrees, even a slight decrease in temperature due to the increase in elevation will result in a snow/ice division. This is a common occurrence in Granby, where ice/snow conditions may be found in half of the town while simple rain falls in the remaining portion. Such was the case on 12/12/2008 when the town had significant road closures and power outages at elevations above 600 feet while residents in the lower areas wondered why school was being cancelled. Fortunately the Town has an excellent understanding of this and dispatches crews systematically to address each occurrence. While the steep terrain can be difficult to navigate during winter storms, the town crews are well trained and equipped to address such circumstances. New equipment and personnel are made available as necessary.

The Town contains significant forested lands, including state forest and the privately held properties of the McLean Game Refuge and Granby Land Trust, and therefore has more concern over forest fires than most other towns in the region. The Lost Acres Fire Department has an excellent understanding of forests fires and is well equip to address the situation should it arise. The LAFD regularly updates its equipment as needed. New electrical generators were recently installed in all the fire houses.

A small portion of the Town is within the 100 year flood zone and very little development has occurred or is allowed to occur within the area. Therefore the Town has had relatively minor losses due to flooding. The National Flood Insurance Program has paid 17 property damage claims in Granby totaling nearly $99,000 to-date. The NFIP has paid out four Repetitive Loss Property claims on one property in Granby to-date. These claims have totaled over $23,000. Because of its steep terrain, when flooding does occur, the flood waters quickly recede following the storm. The Town has an excellent understanding of local flooding and is prepared to address areas of flooding for the short duration when the flood waters are present. In most cases this involves short term road closers. No new development is anticipated within the areas of potential flooding. Granby had no new construction or demolition since 2008 in floodplains or other vulnerable areas. The Town did a complete review and adopted modifications to Section 8.18 of the Zoning Regulation Special Flood Hazard Areas in September of 2008. These changes were adopted in accordance with recommendations of the Connecticut Department of Energy and Environmental Protection (DEEP). The changes are designed to decrease Granby’s vulnerability to flooding.
Nonetheless, a significant flood event could result in much damage. CRCOG used FEMA’s Hazus-MH model to analyze the risks that the Town of Granby 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 in any given year (the 100-year flood) would be over $42 million. The impacts of such a flood are summarized below:

<table>
<thead>
<tr>
<th>Estimated Damages from 100-Year Flood</th>
<th>Households Displaced</th>
<th>290</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>People Needing Shelter</td>
<td>538</td>
</tr>
<tr>
<td></td>
<td>Buildings at Least Moderately Damaged</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Total Estimated Economic Losses</td>
<td>$42,450,000</td>
</tr>
<tr>
<td></td>
<td>Total Residential Building &amp; Content Losses</td>
<td>$26,430,000</td>
</tr>
<tr>
<td></td>
<td>Total Commercial, Industrial &amp; Other Building &amp; Content Losses</td>
<td>$15,940,000</td>
</tr>
<tr>
<td></td>
<td>Total Business Interruption Losses</td>
<td>$90,000</td>
</tr>
</tbody>
</table>

CRCOG also used FEMA’s Hazus-MH model to analyze the risks that the Town of Granby might face from a hurricane as powerful as the 1938 hurricane. The model estimates that economic losses to the town including residential and commercial damage and business interruptions due to such a Category 3 hurricane would be over $86 million. The impacts of such a storm are summarized below:

<table>
<thead>
<tr>
<th>Estimated Damages from a 1938 Strength Hurricane</th>
<th>Households Displaced</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>People Needing Shelter</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Buildings at Least Moderately Damaged</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Buildings Completely Damaged</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Total Estimated Economic Losses</td>
<td>$29,947,000</td>
</tr>
<tr>
<td></td>
<td>Total Residential Building Losses</td>
<td>$26,035,000</td>
</tr>
<tr>
<td></td>
<td>Total Commercial, Industrial &amp; Other Building Losses</td>
<td>$1,783,000</td>
</tr>
<tr>
<td></td>
<td>Total Business Interruption Losses</td>
<td>$2,111,000</td>
</tr>
<tr>
<td></td>
<td>Total Debris Generated</td>
<td>39,975 tons</td>
</tr>
<tr>
<td></td>
<td>Truckloads (at 25 tons/truck) of building debris</td>
<td>93</td>
</tr>
</tbody>
</table>

Hurricane Irene, which occurred in August of 2011, provided an opportunity for the Town to test its preparation for such major events. Early on the Emergency Management team was activated. Many roads were flooded during the height of the storm and the Town quickly closed such roads and rerouted traffic. As expected the floodwaters quickly receded after the storm and the Town returned to normal. The October 2011 snowstorm, proved a much greater problem. Again the emergency management team was called into operation. However, the heavy snowfall and resulting tree and power line damage completely crippled the Town. The power outages were extensive and prolonged. The Town’s emergency shelter proved to be a great help in accommodating those without power, but also proved inadequate. In response to these events the Town has added generations to most of its public building and plans are being considered as to the future use of these building during prolonged emergencies.

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 of over $2 million. These expenses include debris and snow removal, emergency

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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

<table>
<thead>
<tr>
<th>Applicant: Town</th>
<th>100% of Amount Eligible for 75% Reimbursement</th>
<th>Total Damages Eligible for Public Assistance Due to 2011 Disasters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DR-1958-CT</td>
<td>DR-4023-CT</td>
</tr>
<tr>
<td></td>
<td>2011 Snow</td>
<td>Irene</td>
</tr>
<tr>
<td></td>
<td>August 2011</td>
<td>Oct 2011:</td>
</tr>
<tr>
<td>Town of Granby</td>
<td>$39,537.37</td>
<td>$84,643.21</td>
</tr>
</tbody>
</table>

The Town is completely dependent on ground water for its potable water supply. Most homes in Granby have individual wells, most of which are bedrock wells, though gravel pack or point wells are not uncommon. The Town has no history of droughts seriously impacting local wells, though shallow wells can be temporarily impacted. However, wells cannot operate without electricity. Therefore prolonged electrical outages will result in potable water and sewage disposal issues. Granby is serviced by two water companies, the Salmon Brook Water District and the Aquarian Water Company. Both of these companies are supplied by well water. The Aquarian Water Company is located in Simsbury, where its wells are all located. The Salmon Brook Water District has a 190,000 gallon water tank off of Pendleton Road, with wells located near the Town’s Salmon Brook Park. There is no history of concerns in regards to the quantity of the water supply. The Town works cooperatively with the Salmon Brook Water District in regards to maintaining the quality of the water. Plans are currently underway for the construction of a second water tank to service the District.

### Goals, Objectives and Strategies

**GOAL: REDUCE PROPERTY DAMAGE DUE TO UNSAFE CONDITIONS RESULTING FROM WINTER STORMS**

**Objective 1:**
Improve snow removal equipment and techniques.

**Strategic Actions:**

1.1 Pursue increased funding for equipment and labor as necessary.
   - **Lead:** Public Works, Administration
   - **Priority:** Medium
   - **Status:** The Town has purchased new and improved snow removal equipment since 2008. It is recommended that this mitigation action be continued in the 2014-2019 Plan Update.
   - **Potential Funding Source:** local funds
   - **Timeframe:** 2014-2019: Annually during the budget process.

1.2 Continue to pursue opportunities for service and equipment sharing with neighboring communities through CRCOG’s service sharing initiative and otherwise.
   - **Lead:** Public Works, Administration
1.3 Improve Public Works personnel contracts to ensure adequate staffing for storm situations.

**Lead:** Administration

**Priority:** Medium

**Status:** Contracts have been revised and the Town feels that, absent unforeseen circumstances staffing is adequate for most storms.

**Potential Funding Source:** grants and local funds

**Timeframe:** 2014 – 2019

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**Objective 2:**
Remove and prevent impediments to snow removal operations.

**Strategic Actions:**

2.1 Educate private snow-removal contractors and residents on not obstructing roads and the right-of-way.

**Lead:** Police and Fire

**Priority:** Medium

**Status:** Continuing efforts have been made. Efforts will continue and outreach will be conducted periodically.

**Potential Funding Source:** local funds

**Timeframe:** 2014-2019

2.2 Enforce existing ordinance prohibiting roadway obstructions.

**Lead:** Police

**Priority:** Medium

**Status:** Continuing efforts have been made. Efforts will continue and enforcement will be conducted as needed.

**Potential Funding Source:** local funds

**Timeframe:** 2014-2019

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**Objective 3:**
Educate public on hazardous conditions during storm events - promote safe driving techniques.

**Strategic Actions:**

3.1 Continue to issue press releases and advisories.

**Lead:** Emergency Management, Police

**Priority:** High
Status: The Town is now actively using the Everbridge Aware emergency notification system. This reverse notification system enables the Town to notify its citizens through every communication device—including mobile phones, landlines, smart phones, email, text messaging, instant messaging, pagers, and more based on their preferences and stops sending messages after a recipient confirms receipt. Outreach will continue to be conducted periodically.

Potential Funding Source: local funds
Timeframe: 2014-2019

GOAL: IMPLEMENT GUIDELINES AND REGULATIONS TO REDUCE EXPOSURE TO PROPERTY DAMAGE AND LOSS OF LIFE AS A RESULT OF FLOODING

Objective 1:
Restrict development of buffer areas in flood prone zones and promote best development practices for minimizing environmental impacts.

Strategic Actions:

1.1 Continue to work with FEMA and DEEP to maintain zoning, subdivision and wetlands regulations current with best practices.
Lead: Community Development
Priority: High
Status: In September of 2008, the Town updated its Flood Hazard Regulation in accordance with recommendations of the State DEEP and FEMA. Town regulations will continue to be evaluated periodically and updated as necessary.

Potential Funding Source: local funds
Timeframe: 2014-2019

1.2 Update the stormwater management plan as necessary.
Lead: Engineering, Planning
Priority: Medium
Status: In the 2008 Plan, the Town proposed to complete and implement a Stormwater Management Plan. A comprehensive Stormwater Management Plan was revised and adopted in April of 2008. The Plan will be evaluated periodically and updated as necessary.

Potential Funding Source: local funds
Timeframe: 2014-2019

1.3 Investigate participation in the National Flood Insurance Program’s Community Rating System.
Lead: Planning, Administration, Emergency Management
Priority: Medium
Status: This is a new initiative.

Potential Funding Source: local funds
Timeframe: 2014-2019
Objective 2:
Maintain waterways, drainage and other structures in critical flood areas.

Strategic Actions:

2.1 Address priority bridges, culverts and other drainage projects as may be identified in Capital Improvement Plan.
   Lead: Public Works, Engineering, Administration
   Priority: High
   Status: As of December, 2012 the Town was in the final stages of a complete reconstruction of the Silver Street Bridge. Over the past 5 years numerous drainage projects have been completed, mostly in conjunction with road reconstruction projects. The Town continues such concerns.
   Potential Funding Source: local funds, bonding, and/or grants
   Timeframe: 2014-2019: Annual evaluation of improvement projects will be undertaken during the budget process.

2.2 Work with DEEP to continue to monitor dams as necessary.
   Lead: Engineering, Emergency Management
   Priority: Medium
   Status: This is an established practice; periodic monitoring of dams with DEEP will continue.
   Potential Funding Source: local funds
   Timeframe: 2014-2019

Objective 3:
Ensure traffic safety during flood events.

Strategic Actions:

3.1 Regularly update the communication protocols with neighboring communities on road closures and detour routing.
   Lead: Police, Fire
   Priority: High
   Status: The Town has worked to improve communications with neighboring towns and this will remain a continuing effort. Updates will be made periodically.
   Potential Funding Source: local funds
   Timeframe: 2014-2019

3.2 Educate police personnel on detour routing protocols to ensure alternative routes can accommodate trucks.
   Lead: Police
   Priority: Medium
   Status: Continuing. Training will continue to be conducted periodically.
   Potential Funding Source: local funds
   Timeframe: 2014-2019
3.3 Use GIS technology in coordinating and prioritizing response.
Lead: Police, Fire Community Development
Priority: Medium
Status: New, large size maps, with updated information were recently produced and made available to first responders. GIS technology is available and has been provided to the Public Works and Police Departments. Education on its use continues.
Potential Funding Source: local funds
Timeframe: 2014-2019

**GOAL: REDUCE PERSONAL PROPERTY DAMAGE AND POWER FAILURES CAUSED BY HIGH WINDS**

**Objective 1:**
Aggressively work with utility companies to identify high risk areas and promote tree trimming.
Status: Tree trimming is ongoing and aggressive.

**Objective 2:**
Relocate high density utility facilities underground.

**Strategic Actions:**

2.1 Create a long range plan for placing utility facilities underground.
Lead: Planning, Emergency Management
Priority: Low
Status: Efforts have been initiated and the town will continue to work with the utilities to develop an appropriate plan.
Potential Funding Source: local funds
Timeframe: 2014-2019

2.2 Pursue opportunities to relocate wires where they are vulnerable: areas of repetitive power failure.
Lead: Emergency Management, Planning
Priority: Medium
Status: Efforts have been initiated and the town will continue to work with the utilities and property owners to encourage relocation of vulnerable wires as opportunities arise.
Potential Funding Source: local funds
Timeframe: 2014-2019

**Objective 3:**
Promote an ongoing tree maintenance program along public rights-of-way.
Strategic Actions:

3.1 Seek to increase local budget for tree trimming.
   Lead: Public Works, Administration
   Priority: Medium
   Status: Since the storms of 2011 the DPW has been actively involved in tree trimming.
   Potential Funding Source: local funds
   Timeframe: 2014-2019: Annual evaluation of the tree trimming budget will be undertaken
during the budget process.

GOAL: REDUCE PERSONAL PROPERTY DAMAGE AND LOSS OF LIFE RESULTING FROM FOREST FIRES

Objective 1:
Promote forest management to reduce fire risks.

Strategic Actions:

1.1 Develop and implement timber management program for town-owned property.
   Lead: Public Works, Parks
   Priority: Medium
   Status: The Lead department heads will meet with local foresters to discuss the
development and implementation of a timber management plan. Separate
   plans may be necessary for individual properties. Prior to any adoption, draft
   plans will be subject to a public review process.
   Potential Funding Source: local funds, grants
   Timeframe: 2015

1.2 Promote timber management planning with other major landholders including McLean Game
   Refuge, Granby Land Trust and the State.
   Lead: Public Works, Parks
   Priority: Medium
   Status: Deferred. It is recommended that this project will continue to be considered in
   next plan period. Outreach will be conducted periodically.
   Potential Funding Source: local funds (for outreach)
   Timeframe: 2014-2019

Objective 2:
Determine and implement best practices to facilitate forest-fire fighting.
Strategic Actions:

2.1 Promote and implement best practices, such as fire roads, dry hydrants, etc.
   Lead: Community Development, Engineering
   Priority: Medium
   Status: The Office of Community Development has established an important working relationship with the Lost Acres Fire Department for the review of proposed developments. This will be a continual effort and will be conducted as development proposals are reviewed.
   Potential Funding Source: local funds
   Timeframe: 2014-2019

2.2 Consider regulations requiring dry hydrant installations in new developments.
   Lead: Community Development
   Priority: Medium
   Status: The Town is currently working with the Lost Acres Fire Department on a dry hydrant requirement.
   Potential Funding Source: local funds
   Timeframe: Regulations are expected to be drafted in 2014 and are anticipated to be adopted by 2016.
Map 34: Granby Population Density, Dams and Flood Zones