Executive Summary

Introduction

Connecticut’s Capitol Region encompasses the City of Hartford and twenty-nine surrounding suburban and rural communities. The Capitol Region Council of Governments (CRCOG) received Federal Emergency Management Agency (FEMA) funds through the Connecticut Department of Energy and Environmental Protection (DEEP) to develop a Natural Hazard Mitigation Plan Update for the thirty municipalities comprising the region:

- City of Hartford
- Town of Andover
- Town of Avon
- Town of Bloomfield
- Town of Bolton
- Town of Canton
- Town of East Granby
- Town of East Hartford
- Town of East Windsor
- Town of Ellington
- Town of Enfield
- Town of Farmington
- Town of Glastonbury
- Town of Granby
- Town of Hebron
- Town of Manchester
- Town of Marlborough
- Town of Newington
- Town of Rocky Hill
- Town of Simsbury
- Town of South Windsor
- Town of Stafford
- Town of Suffield
- Town of Tolland
- Town of Vernon
- Town of West Hartford
- Town of Wethersfield
- Town of Windsor
- Town of Windsor Locks

CRCOG staff and municipal officials from each community contributed to this planning project. The Capitol Region Emergency Planning Committee (CREPC) ESF-5 Emergency Management subcommittee was expanded to provide guidance to the update process. This plan update builds on the existing Pre-Disaster Natural Hazard Mitigation Plan of 2008. (All of the communities listed above except Stafford, which joined the Capitol Region in 2010, participated in the 2008 Plan.) The purpose of this plan is to identify natural hazards likely to affect the Capitol Region and its nearly 770,000 residents, assess our vulnerabilities to these hazards and set forth mitigation strategies that will reduce the loss of life and property, economic disruptions and the cost of post-disaster recovery for the region’s communities. The benefits of preparing a Natural Hazards Mitigation Plan include:

- Improving the region’s ability to deal with natural disasters and reduce losses
- Reducing the need for emergency response to natural disasters
- Enabling municipalities to access FEMA Hazard Mitigation Assistance Grants upon formal adoption of an approved plan
- Improving post-disaster recovery implementation

The plan considers the following natural hazards that affect the region:

- Dam failure
- Drought
- Earthquake
- Flooding
- Forest and Wild Land Fires
- Hurricanes and Tropical Storms
- Tornados and High Winds
- Severe Winter Storms
The impacts of these natural hazards were evaluated as well as the locations and groups of people particularly vulnerable to the effects of these hazards. Mitigation goals and strategies were developed at both the regional and local levels to reduce or prevent the damages to life and property that can result from these natural hazards. CRCOG and CREPC, in addition to local and other partners, are responsible for implementation of the regional goals contained in this plan. Each participating municipality identified its own mitigation goals and strategies and assumes responsibility for implementation of those measures.

Hazard Impacting the Capitol Region

The Capitol Region is vulnerable to the numerous natural hazards with flooding, winter storms and high wind events being the natural hazards that most frequently occur with enough severity to cause loss of life or property. To evaluate the impacts of these hazards on our region, we looked at historical accounts of major storms and other events; examined flood insurance claims data and public assistance provided after federally declared disasters; analyzed demographic data and physical features; and used a computer model to estimate losses due to flooding, hurricanes and earthquakes. The following is a brief summary of the natural hazards affecting the region and our communities.

Hurricanes and Tropical Storms

The Atlantic hurricane season extends from June 1st through November 30th each year. While the Capitol Region is spared the coastal storm surges associated with hurricanes, it is not immune from damaging winds and rain. According to the State’s Hazard Mitigation Plan, a moderate Category II hurricane can be expected to hit Connecticut once every twenty-three to thirty years. A major Category III or IV hurricane may occur before 2040, based on 20th century trends.

In August 2011, Hurricane Irene, which was downgraded to a tropical storm before hitting Connecticut, caused widespread damage to the region and state. Irene was responsible for three deaths associated with flooding and downed wires from falling trees. According to The Hartford Courant, insurance companies paid out $235 million on more than 60,000 claims in Connecticut related to damage from Irene. However, this figure does not include hundreds of millions more in uncovered expenses and clean up costs for Connecticut’s largest electric utility, Connecticut Light and Power. At the height of the storm some 754,000 residents were without power. Capitol Region cities and towns were widely affected by downed trees, flooding and power outages as a result of Irene. Many residents and businesses were without power over a week. According to the Connecticut Division of Emergency Management and Homeland Security, municipalities, other local and private nonprofit agencies incurred expenses of over $3.18 million due to Irene. The municipalities and agencies are eligible for reimbursement of 75% of these costs under FEMA’s Public Assistance program.

CRCOG used FEMA’s Hazus-MH software to estimate the extent of physical damage and the economic losses to the region and our communities if we were hit with another hurricane similar to the Category III hurricane of 1938. The Hazus-MH hurricane model primarily considers wind damage for inland areas such as the Capitol Region which are not subject to storm surges. The model predicts the region could face economic losses of over $3.6 billion and nearly 26,000 buildings with moderate or greater damage as a result of such a storm.

Floods

Flooding can occur as a result of other natural hazards such as heavy precipitation, hurricanes, winter storms, snow melt, ice jams or dam failures. The Capitol Region’s numerous rivers and streams, as well as its urbanized areas, make floods and flash floods a regular risk. Individuals and local governments face significant economic
loss, risks to public safety, and degraded waterways from flooding. There is not a “flood season” per se in Connecticut; however, waterways are normally higher during spring, and are thus especially vulnerable to flooding from intense precipitation. Significant flooding can also occur as a result of hurricanes and tropical storms. According to the State’s Plan, major flooding of small rivers and loss of life can be expected every 5-10 years throughout the State. Major flooding of larger rivers, such as the Connecticut and Farmington, with loss of life and structural damage can be expected once every 30 years. Historic and widespread floods occurred in 1936, 1938, 1955, and 1982.

An analysis of claims filed under the National Flood Insurance Program in the Capitol Region demonstrates the potential for losses due to flooding. Since the program’s inception, over 1,200 claims resulting in payments of nearly $7.8 million have been filed in the Capitol Region as of February 2012. Of these claims, 287 were repetitive loss claims (i.e., more than one claim over $1,000 has been filed for flood damages to an
insured building over a ten year period). Nearly 100 properties have experienced repetitive losses in the Capitol Region. These losses have resulted in payments of over $3.5 million. West Hartford and Farmington have had the highest overall and repetitive flood loss claims.

To help assess the risks we face from major flooding, CRCOG used FEMA’s Hazus-MH loss estimation program to model the effects of flooding at the local level. The following table shows the damages each town in the region might face from a flood with a 1% probability of occurring in any given year (i.e., the 100 year flood). As can be seen, losses could be expected to be particularly high for Farmington River Valley communities.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Total Estimated Economic Losses from a 1% (100 Year) Flood</th>
<th>Buildings at Least Moderately Damaged</th>
<th>Municipality</th>
<th>Total Estimated Economic Losses from a 1% (100 Year) Flood</th>
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Significant areas of the Capitol Region are vulnerable to flooding. Over 9% or 48,883 acres of the Capitol Region is located in flood plains. Over half of this land is zoned residential. Without restrictions on development in flood plains, lives and property are at risk.

**Dam Failure**

Dams provide vital benefits to our region such as water supply, power generation, flood control, and recreation, but in the event of failure, they can pose a threat to lives and property. Dam failure can happen for a number of reasons including as a result of natural disasters such as structural failure due to earthquakes or overtopping due to heavy precipitation. Dams in Connecticut are regulated by the Department of Energy and Environmental Protection (DEEP). According to the DEEP, there are 533 dams in the Capitol Region. Of these, 38 are Class C, or high hazard, dams. Failure of a Class C dam would result in probable loss of life, major damage to habitable structures, damage to major highways and great economic loss. The region also has 59 Class B, or significant hazard, dams. Failure in these dams would result in similar, but less severe damage. The State estimates there are nearly 12,000 people in Hartford County and 4,150 people in Tolland County within
the mapped dam inundation areas of high and significant hazard dams. The Capitol Region does not include all municipalities in Hartford and Tolland Counties thus the regional population exposed to this risk is likely lower, probably under two percent.

Severe Winter Storms

Connecticut is subject to blizzards, ice storms and nor’easters - storms characterized by strong, possibly damaging northeasterly winds. The Capitol Region receives an average annual snowfall of about 40”, although snowfall amounts vary widely from year to year and can vary dramatically across the Region in any given storm. Severe winter storms can result in damage to buildings and infrastructure, loss of life, and disruptions to regional transportation and communication systems. Half of all federal disaster declarations for Connecticut over the past 20 years have followed major winter or snow storms. Federal assistance is frequently used to offset the snow/ice removal costs the State and municipalities incur. For example, a federal emergency was declared for the February 11-12, 2006 snowstorm in several counties in Connecticut (including Hartford and Tolland) to help share the costs of snow removal. In 2011, FEMA obligated over $74 million in Public Assistance funds to the State of Connecticut to reimburse state agencies, local governments and eligible private nonprofit organizations for costs associated with the January 11-12, 2011 snowstorm and Storm Alfred in October. The frequency, intensity and timing of winter storms dramatically impacts snow removal budgets. Storm Alfred was particularly costly for municipalities because of the heavy debris loads resulting from the high number of fully leafed trees downed in this storm. Municipalities also incur higher labor costs for snow removal on weekends and holidays.

Tornados/High Winds

Connecticut averages approximately three tornadoes every two years; however, in the first week and a half of July 2013 four tornadoes hit the State including three which touched down in the Capitol Region. Hartford and Litchfield Counties are at the highest risk for tornadoes within the state based on historical patterns and locations of their occurrence. Between 1950 and 2003, Hartford County experienced 14 tornadoes and Tolland County experienced 10. Between 2006 and 2012, Connecticut experienced twelve tornadoes. Two of these were in Hartford County (Wethersfield and Bristol) and one in Tolland County (Somers). Typically, tornadoes occur between April and October. High winds and microbursts (strong straight-line downburst winds) can also inflict damage to property and result in injuries.

One of the country’s most destructive tornadoes touched down in Windsor Locks and Windsor on October 3, 1979. The F4 tornado had winds in excess of 200 miles per hour, and tore an 11-mile path from Windsor to Suffield. The tornado killed 3 people, injured 500 and caused an estimated $250 million ($776,385,000 in 2011 dollars) in damage, in part because it struck the New England Air Museum destroying several planes and hangars.

Earthquake

Connecticut has a moderate risk of earthquakes based on the frequency of their occurrence, not the intensity of individual earthquakes. Between 1568 and 1989, the state had 137 recorded earthquakes. The Capitol Region experienced sixteen between 1837 and 2012. Of those where the magnitude was known, all were under magnitude 4.0. A strong earthquake centered in central Connecticut and thought to be 3.8 magnitude occurred on August 9, 1840.
Magnitude 3.0 to 3.9 earthquakes are often felt by people up to a hundred miles away from the epicenter but rarely cause damage. Magnitude 4.0 to 4.9 earthquakes cause shaking of objects indoors but generally cause none to slight damage. Magnitude 5.0 to 5.9 earthquakes can cause moderate to major damage to poorly constructed buildings but none to slight damage to other buildings. Connecticut incorporated building codes for seismic activity into the state building code in 1992. There were no requirements prior to that. So, while the risk for a very damaging earthquake is relatively low in the region, some structures may be impacted by less intense earthquakes depending on the soil and integrity of the structure.

Using FEMA’s Hazus-MH software, CRCOG analyzed several earthquake scenarios to estimate the potential loss to property and life. One scenario run was based on a 1998 5.2 magnitude earthquake centered in Pennsylvania and the results were typical for the modeling of historic earthquakes: No buildings or transportation and utility infrastructure were estimated to be damaged as a result of such an earthquake here. No fires were expected to result and no debris was expected to be generated as a result of the earthquake. Also, no injuries, deaths or displacements were expected to result from the quake. There were no economic losses estimated from such an earthquake scenario here.

We also ran a simulation of a magnitude 5 earthquake with an epicenter in Hartford. Such an earthquake would be stronger than we would expect based on historical evidence and has a low probability of occurring. An earthquake of this magnitude, however, would inflict considerable damage on the Capitol Region. Hazus estimates that over 12% of the buildings in the region or about 30,700 buildings would be at least moderately damaged and nearly 1,000 buildings would be damaged beyond repair. Four hospitals, 89 schools, seven police stations, five fire stations and two emergency operations centers would suffer at least moderate damage although none would be completely damaged. Thirty bridges would be expected to be moderately damaged and one completely damaged. Numerous leaks and breaks in water, wastewater and natural gas lines would be expected. Power outages would be widespread. Four fires are estimated to be ignited due to the earthquake resulting in about $3 million in building losses. Depending on the time of day that the earthquake struck, 40 to 85 deaths could be expected. Thousands of people would sustain minor injuries and hundreds would need hospitalization. Total economic losses estimated for such an earthquake would be $6.57 billion. Total building related losses were estimated at $5.51 billion with 47% of these losses attributed to residential properties.

If a 5.0 magnitude earthquake were centered in Moodus, an area of historic “rumblings,” the effects on the Capitol Region would be considerably less severe. We ran a Hazus simulation of such an earthquake and found that only 1% of the buildings in the Capitol Region or about 2,200 buildings would be at least moderately damaged. Nearly 15 buildings in the region would be damaged beyond repair. No hospitals, schools, police stations, fire stations, emergency operations centers or bridges would suffer at least moderate damage and none would be completely damaged. Some leaks and breaks in water, wastewater and natural gas lines would be expected but no power outages would be expected. Only one fire is estimated to be ignited due to the earthquake. One death would be expected. About 40 people would sustain minor injuries and only a few would need hospitalization. Total economic losses estimated for the earthquake would be about $300 million. Total building related losses were estimated at $272 million with over 55% of these losses attributed to residential properties.

These simulations highlight the significance of the location of the epicenter to the damages that could be expected. A moderately strong earthquake centered near a more populated, built up area would be expected to result in considerably more damage than one located in a more remote area. Based on our history and
geology, the Capitol Region’s vulnerability to damaging earthquakes is low. The damages we are likely to face here from earthquakes are much lower than in other parts of the nation and world.

Drought

Droughts periodically occur in Connecticut and can have serious consequences. While a drought does not pose immediate threats to life and property, it can have severe economic, environmental and social consequences. A lack of precipitation can affect not only agricultural production, but also tourism, water utilities, residential wells, businesses and more. Connecticut experienced notable droughts in 1957, 1964-67, 1980-81 and 2002. During the 2002 drought, several water utilities imposed mandatory water conservation and restriction measures on their customers, while most other companies imposed voluntary restrictions. Such restrictions can impact businesses as well as residences.

A meteorological drought was most recently declared for Hartford, Tolland and Windham Counties from April 12 through April 24, 2012 due to precipitation levels that were approximately half of normal levels. According to the NOAA Storm Events Database, rivers and streams were most affected as most ran at record low levels during the spring run-off season. The State did not issue a drought declaration, however, as reservoirs were at normal levels, thanks largely to above normal precipitation falling between August 2011 and November 2011. The main impact of this meteorological drought was periods of very high fire danger. Rainfall in the first half of 2013 has been higher than normal and drought seems unlikely for the near future. However, as the State’s draft Natural Hazards Mitigation Plan Update notes, predicting the future occurrences of drought within any given time period is difficult.

Forest and Wildland Fires

Forest or wildland fires can cause not only long-term damage to vegetation and ecosystems, but also damage to developments, especially as residential development has increased in woodland areas. In the last twenty years, a few forest fires have occurred in the Capitol Region including a fire in May 1995 which burned nearly 40 acres in Tolland; a brush fire in April 1999 in Vernon which also burned about 40 acres and came within 100 feet of homes in a nearby neighborhood; and a fire in April 2005 which burned eight acres along the Farmington River in Avon. The scale of these fires is much less than those experienced in the western and midwestern United States; nonetheless forest fires here pose a risk to lives and property especially at the urban/woodland interface.

Mitigation Strategy

To address the impacts of these natural hazards, the planning committee and local and regional staff reexamined the goals, objectives and strategic mitigation activities proposed in the 2008 Plan as well as assessed our experiences with natural disasters of the last five years and considered input from the public and other stakeholders in order to develop a blueprint for better protecting our region over the next five years. Each mitigation action was prioritized and responsible agencies, potential funding sources and time frames for implementing the projects were identified. What follows is a brief outline of the regional and local strategies proposed.

We categorized the individual projects and actions proposed by the region and municipalities into the following types of measures:
Education & Awareness – Projects and actions in this category include measures to inform and educate local residents and businesses, elected and appointed officials, and other stakeholders. Types of outreach include general public informational outreach efforts such as use of local websites to post information, mailings with tax statements, newspaper advertisements, press releases, e-mail blasts, etc. Other measures in this category include targeted outreach efforts to specific groups which could include more direct contact such as meetings. Also included are workshops, forums, fairs, seminars and the like.

Natural Resource Protection – Actions included in this category are those that not only minimize hazard losses but also can preserve or restore functions of natural systems such as stream corridor restoration, watershed management, wetlands preservation and restoration, and timber management.

Preparedness and Enhancement of Emergency Response – Actions in this category may not be thought of as directly tied to mitigation of damage due to natural disasters but they are measures vital to public safety and the restoration of normalcy in a community. In this regard, they play an important role in the reduction of losses a community will experience. Measures in this category include improving working relationships and coordination between agencies; securing new equipment, facilities, supplies and personnel to aid in emergency response; improving procedures related to emergency response; conducting emergency response training; and improving communications systems.

Prevention – Activities in this category generally include government actions or processes that influence the way land and buildings are developed, such as zoning regulations, floodplain regulations, building codes, open space preservation, and stormwater regulations. Also included are studies and assessments of risks and vulnerabilities including identifying and improving a community’s ability to contact vulnerable populations; improving mapping and data analysis capabilities; and undertaking engineering studies to address drainage, flooding, and power outage issues. Other government actions and programs such as implementing procedures for improving operations, using tax incentives and capital improvement programming are also included in this category.

Structural Projects/Property Protection & Modifications – Activities in this category include modifications and retrofits of existing buildings, structures and infrastructure to protect or remove them from harm such as acquisition, relocation, elevation, flood proofing, installation of shatter proof glass, relining culverts, strengthening roofs, etc. Measures in this category could also include new construction or reconstruction projects to reduce the impact of hazards such as installation of improved drainage facilities, culverts, and other stormwater controls as well as undergrounding utilities. Expanding sheltering capacity and installation of backup power to critical facilities are other measures included in this category.

Regional Goal, Objectives and Mitigation Actions

Because of the regional nature of natural hazards and common concerns, some mitigation activities are better addressed at the regional level; however, the means to carry out certain activities may not be available to regional agencies, but are available to municipalities. For example, CRCOG cannot enact laws and regulations, levy taxes, or enter into construction contracts. This section establishes our regional strategy for addressing natural hazards and sets out the mitigation actions that may best be undertaken on a regional level.
Goal: Minimize the loss of life and property, and economic disruptions that can result from natural hazards.

Objective 1: Improve stormwater management and ground water recharge throughout the region to prevent increased flooding and lessen the effects of drought.

Mitigation Actions:

1.1 Encourage all municipalities in the Region to adopt regulations that incorporate or refer to recommended practices from the most current Connecticut Stormwater Quality Manual, Connecticut Guidelines for Erosion and Sedimentation Control and in particular, those which promote low impact development and green infrastructure techniques.

1.2 Encourage development that is in harmony with natural drainage systems in all municipalities through reviews of development referrals.

1.3 Foster improved understanding of the importance stream management, maintenance of natural drainage channels, and use of green infrastructure practices among municipal staff, inland wetlands commissions and planning and zoning commissions through education.

1.4 Continue participation with other regional planning agencies in Connecticut and Massachusetts in the Connecticut River Bi-State Partnership and, in particular, in the development of a Connecticut River Bi-State Corridor Management Plan.

Objective 2: Assist municipalities in implementing hazard mitigation strategies.

Mitigation Actions:

2.1 Work with member municipalities to maintain this regional natural hazard mitigation plan with updates at least every five years.

2.2 Work with member municipalities, state and federal agencies to improve availability of relevant data; including, but not limited to current land uses, vulnerable building stock inventories and values, and hazardous materials inventories.

2.3 Train CRCOG staff in HAZUS-MH software.

2.4 Assist member municipalities in pursuing federal and state funds to implement mitigation measures.

2.5 Incorporate natural hazard mitigation concerns into the regional plan of conservation and development and encourage municipalities to address natural hazards mitigation in local plans of conservation and development.

2.6 Encourage municipalities to participate in the National Flood Insurance Program’s Community Rating System.
2.7 Work with municipalities to facilitate a process for improved communications with upstream communities to provide timely downstream notifications regarding water levels and releases from dams.

2.8 Encourage municipalities to increase their citizens’ awareness and use of the Get Ready Capitol Region website. [http://www.getreadycapitolregion.org/](http://www.getreadycapitolregion.org/)

2.9 Encourage FEMA to recognize the cumulative effect of winter storm events

2.10 Assist member communities in efforts to develop and maintain lists of functional needs populations and in improving involvement of functional needs persons in planning and training for hazard mitigation.

Objective 3: Assist municipalities in minimizing risks associated with power disruptions.

Mitigation Actions:

3.1 Monitor state efforts to assist municipalities in working with Connecticut Light & Power concerns over appropriate utility right-of-way maintenance, emergency response and the burial of transmission lines.

3.2 Encourage the installation of generators at critical facilities and in developments serving the elderly or special need populations through outreach and associated work with local officials.

Objective 4: Assist municipalities in minimizing risks associated with droughts.

Mitigation Actions:

4.1 Assist municipalities that do not currently have drought ordinances in enacting such ordinances to enable the enforcement of water conservation.

4.2 Assist in disseminating drought-related information by encouraging municipalities to post drought-related information released by the Connecticut Division of Emergency Management and Homeland Security or Connecticut Department of Public Health through their websites and/or newsletters, and by posting drought-related information on the Get Ready Capitol Region website.

Municipal Goals, Objectives and Mitigation Actions

Each of the thirty municipalities in the Capitol Region also reassessed its goals, objectives, and strategic mitigation actions from the 2008 Plan, and developed a new strategic course of action for the upcoming five years. In all, some 400 specific mitigation actions and projects are proposed. While many are unique to the individual communities, there are commonalities among the actions proposed, and all communities have proposed a range of activities including public education and awareness; natural resource protection; plans, studies and regulatory actions; structural projects and modifications to buildings, facilities and infrastructure; as well as measures to improve preparedness and emergency response. The table which follows summarizes these actions and projects.
## Summary of Types of Mitigation Projects Proposed by Community

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<tr>
<th>Municipal Strategic Mitigation Actions, Processes, Projects</th>
<th>Education &amp; Awareness</th>
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<th>Preparedness (Enhance Emergency Response)</th>
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2014-2019 Capitol Region Natural Hazards Mitigation Plan Update - Page 11 Executive Summary
Planning Process

The Natural Hazards Mitigation Plan Update planning process began in early 2012 when the Federal Emergency Management Agency (FEMA) awarded the Capitol Region Council of Governments (CRCOG) a Pre-Disaster Mitigation Planning Grant to update its 2008 regional natural hazard mitigation plan. This Plan Update was developed in collaboration with the Capitol Region Emergency Planning Commission (CREPC), the Region’s 30 municipalities and the Department of Energy and Environmental Protection (CT DEEP). A planning sub-committee provided guidance to the project. In July 2012, the planning committee met to reexamine the list of hazards impacting the Capitol Region. The committee agreed that the list of eight natural hazards identified in the 2008 Plan should continue to be considered the natural hazards addressed in the Plan Update. The committee rated the hazards for their significance and impact on the Region. Flooding ranked as the number one hazard of concern, followed closely by hurricanes and then by winter storms and tornados. The planning committee met again in February 2013 to reassess the regional mitigation strategies and in September 2013 to review the draft plan document.

CRCOG staff researched natural hazards and major storm events impacting the Region and State in the last several years. The data analyzed came from a variety of sources including FEMA, DEEP, the National Weather Service, regional newspapers, the United States Geological Survey, United States Census Bureau, municipalities and CRCOG’s internal geographic information system as well as other resources. The data were used to evaluate natural disasters in terms of frequency, magnitude, areas of impact and economic loss. The collected data was analyzed using the CRCOG’s geographic information system and HAZUS-MH, software developed for FEMA to estimate losses from earthquake, hurricanes and floods.

CRCOG staff led efforts to involve officials from each town in updating individual municipal sections. Meetings were held in each of the thirty municipalities and included local staff from a variety of departments including administration, planning, emergency management, police, fire, public health, sanitation, public works, engineering, information technologies, social services, human resources, boards of education, ambulance services, among others. In some towns citizens and elected officials also participated. Following these municipal meetings, CRCOG staff worked with the municipally designated staff contacts to incorporate the updates prepared by the municipalities. In all, over 400 local officials were involved in updating the municipal sections.

A variety of means were used to inform the public of the planning process and to gain public input on hazards, areas and issues of concern, and on mitigation measures. These specific outreach efforts included reports and presentations to local officials; web page updates; an opinion survey developed to solicit input from the public on local mitigation activities and strategies; a series of subregional public meetings. Specific efforts were also made to involve neighboring communities and other regional bodies including Connecticut Light and Power (CL&P) and the Metropolitan District (MDC) into the planning process.

From the survey and subregional meetings, we found there is strong support: 1) for using an emergency alert system to contact residents; 2) for measures which could help restore a sense of normalcy after a significant event, such as providing back-up power to important community facilities and ensuring that roads are quickly passable after storms; 3) for ensuring that the public is prepared for natural disasters through various means of outreach; 4) for training of municipal staff and volunteers for emergency response; for trimming or removing trees to reduce the potential for power outages; and 5) for ensuring the needs of vulnerable populations are addressed.
The public review and comment on the draft Plan Update extended from mid September through October 2013. Notifications of the availability of the plan are posted on CRCOG’s website and all municipalities were asked to post similar notices on their websites. Two public meetings were held, one in Hartford and one in Enfield, to gather public comment. Comment was also solicited through the CRCOG website and emails to an extensive list of stakeholders developed during the plan update process. Following the public review, the draft Plan Update was revised to incorporate suggestions received and submitted the Connecticut Department of Energy and Environmental Protection (DEEP) for formal review. State officials reviewed the Plan Update and forwarded it to FEMA for federal review and approval. FEMA requested a number of revisions; these were addressed and the revised Plan Update was resubmitted for State and federal review. FEMA issued its Approval Pending Adoption August 29, 2014.

Plan Implementation and Maintenance

Upon approval of the Plan Update by FEMA, each municipality’s governing body as well as CRCOG’s Policy Board will need to formally adopt the Plan Update. CREPC will also be asked to append this plan to the Regional Emergency Support Plan (RESP) Plan.

Implementation of the strategies contained within this plan will depend largely on the availability of resources. Each municipality and CRCOG will have to consider the costs, availability of funding, and impacts of each strategy individually. The CRCOG Policy Development & Planning Department will be responsible for regional strategies and coordination with CRCOG Public Safety staff. The planning sub-committee of CREPC (ESF-5), which provided guidance to this project, will monitor progress on its implementation with assistance from CRCOG staff. The sub-committee will conduct annual outreach to municipalities to ascertain progress on proposed mitigation actions.

For more information on natural hazard mitigation planning, please visit CRCOG’s website – http://www.crcog.org/community_dev/current_p_fema.html