

2015
Northeastern Connecticut Council of Governments
Regional Hazard Mitigation Plan



2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan

Prepared by

The Northeastern Connecticut Council of Governments

For use by

The citizens and municipal governments of northeastern Connecticut,
the Federal Emergency Management Agency of the United States Department of Homeland Security,
and the Division of Emergency Management and Homeland Security of the Connecticut Department of
Emergency Services and Public Protection



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Cover photo: Fire at Belding Hemmingway Magnesium Plant in Putnam, Connecticut, during an historic
flood on August 19, 1955.

From the Louis S. Edman Collection at the Connecticut State Library

File name: *55flood28*

Web link: <http://www.cslib.org/flood1955.htm>

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Appendices

- Appendices are continuously numbered and located after the document body.
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Sources

- Sources are cited in the document body using footnotes.
- For the names of local documents (e.g. zoning regulations), see Chapter 4.1.

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Acronyms and Abbreviations

- Acronyms, initials, and abbreviations are defined in each chapter in which they are used.

ADT- Average daily traffic

ALS- Advanced Life Support

AVCOG- Androscoggin Valley Council of Governments

BCA- Benefit Cost Analysis

BLS- Basic Life Support

BO- Building Official

CAC- Community Assistance Contact

CAV- Community Assistance Visit

CC- Cloud-to-cloud

CEO- Chief elected official

CG- Clout-to-ground

CFR- Code of Federal Regulations

CIP- Capital Improvements Plan

CLEAR- Center for Land Use Education and Research (at the University of Connecticut)

ConnDOT- Connecticut Department Transportation

CPC- Climate Prediction Center

CRS- Community Rating System

DEEP- Connecticut Department of Energy and Environmental Protection

DEMHS- Division of Emergency Management and Homeland Security (of the Connecticut Department of Emergency Services and Public Protection)

DESPP- Connecticut Department of Emergency Services and Public Protection

Dfb- Humid continental climate with at least four months above 10⁰C (according to Köppen climate taxonomy)

DMA- Disaster Management Act

DOD- Degree of damage

DOL- Connecticut Department of Labor

ECEC- Eastern Connecticut Enterprise Corridor

EMD- Emergency Management Director

EOC- Emergency Operations Center

EOP- Emergency Operations Plan

FEMA- United States Federal Emergency Management Agency

FIRM- Flood Insurance Rate Map

FMA- Flood Mitigation Assistance

GIS- Geographic Information Systems

HMA- Hazard Mitigation Assistance

HMGP- Hazard Mitigation Grant Program

IC- Intracloud

Knots- Nautical miles per hour

LEOP- Local Emergency Operations Plan

LiDAR- Light Detection and Ranging

LMA- Labor Market Area

MCS- Mesoscale convective system

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MMI- Modified Mercalli Intensity Scale	RHMPC- Regional Hazard Mitigation Planning Committee
MMS- Moment Magnitude Scale	RL- Repetitive Loss
NCDC- National Climatic Data Center	ROCI- Radius of outermost closed isobar
NCEMC- Northeastern Connecticut Emergency Management Committee	SCCOG- Southeastern Connecticut Council of Governments
NDMC- National Drought Mitigation Center	SEAT- Southeast Area Transit
NECCOG- Northeastern Connecticut Council of Governments	SFHA- Special Flood Hazard Area
NECTD- Northeastern Connecticut Transit District	SHELDUS- Spatial Hazard Events and Losses Database for the United States
NFIP- National Flood Insurance Program	SRL- Severe Repetitive Loss
NHIRAM- Natural Hazard Identification and Risk Assessment Matrix	TBD- To be determined
NOAA- National Atmospheric and Oceanic Administration	The 2013 Plan draft- 2013 Northeastern Connecticut Natural Hazard Mitigation Plan (draft)
NRCC- Northeast Regional Climate Center (at Cornell University)	The 2015 Plan- 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan
OPM- Connecticut Office of Policy and Management	TP- Town Planner
P.A.- Public Act	UConn- University of Connecticut
PDM- Pre-Disaster Mitigation	USDA- United States Department of Agriculture
POCD- Plan of Conservation and Development	USDOT- United States Department of Transportation
PZC- Planning and Zoning Commission	USGS- United State Geological Survey
QVCC- Quinebaug Valley Community College	WINCOG- Windham Region Council of Governments
RCOG- Regional Council of Governments	WRTD- Windham Region Transit District
RFC- Repetitive Flood Claims	ZEO- Zoning Enforcement Official
RFV- Risk Factor Value	

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Executive Summary

The 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan (The 2015 Plan) represents the Northeastern Connecticut Council of Governments', and its constituent towns', commitment to preparedness and safety. The Northeastern Connecticut Council of Governments (NECCOG) is a Regional Council of Governments (RCOG), with membership from 16 towns in northeastern Connecticut.

NECCOG staff led the development The 2015 Plan document and the following public officials contributed:

Chief Elected Officials of NECCOG Member Towns

Michael Zambo, First Selectman, Ashford

Richard Ives, First Selectman, Brooklyn

Roy Piper, First Selectman, Canterbury

William Rose, First Selectman, Chaplin

Arthur Brodeur, First Selectman, Eastford

Allan Cahill, First Selectman, Hampton

John Hallbergh, Town Council Chairman, Killingly

Paul Sweet, First Selectman, Plainfield

Maureen Nicholson, First Selectman, Pomfret

Tony Falzarano, Mayor, Putnam

Daniel Syme, First Selectman, Scotland

Russell Gray, First Selectman, Sterling

Paul Lenky, First Selectman, Thompson

Andy Goodhall, First Selectman, Union

Robert Sirpenski, First Selectman, Voluntown

Allan Walker, First Selectman, Woodstock

Members of the Northeastern Connecticut Emergency Management Committee

Thomas Borgman, Emergency Management Director, Ashford

Michael Gardner, Deputy Emergency Management Director, Ashford

Kevin Filchak, Emergency Management Director, Brooklyn

Luther Thurlow, Emergency Management Director, Canterbury

Jim Randall, Emergency Management Director, Chaplin

Deborah Richards, Emergency Management Director, Eastford

Daniel Meade, Emergency Management Director, Hampton

Randy Burchard, Emergency Management Director, Killingly

John Gorman, Deputy Emergency Management Director, Hampton

Paul Yellen, Emergency Management Director, Plainfield

Derek May, Emergency Management Director, Pomfret

Edward Perron, Emergency Management Director, Putnam

*Ernest Mellor, Emergency Management
Director, Scotland*

*Stuart Cobb, Emergency Management
Director, Union*

*Don Buell, Emergency Management
Director, Sterling*

*Joseph Grenier, Emergency Management
Director, Voluntown*

*Stephen Benoit, Emergency Management
Director, Thompson*

*Edward Munroe, Emergency Management
Director, Woodstock*

*Brian Howell, Deputy Emergency
Management Director, Thompson*

All questions and comments regarding The 2015 Plan may be direct to the NECCOG offices in Dayville, Connecticut. More information is available at <http://www.neccog.org>.

Purpose of The 2015 Plan

The 2015 Plan provides the framework for natural hazard preparedness by identifying local and regional actions that address threats *before* they occur.

An approved Hazard Mitigation Plan enables its participating jurisdictions to compete for Hazard Mitigation Assistance (HMA) grant programs through the Federal Emergency Management Agency (FEMA). HMA funds can be used for mitigation planning as well as implementing mitigation actions, such as floodproofing a community facility, and belong to one of the three following grant programs:

Hazard Mitigation Grant Program- The Hazard Mitigation Grant Program (HMGP) assists in implementing long-term hazard mitigation measures following a major disaster.

Pre-Disaster Mitigation- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis.

Flood Mitigation Assistance- Flood Mitigation Assistance (FMA) provides funds for projects to reduce or eliminate risk of flood damage, on an annual basis.

Natural Hazards Identification

The 2015 Plan addresses natural hazards which were identified through a series of meetings of NECCOG and the Northeastern Connecticut Emergency Management Committee (NCEMC), a regularly meeting group comprised of the region's appointed Emergency Management Directors (EMDs), as being relevant threats to the region. Natural hazards addressed in The 2015 Plan are: Flooding, wind, severe summer storms (thunderstorms, lightning, hail), winter storms/nor'easters, tropical cyclones, tornadoes, drought, earthquakes, and fluvial erosion.

Historic occurrences, anticipated risks, and vulnerability are described for each natural hazard. Location, development and environmental trends, demographics, and topography affect specific hazard vulnerability in each town, and in areas within each town.

Since the passage of the Stafford Act in 1988, Connecticut has withstood 13 presidentially declared natural disasters. Recently, the following have affected NECCOG towns:

Flooding and Wind Damage (March 2010)

Super-storm Sandy (October 2012)

Record Snowfall (January 2011)

Winter Storm Nemo (February 2013)

Tropical Storm Irene (August 2011)

Winter Storm Juno (January 2015)

October Nor'easter (October 2011)

Risk and Vulnerability Assessments

A detailed risk assessment describes impact, probability, spatial extent, duration, and warning time associated with each natural hazard for the entire region. These criteria were used to rank the each hazard's risk against one another in a standardized way.

The 2015 Plan's vulnerability assessment considered the specific areas within each town that are likely to be more at risk to the damaging effects of natural hazards. It also described vulnerability in terms of potential damage to people and property. The effects of flooding, hurricane wind, and earthquakes events were modeled using geographic information systems (GIS) software.

Hazard Mitigation Goals

A series of meetings of NECCOG and the NCEMC resulted in the designation of the following goals, which guide the implementation hazard mitigation actions:

Goal 1: Implement Identified Mitigation Activities to Protect Life and Property.

Goal 2: Protect Existing Infrastructure and Design New Infrastructure to be Resilient to the Effects of Natural Hazards.

Goal 3: Improve Education and Awareness of Hazards and Risks.

Goal 4: Ensure That Public Funds are Used in the Most Efficient Manner.

Hazard Mitigation Actions

Local Mitigation Actions were identified for each participating jurisdiction with the goal of increasing that individual community's resilience to one or more identified natural hazards. Regional Mitigation Actions were also identified and may be carried out by NECCOG to support *regional* resilience through coordination of hazard mitigation efforts and service sharing.

Adoption and Continued Planning

Following FEMA's approval of The 2015 Plan, NECCOG member towns will have the opportunity to adopt the plan through a formal adoption resolution, then incorporate the findings

of the plan into local capabilities, such as zoning, capital improvements plans, and public works responsibilities.

Progress of The 2015 Plan’s identified Local Mitigation Actions and Regional Mitigation Actions will be continually monitored throughout its five-year life cycle. NECCOG staff will request information from local chief elected officials and EMDs while soliciting feedback from the general public in regards to possible changes to plan content. The next update of The 2015 Plan will be completed prior to 2020. The updated plan will reassess identified hazards’ risks and vulnerability, possibly being expanded to include additional hazards, while reporting on the status and progress of Local Mitigation Actions and Regional Mitigation Actions, and proposing new actions for each participation jurisdiction.

Plan Requirements

Statutory requirements for multi-jurisdictional HMPs are spelled out in 44 CFR §201.6 and interpreted in the 2011 FEMA publication, Local Mitigation Plan Review Guide. See below for plan requirements and corresponding sections of The 2015 Plan, per the Local Mitigation Plan Review Guide. Upon completion of a plan draft, HMPs in Connecticut are submitted to the Connecticut Department of Emergency Services and Public Protection’s Division of Emergency Management and Homeland Security (DEMHS). Following review by recommendations from DEMHS, plans are then forwarded FEMA. After receiving conditional approval from FEMA, a multi-jurisdictional HMP is not finally approved until adopted by all participating municipalities.

Element A. Planning Process

Plan Element	Plan Requirement	Location in Document
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? 44 CFR 201.6(c)(1)	a. Documentation of how the plan was prepared must include the schedule or timeframe and activities that made up the plan’s development as well as who was involved. Documentation typically is met with a narrative description, but may also include, for example, other documentation such as copies of meeting minutes, sign-in sheets, or newspaper articles.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 2 • Appendix 6 • Appendix 7
	b. The plan must list the jurisdiction(s) participating in the plan that seek approval.	<ul style="list-style-type: none"> • Chapter 1.0 • Executive Summary
	c. The plan must identify who represented each jurisdiction. The Plan must provide, at a minimum, the jurisdiction represented and the person’s position or title and agency within the jurisdiction.	<ul style="list-style-type: none"> • Executive Summary
	d. For each jurisdiction seeking plan approval, the plan must document how they were involved in the planning process. For example, the plan may document meetings attended, data provided, or stakeholder and public involvement activities offered.	<ul style="list-style-type: none"> • Executive Summary • Chapter 1.3.1 • Appendix 2

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	e. Plan updates must include documentation of the current planning process undertaken to update the plan.	[Not Applicable]
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? 44 CFR 201.6(b)(2)	a. The plan must identify all stakeholders involved or given an opportunity to be involved in the planning process. At a minimum, stakeholders must include: 1) Local and regional agencies involved in hazard mitigation activities; 2) Agencies that have the authority to regulate development; and 3) Neighboring communities.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 2 • Appendix 5 • Appendix 6 • Appendix 7
	b. The Plan must provide the agency or organization represented and the person’s position or title within the agency.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 7
	c. The plan must identify how the stakeholders were invited to participate in the process.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 5 • Appendix 6 • Appendix 7
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? 44 CFR 201.6(b)(1) and 201.6(c)(1)	a. The plan must document how the public was given the opportunity to be involved in the planning process and how their feedback was incorporated into the plan.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 2 • Appendix 3 • Appendix 5 • Appendix 6
	b. The opportunity for participation must occur during the plan development, which is prior to the comment period on the final plan and prior to the plan approval / adoption.	<ul style="list-style-type: none"> • Chapter 1.3.1 • Appendix 5 • Appendix 6
A4. Does the Plan document the review and incorporation of existing plans, studies, reports, and technical information? 44 CFR 201.6(b)(3)	a. The plan must document what existing plans, studies, reports, and technical information were reviewed.	<ul style="list-style-type: none"> • Chapter 1.2
	b. The plan must document how relevant information was incorporated into the mitigation plan.	<ul style="list-style-type: none"> • Chapter 1.2 • Chapter 2.0 • Chapter 2.1 • Chapter 2.2 • Chapter 2.3 • Chapter 4.1
A5. Is there discussion on how the community(ies) will continue public participation in the plan maintenance process? 44 CFR 201.6(c)(4)(iii)	a. The plan must describe how the jurisdiction(s) will continue to seek public participation after the plan has been approved and during the plan’s implementation, monitoring and evaluation.	<ul style="list-style-type: none"> • Chapter 1.4
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? 44 CFR 201.6(c)(4)(i)	a. The plan must identify how, when, and by whom the plan will be monitored. Monitoring means tracking the implementation of the plan over time.	<ul style="list-style-type: none"> • Chapter 1.4
	b. The plan must identify how, when, and by whom the plan will be evaluated.	<ul style="list-style-type: none"> • Chapter 1.4
	c. The plan must identify how, when, and by whom the plan will be updated.	<ul style="list-style-type: none"> • Chapter 1.4
	d. The plan must include the title of the individual or name of the department/agency responsible for leading each of these efforts.	<ul style="list-style-type: none"> • Chapter 1.4

Element B. Hazard Identification and Risk Assessment

Plan Element	Plan Requirement	Location in Document
<p>B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction? 44 CFR 201.6(c)(2)(i) and 44 CFR 201.6(c)(2)(iii)</p>	<p>a. The plan must include a description of the natural hazards that can affect the jurisdiction(s) in the planning area.</p> <p style="text-align: center;"><i>(see table on page ES-9)</i></p>	<ul style="list-style-type: none"> • Chapter 3.0 • Chapter 3.1 • Chapter 3.2 • Chapter 3.3 • Chapter 3.4 • Chapter 3.5 • Chapter 3.6 • Chapter 3.7 • Chapter 3.8 • Chapter 3.9
	<p>b. The plan must provide the rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area.</p>	<ul style="list-style-type: none"> • Chapter 2.4
	<p>c. The description, or profile, must include information on location, extent, previous occurrences, and future probability for each hazard. Previous occurrences and future probability are addressed in sub-element B2.</p> <p style="text-align: center;"><i>(see table on page ES-9)</i></p>	<ul style="list-style-type: none"> • Chapter 3.1.2 • Chapter 3.1.3 • Chapter 3.2.2 • Chapter 3.3.2 • Chapter 3.4.2 • Chapter 3.5.2 • Chapter 3.6.2 • Chapter 3.7.2 • Chapter 3.8.2 • Chapter 3.9.2 • Chapter 4.2.1 • Chapter 4.2.2 • Chapter 4.2.3 • Appendix 9
	<p>d. For participating jurisdictions in a multi-jurisdictional plan, the plan must describe any hazards that are unique and/or varied from those affecting the overall planning area.</p> <p style="text-align: center;"><i>(see table on page ES-9)</i></p>	<ul style="list-style-type: none"> • Chapter 3.9 • Chapter 4.2.2 • Chapter 4.2.3
<p>B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? 44 CFR 201.6(c)(2)(i)</p>	<p>a. The plan must include the history of previous hazard events for each of the identified hazards.</p> <p style="text-align: center;"><i>(see table on page ES-9)</i></p>	<ul style="list-style-type: none"> • Chapter 3.1.1 • Chapter 3.2.1 • Chapter 3.3.1 • Chapter 3.4.1 • Chapter 3.5.1 • Chapter 3.6.1 • Chapter 3.7.1 • Chapter 3.8.1 • Chapter 3.9.1 • Appendix 9 • Appendix 16
	<p>b. The plan must include the probability of future events for each identified hazard.</p> <p style="text-align: center;"><i>(see table on page ES-9)</i></p>	<ul style="list-style-type: none"> • Chapter 3.1.2 • Chapter 3.2.2 • Chapter 3.3.2 • Chapter 3.4.2 • Chapter 3.5.2 • Chapter 3.6.2 • Chapter 3.7.2

		<ul style="list-style-type: none"> • Chapter 3.8.2 • Chapter 3.9.2
	c. Plan updates must include hazard events that have occurred since the last plan was developed.	[Not Applicable]
B3. Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? 44 CFR 201.6(c)(2)(ii)	a. For each participating jurisdiction, the plan must describe the potential impacts of each of the identified hazards on the community.	<ul style="list-style-type: none"> • Chapter 4.2.2 • Chapter 4.2.3
	b. The plan must provide an overall summary of each jurisdiction’s vulnerability to the identified hazards. The overall summary of vulnerability identifies structures, systems, populations or other community assets as defined by the community that are susceptible to damage and loss from hazard events. A plan will meet this sub-element by addressing the requirements described in §201.6(c)(2)(ii)(A-C).	<ul style="list-style-type: none"> • Chapter 4.2.1 • Chapter 4.2.2 • Chapter 4.2.3
B4. Does the Plan address NFIP insured structures within each jurisdiction that have been repetitively damaged by floods? 44 CFR 201.6(c)(2)(ii)	a. The plan must describe the types (residential, commercial, institutional, etc.) and estimate the numbers of repetitive loss properties located in identified flood hazard areas.	<ul style="list-style-type: none"> • Chapter 4.1.1

Element C. Mitigation Strategy

Plan Element	Plan Requirement	Location in Document
C1. Does the plan document each jurisdiction’s existing authorities, policies, programs and resources, and its ability to expand on and improve these existing policies and programs? 44 CFR 201.6(c)(3)	a. The plan must describe each jurisdiction’s existing authorities, policies, programs and resources available to accomplish hazard mitigation.	<ul style="list-style-type: none"> • Chapter 4.1.1 • Chapter 4.1.2 • Chapter 4.1.3
C2. Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? 44 CFR 201.6(c)(3)(ii)	a. The plan must describe each jurisdiction’s participation in the NFIP and describe their floodplain management program for continued compliance. Simply stating “The community will continue to comply with NFIP,” will not meet this requirement.	<ul style="list-style-type: none"> • Chapter 4.1.1
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? 44 CFR 201.6(c)(3)(i)	a. The plan must include general hazard mitigation goals that represent what the jurisdiction(s) seeks to accomplish through mitigation plan implementation.	<ul style="list-style-type: none"> • Chapter 5.1
	b. The goals must be consistent with the hazards identified in the plan.	<ul style="list-style-type: none"> • Chapter 5.1
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to	a. The plan must include a mitigation strategy that 1) analyzes actions and/or projects that the jurisdiction considered to reduce the impacts of hazards identified in the risk assessment, and 2) identifies the actions and/or projects that the jurisdiction intends to implement.	<ul style="list-style-type: none"> • Chapter 5.2.1 • Chapter 5.2.2 • Chapter 5.2.3

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<p>reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? 44 CFR 201.6(c)(3)(ii) and 44 CFR 201.6(c)(3)(iv)</p>	<p>b. Each jurisdiction participating in the plan must have mitigation actions specific to that jurisdiction that are based on the community’s risk and vulnerabilities, as well as community priorities.</p>	<ul style="list-style-type: none"> • Chapter 5.2.2
	<p>c. The action plan must reduce risk to existing buildings and infrastructure as well as limit any risk to new development and redevelopment.</p>	<ul style="list-style-type: none"> • Chapter 5.2.2
<p>C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? 44 CFR 201.6(c)(3)(iii) and 44 CFR (c)(3)(iv)</p>	<p>a. The plan must describe the criteria used for prioritizing implementation of the actions.</p>	<ul style="list-style-type: none"> • Chapter 5.2.2
	<p>b. The plan must demonstrate when prioritizing hazard mitigation actions that the local jurisdictions considered the benefits that would result from the hazard mitigation actions versus the cost of those actions.</p>	<ul style="list-style-type: none"> • Chapter 5.2.2
	<p>c. The plan must identify the position, office, department, or agency responsible for implementing and administering the action (for each jurisdiction), and identify potential funding sources and expected timeframes for completion.</p>	<ul style="list-style-type: none"> • Chapter 5.2.2 • Chapter 5.2.3
<p>C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? 44 CFR 201.6(c)(4)(ii)</p>	<p>a. The plan must describe the community’s process to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms.</p>	<ul style="list-style-type: none"> • Chapter 1.5
	<p>b. The plan must identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated.</p>	<ul style="list-style-type: none"> • Chapter 1.5
	<p>c. A multi-jurisdictional plan must describe each participating jurisdiction’s individual process for integrating hazard mitigation actions applicable to their community into other planning mechanisms.</p>	<ul style="list-style-type: none"> • Chapter 1.5
	<p>d. The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts.</p>	<p>[Not Applicable]</p>
	<p>e. The updated plan must continue to describe how the mitigation strategy, including the goals and hazard mitigation actions will be incorporated into other planning mechanisms.</p>	<p>[Not Applicable]</p>

Element E. Plan Adoption

Plan Element	Plan Requirement	Location in Document
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? 44 CFR 201.6(c)(5)	a. The plan must include documentation of plan adoption, usually a resolution by the governing body or other authority.	<ul style="list-style-type: none"> Appendix 1 [To be added after adoption]
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? 44 CFR 201.6(c)(5)	a. Each jurisdiction that is included in the plan must have its governing body adopt the plan prior to FEMA approval, even when a regional agency has the authority to prepare such plans.	<ul style="list-style-type: none"> Appendix 1 [To be added after adoption]

Additional, Descriptive Information of Compliance with Plan Requirements

Plan Requirement	Description of Compliance
B1 (a)	In Chapter 3, each natural hazard is assigned a section (e.g. Chapter 3.1). At the beginning of each section is a detailed description of the natural hazard.
B1 (c)	Subsection 2 of each section in Chapter 3 (e.g. Chapter 3.1.2) includes information on <i>Probability, Impact, Spatial Extent, Warning Time, and Duration</i> . For Erosion (Chapter 3.9), only impact (extent) and probability are described under subsection 2 (Chapter 3.9.2), for the identified vulnerable area of the region.
B1 (d)	Table 3-1 in Chapter 3.0 notes the regional location of the identified natural hazards. Chapters 4.2.2 and 4.2.3 describe the ways in which jurisdictions are <i>uniquely</i> vulnerable to the identified natural hazards, using qualitative and quantitative means.
B2 (a)	Subsection 1 of each section in Chapter 3 (e.g. Chapter 3.2.1) includes information on <i>Notable Occurrences</i> ; particularly impactful events from reliable, historic sources. Appendix 9 contains tabular data of events from the National Climatic Data Center’s <u>Storm Events Database</u> and the <u>Spatial Hazard Events and Losses Database for the United States</u> (SHELDUS) by the University of South Carolina’s Hazards and Vulnerability Research Institute.
B2 (b)	<i>Probability</i> is described in Subsection 2 of each section in Chapter 3 (e.g. 3.1.2) and is data-based, using data from the <u>Storm Events Database</u> , <u>SHELDUS</u> , and other sources.

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Chapter One: Introduction

1.0 Introduction

“Hazard mitigation” is a critical element in emergency management and serves three primary purposes: to protect people from injury and death, to protect property from harm and destruction, and to limit the cost of disaster response and recovery through project funding and coordination of services.

The 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan (The 2015 Plan) is the result of dedicated stakeholder participation, from the northeastern Connecticut towns of Ashford, Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Plainfield, Pomfret, Putnam, Scotland, Sterling, Thompson, Union, Voluntown, and Woodstock, toward strengthening the region’s resilience to natural hazard events.

The 2015 Plan was prepared by the staff of the Northeastern Connecticut Council of Governments (NECCOG), a Regional Council of Governments (RCOG) with membership from the 16 abovementioned towns (see Figures 1-1 and 1-2). NECCOG is an organization of each town’s chief elected official (CEO) and provides a forum for regional and inter-municipal planning, collaboration, and service sharing.

1.1 Why Plan?

Natural hazards present significant risks to people and property, as well as large-scale economic costs. Responding to hazards *before* they occur—as opposed to responding to hazards *as* or *after* they occur—goes a long way in reducing these risks. A natural hazard mitigation plan, approved by the Federal Emergency Management Agency (FEMA) is a prerequisite to federal funding for local mitigation projects, studies, and plans. Three grant programs allow for the opportunity to mitigate the impacts of a region or town’s identified hazards.

Each of NECCOG’s member towns participated in the planning process that resulted in the region’s natural hazard mitigation plan. In accordance with current FEMA guidelines, the planning process was facilitated by NECCOG staff, in cooperation with regional CEOs, government employees, other organizations and outside governments, the general public, and the Northeastern Connecticut Emergency Management Committee (NCEMC), a group that meets regularly, throughout the year, and consists of the 16 Emergency Management Directors (EMDs) from each town.

Development of an effective natural hazard mitigation plan requires that the region identify risks and vulnerabilities, and develop strategies to lessen or eliminate the effects of selected hazards. In addition, the region can realize the following benefits:

Figure 1-1: NECCOG in Relation to Major Cities

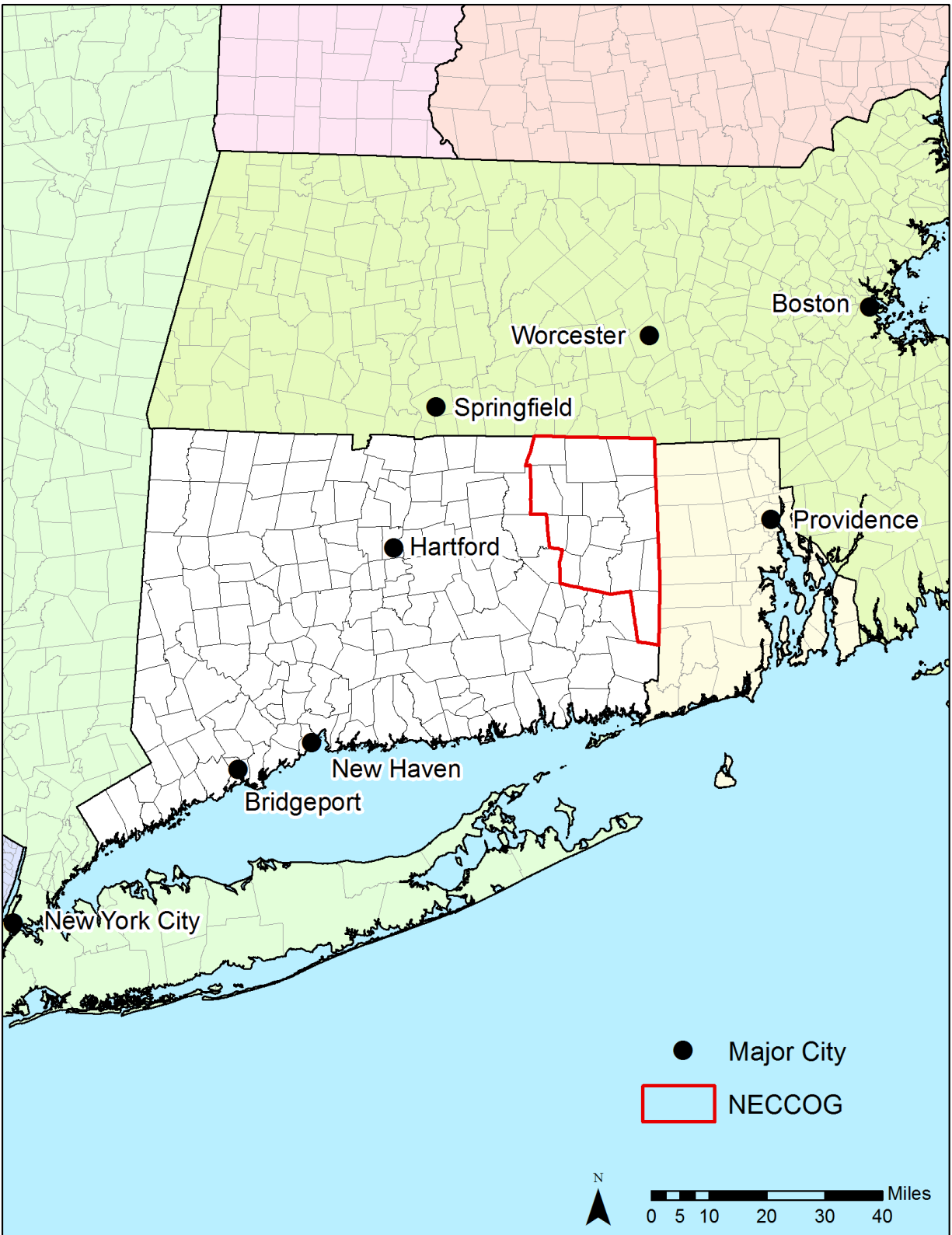
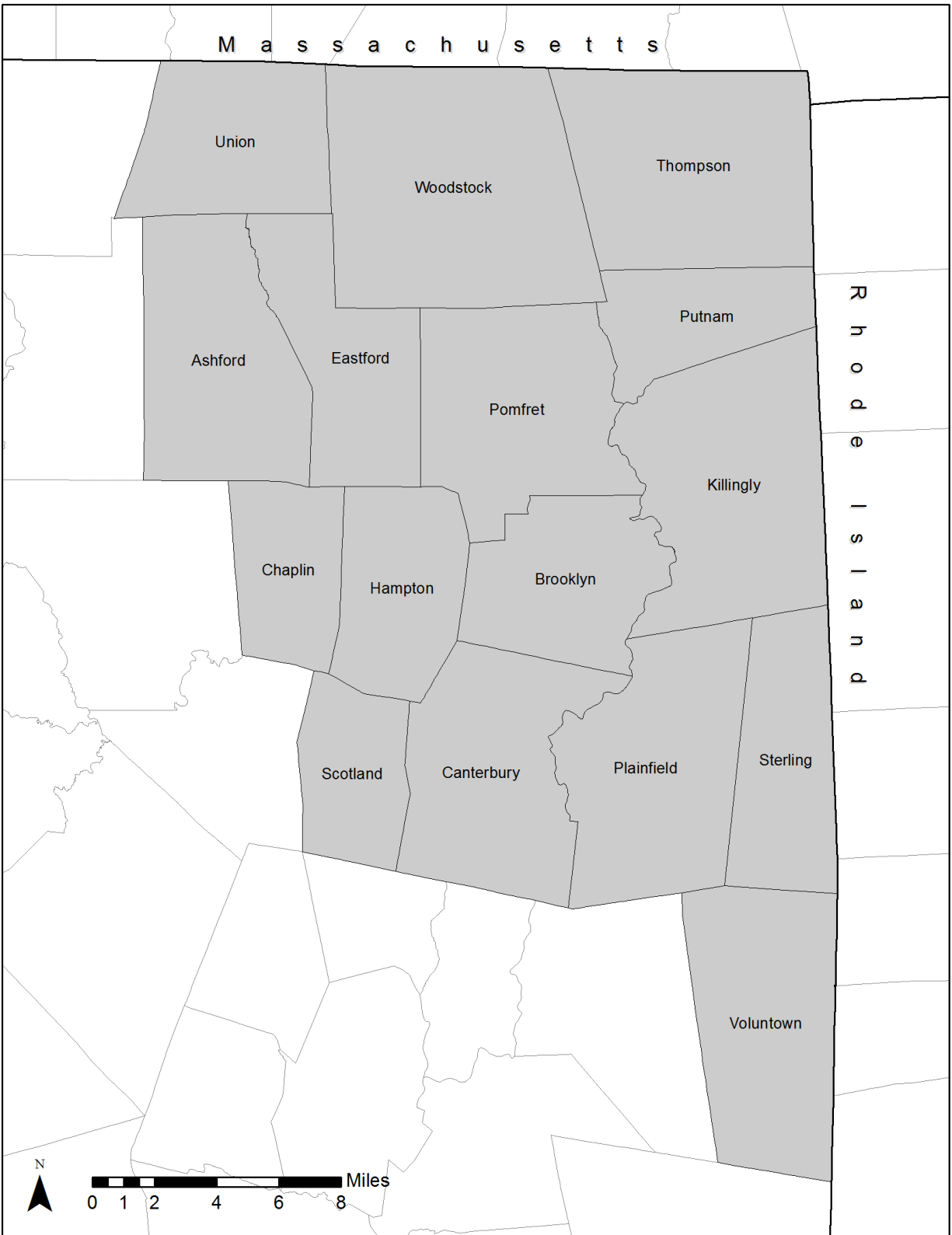


Figure 2-2: NECCOG Member Towns



- **Identification of Hazards-** Identification and risk assessment of hazards provides an effective means for the implementation of funding for risk-reduction projects, development of regulatory standards and policies to address the hazards, and articulating the region's needs to other levels of government when funding becomes available.
- **Increased Public Awareness of Natural Hazards-** Mitigation planning serves to help residents better understand the threat to public health, safety, and welfare, economic vitality, and the operational capability of critical infrastructure. It expands understanding of potential risk reduction measures to include structural and regulatory tools, where available, such as ordinances and building codes.
- **Reduction of Impact-** Hazard mitigation can reduce the impacts of natural disasters in the region. Personal injury, loss of life, and monetary losses can be reduced.
- **Building Partnerships-** Mitigation planning helps to build partnerships with diverse stakeholders, increasing opportunities to leverage data and resources in reducing workloads, as well as achieving shared community objectives.
- **Compliance Assurance-** This Plan ensures that the region and its member towns are compliant with the Federal Disaster Mitigation Act of 2000 (DMA 2000) and are eligible to apply for and receive Hazard Mitigation Assistance (HMA) funds.

1.2 Review of Past and Recent Documents

Between the years of 2011 and 2013, NECCOG staff drafted and submitted the 2013 Northeastern Connecticut Natural Hazard Mitigation Plan draft (The 2013 Plan draft). In the month of October, 2013, the Connecticut Department of Energy and Environmental Protection (DEEP) and FEMA reviewed the draft but the document did not meet final approval by FEMA. The drafted document was able to serve as a foundation for The 2015 Plan. Additionally, FEMA's review process resulted in constructive feedback which allowed staff to specifically tailor the design of The 2015 Plan to meet federal requirements.

In preparation for The 2015 Plan, NECCOG staff also reviewed multi-jurisdictional plans, state plans, and local plans from Connecticut, neighboring states, and beyond. A review of nearby plans provided important data, while plans from similarly sized regions allowed for the development of a streamlined approach, based on each document's best qualities. The most important, reviewed documents were:

- **Northeastern Connecticut Council of Governments:** 2013 Northeastern Connecticut Natural Hazard Mitigation Plan (draft).
- **Windham Region Council of Governments (WINCOG):** 2007 Pre-Disaster Natural Hazards Mitigation Plan; 2012 Pre-Disaster Natural Hazards Mitigation Plan (draft).
- **Southeastern Connecticut Council of Governments (SCCOG):** Southeastern Connecticut Council of Governments Multi-Jurisdictional Hazard Mitigation Plan Update (2012).
- **Capitol Region Council of Governments (CRCOG):** 2013-2018 Capitol Region Natural Hazards Mitigation Plan Update.
- **Androscoggin Valley Council of Governments (AVCOG):** Androscoggin County Hazard Mitigation Plan (2011). AVCOG is in Androscoggin County, Maine.

- **Huron County, Ohio:** Huron County Multi-Jurisdictional Hazard Mitigation Plan 2011-2016.
- **State of Connecticut:** 2014 Connecticut Natural Hazards Mitigation Plan Update.
- **State of Rhode Island:** 2014 Rhode Island Hazard Mitigation Plan Update.
- **Commonwealth of Massachusetts:** Commonwealth of Massachusetts State Hazard Mitigation Plan (2013).
- **Local Communities:** Local Plans of Conservation and Development (POCDs), as well as zoning regulations, subdivision regulations, inland wetlands regulations, codes of ordinances, and other documents. These documents allowed for a proper assessment of present and future vulnerability.
- **FEMA Guidance Documents:** A number of guidance documents, available through FEMA were used in the drafting and planning processes. The most important of which was Multi-Jurisdictional Mitigation Planning.

Plans from the Windham Region Council of Governments (WINCOG) and the Southeastern Connecticut Council of Governments (SCCOG) served twofold because they also aided important data needs for four towns in the NECCOG region: Chaplin, Hampton, Scotland, and Voluntown.

1.3 Formation of a Regional Plan

Congress, in response to the national need to prepare for natural disasters, enacted the Disaster Mitigation Act of 2000¹ to establish a unified national hazard mitigation program. This act (which updated earlier preparedness acts) placed new emphasis on hazard mitigation planning in state and local units of government, requiring adoption of mitigation plans as a prerequisite for certain assistance programs. FEMA has implemented local and multi-jurisdictional planning requirements through federal regulations (44 CFR §201). FEMA also provides a publication, Multi-Jurisdictional Mitigation Planning, to guide county governments and regional planners to meet the requirements of 44 CFR §201.6. All plans in Connecticut are submitted to Connecticut Department of Emergency Services and Public Protection, Division of Emergency Management and Homeland Security (DEMHS) for initial review, with DEMHS then forwarding the plans to the Federal Emergency Management Agency, Region I office in Boston, Massachusetts for their review, correction, and subsequent determination of compliance with regulations.

The following programs will become available to NECCOG member towns, pending approval of a hazard mitigation plan:

- **Pre-Disaster Mitigation Program (PDM)** - This program was put in place to preemptively plan for natural disasters, negating the need for federal assistance in recovery. Eligible projects include: Voluntary acquisition of real property for open space; elevation of existing public or private structures; retrofitting existing structures to meet building codes; construction of safe rooms for public or private structures that meet certain FEMA requirements; hydrologic and hydraulic studies/analyses, engineering and drainage studies for project design and feasibility; vegetation management; protective measures for utilities,

¹ This Act also covers man-made disasters

water, sewer, roads and bridges; storm water management to reduce/eliminate long-term flood risk; and dam or levee rehabilitation, replacement, or removal.

- **Hazard Mitigation Grant Program (HMPG)** - This program is designed to assist in mitigation project implementation, directly following a natural disaster, to reduce risks from future disasters. Eligible projects include, but are not limited to, hazard mitigation planning, generator purchases, infrastructure retrofitting, and minor flood reduction projects.
- **Flood Mitigation Assistance Program (FMA)** - This program assists in the implementation of cost-effective measures to reduce or eliminate long-term risk of flood damage to NFIP-insured structures. Eligible projects include, but are not limited to, property acquisition and structure elevation, demolition, or relocation, dry flood-proofing, and minor structural flood control activities.

1.3.1 Planning Process

The planning process for The 2013 Plan draft proved valuable in developing a scope of hazard mitigation planning that serves the needs of municipalities in northeastern Connecticut. The 2015 Plan built off of The 2013 Plan draft and additional information was sought from the general public, town employees, EMDs, CEOs, as well as outside sources. The body of The 2015 Plan was compiled between August, 2014 and December, 2014. The NCEMC and NECCOG were the two groups at the center of the planning process. Stakeholders in the planning and construction of The 2013 Plan draft and The 2015 Plan were:

- **Northeastern Connecticut Emergency Management Committee-** For both The 2013 Plan draft and The 2015 Plan, the committee was actively involved in providing data, identifying natural hazards, communicating with town governments, providing Local Mitigation Actions, and coordinating meetings. Two NCEMC meetings overlapped with the drafting process of The 2015 Plan (see [Table 1-4](#) and [Appendix 2](#)). Results of the previous planning process were reviewed at the September, 2014 meeting.
- **Northeastern Connecticut Council of Governments:** CEOs from each member town comprise the Northeastern Connecticut Council of Governments. CEOs were valuable in providing data, coordinating meetings, reviewing the plan, proposing Local Mitigation Actions, and identifying hazards (see [Table 1-4](#)). When needed, CEOs were able to offer support relative to the plan and will be integral in accomplishing Regional Goals and Objectives.
- **General Public-** In preparation for The 2013 Plan draft, NECCOG staff held public, informational meetings in the towns of Thompson, Sterling, Plainfield, and Pomfret. In October and November, 2014, a NECCOG staff member, often accompanied by a local EMD and/or CEO, held a public, informational meeting in *each* member town (see [Table 1-3](#) and [Appendix 2](#)). These meetings provided a forum for public participation when assessing regional vulnerability and considering Local Mitigation Actions. Additionally, the public was able to view and comment on the working draft of the plan through the NECCOG website (see [Appendix 5](#)). Beginning in October, draft chapters were continually updated and available for public consumption. The public was invited to offer feedback and local data by contacting a NECCOG staff member or completing a structured questionnaire (see [Appendix 3](#)); however, it was not used. Moreover, the public was made aware of NECCOG's planning

efforts by local press. Local radio station, WINY, and local newspapers, The Reminder and The Willimantic Chronicle, attended meetings in Putnam, Plainfield, and Ashford, respectively, and ran stories on The 2015 Plan (see [Appendix 6](#)).

- Outside Entities:** During the initial planning process, in 2011 and 2012, information about planning meetings were posted on the NECCOG website, inviting participation. Additionally, a number of outside entities attended early planning meetings (see [Table 1-1](#) and [Appendices 5](#)). Prior to submittal of The 2015 Plan, NECCOG staff contacted a broad group of outside stakeholders to view a working draft of The 2015 Plan and was offer specific input. Participation was sought from EMDs from the neighboring, Connecticut towns of Stafford, Willington, Mansfield, Windham, Sprague, Lisbon, Griswold, and North Stonington, as well as staff from the Southeastern Connecticut Council of Governments, the Capital Region Council of Governments, Central Massachusetts Regional Planning Commission, the Pioneer Valley Planning Commission, and the Rhode Island Division of Planning (see [Appendix 7](#)).

Table 1-1: Outside Stakeholder Attendance at Planning Meetings

Organization	Title
Northeastern District Department of Health	Emergency Preparedness Coordinator
Connecticut DESPP, DEMHS	Region 4 Coordinator
American Red Cross	Disaster Action Team Leader and Government Liaison
Northeast Utilities, Connecticut Light & Power (Eversource Energy)	Community Relations Specialist
Federal Emergency Management Agency	Mitigation/Tribal Specialist
Thames Valley Council for Community Action	Chief Operations Officer
Day Kimball Hospital Homecare	Director, Day Kimball HomeCare

Hazard Identification

In 2012, in preparation for The 2013 Plan draft, NECCOG staff sought participation from the NCEMC and the Northeastern Connecticut Council of Governments’ CEOs in identifying the region’s natural hazards. Following November 2012 NCEMC Meeting and NECCOG’s October 2012 Regular Meeting, both parties were asked to subjectively assess risk factors associated with natural hazards identified in the [2014 Connecticut Natural Hazards Mitigation Plan Update](#) and WINCOG’s [2007 Pre-Disaster Natural Hazards Mitigation Plan](#). This risk assessment was conducted with the use of a Natural Hazard Identification and Risk Assessment Matrix (NHIRAM) (see [Appendix 4](#)) that used the criteria of “hazard frequency”, “hazard probability”, “health and public safety [risks]”, “home damage”, “business disruption”, “public expenditures”, “magnitude of population at risk”, “magnitude of homes at risk”, and “magnitude of businesses at

risk” to compare flooding, drought, hail, high wind, tropical cyclones, lightning, heavy rain, winter storms, temperature extremes (heat and cold), tornadoes, wildfires, earthquakes, ice jams, and dam failures. The NHIRAM also allowed these stakeholders to input additional hazards, for consideration in the coming plan.

Table 1-2: Outside Stakeholder Involvement through E-mail

Organization/Jurisdiction	Involvement
Town of Stafford	Emergency Management Director
Town of Willington	Emergency Management Director
Town of Mansfield	Emergency Management Director
Town of Windham	Emergency Management Director
Town of Sprague	Emergency Management Director
Town of Lisbon	Emergency Management Director
Town of Griswold	Emergency Management Director
Town of North Stonington	Emergency Management Director
Capital Region Council of Governments	Staff via Executive Director
Southeastern Connecticut Council of Governments	Staff via Executive Director
Central Massachusetts Regional Planning Commission	Staff via Executive Director
Pioneer Valley Planning Commission	Staff via Executive Assistant
Rhode Island Department of Administration, Division of Planning	Staff via Associate Director
The Last Green Valley, Inc.	Staff via Common E-Mail Address

The 2015 Plan addresses the following, region-wide hazards, identified in the abovementioned process: Flooding, wind, lightning, thunderstorms, winter storms/nor’easters, tropical cyclones, tornadoes, drought, hail, and earthquakes. In addition, The 2015 Plan was expanded to include erosion, specifically for the town of Putnam, due to an identified and impactful threat of fluvial erosion (see [Appendix 8](#)).

Table 1-3: Public Meeting Dates and Attendance

Town	Meeting Date	Attendance*	Media	Meeting Format
Eastford	October 6, 2014	7		Board of Selectmen Meeting
Scotland	October 8, 2014	9		Board of Selectmen Meeting
Pomfret	October 20, 2014	7		Board of Selectmen Meeting
Union	October 20, 2014	6		Informational NECCOG Meeting
Brooklyn	October 22, 2014	3		Informational NECCOG Meeting
Hampton	November 3, 2014	2		Informational NECCOG Meeting
Putnam	November 5, 2014	2	WINY Radio	Informational NECCOG Meeting
Woodstock	November 6, 2014	11		Board of Selectmen Meeting
Chaplin	November 6, 2014	5		Board of Selectmen Meeting
Sterling	November 10, 2014	1		Informational NECCOG Meeting
Plainfield	November 12, 2014	2	The Reminder	Informational NECCOG Meeting
Thompson	November 13, 2014	4		Informational NECCOG Meeting
Canterbury	November 17, 2014	0		Informational NECCOG Meeting
Ashford	November 19, 2014	4	The Willimantic Chronicle	Informational NECCOG Meeting
Killingly	November 20, 2014	8		Special Meeting of the Town Council
Voluntown	November 24, 2014	2		Informational NECCOG Meeting

*Attendance includes town personnel and does not include NECCOG staff

Table 1-4: NECCOG and NCEMC Meeting Dates and Content

Meeting Date	Meeting Type	Meeting Content	Media
September 30, 2011	Regular NECCOG Meeting	Inclusion of work into the 2011-2012 NECCOG Budget and Work Plan	WINY Radio
November 15, 2011	NCEMC Meeting	Overview of planning process and distribution of the NHIRAM	WINY Radio, Villager Newspapers
February 7, 2012	Special meeting held by NECCOG	Natural Hazard Identification and discussion of all hazards	
March 23, 2012	Regular NECCOG Meeting	Discussion of the status of The 2013 Plan draft and the planning process	WINY Radio
April 27, 2012	Regular NECCOG Meeting	Update regarding progress of The 2013 Plan draft	WINY Radio
October 26, 2012	Regular NECCOG Meeting	Discussion of specific natural hazards and hazard identification using NHIRAM	WINY Radio
November 13, 2012	NCEMC Meeting	Draft plan distributed for review. EMDs asked to provide potential mitigation projects (Local Mitigation Actions) for inclusion in the plan's Mitigation Strategy	
November 30, 2012	Regular NECCOG Meeting	Draft plan distributed for review. CEOs asked to provide potential mitigation projects (Local Mitigation Actions) for inclusion in the plan's Mitigation Strategy	WINY Radio
January 8, 2013	NCEMC Meeting	Review of Goals and Objectives. Additional Local Mitigation Actions sought for inclusion in the plan's Mitigation Strategy	
March 12, 2013	NCEMC Meeting	Additional Local Mitigation Actions sought for inclusion in the plan's Mitigation Strategy	
August 22, 2014	Regular NECCOG Meeting	Announcement of intent to draft The 2015 Plan as a continuation of The 2013 Plan draft	WINY Radio
September 9, 2014	NCEMC Meeting	Review of natural hazards identified in, and adopted from, The 2013 Northeastern Connecticut Natural Hazard Mitigation Plan draft. Review of the needs for The 2015 Plan	
September 26, 2014	Regular NECCOG Meeting	Discussion of progress of The 2015 Plan and specific needs from each member town	WINY Radio
October 24, 2014	Regular NECCOG Meeting	Discussion of progress of The 2015 Plan and specific needs from each member town	WINY Radio
November 18, 2014	NCEMC Meeting	Brief update regarding the drafting and planning process for The 2015 Plan	WINY Radio
December 4, 2014	Regular NECCOG Meeting	Official endorsement, from the Northeastern Connecticut Council of Governments, of the draft of The 2015 Plan	WINY Radio

1.4 Plan Maintenance Strategy

To ensure the success of an ongoing program, it is critical that The 2015 Plan remain relevant to the changing needs of the region. To do this, members of the NCEMC and NECCOG must continually offer feedback on the progress of the plan, relative to their own towns. Mitigation actions, goals, and objectives, identified in the plan, are meant to guide jurisdictional and multi-jurisdictional efforts. Information regarding the completion, planning, deferment, or elimination of mitigation actions identified in [Chapter 5.2](#) is crucial to keeping the plan current. The 2015 Plan should be viewed as a “living document” that changes with the conditions of the region.

Table 1-5: Timeline for Maintaining The 2015 Plan and Drafting The 2020 Update

Process	Timeline	Description
Plan Evaluation and Monitoring	2015 - 2019	Regular meetings with CEOs and EMDs result in ideas for improvement to The 2015 Plan and allow NECCOG staff to monitor the progress of Local Mitigation Actions
Commence Planning for The 2020 Update	2017	NECCOG staff begin scheduling public meetings and detailing an outline of the draft of The 2020 Update
Plan Drafting and Review	2018	NECCOG staff prepare a draft, using up-to-date information, of The 2020 Update and conduct 16 public meetings in each member town
Final Drafting and Submittal	2019	NECCOG staff complete a final draft of The 2020 Update and submit to DEMHS and FEMA for initial review, making amendments as needed
Continued Coverage	2020 - 2024	NECCOG member towns continue coverage under an up-to-date plan, through 2024

Evaluating and Monitoring the Current Plan

It will be the responsibility of NECCOG staff and the NCEMC to continually monitor the progress of the plan and complete a holistic review the document on a yearly basis. NECCOG staff will stay track the status of projects by meeting with the NCEMC once every two months, or as needed, and maintaining contact with CEOs, other town officials, and town employees. Meetings will also serve the planning process by providing insight to needed amendments and ideas for the next plan update. NECCOG staff members responsible for hazard mitigation planning are: Executive Director, Associate Director, and Regional Project Analyst. Additional staff may be added to assist in hazard mitigation planning.

Public Participation

Public participation in the ongoing planning process will be facilitated through the NECCOG website, local EMDs, and NECCOG meetings. The public will be able to view the final draft of the plan and monitor its progress on the NECCOG website, and are invited to contact the NECCOG staff member(s) responsible for maintaining records of public input. The public is always invited to raise town-specific concerns, regarding the plan, with their local EMD and/or dedicated commission, with the information being relayed to NECCOG staff. Additionally, the public is always welcomed to attend a regular meeting of the Northeastern Connecticut Council of Governments, held monthly.

Updating the Plan

Guidelines require that updated plans be submitted for approval on a five-year cycle in order to preserve funding eligibility. Given the short-term nature of hazard mitigation planning, it is imperative that the process for updating The 2015 Plan be viewed as continuous with plan evaluation and monitoring—all taking place in one cycle.

The next anticipated update of the region’s plan is for the year 2020. “The 2020 Update” will likely follow a similar planning process and outline to The 2015 Plan, making deviations when needed, and will be expanded to better address climate change and possibly man-made hazards. Once again, 16 public meetings will be held in NECCOG’s member towns during this process. The 2020 Update will also include a section that inventories all progress made, and Local Mitigation Actions and Regional Mitigation Actions accomplished or underway, since the completion of The 2015 Plan. It is the intention of NECCOG and its member towns to implement as many actions, identified in [Chapter 5.2](#), as possible, while The 2015 Plan is active.

1.5 Plan Integration and Adoption

All participating municipalities must adopt the multi-jurisdictional hazard mitigation plan for that plan to receive final, federal approval. Multi-jurisdictional plans must also include a discussion of how the document will be integrated into municipal operations, town planning mechanisms, and regulatory powers.

After FEMA issues an Approval Pending Adoption, NECCOG will send adoption resolutions to each of its 16 towns for CEOs to sign at that town’s Board of Selectmen’s Meeting or Meeting of the Town Council. See [Figure 1-3](#) for a sample adoption resolution. Upon adoption, a copy of each, signed resolution will be appended to The 2015 Plan. Prior to adoption, blank resolution templates are located in the first appendix (see [Appendix 1](#)).

Proceeding plan adoption, NECCOG staff shall assist each town’s CEO in eliciting involvement from boards, commissions, and departments that have interests and responsibilities relevant to the hazard mitigation process. Letters will be sent to the heads of each party, requesting involvement in, and espousal of, the goals and objectives of the plan. It is intended that all boards, commissions, and departments integrate the plan into their routine practices, regulatory authorities, and appropriate town documents, such as a Plan of Conservation and Development. See [Figures 1-4 and 1-5](#) for examples of letters that may be sent to elicit involvement.

Municipal Adoption Resolution Template

Resolution Adopting the *2015 Northeastern
Connecticut Council of Governments Regional Hazard Mitigation Plan*

WHEREAS, the Town of _____ Town Council/Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of _____; and

WHEREAS, the Town of _____ in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of _____ and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of _____ to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of _____ Town Council/Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of _____'s section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan

NOW, THEREFORE, BE IT RESOLVED, that the Town of _____ Town Council/Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Figure 1-3: Sample adoption resolution

Sample Letter to Pomfret Public Works,

As of January, 2015, the Northeastern Connecticut Council of Governments holds an approved *natural hazard mitigation plan* through the Federal Emergency Management Agency. As part of the Northeastern Connecticut Council of Governments, Pomfret formally adopted the natural hazard mitigation plan on January X, 2015; attached is a copy of Pomfret's adoption resolution.

In addition to enabling opportunities for federal hazard mitigation funding, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan addresses the need for local communities to enhance hazard mitigation efforts through daily practices and capital improvements. The following regional goals and objectives were established by the Regional Hazard Mitigation Planning Committee, comprised of local Emergency Management Directors:

- | | | |
|-------------------|-------------------|---------------------|
| ▪ Goal One | ▪ Goal Two | ▪ Goal Three |
| ▪ Objective One | ▪ Objective One | ▪ Objective One |
| ▪ Objective Two | ▪ Objective Two | ▪ Objective Two |
| ▪ Objective Three | ▪ Objective Three | ▪ Objective Three |

We are calling on all departments, boards, and commissions to integrate the goals and objectives of this plan into future and existing documents and regular procedures. It should also be understood that this plan is available as a reference for decision making when needed. We ask that the Pomfret Department of Public Works develop ways in which regular procedures can be modified or expanded to better serve regional hazard mitigation goals and objectives. Example actions include: monthly inspection of storm drains for jamming debris and sediment; or consideration of road management practices that reduce surface runoff from rainwater.

Support from the Pomfret Department of Public Works is integral in meeting the regional goals and objectives of plan. The Northeastern Connecticut Council of Governments and the Regional Hazard Mitigation Planning Committee thank you for your participation.

Sincerely,

Staff Contact, Title- Northeastern Connecticut Council of Governments

First name Last name

First name Last name, Emergency Management Director- Town of Pomfret

First name Last name

Figure 1-4: Sample letter to the Pomfret Public Works Department

Sample Letter to Woodstock Planning and Zoning Commission,

As of January, 2015, the Northeastern Connecticut Council of Governments holds an approved *natural hazard mitigation plan* through the Federal Emergency Management Agency. As part of the Northeastern Connecticut Council of Governments, Woodstock formally adopted the natural hazard mitigation plan on January X, 2015; attached is a copy of Woodstock's adoption resolution.

In addition to enabling opportunities for federal hazard mitigation funding, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan addresses the need for local communities to enhance hazard mitigation efforts through daily practices and capital improvements. The following regional goals and objectives were established by the Regional Hazard Mitigation Planning Committee, comprised of local Emergency Management Directors:

- | | | |
|-------------------|-------------------|---------------------|
| ▪ Goal One | ▪ Goal Two | ▪ Goal Three |
| ▪ Objective One | ▪ Objective One | ▪ Objective One |
| ▪ Objective Two | ▪ Objective Two | ▪ Objective Two |
| ▪ Objective Three | ▪ Objective Three | ▪ Objective Three |

We are calling on all departments, boards, and commissions to integrate the goals and objectives of this plan into future and existing documents and regular procedures. It should also be understood that this plan is available as a reference for decision making when needed. We ask that the Woodstock Planning and Zoning Commission develop ways in which regular procedures can be modified or expanded to better serve regional hazard mitigation goals and objectives. Additionally, we ask that, as the commission charged with comprehensive planning, the Woodstock Planning and Zoning Commission integrate the goals, objectives, activities, and information laid out in the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan into next update of the Woodstock Plan of Conservation and Development.

Support from the Woodstock Planning and Zoning Commission is integral in meeting the regional goals and objectives of plan. The Northeastern Connecticut Council of Governments and the Regional Hazard Mitigation Planning Committee thank you for your participation.

Sincerely,

Staff Contact, Title- Northeastern Connecticut Council of Governments
First name Last name

First name Last name, Emergency Management Director- Town
First name Last name

Figure 1-5: Sample letter to the Woodstock Planning and Zoning Commission

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Chapter Two: The Region

2.0 The Region

The region making up the Northeastern Connecticut Council of Governments (NECCOG) borders Rhode Island (Washington, Kent, and Providence Counties) to the east and Massachusetts (Hampton and Worcester Counties) to the north. NECCOG member towns are mostly located in Windham County; with the exceptions of Voluntown (New London County) and Union (Tolland County). The region abuts the Connecticut towns of Stafford, Willington, Mansfield, Windham, Sprague, Lisbon, Griswold, and North Stonington. The only town in Windham County that is not a member of NECCOG is Windham.

Much of the region has been defined, both culturally and geographically, by the Quinebaug River and its tributaries. Eleven mill villages can be found along the Route 12 corridor, mostly on the Quinebaug River and in various states of decline and rebirth. In some small hubs along Interstate 395, modern commercial developments and industrial land uses have replaced these mill villages as centers of commerce and employment. Away from the river, colonial village centers and a rural landscape lend the region its nicknames: “The Last Green Valley” and the “Quiet Corner”. Most of the region is forested—over 70%—and agriculture is present and persistent. Because of this, at least some portion of every town retains a distinct rural character.

2.1 Demographics and Economy

Data in this section was taken from numerous sources and was studied to gain an understanding of the economic and social conditions that create the context for hazard mitigation planning in northeastern Connecticut. Used for its accuracy and reliability, 2010 Decennial Census¹ data was employed to provide snapshots of racial/ethnic demographics, 2010 population, and selected housing characteristics. The Connecticut State Data Center² contained population projections as well as historic census data for each town. Recent workforce and employment figures were available through the Connecticut Department of Labor^{3,4} (DOL), by Labor Market Area (LMA).

The region, for more than forty years, and especially during the past twenty years, has grown in population, housing units, and businesses. The reasons for growth are tied to the strategic location of the region, relatively low costs for land and housing, and affordable labor. The region is a convenient distance from New England’s largest metropolitan areas: Providence, Worcester, and Boston. These cities are more often the connection for work, culture, and commerce than any large urban area in Connecticut. The 2010 Census designated much of I-395 corridor (parts of, Woodstock, Putnam, Pomfret, Killingly, Brooklyn and Plainfield) as part of the Worcester Urban Area. Boston and its suburbs can be reached in about one hour and Providence and Worcester are,

¹ United State Census Bureau, *2010 Census Summary File 1 Connecticut*

² Connecticut State Data Center at the University of Connecticut Libraries Map and Geographic Information Center, *2015-2025 Population Projections for Connecticut at State, County, Regional Planning Organization, and Town Levels*

³ Connecticut Department of Labor, *Labor Market Area Information*

⁴ Connecticut Department of Labor, *Labor Market Area Information*

respectively, forty-five minutes and thirty minutes from most of the region’s people. Many new residents have moved to northeastern Connecticut because of its access to these three metro areas while affording them a rural lifestyle and a choice of affordable housing options. Within Connecticut, the region is approximately one hour from the greater Hartford and Groton-New London areas, and the state’s two tribal casinos, Mohegan Sun and Foxwoods, can be reached in under one hour. Northeastern Connecticut is also one of the few places in southern New England where a full spectrum of workers can find housing that fits their financial requirements.

Population and Housing

Table 2-1: Historic and Projected Population Growth

Town	1970	1980	1990	2000	2010	2015	2020	2025	15 Year Growth
Ashford	2,156	3,221	3,765	4,107	4,317	4,413	4,483	4,521	4.7%
Brooklyn	4,965	5,691	6,681	7,176	8,210	8,671	9,079	9,474	15.4%
Canterbury	2,673	3,426	4,467	4,702	5,132	5,332	5,483	5,607	9.3%
Chaplin	1,621	1,793	2,048	2,251	2,305	2,293	2,262	2,202	-4.5%
Eastford	922	1,028	1,314	1,617	1,749	1,822	1,871	1,903	8.8%
Hampton	1,129	1,322	1,578	1,760	1,863	1,889	1,894	1,878	0.8%
Killingly	13,573	14,519	15,889	16,488	17,370	17,738	17,974	18,080	4.1%
Plainfield	11,957	12,774	14,363	14,626	15,405	15,759	15,992	16,130	4.7%
Pomfret	2,529	2,775	3,102	3,803	4,247	4,473	4,678	4,876	14.8%
Putnam	8,598	8,580	9,031	9,002	9,584	9,935	10,245	10,478	9.3%
Scotland	1,022	1,072	1,215	1,557	1,726	1,783	1,820	1,833	6.2%
Sterling	1,853	1,791	2,357	3,099	3,830	4,168	4,472	4,742	23.8%
Thompson	7,580	8,141	8,668	8,879	9,458	9,733	9,924	10,073	6.5%
Union	443	546	612	694	854	912	956	995	16.5%
Voluntown	1,452	1,637	2,113	2,530	2,603	2,590	2,543	2,474	-5.0%
Woodstock	4,311	5,117	6,008	7,242	7,964	8,324	8,607	8,862	11.3%
Total	66,784	73,433	83,211	89,533	89,533	99,835	102,283	104,128	16.3%

Source: Connecticut State Data Center at the University of Connecticut Libraries Map and Geographic Information Center, 2015-2025 Population; United States Census Bureau, 2010 Census Summary File 1 Connecticut

According to the 2010 Decennial Census, the region’s 16 towns were home to 96,617 people. The four towns along the I-395 corridor, Killingly (17,370), Plainfield (15,405), Putnam (9,584), and Thompson (9,458), accounted for 51,817 people, about 54% of the region’s residents. These four towns were the most populous, with Brooklyn (8,210) and Woodstock (7,964) also having relatively large populations. The three least-populous towns were Union (854), Scotland (1,726), and Eastford (1,749).

NECCOG towns’ populations are projected to climb slowly and steadily for the rest of the quarter century (see [Table 2-1](#)). According to the Connecticut State Data Center, most towns should experience consistent population increases; however Chaplin and Voluntown are expected to decrease in size over the next eleven years. UConn also predicts that Sterling (23.8%), Union (16.5%), Brooklyn (15.4%), Pomfret (14.8%), and Woodstock (11.3%) will experience the sharpest increases in population. Approximately 8.9% of the region’s population is 70 years or older.

The slow and steady population change of the region, coupled with its lack of high-activity urban centers, lends itself to relatively homogenous racial and ethnic characteristics. In 2010, NECCOG towns were 95.47% White/Hispanic. In the entire state of Connecticut, White and Hispanic

Table 2-2: Selected Demographic Characteristics

Town	2010 Population	White/Hispanic	Black/African American	Asian	American Indian	70 Years and Older	70 Years and Older
Ashford	4,317	94.09%	1.04%	1.34%	0.37%	302	7.00%
Brooklyn	8,210	92.63%	2.94%	1.07%	0.29%	831	10.12%
Canterbury	5,132	95.65%	1.11%	0.68%	0.41%	351	6.84%
Chaplin	2,305	94.75%	1.13%	0.26%	0.26%	199	8.63%
Eastford	1,749	96.05%	0.17%	0.97%	0.29%	159	9.09%
Hampton	1,863	96.08%	0.16%	0.86%	0.48%	164	8.80%
Killingly	17,370	93.11%	1.51%	1.80%	0.42%	1,734	9.98%
Plainfield	15,405	93.58%	1.15%	1.03%	0.57%	1,338	8.69%
Pomfret	4,247	95.69%	0.61%	1.62%	0.14%	326	7.68%
Putnam	9,584	94.09%	1.31%	1.01%	0.63%	1,059	11.05%
Scotland	1,726	97.10%	0.58%	0.35%	0.23%	120	6.95%
Sterling	3,830	96.01%	0.47%	0.78%	0.84%	171	4.46%
Thompson	9,458	95.94%	0.60%	0.69%	0.40%	931	9.84%
Union	854	95.08%	0.47%	0.47%	0.35%	91	10.66%
Voluntown	2,603	95.39%	0.54%	0.61%	0.73%	177	6.80%
Woodstock	7,964	97.23%	0.38%	0.74%	0.31%	680	8.54%
Total	96,617	N/A	N/A	N/A	N/A	8,633	N/A
Average	6,039	94.57%	1.14%	1.07%	0.44%	540	8.94%
Connecticut	3,574,097	77.57%	10.14%	3.79%	0.31%	357,278	10.00%

Source: Source: United States Census Bureau, 2010 Census Summary File 1 Connecticut

persons made up only 77.57% of the population while Black/African American persons accounted for 10.14% of the population. In NECCOG towns, in 2010, 1.14% of the population were Black/African American. The NECCOG region also had a lower-than-average Asian population; only 1.07%, compared to the state’s 3.79%. American Indian, however, accounted for a higher-than-average 0.44% of the region’s population—compared to the state’s share of 0.31%. For a comprehensive inventory of town-by-town racial/ethnic statistics, see [Table 2-2](#).

According to the 2010 Decennial Census, the region was home to 37,240 housing units (see [Table 2-3](#)). Approximately 75% of these housing units were owner-occupied and approximately 25% were renter occupied. Home ownership in the NECCOG region greatly exceeds the state average.

Special Populations

Elderly and disabled populations are often at considerable risk during natural hazard events. As a whole the region has fewer elderly and disabled persons than the state of Connecticut (see [Tables 2-2 and 2-3](#)); however, a number of towns deviate from this rule. Elderly and disabled populations are important to note when planning for hazards.

Table 2-3: Estimated Share of Non-Institutionalized Civilian Population with Disability or Impairments

Town	Disability Status	Hearing Difficulty	Vision Difficulty	Cognitive Difficulty	Ambulatory Difficulty	Self-care Difficulty	Independent Living Difficulty
Ashford	4.4%	1.9%	2.4%	1.6%	2.0%	2.4%	3.3%
Brooklyn	4.9%	3.0%	3.7%	3.3%	3.2%	3.3%	3.6%
Canterbury	4.5%	3.8%	4.1%	4.0%	4.0%	3.8%	2.7%
Chaplin	4.0%	2.9%	3.3%	2.1%	2.4%	2.1%	3.1%
Eastford	4.3%	1.5%	2.7%	2.3%	2.1%	2.4%	2.8%
Hampton	4.3%	2.3%	3.2%	2.6%	2.7%	2.7%	1.6%
Killingly	4.1%	2.4%	2.7%	2.8%	2.4%	2.6%	2.4%
Plainfield	4.0%	2.7%	3.1%	2.9%	2.8%	2.9%	3.6%
Pomfret	4.9%	3.5%	3.5%	4.1%	4.0%	4.1%	3.3%
Putnam	5.5%	4.5%	4.8%	4.5%	4.6%	4.7%	4.5%
Scotland	1.6%	0.2%	0.2%	0.3%	0.3%	0.5%	1.5%
Sterling	2.7%	1.6%	1.4%	1.6%	1.6%	1.6%	1.7%
Thompson	2.8%	1.4%	1.8%	1.8%	1.5%	1.5%	1.4%
Union	4.4%	3.1%	3.4%	3.1%	3.7%	3.5%	3.9%
Voluntown	4.3%	2.0%	2.5%	3.3%	3.4%	3.4%	3.6%
Woodstock	2.8%	1.8%	2.0%	2.8%	1.9%	1.9%	0.9%
Connecticut	5.2%	3.4%	3.7%	4.0%	4.0%	4.0%	3.9%

Source: United States Census Bureau, 2009-2013 American Community Survey 5-year Estimates

According to the 2010 Decennial Census, the towns of Brooklyn, Putnam, and Union have populations over persons 70 years and older above the state average of 10%; Eastford, Killingly, and Thompson also have populations 70 years and older above the regional average of 8.94%.

According to the 2009-2013 5-year Community Survey by the United States Census Bureau, few towns have disabled and impaired populations above state averages. Putnam was estimated to exceed the state average for populations with a disability or hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties. The towns of Brooklyn, Canterbury, Pomfret, and Union were estimated to exceed the state average in one or more category of impairments.

Economy

Table 2-4: Selected Housing Characteristics

Town	Average Household Size	Average Family Size	Total Housing Units	Owner-Occupied Units	Percent Owner-Occupied	Renter-Occupied Units	Percent Renter-Occupied
Ashford	2.51	2.98	1,716	1,337	77.91%	379	22.09%
Brooklyn	2.55	3.01	2,989	2,234	74.74%	755	25.26%
Canterbury	2.65	3.02	1,934	1,667	86.19%	267	13.81%
Chaplin	2.51	2.98	920	742	80.65%	178	19.35%
Eastford	2.53	2.92	690	572	82.90%	118	17.10%
Hampton	2.49	2.90	747	650	87.01%	97	12.99%
Killingly	2.52	2.98	6,749	4,646	68.84%	2,103	31.16%
Plainfield	2.66	3.05	5,726	4,061	70.92%	1,665	29.08%
Pomfret	2.57	3.05	1,582	1,185	74.91%	397	25.09%
Putnam	2.33	2.89	3,950	2,292	58.03%	1,658	41.97%
Scotland	2.71	3.03	637	564	88.54%	73	11.46%
Sterling	2.77	3.13	1,383	1,151	83.22%	232	16.78%
Thompson	2.51	2.98	3,730	2,963	79.44%	767	20.56%
Union	2.56	2.91	334	297	88.92%	37	11.08%
Voluntown	2.60	2.97	1,002	853	85.13%	149	14.87%
Woodstock	2.53	2.93	3,151	2,678	84.99%	473	15.01%
Total	N/A	N/A	37,240	27,892	74.90%	9,348	25.10%
Average	2.56	2.98	2,327.50	1,743.25	N/A	584.25	N/A
Connecticut	2.52	3.08	1,371,087	925,286	67.49%	445,801	32.51%

Source: United States Census Bureau, 2010 Census Summary File 1 Connecticut

The regional economy and distribution of commercial and industrial land uses in northeastern Connecticut is heavily defined by I-395 and other high-volume routes like U.S. Routes 6 and 44. The I-395/Route 12 corridor mimics the north-south orientation of the Quinebaug River and runs through, or proximate to, most of the Quinebaug’s mill villages. Because of this, today’s regional development patterns closely resemble those of old. Today, some of the employment provided by the original mill business has been replaced by industrial firms specializing in manufacturing, food processing, and regional distribution. Many of the mills remain; some house new businesses or have been repurposed for housing while others are sources of blight. Outside of the immediate river valley, agriculture and silviculture remain established land uses and drivers of town culture. With high returns for residential development, open space conservation is a growing issue in this area. Many of the region’s rural towns, while lacking the benefits of economic development, are interested in natural resources conservation and preserving their bucolic character. The fact that these towns must rely on the commercial centers along the Quinebaug River or in Windham, along the Shetucket River, helps to strengthen the regional economy, discourage competition for economic development, and control sprawl.

Many NECCOG towns have economic development boards; however, few towns have paid staff that work, at least in part, in economic development. Killingly, Sterling, Plainfield, and Putnam have designated staff members. Other marketing and business attraction efforts come from regional partnerships. The Eastern Connecticut Enterprise Corridor (ECEC), Northeast Connecticut Economic Partnership, and The Last Green Valley, Inc. market business opportunities from a regional perspective. The Northeastern Connecticut Economic Alliance is an additional non-profit resource for business services and funding. Regional chambers of commerce are, the Northeastern Connecticut Chamber of Commerce, the Windham Region Chamber of Commerce, and the Eastern Connecticut Chamber of Commerce.

Education

Almost every town in northeastern Connecticut has its own school district for primary education. Secondary education in the region is more dispersed and students in many towns have the option of leaving the region for nearby school districts. Tourtellotte Memorial High School (Thompson), Putnam High School, Killingly High School, Plainfield High School, Parish Hill High School (Connecticut Regional School District 11 in Chaplin), and Woodstock Academy (a regional,

Table 2-5: Employers in Windham County with Over 500 Employees

Employer	Town	Industry
Day Kimball Healthcare Center	Putnam	Health Services
Day Kimball Hospital	Putnam	Hospitals
Frito-Lay Inc.	Killingly	Potato Chips (Wholesale)
Windham Hospital	Windham*	Hospitals
Rite Aid Customer Support Center	Killingly	Distribution Centers (Wholesale)
Lowe’s Distribution Center	Plainfield	Distribution Centers (Wholesale)
Windham Public Schools	Windham*	Schools

*The Town of Windham is outside of the region; however, it is a large employment center for towns in northeastern Connecticut

Source: Connecticut Department of Labor, Labor Market Area Information

quasi-public school) serve much of the region's secondary education students. Killingly is also home to a state-run technical school, H.H. Ellis Technical High School. It serves as an additional option for the region's students, offering vocational and technical training.

The NECCOG region's lone college, Quinebaug Valley Community College (QVCC) is located in Killingly. QVCC is an asset to the region, affording higher education to future leaders and those who may otherwise be unable to attend college. In neighboring towns are two public universities, Eastern Connecticut State University in Windham and The University of Connecticut in Mansfield. The region is also proximate to the college-dense areas surrounding Worcester and Providence, as well as schools in southern and central Connecticut.

2.2 Natural Environment

Northeastern Connecticut is home to a range of natural, New England landscapes. Rolling hills and river valleys create the grander picture, while hardwood and softwood forests, underlain by glacial till, sandy soils, or poorly-drained silt, provide critical habitat for the region's wildlife.

Moving forward, it is imperative that towns take steps to protect and enhance their own natural beauty. Not only will these efforts ensure the region's future as "The Last Green Valley", but they will serve an ongoing process of natural hazard mitigation through cooperation with nature.

Vegetation and Soils

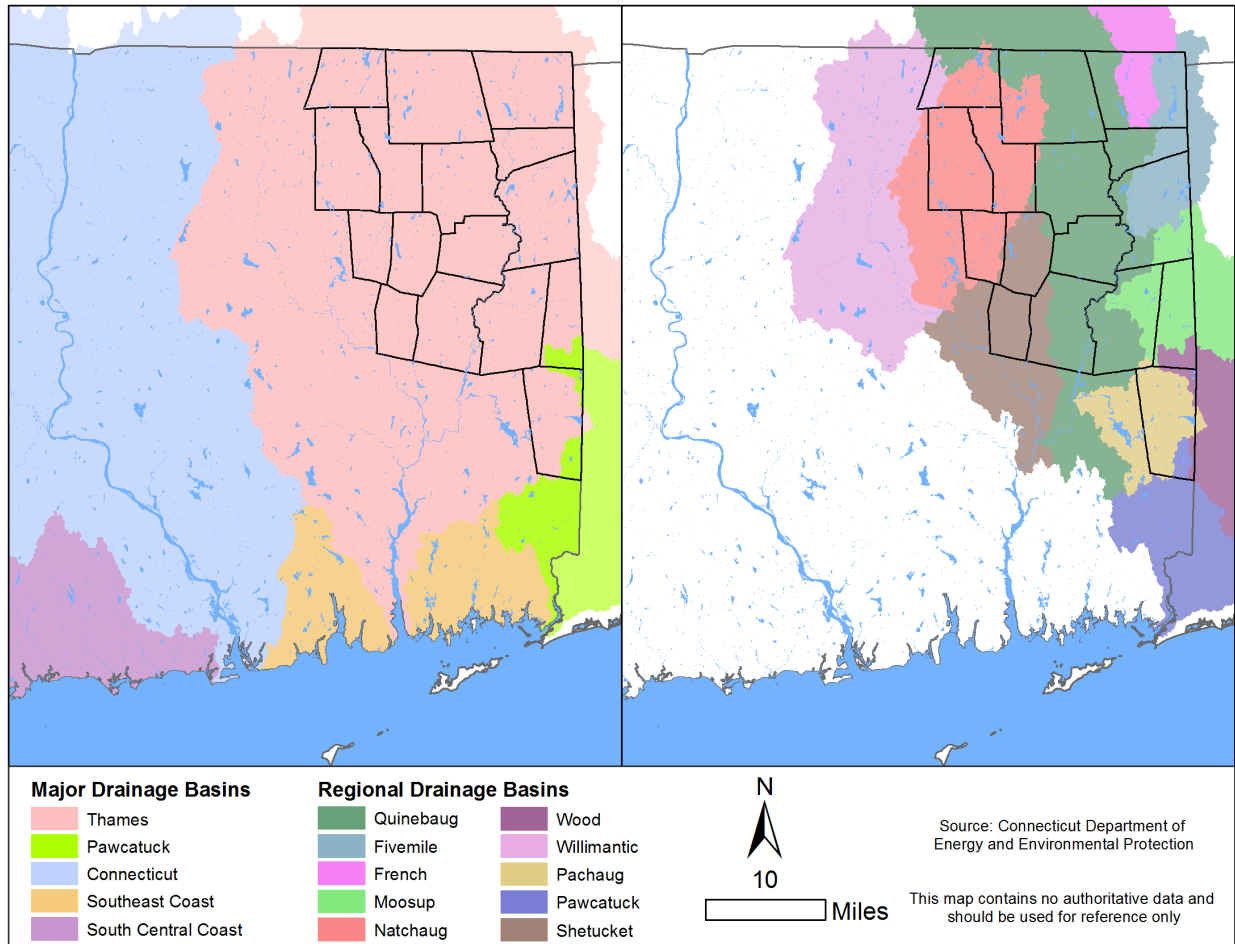
The soils of northeastern Connecticut are primarily a product of the most recent ice age—roughly 18,000 years ago—and there are about sixty different soil classifications identified by the United States Department of Agriculture (USDA). According to the 1981 document, Soil Survey of Windham County by the USDA, there are six main soils types that lend themselves to distinct natural landscapes: Brookfield-Brimfield, Charlton-Hollis, Charlton-Canton-Leicester, Woodbridge-Paxton-Ridgebury, Hinckley-Merrimac, and Saco-Rippowam-Pootatuck. Of the six soil types, the Saco-Rippowam-Pootatuck soils represent soils associated with flood plains along major streams and are subject to frequent flooding and are more often part of the flood plain.

According to Soil Survey of Windham County, about 63% of Windham County's commercial forests (non-preserved, productive, non-urban forests) were oak-hickory (42%) or elm-ash-red maple (21%) forests. Oak-hickory forests are common throughout southern New England and are associated with well-drained soils. Elm-ash-red maple forests, on the other hand, are found in wetland areas. Other principle forest types for the region were identified as maple-beech-birch, oak-pine, white pine, red pine-hemlock, pitch pine-eastern red cedar, spruce-fir, and aspen-birch.

Wetlands, Watercourses, and Dams

Wetlands in Connecticut are delineated by the presence of certain soil types that are typically favorable for agriculture or often associated with bogs, marshes, swamps, and intermittent watercourses. Soils defined by the National Cooperative Soils Survey as poorly drained, very poorly drained, alluvial, or floodplain are classified as "Connecticut Inland Wetlands Soils".

Figure 2-1: Major and Regional Drainage Basins

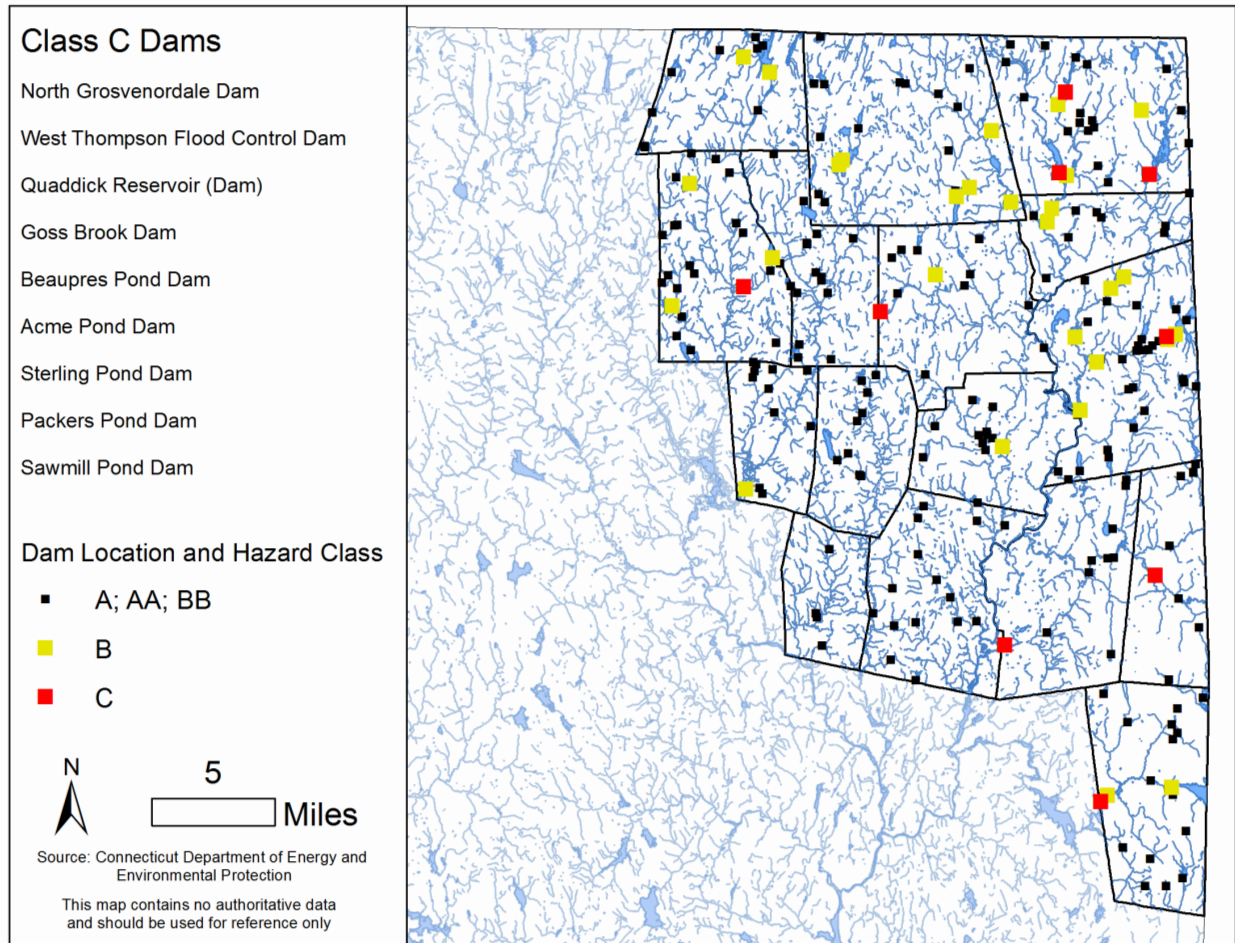


These soils are protected by the state’s Inland Wetlands and Watercourses Act—which empowers towns to adopt protective wetlands and watercourses regulations—with the historic intent of protecting the state’s agricultural future and natural environment. Northeastern Connecticut, with its abundance of waterways and agricultural land uses, is wetlands-dense. Wetlands cover about 6% and watercourses cover about 2% of the region, together they account for roughly 8% of the region’s total area.

For an inland region, northeastern Connecticut is heavily tied to the water. As previously mentioned, the Quinebaug River and its tributaries have defined the existence of NECCOG’s largest towns. Although the region’s other waterways are historically less-important economic drivers, rivers such as the Shetucket, Natchaug, Moosup, and Fivemile once helped the regional economy and/or continue to enhance the region’s rural character. The majority of these rivers drain into the Thames River Drainage Basin, a major drainage basin for Long Island Sound; however, the Wood River and its local tributaries in Sterling and Voluntown drain into the Pawcatuck River (see [Figure 2-1](#)).

In addition to its rivers, northeastern Connecticut is home to lakes ponds ranging from small, swampy pools to lakes of over 400 acres, clear kettle lakes, and public utility reservoirs.

Figure 2-2: Regional Watercourses and Class B and C Dams



Quaddick Lake in Thompson and Mashapaug Pond in Union are the two largest, at 408 acres and 300 acres respectively. Many of the larger water bodies—and river sections—in the region are held by dams. A dam on the south end of West Thompson Lake is the largest in the region. It is operated by the New England District of the Army Corps of Engineers and has a mostly earthen structure which supports a public roadway. West Thompson Lake Dam is classified by Connecticut Dam Safety Inspection Regulations as “Class C” or “High Hazard”, meaning there would be considerable economic loss, probably loss of life, and extensive damage if it were to fail. The NECCOG area is home to 9 Class C dams and 28 Class B dams—which pose a “Significant Hazard” (see [Figure 2-2](#)). Significant dams in each town are addressed in Chapter 4. Northeastern Connecticut’s abundance of wetlands soils and watercourses, accompanied by Class C and Class B dams, clarify the need for flood awareness and flood mitigation.

Climate

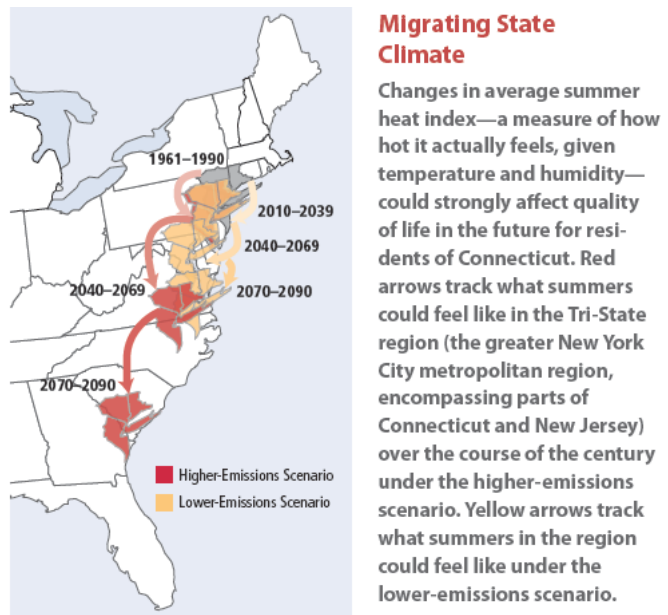
Possibly the most important environmental factor when considering natural hazard mitigation, the region’s climate is categorized as a “humid continental climate”, with at least four months above 10⁰C, by the Köppen climate taxonomy and given the designation, “Dfb”. Humid continental

climates are characterized by four, full seasons, each bringing different weather conditions. Each season experiences regular precipitation and humidity is relatively high year-round—there is no “wet season” or “dry season”. See [Table 2-6](#) for average monthly temperatures and average monthly precipitation values for the region (taken in Hampton). Humid continental climates lie on the boundary between polar and tropical air masses. Precipitation is often a result of the interaction of these air masses, caused by uplift of the moist, tropical air mass.

Northeastern Connecticut’s weather patterns are driven by westerly winds that blow from west to east across the continental United States. They often bring heavy rain, heavy snow, ice, and high wind, but rarely tornadoes. Additionally, tropical storms and hurricanes make their way up the Atlantic coastline in the autumn and summer months, posing a regular and serious threat to the region.

The region’s climate appears to be changing, creating challenges in the near term as well as the long term. According to the independent Union of Concerned Scientists’ 2007 publication, [Confronting Climate Change in the U.S. Northeast](#): “Since 1970 the Northeast [United

Figure 2-3: Connecticut’s Shifting Climate



Source: Union of Concerned Scientists, *The Changing Northeast Climate*

Table 2-6: 30-Year Climate Normal for the NCDC’s Weather Gauging Station in Hampton, from 1981-2010

Month	Total Precipitation Normal	Mean Max. Temperature Normal	Mean Min. Temperature Normal	Mean Avg. Temperature Normal
January	3.98	34.8	14.3	24.6
February	3.59	37.7	17.8	27.8
March	4.54	46.4	24.4	35.4
April	4.74	58.3	35.1	46.7
May	3.79	68.8	44.4	56.6
June	4.37	74.8	54.1	64.5
July	4.39	79.5	59.8	69.7
August	4.03	78.2	58.3	68.3
September	4.18	71.3	50	60.7
October	4.6	61.6	39.2	50.4
November	4.61	52.1	30.5	41.3
December	4.34	40.2	21.1	30.7

Source: National Climatic Data Center, 1981-2010 U.S. Climate Normals

States] has been warming at a rate of nearly 0.5°F per decade. Winter temperatures have risen even faster, at a rate of 1.3°F per decade from 1970 to 2000.” Most scientists recognize these temperature changes as anthropogenic, meaning they are caused by human activity. When it Rains it Pours, a 2012 report from Environment America, found that extreme rainstorms and snowstorms in New England now occur 85% more frequently than they did in 1948.

It is important to consider present, historic, and future climatic characteristics when planning for natural hazards. Most of northeastern Connecticut’s natural hazards are climate-driven and may be greatly affected by climate change. Adaptive plans and forward-thinking procedures should steer hazard mitigation in a changing environment.

Elevation

Northeastern Connecticut is a hilly region, but without tall peaks or significant elevation. Burley Hill in Union is the highest point in Connecticut, east of the Connecticut River at over 1,300 feet in elevation. The lowest point in the region is along the Quinebaug River in Canterbury.

2.3 Government and Land Management

Studying the ways in which people make use of land is critical in understanding hazard mitigation. In Connecticut, it is largely up to municipalities to regulate, permit, and plan for the ways in which businesses and citizens inhabit, and derive value from, their property. Each town’s mitigation capabilities, in regards to governance and municipal responsibilities, are discussed in Chapter 4.

Local Government

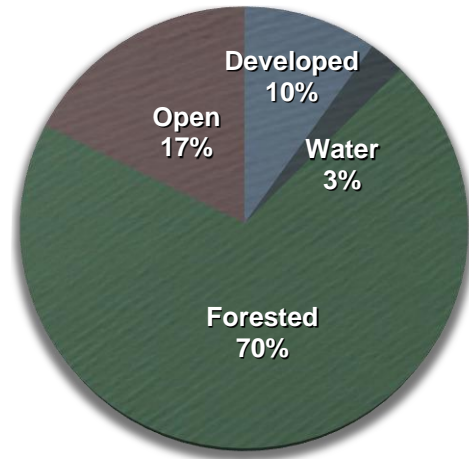
Each of the region’s towns operates with its own governmental structure. In New England’s small towns, the Selectman-Town Meeting form of government is dominant. In the NECCOG region, all but two towns operate under this system; Putnam has a Mayor-Town Council form of government and Killingly has a Town Manager-Town Council form of government. Each town is, as is the case throughout, highly dependent on property taxes for revenue in order to provide services for their residents.

Land Use and Land Cover

Today, northeastern Connecticut is characterized by varied land uses, stemming from its industrial history, abundance of agricultural land, and proximity to I-395, other major routes, and railroads. The interdependence of local economies has contributed to growth that somewhat preserves the development patterns of the early-twentieth century. The region is home to an abundance of streams, rivers, ponds, lakes, wetlands, swamps, and forested landscape. State-owned forest and parks, land trusts, and municipal regulations seek to preserve the rural character of the Quinebaug Valley’s upland areas. Unfortunately, some agricultural lands are returning to a forested state and others are subdivided or sold for development.

Typically, density increases along the Quinebaug River and its tributaries, proximate to historic mill villages. The villages like North Grosvenordale in Thompson, Putnam, Danielson in Killingly, and Moosup in Plainfield, have experienced varying levels of economic decline and rebirth. Some of these villages are very small and are now dominated by residential land uses. The larger ones have sought to retain their importance by adapting to a new economy. Sprawled commercial development and intensive industrial development are prevailing land uses in places like Dayville. Danielson, Moosup, and parts of Putnam retain an urban density that may prove valuable in a dynamic economy.

Figure 2-4: Regional Land Cover



Source: University of Connecticut Center for Land Use Education and Research

According to data from the Center for Land Use Education and Research (CLEAR) at the University of Connecticut⁵ (see [Figure 2-4](#)), most of the region was forested—about 70%—in 2010, with about 10% remaining dedicated to agriculture. Wetlands account for over 6% of the region’s total land cover.

Transportation

Like most of modern-day New England, regional transportation in northeastern Connecticut is dominated by personal automobile use. There are roughly 336 miles of state-owned routes in the NECCOG region and over 1,000 miles of municipally-owned routes. U.S. Route 6 and U.S. Route 44 cross the region, as well as Interstate 395 and Interstate 84. I-395 traverses the region’s eastern half while I-84 passes through Ashford and Union with exits convenient to much of the region’s northwestern quadrant. I-395 connects the region with points north and south, including southern Connecticut and the Interstate 95 corridor, Worcester, Boston, and other cities along the Massachusetts Turnpike (I-90). I-84 is often the connection to central and western Connecticut and New York. U.S. Routes 6 and 44 also run east-west through the region and are popular connections to Hartford and Providence.

The Northeastern Connecticut Transit District (NECTD), operated by NECCOG, provides deviated fixed-route bus transportation to a portion of the region, serving the towns of Killingly, Putnam, Brooklyn, and Thompson, Monday through Friday. NECTD also offers Dial-a-Ride service for the towns of Pomfret, Canterbury, Eastford, Woodstock, Plainfield, Putnam, Brooklyn, Union, and Killingly, seven days a week. Windham Region Transit District (WRTD) and Southeast Area Transit (SEAT) also serve portions of the region.

⁵ Figures derived from CLEAR data a rough estimates based on remote sensing techniques.

Rail service in northeastern Connecticut is limited to freight on the Providence and Worcester Railroad. Boston commuter trains are available, however, in both the Worcester and Providence areas. There are also no major airports in northeastern Connecticut. The Woodstock Airport and the state-owned Danielson Airport, serve only small aircraft. However, the proximities of Bradley International Airport in Windsor Locks, Connecticut, T.F. Green International Airport in Warwick, Rhode Island, and Logan International Airport in Boston make air travel very accessible.

Emergency Services

Each town has an appointed Emergency Management Director and Emergency Operations Center (EOC), both coordinated through the Connecticut Department of Emergency Management and Homeland Security, Region IV. A town’s EMD is responsible for overseeing emergency preparedness and emergency service, coordinating training programs, and acts as a liaison for FEMA and DEMHS. At the center of municipal emergency management is each town’s Emergency Operations Plan (EOP), which provides a framework for civil preparedness and resource expenditure in the case of an emergency.

Each town is able to provide some level of emergency services to its residents; however, due to some towns’ small size, the number and types of services vary. For instance, two of NECCOG’s member towns provide police service. Plainfield’s police service is town-wide and Putnam provides police service for its Special Services District. Chaplin, Brooklyn, and Killingly participate in Connecticut State Police’s Resident State Trooper program. The majority of NECCOG towns rely on police response from Connecticut State Police Troop D in Killingly (Canterbury, Scotland, Hampton, Pomfret, Eastford, Thompson, Putnam, and Woodstock), Troop E in Montville (Voluntown), or Troop C in Tolland (Union and Ashford). Fire and ambulance services are mostly provided by volunteer corps.

Day Kimball Hospital in Putnam is the primary provider of emergency and hospital health care. Also, Backus Hospital in nearby Norwich, Connecticut is convenient to many of the region’s residents. Backus Hospital also operates a remote Emergency Room, centrally located in Plainfield. Hubbard Regional Hospital in Webster, Massachusetts and Windham Hospital in Windham, Connecticut also serve the region.

Table 2-7: Roadway Ownership by Town in 2013

Town	State-owned Roads (miles)	Town-owned Roads (miles)
Ashford	20.17	67.59
Brooklyn	15.98	65.99
Canterbury	15.77	68.47
Chaplin	8.35	36.45
Eastford	13.61	33.67
Hampton	12.63	43.14
Killingly	40.45	130.98
Plainfield	38.38	100.67
Pomfret	26.78	64.39
Putnam	21.31	65.22
Scotland	8.82	28.17
Sterling	10.12	47.79
Thompson	31.22	97.14
Union	19.46	23.72
Voluntown	18.26	29.91
Woodstock	35.08	113.56
Total	336.39	1,016.86

Source: Connecticut Department of Transportation, Public Road Mileage by Maintenance Responsibility

Local Authorities

The state of Connecticut enables its municipal governments to enact and enforce a number of regulatory codes that guide the ways in which people are allowed to use, and derive value from, their land. Justified by safeguarding their citizens and protecting the interests of the community, these municipal powers play a vital role in hazard mitigation. All towns also have a Plan of Conservation and Development (POCD), a document that outlines the town's vision for future growth, resource management, and service management. Regulations are often tailored to fit the goals and objectives outlined in the POCD.

For the purposes of The 2015 Plan, NECCOG staff performed an inventory of its member towns' regulatory powers, considering how they pertain to hazard mitigation. Specifically, each town's zoning regulations, wetlands regulations, and subdivision regulations, as well as relevant ordinances, were examined. Each town's regulatory powers, as they pertain to hazard mitigation and the National Flood Insurance Program, are reviewed in Chapter 4. It should be noted that Eastford is one of two towns in Connecticut without zoning regulations. All other NECCOG member towns have zoning regulations; and all NECCOG member towns, including Eastford, have wetlands regulations, subdivision regulations, and a code of ordinances.

2.4 Natural Hazards

While there is a broad number of natural hazards that can impact the region at any time, and to varying extents, the hazards to which NECCOG and its member towns feel they are at greatest risk demand attention in special mitigation planning. Ten natural hazards were identified as posing a significant threat to the region, and one, additional hazard is also addressed for the town of Putnam. The region's identified hazards are:

- **Flooding-** Flooding is unique because portions of each town are at-risk; however, most of the land in each town is subject to little or no flooding. Flooding in the NECCOG region can be the result of rising water levels in a watercourse, the inability for soils to absorb water, surface runoff, failure or overload in utilities, blockages like ice jams and beaver dams, or dam or blockage failures. Flooding is possible throughout the year.
- **Wind-** Wind can occur at all times and in all areas of the NECCOG region. Wind can cause damage by itself, but is often associated with other weather events, such as hurricanes.
- **Lightning-** Lightning is a deadly and destructive discharge of electrical energy in the atmosphere. Lightning can be associated with a number of other hazards and is possible anywhere in the region, at any time of the year; however, it is most common in the summer months.
- **Thunderstorms-** Thunderstorms typically feature rain, high winds, and lightning. A number of other hazards are associated with thunderstorms, which can occur throughout the region at all times of the year; however, thunderstorms are most common in the summer months.
- **Winter Storms/Nor'easters-** Winter storms and nor'easters commonly occur throughout the region in the winter months, but they are not uncommon in the spring and autumn months. Winter storms and nor'easters typically bring snowfall and wind but can be responsible for a wide range of precipitation.

- **Tropical Cyclones-** Hurricanes, tropical storms, and tropical depressions are large, destructive, cyclonic storms from tropical regions. The entire region is at-risk to hurricanes and tropical storms. These storms typically occur between late spring and late fall.
- **Tornadoes-** Tornadoes are small-scale cyclonic wind events, and are commonly associated with thunderstorms. A single tornado would affect only a small portion of the region; however, the entire region is at-risk. Tornadoes are also extremely destructive and can occur at any time of the year.
- **Drought-** Drought is the result of long-term deficits in precipitation for the region. A drought single affects the entire region and can occur at any time of the year.
- **Hail-** Hail are large, falling pieces of ice, commonly associated with thunderstorms. Hail can cause wide-spread property and crop damage across much of the region. The entire region is vulnerable to hail, which is most likely to occur in the summer months.
- **Earthquakes-** Earthquakes have the potential to be extremely destructive. They are the result of energy releases in the earth's crust and can affect the entire region at any time.
- **Erosion-** Erosion is the removal of soil and rock, usually by water or wind flow. Fluvial erosion—erosion caused by rivers and streams—is a specific concern in the town of Putnam along the banks of the Quinebaug River. Elsewhere in the region, erosion poses little hazardous threat.

Hazards that were not included in The 2015 Plan, but were included in the 2014 Connecticut Natural Hazards Mitigation Plan Update, are:

- **Sea Level Rise-** Sea level rise affects coastal communities, only. Northeastern Connecticut is not a coastal region.
- **Wildfire-** Wildfires are rare in northeastern Connecticut, due to forest type and climate. However, future plans may be expanded to include wildfires if they become a larger concern, due to climate change.

Additional hazards that were not included in The 2015 Plan, but may become a larger concern in the future, and may be considered in future plans, are:

- **El Niño/La Niña-** This climatological event affects other natural hazards addressed in The 2015 Plan. Future plans may be expanded to specifically address El Niño/La Niña.
- **Global Warming/Climate Change-** Like El Niño/La Niña, this hazard affects other natural hazards addressed in the plan. Global warming/climate change will be considered when planning and implementing mitigation actions. Future plans may be expanded to specifically address global warming/climate change.
- **Heat Waves/Extreme Heat-** Temperatures in northeastern Connecticut very rarely reach 100°F. However, future planning may be expanded to include heat waves/extreme heat if conditions are exacerbated by climate change.
- **Extreme Cold-** Temperatures in northeastern Connecticut rarely fall below 0°F. However, future planning may be expanded to include extreme cold if conditions are exacerbated by climate change.

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Chapter Three: Regional Risk Assessment

3.0 Regional Risk Assessment

The ten regional hazards, and one single-jurisdictional hazard, on which The 2015 Plan is based, were briefly discussed in [Chapter 2.4](#). The following chapter offers a description of the identified hazards, recounts historic occurrences, and assesses regional risk; lightning, thunderstorms, and hail were combined into Severe Summer Storms. This chapter should be used as reference and educational material for member municipalities, as well as the general public. Quantified risks of the Regional Risk Assessment were used when prioritizing Local Mitigation Actions in [Chapter 5.2](#).

Table 3-1: Areas and Jurisdictions Affected by Identified Hazards

Natural Hazard	Jurisdictions	Areas Most Likely Affected
Flooding (includes Dam Failure)	All jurisdictions	Identified floodplains; areas of poor drainage; areas downstream of dams and flood control structures.
Wind	All jurisdictions	Weak structures; developed land proximate to forested land.
Severe Summers Storms (Identified hazards: Lightning, Thunderstorms, and Hail)	All jurisdictions	Weak structures; developed land proximate to forested land; agricultural land.
Winter Storms/Nor'easters	All jurisdictions	Areas of dense development and high activity; areas prone to isolation; buildings with poorly maintained roofs.
Tropical Cyclones	All jurisdictions	Weak structures; developed land proximate to forested land; areas prone to flooding; areas of dense development and high activity.
Tornadoes	All jurisdictions	Areas of dense development and high activity.
Drought	All jurisdictions	Agricultural land; properties reliant on groundwater.
Earthquakes	All jurisdictions	Masonry structures; areas of dense development.
Erosion	Town of Putnam	Land along the Quinebaug River.

3.0.1 Methodology

To conduct a proper risk assessment, NECCOG staff inventoried historic and scientific data to determine each hazard's expected impact, probability, spatial extent, warning time, and duration. The following sources were used when researching past events or predicting the impact and probability of future events:

- **The Storm Events Database-** Compiled by the National Climatic Data Center (NCDC) at the National Oceanic and Atmospheric Administration (NOAA). This database contains records of a list of weather events, some dating into the 1950s. For many events, county-level data was used as a proxy for the NECCOG region. Property damage is expressed in 2011 US Dollars.
- **Spatial Hazard Events and Losses Database for the United States (SHELDUS)-** Created by the University of South Carolina's Hazard & Vulnerability Research Institute. Data from certain events dates to the 1960s; however, there is an information gap between 1985 and 1995. Like the Storm Events Database, much of the data is county-level and expressed in 2011 US Dollars.
- **Hazus-MH software-** A program used in conjunction with ArcMap GIS software by ESRI. Hazus-MH models hurricane, earthquake, and flooding events and was used in determining the spatial extent of flooding in the region. Hazus-MH was also important when assessing hazard vulnerability to tropical cyclones, earthquakes, and flooding.
- **Additional Sources-** When the above mentioned databases were incomplete, additional sources from NOAA, the State of Connecticut, other government or non-profit entities, or research institutions were used.

Each hazard was given index values for the above mentioned criteria, which were then weighted and combined, giving each hazard a "Risk Factor Value" (RFV). The Risk Factor Value was then simplified to group hazards into "High Risk", "Medium Risk", and "Low Risk" categories. This method was adopted from an active plan for Huron County, Ohio, Huron County Multi-Jurisdictional Hazard Mitigation Plan 2011-2016, for its sound methodology and holistic approach to risk assessment. For simplified results of the Regional Risk Assessment, and a matrix detailing its methodology, see [Tables 3-2 and 3-3](#). See [Appendix 9](#) for an entire collection of SHELDUS and Storm Events Database entries.

Limitations

Historic data was valuable to the Regional Risk Assessment because it reveals trends and can allow planners to anticipate the impact of future events. However, natural hazards are dynamic and often unpredictable. Additionally, even the best data sets are not 100% accurate and often rely on non-comprehensive collection techniques. In the future, it may be found that different risk assessment methods are appropriate for the NECCOG region. Each subsequent plan should use the best, available techniques and data to limit oversight in the risk assessment process.

Table 3-2: Matrix Used to Determine Risk Factor Values

Criterion	Level	Degree of Risk	Index Value	Weight
Probability	Unlikely	<1% annually	1	30%
	Possible	1% - 20% annually	2	
	Likely	20% - 100% annually	3	
	Highly Likely	> 100% annually	4	
Impact	Minor	Few injuries; minor property damage	1	30%
	Limited	Minor injuries; More than 10% of property in affected area damaged or destroyed	2	
	Critical	Multiple deaths/injuries possible; or more than 25% of property in affected area damaged or destroyed	3	
	Catastrophic	High number of deaths/injuries possible; or more than 50% of property in affected area damaged or destroyed	4	
Spatial Extent	Negligible	Less than 1% of the region	1	20%
	Small	Between 1% and 10% of the region	2	
	Moderate	Between 10% and 50% of the region	3	
	Large	More than 50% of the region	4	
Warning Time		More than 24 hours	1	10%
		12 to 24 hours	2	
		6 to 12 hours	3	
		Less than 6 hours	4	
Duration		Less than 6 hours	1	10%
		Less than 24 hours	2	
		Less than 1 week	3	
		More than 1 week	4	

Source: Huron County Emergency Management Agency and Office of Homeland Security, Huron County Multi-Jurisdictional Hazard Mitigation Plan 2011-2016

Table 3-3: Risk Factor Analysis Results for the Region's Identified Hazards

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	RFV	Hazard Grouping	Area
Lightning	4	3	4	4	1	3.4	High Risk	Entire Region
Thunderstorms	4	3	4	4	1	3.4	High Risk	Entire Region
Flooding	4	4	2	4	2	3.4	High Risk	Entire Region
Winter Storms/Nor'easters	4	3	4	1	2	3.2	High Risk	Entire Region
Tropical Cyclones	3	4	4	1	2	3.2	High Risk	Entire Region
Wind	4	2	4	4	2	3.2	High Risk	Entire Region
Tornadoes	1	4	2	4	1	2.4	Medium Risk	Entire Region
Drought	2	1	4	1	4	2.2	Medium Risk	Entire Region
Hail	4	1	2	1	1	2.1	Medium Risk	Entire Region
Earthquakes	1	1	4	4	1	1.9	Low Risk	Entire Region
Erosion	4	2	1	1	4	3.0	Medium Risk	Putnam

3.0.2 Regional Vulnerability Assessment

Within the Regional Risk Assessment each hazard's anticipated and historic impact is described in terms of potential and historic losses to people and property, and people and property that are especially vulnerable to the effects of the hazard. This chapter also serves as a Regional Vulnerability Assessment. Vulnerability is described more specifically, for each municipality, in [Chapter 4](#).

3.1 Flooding

Flooding, at any time of the year, is a common occurrence in the region. Northeastern Connecticut's abundance of rivers, and development patterns proximate to those rivers, makes flooding one of the more pertinent hazards affecting the region's communities. Floods are primarily the result of heavy or continuous precipitation exceeding the absorptive capacity of soil and the flow capacity of watercourses, blockages or blockage failures along watercourses, or the inability of man-made structures and systems (sewer systems, drainage areas, impervious surfaces) to handle an excess volume of water. They are generally classified into two categories: "flash floods", which are often caused by short-term, localized precipitation, and "general floods", which are often caused by long-term, wide-spread precipitation.

Flood levels are often measured in terms of probability over a given return period. As an example, a "100-year flood" is a flood level that has a 1% of being equaled or exceeded in a given year, while a "500-year flood" has a 0.2% chance of being equaled or exceeded. The flooded areas from these events can be expressed as the "100-year floodplain" and the "500-year floodplain", and are different for every watercourse.

Dam Failure

This section also addresses dam failure. NECCOG member towns are home to nine "High Hazard" (Class C), 28 "Significant Hazard" (Class B) dams, and hundreds of smaller dams. Dam failure can result in sudden and severe onset flooding, the extent of which is determined by the type of failure and development downstream.

3.1.1 Notable Occurrences

In 1938, the region experienced its most dramatic flooding during the Great New England Hurricane of 1938, a Category 3 hurricane that ravaged New England and New York. To this day, it remains the deadliest hurricane to affect New England since the 17th century¹. Passing just south of northeastern Connecticut, the precipitation from the storm rose the Quinebaug and Shetucket Rivers to their, still, record discharge levels. The low-lying mill village of Rogers in

NOAA definitions of *flood* and *flash flood*

General Flood: An overflow of water onto normally dry land. The inundation of a normally dry area caused by rising water in an existing waterway, such as a river, stream, or drainage ditch. Ponding of water at or near the point where the rain fell. Flooding is a longer term event than flash flooding: it may last days or weeks.

Flash flood: A flood caused by heavy or excessive rainfall in a short period of time, generally less than 6 hours. Flash floods are usually characterized by raging torrents after heavy rains that rip through river beds, urban streets, or mountain canyons sweeping everything before them. They can occur within minutes or a few hours of excessive rainfall. They can also occur even if no rain has fallen, for instance after a levee or dam has failed, or after a sudden release of water by a debris or ice jam.

Source: National Weather Service at NOAA

¹ Laura Katz Smith, *The Eye of the Storm: A Journey into the Natural Disasters in Connecticut*

Killingly was inundated by the Quinebaug River, as was West Thompson—where the river is now dammed².

Flooding from 1938 hurricane, occurred only two years after another serious flood in New England, the Flood of March 1936. The Flood of March 1938 was the result of nine days of rain, coupled with melting snow³. At the time, it was the greatest flooding in state history⁴.

In August, 1955, two hurricanes hit New England in the course of one week. Some of the greatest damage in Connecticut occurred along the Quinebaug River. In Putnam, the Belding Hemingway Magnesium Plant caught on fire and railroads were destroyed⁵. The area of the river in Jewett City, Connecticut reached its peak height of 29 feet during this event⁶.

More recently, a powerful storm in March 2010 threatened the Quinebaug River's peak level, bringing it to approximately 23 feet in Jewett City⁷. Upstream, in the NECCOG Region, the river rose above flooding stage, as did the Mount Hope River and several smaller rivers. One of the Quinebaug's major tributaries, the Moosup River, flooded streets in the village of Moosup in Plainfield. This flooding event was the result of snowmelt and heavy rain.

SHELDUS by the University of South Carolina and the NCDC's Storm Events Database contain records from historic flooding events in the region (see [Appendix 9](#)).

It is possible that climate change may result in a greater number of floods in the region due to more frequent and more severe tropical cyclones, summer storms, and winter storms.

Flood: 10/15/2005 07:30 – 15:00 EST

A low pressure system interacted with a plume of tropical moisture as the low slowly moved parallel to the Long Island and south Massachusetts coasts, resulting in excessive rain and flooding across north central and northeast Connecticut. Between approximately 4 and 8.5 inches of rain fell across the region. The county of Hartford was the hardest hit by this flood event, with much of the damage concentrated in the town of West Hartford... This flood event directly resulted in two fatalities in northern Connecticut. One fatality resulted when a woman slipped and fell into the raging flood waters along the Natchaug River in Chaplin as she was watching the rapids. An elderly man was swept away and killed by flood waters when he attempted to leave his truck, which was stranded in flood waters from Roaring Brook in Stafford (Property Damage: \$600,000; Fatalities: 1 (2 total)).

Flood: 02/13 16:50 EST – 02/14/2008 05:15 EST

In Windham, Routes 6 and 32 were flooded. Several streets and yards were flooded with six inches of water in Putnam. In the Moosup area of Plainfield, several yards were flooded. Freedley Road in Pomfret was closed due to flooding (Property Damage: \$20,000).

Source: Storm Events Database, NCDC at NOAA

² Killingly Historical Society, *The History of Killingly's Villages*

³ Laura Katz Smith, *Going Beyond the Call: Southern New England Telephone Company's Response to Natural Disasters in Connecticut*

⁴ Laura Katz Smith, *The Eye of the Storm: A Journey into the Natural Disasters in Connecticut*

⁵ Mark Jones, *The Connecticut Floods of 1955: A Fifty-Year Perspective*

⁶ Judy Benson, *Climate Change Suggests Floods Will Probably Happen Again*

⁷ Judy Benson, *Climate Change Suggests Floods Will Probably Happen Again*

3.1.2 Regional Risk Assessment

Probability

SHELDUS data revealed that a total of 17 hazardous (causing damage to people or property) flooding events occurred between 1975 and 2014⁸. The most-significant event, in terms of damage, occurred in 1982. Flood data from the NCDC can belong to a number of flood types, only “flood” and “flash flood” events applied to the NECCOG region. Since flooding is often local and town-level data exists, NCDC data from New London and Tolland Counties were studied in addition to Windham County. Although data was sometimes duplicated or non-specific on the number of towns affected, it was determined that as many as 13 regional events affected NECCOG towns in the three counties since 1998. Additionally, the database included records of seven town-level flooding events between 1998 and 2014.

After reviewing data from these sources, it was determined that the yearly probability of a hazardous flood occurring in the NECCOG region is less than 100%. Although some years there may be no significant flooding; on average, the region experiences approximately one hazardous flood every two years. The index value for Probability is three out of four, or “Likely”, meaning that there is an annual return rate between 20% and 100% for flooding in northeastern Connecticut.

Impact

The effects of flooding can be disastrous for people, their property, crops, and entire communities. Floods cause damage in a number of ways, including undermining structures (buildings and infrastructure), mechanical and electrical damage, general water damage, drowning deaths or related injuries, or injury and damage caused by floating debris. According to NOAA, the national 30-year average number of flood deaths is 85, more than lightning (51), tornadoes (75), and hurricanes (47)⁹.

One of the most disastrous, recent floods in the region, recorded in the Storm Events Database, was a flood in October, 2005 in which a woman drowned in the Natchaug River in Chaplin. This flooding event resulted in \$600,000 in damage for Windham County alone. In 1955, Hurricanes Connie and Diane hit southern New England within a week of one another, resulting in over \$350,000,000 in damage. Additional flooding records in SHELDUS and the Storm Events Database show other instances of floods causing millions of dollars in damage—events like a 1982 storm that cost the region \$14,772,727 and claimed one life. It should be expected, however, that multiple deaths will be possible in an extreme flood.

Loss estimates from Hazus-MH, for a 100-year flooding event in the NECCOG region show that towns should expect to see over \$170,000,000 in structural damage to buildings, over \$75,000,000 in damage to utilizes, over \$100,000 in damage to transportation infrastructure, and the displacement of 6,782 people (see [Chapter 4](#)). The index value for Impact is three out of four, or “Critical”, meaning that multiple casualties are possible or that 50% of the property in the affected area (the floodplain) will be damaged or destroyed.

⁸ The years 1985 and 1995 contain incomplete data. Some floods may not be accounted-for.

⁹ National Weather Service, *Weather Fatalities*

Spatial Extent

Flooding events are rarely isolated and their causes often affect the region as a whole, as opposed to a single town. Northeastern Connecticut's abundance of rivers and prominence of one major drainage basin—the Thames River Drainage Basin—create favorable conditions for flooding during heavy rain. Data from SHELDUS and the NCDC support the idea that flooding in northeastern Connecticut often occurs on a regional scale. More often than not, data was recorded on the county level and specifically mentioned serious flooding in more than one town. In the case of more serious flooding, such as a 100-year flood, it should be expected that every town will sustain property damage and, possibly, injuries or death. In this sense, the spatial extent of a flood is region-wide.

Looking more specifically at the geography of flooding, floodplains can be used to describe the exact percentage of land inundated by flood waters. Instead of relying only on historic data, 100-year flood models created for [Chapter 4](#) were used to study the spatial extent of floods. It was determined that the 100-year floodplain covers approximately 5% of the region's land area, making the index value for Spatial Extent two out of four. People and property in this floodplain are especially vulnerable to the effects of a flood.

Warning Time

When considering the warning time of floods, it is important to separate flash flooding from general flooding events. For the purposes of this plan, flash flooding—the more early-onset form of flooding—will be evaluated in respect to the warning time of floods. Flash floods are characterized by their lack of warning, and according to NOAA, "...can occur within a few minutes or a few hours of excessive rainfall. They can also occur if no rain has fallen, for instance after a levee or dam has failed..."¹⁰ The index value for Warning Time is four out of four, meaning that there is typically less than six hours of lead time associated with hazardous flooding.

Duration

Many factors influence the duration of a flooding event. The duration of rain event, the geography of a watercourse's drainage basin, geology and soil makeup of the affected area, topology, the carrying capacity of watercourses and underground utilities, and the presence of vegetation are all common variables. General flooding is typically longer-lived than flash flooding because it is associated with longer storm events and poor drainage. The Storm Events Database from the NCDC includes a record of a general flood that lasted over 20 hours in Windham County. For the most part, the database lacked durations for flooding. It should be expected that a major flooding event in northeastern Connecticut will last over 6 hours, making the index value for Duration, two out of four.

3.1.3 Dam Failure

Dam failure has most notably affected the northeastern Connecticut region during the August, 1955 flooding. A dam on the Quinebaug River in Southbridge, Massachusetts failed and greatly

¹⁰ National Severe Storms Laboratory, *Severe Weather 101*

contributed to the historic flooding in Putnam, Thompson, and Killingly. At the same time, a dam failed just downstream in Jewett City, an area of the town of Griswold. Eight years later, in 1963, the failure of Spaulding Pond Dam, in the nearby town of Norwich, killed six people¹¹. Within the geographic confines of the region, a privately owned dam in Hampton, in 2001 failed and closed a portion of Route 97 but caused no quantifiable damage¹². Also, the National Performance of Dams Program database lists a record of overtopping of Mansure Pond dam in Chaplin, in 1982, but with no report of damage¹³.

Currently there is an identified issue of Dam Failure in the town of Killingly's village of East Killingly. A holding pond that once supplied the still-standing and historic East Killingly mill is threatening to breach. A breach would affect the mill, roads, and possibly homes, while draining an environmentally valuable pond. The Connecticut Department of Energy and Environmental Protection (DEEP) classifies this dam as a Class C dam, or "High Hazard" dam.

3.2 Wind

Wind occurs throughout the region, at all times of the year and often occur in association with a number of natural hazard events (winter storms, tornadoes, tropical cyclones, thunderstorms, hail storms). Wind events vary greatly in magnitude, geographic extent, and time of occurrence. Because of its unpredictability and reliance on dynamic, atmospheric activity, wind poses a distinct hazard to the region.

Wind is the movement of air in the atmosphere, resulting from differences in air pressure. The force of wind is determined by the difference in pressure and the geographic extent of that difference. Meteorologists describe wind in a number of ways: direction and pattern of movement, speed, associated weather, and probability over a given return period (like flooding). A "gale force" wind, or anything greater, is typically considered to be a powerful and hazardous wind. Gale force winds are usually defined as sustained winds between of 33 and 47 nautical miles per hour (knots) or roughly 39 miles per hour. According to the Beaufort Scale, an index used to assess wind damage on land and effects at sea, a gale force wind produces high and long waves, breaks small branches on trees, and create difficult walking conditions. A "strong gale", according to the scale, is between 47 and 54 knots and will begin to cause structural damage.

3.2.1 Notable Occurrences

Northeastern Connecticut is in a region that is unlikely to be threatened by tornadoes; however, they have occurred and are expected to occur again. Additionally, powerful winter and summer storms, including hurricanes, are perennial threats to northeastern Connecticut, making strong wind a regular occurrence.

¹¹ United States Department of the Interior, Geological Survey, *Floods of August 1955 in the Northeastern States*

¹² State of Connecticut, *2014 Connecticut Natural Hazards Mitigation Plan Update*

¹³ National Performance of Dams Program, *NPDP Database*

See [Appendix 9](#) for a full inventory of past events. Also, see [Chapters 3.5 and 3.6](#) for historic tropical cyclones and tornadoes.

3.2.2 Regional Risk Assessment Probability

The probability of wind events is largely dependent on the probability of associated weather events because wind does not always occur on its own. Historic data on wind events was available through the Storm Events Database.

According to the NCDC, “high wind” above 30 knots (33mph) was reported on 16 separate (18 reported events) dates between 1996¹⁴ and 2013 for Windham County. 180 separate dates (228 reported events) with weather events that featured winds in excess of 30 knots occurred after 1992 in Windham County. After reviewing NCDC data, it was determined that, accounting for wind-only and wind-coincident events, hazardous wind events have at least a 100% chance of occurring in any given year. The index value for Probability is four out of four or “Highly Likely”.

Impact

Hazardous winds events, whether alone or associated with another weather event, have the capability to greatly stress a community’s resources, cause injury or loss of life, and cause wide-spread property damage. According to the Storm Events Database, in 2012, high winds of 53 knots, from Hurricane Sandy were responsible for \$483,000 in damage in Windham County. Additionally, the database contains a 2005 record of high winds—in a snow storm—downing tree limbs, injuring a Thompson man. Wind from this storm was responsible for \$45,000 in property damage. Information used for analyses in [Chapters 3.3-3.6](#) also served to determine the impact of wind. Historic data suggests that wind is capable of having a “Limited”, but nonetheless noteworthy, impact on the region. The index value for Impact is two out of four, because minor injuries can be expected alongside wide-spread property damage. Poorly built structures and structures that pre-date the Connecticut State Building Code’s design wind speed standards should be considered especially vulnerable to the effects of wind. Also, damages to buildings, utilities, and transportation infrastructure, from trees and debris is likely to occur at the interface

High Wind: 12/17/2000 11:00 – 22:00 EST

A rapidly strengthening low pressure system west of New England brought a period of damaging southerly winds to northern Connecticut, as lines of showers passed through southern New England. Following the passage of a strong cold front in the afternoon, increasing northwest winds caused additional damage. Peak wind gusts of nearly 60 mph were common in Hartford, Tolland, and Windham Counties. There were several reports of downed trees and wires, and several thousand electric customers were left without power.

High Wind: 12/01/2004 13:00 – 20:30 EST

Damaging wind gusts affected much of northern Connecticut as strengthening low pressure tracked across northern New England and a strong cold front moved through the region. Gusts estimated as high as 60 mph brought down trees and wires across the higher elevations of Hartford and Windham Counties. No injuries were reported. (Property Damage: \$25,000).

High Wind: 01/31/2013 03:52 – 08:45 EST

The Automated Surface Observing System at Windham Airport in Willimantic (KIJD) recorded a wind gust to 58 mph. In addition, mesonet and amateur radio operators reported gusts to 60 mph in Thompson and North Grosvenor Dale. Several trees were downed onto wires in Woodstock. (Property Damage: \$15,000).

Source: Storm Events Database, NCDC at NOAA

¹⁴ Data on the “high wind” was not collected prior to 1996 for the region

between forested land and human development. See [Chapter 4](#) for the anticipated, regional effects of a 50-year hurricane wind in northeastern Connecticut.

Spatial Extent

Damaging winds can be associated with many different weather events, so the spatial extent of its damage is variable. In the case of a tornado, wind damage would largely be confined to the tornado's path. However, wind-only events and other wind-coincident events occur typically over a very large area—larger than the region—because they are associated with wide-spread, moving patterns of atmospheric pressure. For example, a low-pressure system in New England may bring thunderstorms that move in a northeasterly direction, across Connecticut and toward the Boston area. Wind associated with the moving storm front is likely to affect the whole of the state. Information from the NCDC supports this idea. 104 of 221 entries in the Storm Events Database were on the county level while many others were same-day reports from different towns. Information used for analyses in [Chapters 3.3-3.6](#) was also useful in determining the spatial extent of wind. The index value for Spatial Extent is four out of four.

Warning Time

The warning time associated with extreme wind events is also dependent on the associated storm or weather conditions. For instance, wind associated with tornadoes will have less warning time than wind associated with hurricanes. The severity of wind associated with hurricanes, however, is often not fully realized until the hurricane has impacted the region. In most cases, the dynamic nature of the atmosphere and the unpredictability of associated weather events provides very little warning time hazardous winds.

Gale Warnings can be issued when an area is experiencing sustained wind exceeding 33 knots. Gale Watches are issued in advance, attempting to predict future wind based on atmospheric data, but with uncertainty as to the extent, exact locations, and timing of gale force winds¹⁵. Because of wind's unpredictability, the index value for Warning Time is four out of four, meaning that it can't be reliably predicted in over six hours; this is especially the case with tornadoes.

Duration

Some wind events in the Storm Events Database contained temporal data, although others displayed no data or incomplete data. Under the category, High Wind, the database contains 15 records over 13 days. When studying the duration of wind, three days of records were omitted due to incompleteness. The ten remaining events averaged 6 hours and 20 minutes, each. Because events averaged over six hours, the index value for Duration is two out of four. However, when associated with wide-spread weather systems and events like tropical storms and winter storms, powerful winds can persist for over a day.

¹⁵ National Weather Service, *National Weather Service Glossary*

3.3 Severe Summer Storms

Three hazards identified in the Hazard Identification process, thunderstorms, lightning, and hail, were combined under Severe Summer Storms for the purpose of the Regional Risk Assessment.

Thunderstorms

Thunderstorms are a common occurrence throughout the region, particularly in warmer months. Thunderstorms, by their name, are characterized by the presence of thunder—the audible effect of lightning. However, lightning only partially describes a thunderstorm’s threat to people and property. According to NOAA, “Many hazardous weather events are associated with thunderstorms. Under the right conditions, rainfall from thunderstorms causes flash flooding, killing more people each year than hurricanes, tornadoes or lightning. Lightning is responsible for many fires around the world each year, and causes fatalities. Hail up to the size of softballs damages cars and windows, and kills livestock caught out in the open. Strong (up to more than 120 mph) straight-line winds associated with thunderstorms knock down trees, power lines and mobile homes. Tornadoes (with winds up to about 300 mph) can destroy all but the best-built man-made structures.”¹⁶

There are four types of thunderstorms: multi-cell storms, squall line storms, supercell storms, and single-cell storms. Supercell storms are typically the most hazardous, but are not as common in New England. A collection of thunderstorms that acts as a system, although rare, is a mesoscale convective system (MCS). Historically, only a few MCSs have impacted the region. All thunderstorms are caused by rising, warm, moist air that forms a cumulonimbus cloud. Water droplets and ice create the potential for lightning then fall to earth as rain or hail. A downdraft caused by the cooling effect of precipitation accounts for a thunderstorm’s strong wind, and eventually causes the storm to dissipate.

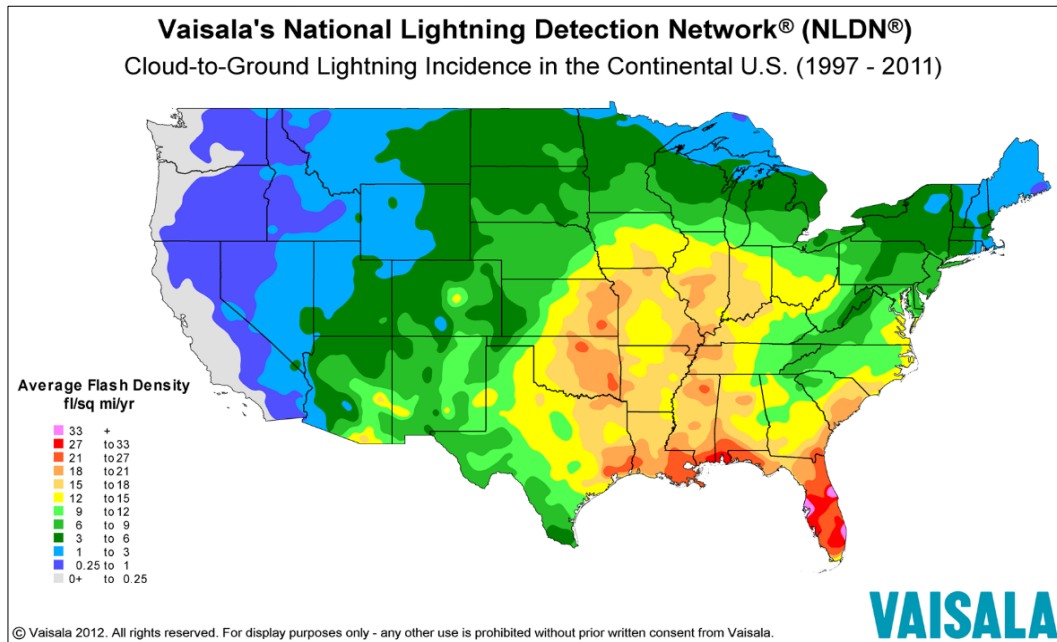
Lightning

NOAA defines lightning as, “a rapid discharge of electrical energy in the atmosphere.” Although it is commonly associated with thunderstorms, lightning can occur whenever there is high electric potential between two regions in the atmosphere or the atmosphere and the earth. Lightning comes in three forms. Cloud-to-Ground (CG) lightning, as opposed to Intracloud (IC) and Cloud-to-Cloud (CC) lightning, is the most relevant form when planning for on-the-ground hazards. It occurs when wind, water particles, and hail create a negative electrical charge inside clouds. If a positive charge on the ground becomes large enough, the negative charge begins moving toward the ground, creating a conductive path along the way. If the two charges make a connection, an electrical current, lightning, moves through the conductive path. Between the years 2006 and 2013, lightning accounted for 261 deaths in the United States.¹⁷ A large number of these deaths were preventable; many resulted from recklessness or ignorance of lightning safety. Finnish company, Vaisala, offers a comparative and generalized representation of strike density in the continental United States (see [Figure 3-1](#)). Lightning can be a product of many different storm events and has even been known to strike in snow storms; however, it is most common during warm months.

¹⁶ National Oceanic and Atmospheric Administration, *Severe Weather 101*

¹⁷ John S. Jensenius, Jr., *A Detailed Analysis of Lightning Deaths in the United States from 2006 through 2013*

Figure 3-1: Cloud-to-Ground Lightning Incidence in the Continental United States (1997-2011)



Source: Vaisala, Cloud-to-Ground Lightning Incidence in the Continental U.S. (1997-2010)

Hail

Hail is a weather condition that is associated with a number of previously identified hazards—thunderstorms, winter storms/nor’easters, and tropical cyclones. But hail, like lightning and wind, is worthy of recognition because of its distinct threats to people and property. Hail is a specific form of solid (ice) precipitation, at least 5mm in diameter. The American Meteorological Society defines hail as, “Precipitation in the form of balls or irregular lumps of ice, always produced by convective clouds, nearly always cumulonimbus.”¹⁸

Any storm that produces hail is known as a hailstorm. Hailstorms are born from storms that feature convective updrafts—typically thunderstorms. Convective air currents cycle ice pellets through different altitudes in storm clouds. A hailstone increases in size as it stays trapped in these convective currents, gaining a layer each cycle, until it can no longer be supported and falls to the ground. Heavier hailstones fall more quickly than lighter hailstones of the same shape, increasing the risk to people and property. The largest hailstone in the United States fell in South Dakota and had a diameter of 8 inches¹⁹. States that are known for tornadoes or violent and frequent thunderstorms are more vulnerable to damaging hail.

Hail is commonly known for damaging cars and their windows, the windows and roofs of homes, and other materials that are capable of being dented or shattered by falling ice; however, crops

¹⁸ American Meteorological Society, *Meteorology Glossary*

¹⁹ National Oceanic and Atmospheric Administration, ‘Volleyball’ from the Sky: South Dakota Storm Produces Record Hailstone

can be equally vulnerable to hail storms. According to the National Weather Service, hail is responsible for about \$1,000,000,000 in damage to property and crops each year in the United States²⁰. The National Weather Service will issue a Severe Thunderstorm Warning in the presence of hailstones greater than 1” in diameter. This is the size at which hail begins causing extensive damage. Much smaller hail can cause crop damage though, depending on the sensitivity of the crop.

3.3.1 Notable Occurrences

In July, 1999, powerful storms made their way through the state, bringing lightning, rain and strong winds. In Ashford, wind gusts were measured at 55 knots, and in Plainfield, a house was struck by lightning. The Storm Events Database did not record property damage for this storm; however, it should be expected that damage did occur. Over 1,000 people in northern Connecticut—including Windham County—were left without power.

A type of mesoscale convective system, called a “bow echo”, hit Windham County in May, 2007. This storm downed trees across Ashford, Eastford, Pomfret, Killingly, and Putnam. It was estimated that hundreds of trees came down in one section of Pomfret. Winds from this storm were estimated to be as high as 80 mile per hour. A complete listing of events from the Storm Events Database and SHELDUS is located in [Appendix 9](#).

Lightning is an extremely common phenomenon in northeastern Connecticut’s warmer months. In one lightning-producing storm, the region should expect multiple strikes. The Storm Events Database and SHELDUS contained limited records of lightning for the region (see [Appendix 9](#)), restricting it to incidences that caused quantifiable damage, or incidents that resulted in injury or loss of life.

Thunderstorm Wind: 08/10/2001 12:50 EST

Severe thunderstorms brought damaging winds to parts of northeast Connecticut. In Tolland County, trees and wires were downed in Coventry and Andover. In Windham County, the storms downed trees and wires in Thompson and Plainfield.

Lightning: 08/21/2004 07:25 EST

Severe thunderstorms downed large branches in Southington and Ashford, and produced nickel sized hail in Ellington. Two men were struck by lightning while attending a Civil War reenactment in Woodstock (Injuries: 2).

Hail: 08/05/1999 13:48 EST

Severe thunderstorms produced large hail and damaging winds in northern Connecticut. In Hartford County, the storms produced quarter size hail in Unionville, and downed trees and large branches in Farmington, Unionville, Hartford, and Burlington. As the storms moved across Windham County, they produced hail as large as ping pong balls in Pomfret, and hail the size of quarters in Killingly. Thunderstorm winds also downed trees in Pomfret.

Source: Storm Events Database, NCDC at NOAA

²⁰ National Weather Service Forecast Office, Columbia, SC, *Hail...*

3.3.2 Regional Risk Assessment Probability

Northeastern Connecticut typically sees several severe summers storms each year and many minor more minor thunder and lightning events. County-level data from SHELDUS revealed that between 1960 and 1985²¹, 53 hazardous thunderstorms affected the region. The NCDC's Storm Events Database does not contain "Thunderstorm" records but separate records for "Thunderstorm Wind", "Lightning", "Marine Thunderstorm Wind", and other weather conditions related to thunderstorms. Unfortunately, the Storm Events Database also contained limited records of lightning. In the database, three events were reported for dates between 1999²² and 2010 for Windham County. Separate from the Storm Events Database, the NCDC compiles Raw Flash Data into a separate database that records the locations of individual lightning flashes. A county-level summary of this data revealed that there were lightning strikes on 805 separate days, in Windham County, between January, 1986 and May, 2013 (see [Appendix 9](#)). This data suggests that lightning has at least a 100% chance of reoccurring each year.

Reviewing hail records from the Storm Events Database, Windham County towns experienced 24 days with 36 recorded hail events in the past 21 years (since 1994). The database kept records on all instances of hail greater than 0.5" diameter. Additionally, ten days with hail greater than 1" in diameter, over 12 separate events were recorded.

Considering the recorded frequency of thunderstorms, lighting, and hail, as well as local knowledge, it was determined that severe summers storms are "Highly Likely", making the index value for Probability four out of four.

Impact

Severe summer storms are capable of causing damage from flooding, wind, hail, and lightning strikes. Lightning has a great capacity to cause injury, loss of life, utility damage and power outages, or property damage. According to the NCDC, lightning from a 2004 storm injured two in Woodstock. Data from SHELDUS documents that two people have been killed by lightning in the region since 1960. Also, a 1977 event resulted in \$185,714 in lightning-related damages, while wind and lightning from a 1979 storm caused \$1,969,697 in property damage.

The Storm Events Database contained no records of property or crop damage from hail. Since hailstones beyond 1.75" in diameter were not recorded, it is likely that damage was only negligible and was never reported. Reviewing the narratives of individual records, there were also no reports of property damage from hail. Hail, however is well known to cause damage to buildings and vehicles, and injure people. It may be expected that climate change will increase hail's potential impact in the region.

The index value for severe summer storms' Impact is three out of four because of the potential for death and injury from lighting, and property damage from lighting and hail.

²¹ Because data between 1985 and 1995 was incomplete, the sample size was restricted to pre-1985 data.

²² Data on the lightning was not collected prior to 1996 for the region.

Spatial Extent

Since severe summer storms are large scale weather events, they are likely to affect the entire region, as well as much of the state, at once. The index value for Spatial Extent is four out of four, meaning that greater than 50% of the region will be affected.

Warning Time

The National Weather Service issues “Severe Thunderstorm Warnings” and “Severe Thunderstorm Watches”. A Severe Thunderstorm Warning is issued when a thunderstorm producing wind gusts greater than 58mph and/or hail greater than 1” in diameter has been spotted or detected with radar. A Severe Thunderstorm Watch is issued when conditions for a thunderstorm exist in an area. Although the weather patterns that provide the conditions for thunderstorms can be tracked and modeled further in advance, it is often unsure if, where, and when the storms will develop and whether or not there will be CG lightning and/or hail. Barbara Watson of NOAA writes, “[Thunderstorms] can develop in less than 30 minutes, allowing little time for warning.”²³ Because of the unpredictability of severe summer storms, the index value for Warning Time is four out of four; there is typically less than six hours lead time before a storm.

Duration

Severe summer storms and thunderstorms are often short-lived. Violent storms that produce hail and lightning in northeastern Connecticut typically come and go quickly. The four abovementioned categories of thunderstorms last anywhere from 20 minutes to over one hour²⁴; however, a multi-cell storm may be part of a system that lasts two or more hours, but this is a short-duration event compared to some other natural hazards. Mesoscale convective systems have been known to last over 12 hours but are not typical to the region. Because severe summer storms in northeastern Connecticut typically last less than six hours, the index value for Duration is one out of four.

3.4 Winter Storms/Nor’easters

Winter storms are common occurrences in northeastern Connecticut and can bring different combinations of individually hazardous weather conditions including snow, cold temperatures, rain, freezing rain, ice, sleet, and high winds. Winter storms have the potential to cause significant threats to safety on roadways, interrupt electric and other utilities, cause flooding, or cause structure damage or collapse. Additionally, extreme cold is often exacerbated by these effects of winter storms, such as utility failure, and can pose a significant threat to the public. Older-aged, poor, homeless, and disabled populations are especially at-risk during the winter. They can be threatened by even minor winter weather events. Nor’easters, explained below, are meteorological phenomena that is relevant to this chapter and natural to the region.

²³ Barbara Watson, *Virginia Thunderstorms and Lightning*

²⁴ National Severe Storms Laboratory, *Severe Weather 101*

Nor'easters

Nor'easters are large-scale, rotating storms that affect the Atlantic coasts of the United States and Canada. They typically bring heavy precipitation and high wind, causing blizzard conditions (see below). Nor'easters are commonly associated with winter storms; however, they can occur at other times of the year (typically between November and April). A famous example of a nor'easter is the Blizzard of 1978 in New England and the northeast. This nor'easter left many without heat, water, and electricity and greatly stretched the region's resources. According to NOAA's Neal Strauss, the storm accounted for approximately 100 lives²⁵.

Blizzards

A blizzard is a specific combination of snow and wind. A Blizzard Warning is issued by the National Weather Service when winds or frequent gusts reach or exceed 35mph and falling or blowing snow reduces visibility to within ¼ mile²⁶.

3.4.1 Notable Occurrences

The Blizzard of 1888 was one of the most impressive storms in Connecticut's post-industrial history. Snow accumulations totaled between twenty and fifty inches across the state, over a three-day period²⁷. Accompanying the snow were gale force winds and cold temperatures.

Ninety years after the Blizzard of 1888, the Great Northeast Blizzard of 1978 broke Boston and Providence's 24-hour snowfall records, caused over \$25,000,000 in damage, and crippled activity in southern New England²⁸. In Hartford, the flat roof of the Hartford Civic Center collapsed under the weight of the snow. Governor Ella T. Grasso

Heavy Snow: 03/31/1997 15:00 EST – 04/01/1997 09:00 EST

Heavy snow and strong winds produced near-blizzard conditions across the area during the early morning hours of April 1st. Snowfall totals of 12 to 21 inches were reported. Some totals included: Putnam, 21 inches; Union, 18.5 inches; and Mansfield, 16 inches. About 98,000 electric customers lost power statewide when the heavy, wet snow knocked down tree limbs and power lines. Most of the estimated dollar damage was from snow removal and restoration of power/removal of debris. (Property Damage: [not listed]).

Winter Storm: 01/08/2005 07:00 EST

Low pressure quickly strengthened as it passed south of New England and brought a mix of snow, sleet and freezing rain to much of interior southern New England. North central Connecticut was especially hard hit by freezing rain, where as much as one half inch of glaze brought down trees, tree limbs and power lines. There was no estimate of how many customers lost power, but dozens of accidents were reported as a result of icy roads. (Property Damage: \$50,000).

Winter Storm: 02/01/2011 07:00 EST

A total of 6 inches of snow fell across Windham County over the two day period. Damage amounts are for the roof collapses of some 28 structures that occurred following heavy snowfall that totaled 86.4 inches by the end of the snow season. Most of this snow fell from December 26 through February 2 and most roof collapses occurred during or shortly after the February 1 and 2 snow storm. (Property Damage: \$500,000).

Source: Storm Events Database, NCDC at NOAA

²⁵ Neal Strauss, *The Great Northeast Blizzard of 1978 Remembered 30 Years Later in Southern New England*

²⁶ National Weather Service, *National Weather Service Glossary*

²⁷ Laura Katz Smith, *The Eye of the Storm: A Journey into the Natural Disasters in Connecticut*

²⁸ Neal Strauss, *The Great Northeast Blizzard of 1978 Remembered 30 Years Later in Southern New England*

ordered the closure of all roads in the state²⁹.

A strange and destructive storm occurred on October 30, 2011. The 2011 Halloween Nor'easter was an unseasonable snowstorm in New England and the Mid-Atlantic, making it particularly destructive. Because most trees were still in-leaf, falling trees and broken branches caused power outages that lasted as many as eleven days in Connecticut³⁰. Of the 39 people killed in the storm, ten were in Connecticut—the highest of any state³¹.

Winter Storm Nemo, also known as the February 2013 Nor'easter, was a recent, major storm to affect northeastern Connecticut. Over 22 inches of snow fell in Hartford and over 24 inches in Boston³². According to the Storm Events Database, 22 to 26 inches of snow fell across Windham County. Winter Storm Juno, in January 2015 also greatly affected the region. The database also reported that thunderstorms were common during the height of the storm. See [Appendix 9](#) for a completed list of database records from the Storm Events Database and SHELUDS.

3.4.2 Regional Risk Assessment

Probability

In the NCDIC's Storm Events Database, all reported events were filed as "Heavy Snow", "Winter Weather", or "Winter Storm"; the designation "Blizzard" was never used in Windham County. Data for these three event types is available since 1996. The database contains records for 72 county-wide events in the 19 year period, meaning almost four major events—on average—per year.

This data suggests that winter storms have at least a 100% chance of reoccurring each year, making their occurrence "Highly Likely". Probability was given an index value of four out of four. It should be noted that winter storms may occur more frequently at higher elevations.

Impact

The impact of winter storms is largely determined by the physical ability of its precipitation to disrupt infrastructure, limit movement, cause flood-related damage, and damage structures. Common injuries and deaths result largely from car crashes. As of 2008, about 70% of injuries, due to ice and snow, resulted from vehicle accidents. And 25% of these accidents occurred during the storm. Other injuries and deaths can be contributed to extreme cold and wind chill. 50% of cold-related injuries affected people over 60 years old, and 20% occurred in the home³³. The entire region is vulnerable to winter storms; however, poorly built structures should be expected to sustain more damage, automobile accidents should occur more frequently in high-density areas and on well-traveled roads, and elderly and disabled populations should be considered more vulnerable to the effects of cold weather and isolation.

²⁹ Connecticut State Library, *Ella T. Grasso, Governor of Connecticut, 1975-1980*

³⁰ Federal Energy Regulatory Commission; North American Electric Reliability Corporation, *Report on Transmission Facility Outages During the Northeast Snowstorm of October 29-30, 2011*

³¹ Journal Inquirer, *Death Toll From Storm Rises to 10*

³² Strauss, Rice and McCoy, *Slow Recovery for Northeast after Epic Blizzard*

³³ National Weather Service, *Winter Storms: The Deceptive Killers*

NCDC and SHELDUS data was incomplete in regards to injury and death statistics related to winter storms. To prove the impact of winter storms, recent news articles were examined and cross referenced with NCDC records. A recent two-day storm dubbed, Winter Storm Nemo brought multiple feet of snow to Connecticut and New England. According to official reports of the storm, Nemo accounted for five deaths in Connecticut alone³⁴. Additionally, the NCDC reported that this storm damaged or destroyed more than 140 agricultural structures in Connecticut. Another recent and historic storm, the Halloween Nor'easter, resulted in ten fatalities in Connecticut and 39 total fatalities on the east coast. The NCDC reports that roughly 830,000 customers in the state were without power, some for as long as 11 days³⁵. This storm was particularly damaging because of its timing.

Considering casualty rates of recent winter storms in Connecticut and the wide-spread effect on property and agriculture, the anticipated impact of future winter storms on the region is "Critical"; the index value of Impact is three out of four. It is expected that multiple injuries and/or multiple deaths could result from a severe storm. It is also expected that wide-spread property damage and disruption of critical facilities is possible.

Spatial Extent

Winter storms of significant size occur almost-exclusively on a multi-state, regional basis. Westerly winds that define weather patterns in New England bring storms that cross much of the continental United States. Although, topography and atmospheric conditions may cause local variations in a storm's intensity, their spatial extent is often great. For instance, the 2011 Halloween Nor'easter (see [Figure 3-2](#)) resulted in a swath of snowfall from Maine to West Virginia. Central New England received the most-intense snowfall while nearby Rhode Island and Cape Cod received relatively little.

Using RFCA, the index value of Spatial Extent is four out of four or "Large", meaning that more than 50% of the northeastern Connecticut could be affected by a single winter storm. In reality, this only partially describes the spatial extent of winter storms.

Warning Time

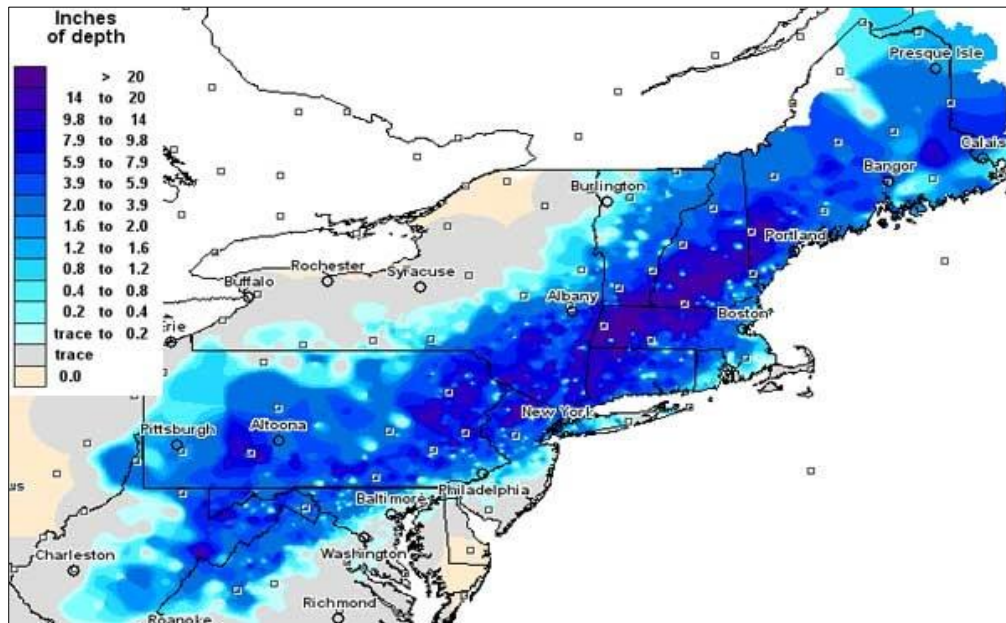
The large spatial extent of winter storms lends itself to very high warning time. It is common that school closures and closures of other community buildings or businesses will be decided a day in advance of a storm.

The National Weather Service issues Winter Storm Outlooks, and Winter Storm Advisories. Winter Storm Outlooks are predictions that communicate a storm is likely within 2-5 days. Winter Storm Advisories are the most-immediate, warning people that a winter storm is affecting the area and that they should take necessary precaution. Because of this, the index value for

³⁴ Cable News Network, *Live Blog: Reports of Five Deaths in Connecticut, Governor Says*

³⁵ Federal Energy Regulatory Commission; North American Electric Reliability Corporation, *Report on Transmission Facility Outages During the Northeast Snowstorm of October 29-30, 2011*

Figure 3-2: 2011 Halloween nor'easter snowfall totals



Source: National Oceanic and Atmospheric Administration, Snowfall Totals from the 2011 Halloween Nor'easter

Warning Time is one out of four, meaning that there is usually more than 24 hours warning before an event.

Duration

The NCDC's Storm Events Database provided severe winter storm data for 72 separate events since 1996 in Windham County. In a sample of 19 events (all events between 2010 and 2014), the average duration of a winter storm was 16.9 hours and storms ranged between 39 and six hours. Using this data, the index value for Duration is two out of four, meaning that a typical storm lasts less than one day.

3.5 Tropical Cyclones

Tropical cyclones have the greatest destructive potential of all natural disasters in Connecticut, due to their probability, size, and the destructive combination of high winds, damage from debris, storm surge and coastal erosion, and heavy rain and flooding. Tropical cyclones include hurricanes, tropical storms, and tropical depressions—extremely large, rotating systems of low pressure that originate in the tropics and are continually fed by moisture when moving over the ocean. Tropical cyclones rotate around an “eye”, and the region of the storm immediately surrounding the eye—they “eyewall”—is the most intense. In New England, tropical cyclones arrive from the south, often tracking along the Atlantic coastline and affecting other states. Because of a tropical cyclone's size, one can be disastrous for an area without passing directly over that region.

Tropical cyclones are categorized by wind speed; hurricanes range from Category 1 hurricanes to Category 5 hurricanes. Tropical storms have lower wind speeds than hurricanes (below 74mph) but can be equally destructive. See [Table 3-4](#) for storm classifications by wind speed, according to the Saffir-Simpson Hurricane Wind Scale.

Category 3, or greater, hurricanes are rare in New England. The Great Colonial Hurricane of 1635 is thought to be the region’s most severe. Today this storm is estimated to be a “Category 3.5”, judging by historic records³⁶. The cooler waters of the North Atlantic reduce the strength of particularly violent storms; southern states, the Caribbean, and the Gulf Coast are more vulnerable to these storms.

Table 3-4: Saffir-Simpson Hurricane Wind Scale

Classification	Maximum Sustained Winds (nmph)	Central Pressure (mb)
Tropical Depression	<34	
Tropical Storm	34 - 63	
Category 1 Hurricane	64 - 82	>980
Category 2 Hurricane	83 - 95	965 - 979
Category 3 Hurricane	96 - 112	945 - 964
Category 4 Hurricane	113 - 136	920 - 944
Category 5 Hurricane	>136	<920

Source: National Weather Service, Tropical Cyclones: A Preparedness Guide; Stephen A. Nelson, Tropical Cyclones

3.5.1 Notable Occurrences

As mentioned above, Category 3, 4, and 5 hurricanes are rare in New England. Nonetheless, the region has been affected by a number of severe hurricanes and other tropical cyclones throughout its history and may experience more frequent storms due to climate change. See [Appendix 9](#) for a complete list of database records from the Storm Events Database and SHELDUS.

The Great Colonial Hurricane of 1635 is thought to be the most powerful in the region’s history, and was perhaps a Category 4 or 5 hurricane before reaching New England³⁷.

The Hurricane of 1938, mentioned in [Chapter 3.1](#), was also a Category 3 hurricane and still is the deadliest and most powerful hurricane, of recent history, to impact New England. This storm made landfall directly south of Windham County.

³⁶ Brian R. Jarvinen, *Storm Tides in Twelve Tropical Cyclones (Including Four Intense New England Hurricanes)*

³⁷ Brian R. Jarvinen, *Storm Tides in Twelve Tropical Cyclones (Including Four Intense New England Hurricanes)*

More recently, in 2011 and 2012, Connecticut and the Atlantic coast experienced significant impact from two tropical events: Hurricane Irene and Super Storm Sandy (Hurricane Sandy). Both of these storms brought torrential rain, causing localized flooding which exacerbated response and accounted for property damage; however, most notable in terms of impact from these events was the loss of electrical power and communications due to high winds. Specifically, fallen trees or tree limbs were to blame for these utility failures—a factor that continues to account for a large amount of storm damage, since northeastern Connecticut’s 1,016.86 miles of publicly owned roadways are primarily tree-lined. The under-management of trees along roadways was brought to reality by these storms. During both events, the region had towns with no passable roads. Trees along public roadways contributed significantly to power outages and the duration of those outages, limited emergency response, and impaired public safety.

**Tropical Storm: 08/28/2011
05:56 EST – 08/28/2011 13:30
EST**

Trees and branches were downed in Moosup (Lake Street) and Plainfield (Route 12, Major and Gendron Roads, Huntington Estates). An amateur radio operator recorded gusts to 57 knots (66 mph) on their home weather station in Thompson. The Automated Surface Observing System at Windham Airport (KIJD) recorded sustained wind speeds of 24 knots (28 mph) and gusts to 44 knots (51 mph). (Property Damage: \$20,000,000).

Source: Storm Events Database, NCDC at NOAA

Other notable hurricanes for the region include: The Great Atlantic Hurricane in 1944; Hurricane Carols and Edna in 1954; Hurricane Bob in 1991; and Hurricane Floyd in 1999.

3.5.2 Regional Risk Assessment

Probability

It is difficult to model return rates for tropical cyclones. Data sources typically focus on one storm type and methodology varies. As mentioned above, Category 3, 4, or 5 hurricanes are extremely rare in New England. The return rate for these hurricanes off of Block Island, RI—the nearest measurement station—is once every 52 years, about 2%, while the overall hurricane return rate is once every 6 years, about 17%³⁸.

According to the National Weather Service Forecast Office in Boston, MA, 49 tropical cyclones impacted New England between 1900 and 1997³⁹. This means that there is roughly a 44% chance of a tropical storm or hurricane impacting New England in a given year. It should be noted, however, that rising sea-surface temperatures in the North Atlantic contribute to increased cyclonic activity⁴⁰. If warming trends continue, increased frequency and intensity of storms could place Connecticut at a much higher risk. The index value for Probability is three out of four or “Likely”. This means that the annual probability of tropical cyclones in northeastern Connecticut is greater than 20%.

³⁸ National Weather Service, *Tropical Cyclone Climatology*

³⁹ National Weather Service Forecast Office, Boston, Massachusetts, *New England Hurricane Climatology*

⁴⁰ World Meteorological Organization International Workshop on Tropical Cyclones, *Statement on Tropical Cyclones and Climate Change*

Impact

Tropical cyclones typically have a larger impact on coastal regions. High winds cause storm surge and tidal extremes that can flood and inundate communities built along the shore. The Hurricane of 1938 caused coastal flooding that lifted houses off of their foundations, moving them miles. Cyclones also tend to lose strength after moving over land. Northeastern Connecticut, however, is not very far inland; the strength of a cyclone should differ greatly after moving thirty miles inland. Northeastern Connecticut is also very vulnerable to a cyclone's high wind speeds. Mentioned earlier, the presence of trees along minor and major roadways poses a threat to mobility, utilities, response, and safety. Records presented in [Chapter 3.2](#) cite instances of sub-hurricane-force winds causing tens of thousands of dollars in utility-related damages.

Although northeastern Connecticut is safe from coastal flooding. The number of rivers and streams in the region, its rolling topography, and the prominence of one major drainage basin—the Thames River Drainage Basin—creates a great chance of inland flooding. The low-lying villages along the Quinebaug River, Shetucket River, and their tributaries, could potentially see historic flooding in an extreme cyclonic event. Similarly, Vermont experienced historic flooding in 2011 during Hurricane Irene. Rolling topography and development along rivers proved catastrophic for many low-lying areas in the southern portion of the state, with some areas experiencing flooding that exceeded records set by the Hurricane of 1938⁴¹. Considering the wide-spread, damaging, and life threatening potential of hurricanes and tropical storms in Connecticut and the New England region, as well as modeling of future events using Hazus-MH, these storms are a major priority for hazard mitigation efforts. The index value for Impact is four out of four or “Catastrophic”. It is expected that multiple injuries and/or multiple deaths could result from one of these storms. Also, most structures and utilities in the region will be prone to property damage (see [Chapters 3.1 and 3.2](#))

Spatial Extent

A storm's gale radius is a measurement, in nautical miles, of the distance of the furthest gale force wind from the center of the storm, in each quadrant (northeast, southeast, southwest, and northwest)⁴². For the purposes of the Regional Risk Assessment, Hurricane Sandy was used as a model event when assessing the spatial extent of tropical cyclones. When Hurricane Sandy made landfall in 2011, the gale radii of its four quadrants were estimated to be 460nm, 370nm, 400nm, and 490nm, respectively⁴³. Smaller, tropical storms and tropical depressions should be expected to be encompass a reduced area, but still affect the entire region. A tropical cyclone's Spatial Extent is “Large”, or an index value of four out of four, meaning that more than 50% of northeastern Connecticut could be affected by an event. But, like winter storms, this only partially describes the spatial extent of these large systems.

Warning Time

Similar to winter storms, the large spatial extent of tropical cyclones suggests very high warning time. Weather professionals and radar systems are dedicated to tracking and monitoring potential storms before they become cyclonic. When a potentially threatening storm develops. The

⁴¹ WCAX, *Vermont Communities Inundated by Irene Flooding*

⁴² The National Hurricane Center, *Extended Best Track Dataset*

⁴³ The National Hurricane Center, *Extended Best Track Dataset*

National Weather Service tracks it and models its trajectory. The National Weather Service also issues “watches” and “warnings” for tropical storms and hurricanes. A Tropical Storm Watch or a Hurricane Watch is issued 48 hours in advance of a storm’s possible onset, meaning that storm is possible in a given area. Tropical Storm Warnings and Hurricane Warnings are issued when a storm is expected within 36 hours. Extreme Wind Warnings are short-term warnings for winds in excess of 115mph are expected within one hour for a region⁴⁴. The index value for Warning Time is one out of four; there is usually more than 24 hours’ warning before an event.

Duration

When estimating the duration of a tropical cyclones on the region, it is necessary to consider the size of a storm and the average forward speed of past storms (see [Table 3-5](#)). At northeastern Connecticut’s latitude (41⁰ N), the average forward speed of a hurricane is 30.6mph or 26.6 knots. Given that Hurricane Sandy’s average estimated gale radius was 430 miles when it made landfall, it would have taken roughly 28 hours to pass over a given point if traveling in a straight line⁴⁵. Using this data, the index value for Duration is three out of four. Tropical cyclones in northeastern Connecticut may last over 24 hours.

Table 3-5: Forward Speed of Hurricanes

Latitude	Speed (nmph)	Number of Cases
0° – 5°	14	186
5° – 10°	11.9	4,678
10° – 15°	10.4	7,620
15° – 20°	9.4	7,501
20° – 25°	9.4	8,602
25° – 30°	10.8	6,469
30° – 35°	14.6	3,397
35° – 40°	21	1,120
40° – 45°	26.6	246
45° – 50°	27.8	34
50° – 55°	27.8	15
55° – 60°	30.1	1

Source: Neal Dorst, Frequently Asked Questions

3.6 Tornadoes

A tornado, sometimes referred to as a “twister” or “cyclone”, is defined by NOAA as, “A violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud roaring noise.

⁴⁴ National Weather Service, *Hurricane Preparedness - Watches & Warnings*

⁴⁵ The National Hurricane Center, *Extended Best Track Dataset*

On a local scale, it is the most destructive of all atmospheric phenomena.” Tornadoes are most commonly associated with supercell thunderstorms but can also be formed absent of supercells and even in tropical cyclones. Tornadoes produced from supercell thunderstorms are typically the most dangerous, lasting longer than one hour and being fed by the storm’s updraft.

Tornados have historically been measured in terms of estimated wind speed from damage to man-made structures. The Fujita-Pearson Scale (see [Table 3-6](#)) designates estimated tornado events F0, F1, F2, F3, F4, or F5 with F5 being the most-intense. Today, the Enhanced Fujita Scale has replaced the Fujita-Pearson Scale. It accounts for differences in construction quality and uses a modified index to estimated wind speed. The Enhanced Fujita Scale designates events as EF0, EF1, EF2, EF3, EF4, or EF5 based on degree of damage (DOD) data.

Table 3-6: Fujita Scale with Damage Descriptions and Enhanced Fujita Scale

Fujita Scale	Wind (mph)	Damage	Enhanced Fujita Scale	Wind (mph)
F0	>73	Light- some damage to chimneys, shallow-rooted trees pushed over.	EF0	65 -85
F1	73 - 112	Peels surface off of roofs, moving automobiles blow off roads	EF1	86 - 110
F2	113 - 157	Roofs torn from house frames, cars lifted off of ground	EF2	111 - 135
F3	158 - 207	Roofs and some walls torn from well-constructed homes, trains overturned	EF3	136 - 165
F4	208 - 260	Well-constructed houses leveled, cars thrown	EF4	166 - 200
F5	261 - 318	Strong-framed houses leveled, trees debarked	EF5	>200

Source: Storm Prediction Center, Fujita Tornado Damage Scale; Storm Prediction Center, Enhanced F Scale for Tornado Damage

Despite their infrequent occurrence in the region, the seriousness and specific challenges related to tornados demand great attention. Tornadoes have killed as many as 519 people in one year, in the United States and, according to NOAA, 59 EF5 or F5 tornadoes have occurred in the United States since 1950^{46,47}.

3.6.1 Notable Occurrences

The two most significant tornado events in Windham County took place one year apart, in 1786 and 1787⁴⁸. On August 23, 1786, a tornado touched down in Sturbridge, MA and traveled

⁴⁶ AON Corporation, *United States Tornado History*

⁴⁷ Storm Prediction Center, *F5 and EF5 Tornadoes of the United States*

⁴⁸ Colonial Sense, *New England Weather*

southeastward through Woodstock, Pomfret, and Killingly. One person was killed in Woodstock, and another in Killingly. The tornado also destroyed 20 homes and 63 barns in the region⁴⁹.

Less than one year later, August 15, 1787, the northeast experienced a tornado outbreak, with six storms in 3.5 hours across the states of Connecticut, Rhode Island, Massachusetts, and New Hampshire. The Four-State Tornado Swarm did not kill anyone in Windham County, but two people were killed in Wethersfield, Connecticut⁵⁰.

Nearby counties in Connecticut, Rhode Island, and Massachusetts have recently experienced severe tornadoes, similar in intensity to the two in 1787 and 1876. These tornadoes are discussed in [Chapter 3.6.2](#). See [Appendix 9](#) for a complete list of database records from the Storm Events Database and SHELDUS.

Tornado: 06/24/1985 11:45 EST

A small tornado touched down in rural, northeastern Connecticut in the town of Woodstock at 1:45 P.M. E.D.T. and moved on a generally east-southeastward track through the towns of Woodstock, Pomfret, Putnam and Killingly. The funnel moved along at generally treetop level throughout its course, tearing up thousands of trees but doing relatively light structural damage. In Woodstock, a 200-ft. long, concrete block chicken coop was totally demolished. A number of homes along the path of the tornado were damaged by falling trees. Five sheds were demolished near Ballouville, and an apartment building there lost parts of its roof. In Killingly, a portion of a roof to a factory was blown off. Damage was estimated at about \$600,000 along the total track of the storm, which was a confirmed tornado by NWS investigation. It was the 6th tornado to be reported in Windham County during the past three hundred years. (Property Damage: \$2,500,000).

Tornado: 08/26/1985 12:45 EST

A small tornado moved through a camping area, damaging tents, trailers, and fences before moving eastward across the state line into Rhode Island. No injuries were reported and damage was held to a minimum since the vortex roved along at tree-top level. The occurrence wa5 confirmed by National Weather Service investigation. The total path length in both states was 1.5 miles. (Property Damage: \$250).

Tornado: 07/14/1992 16:30 EST

A small tornado touched down in a wooded area just off Route 12. No structures were damaged.

Source: Storm Events Database, NCDC at NOAA

3.6.2 Regional Risk Assessment

Probability

Tornadoes are significantly rarer to southern New England than most other regions in the continental United States. The United States, however, has a very high incidence of land-born tornadoes when compared to other countries. It appears that Windham County experiences fewer tornados, on average, than almost all other Connecticut counties—New London County has the least, with only has 2 records in the Storm Events Database. Counties in central and western

⁴⁹ Thomas Grazulis, *Significant Tornadoes 1586-1870*

⁵⁰ Thomas Grazulis, *Significant Tornadoes 1680-1991*

Connecticut had far higher incidence of tornados, and Litchfield County in northwestern Connecticut recorded 22 separate events in the Storm Events Database.

The Storm Events Database keeps tornado records as late as 1950, longer than any other weather event. An assessment of the database's records revealed that Connecticut had experienced 73 separate events since 1950. Of these 73 events, two were F4 tornados, and neither one affected a NECCOG town. Windham County had three entries in the database, two from 1985 and one from 1992. An entry for a F1 tornado in June, 1985 mentioned that it was the sixth tornado in Windham County in 300 years. Nearby Worcester County, Massachusetts had 37 records corresponding to 28 separate events since 1950. Worcester County's most extreme tornado was a F4 event in 1953 that claimed 90 lives. Kent and Providence Counties in northwestern Rhode Island combined for seven separate tornados, including a record of a F2 tornado that formed in nearby Burrillville.

After assessing the database's records, it was determined that the probability of a tornado affecting northeastern Connecticut is about 10%. The index value for Probability is two out of four, or "Possible".

Impact

Unlike in mid-western states where tornadoes are more common and pose an immediate threat, Connecticut does not have designated tornado shelters⁵¹. However, the Connecticut Division of Emergency Management and Homeland Security does provide all public schools in the state with radios for National Weather Service broadcasts. This system for advanced warning allow some mitigation of a tornado's effect on the population. A tornado's effect on property, however, is much more difficult to mitigate. According to the Enhanced Fujita Scale, EF2 tornadoes can cause serious damage to homes (see [Table 3-6](#)). According to NOAA, during an F4 tornado, "Well-constructed houses [will be] leveled...", and during an F3 tornado, "Roofs and some walls torn off well-constructed houses..."⁵²

The most significant tornado to affect Windham County, in recent history, occurred in 1985, starting in Woodstock then traveling southeast through Pomfret, Putnam, then Killingly. This F1 tornado resulted in \$600,000 in property damage⁵³, destroying a chicken coop and damaging homes and businesses (see [Table 3-7](#)). A short distance away, in northern Worcester County, a famous 1953 F4 tornado claimed 90 lives, resulted in 1228 injuries, and caused a quarter of a billion dollars in property damage. Tornadoes in Hartford and New Haven counties each accounted for a similar amount of property damage but claimed less lives and fewer injuries. These F4 tornados are extremely rare in the area are destructive due largely to a lack of preparedness. Recently, a 2011 tornado that began in Springfield, Massachusetts and traveled across much of the state, claimed four lives and injured 200 people. This smaller EF3 tornado claimed accounted for greater property damage than the previous F4 tornados.

Considering the historic impact of tornadoes in Windham County and on surrounding regions, totaling as many as 90 deaths in a single event, the index value for a tornado's Impact is four out of four, or "Catastrophic"; a high number of injuries and deaths are possible from tornadoes and

⁵¹ State of Connecticut, *2014 Connecticut Natural Hazards Mitigation Plan Update*

⁵² Storm Prediction Center, *Fujita Tornado Damage Scale*

⁵³ Price adjusted to 2011 dollars.

over 50% of homes in a tornadoes path could be destroyed. All people and property should be considered vulnerable to tornadoes.

Table 3-7: Significant Tornadoes

Year	County	State	Intensity	Deaths	Injuries	Property Damage (2011 USD)
1953	Worcester	MA	F4	90	1228	\$250,000,000
1979	Hartford	CT	F4	3	500	\$250,000,000
1985	Windham	CT	F1			\$600,000
1985	Windham	CT	F1			\$250
1986	Providence	RI	F2			\$2,500,000
1989	New Haven	CT	F4		40	\$250,000,000
1992	Windham	CT	F1			-
2011	Hampden	MA	EF3	4	200	\$227,600,000

Source: National Climatic Data Center, Storm Events Database

Spatial Extent

As mentioned earlier, tornadoes are extremely localized phenomena. A tornado's path of destruction is normally very thin and the path's length is small in comparison to many other weather hazards. The record for widest recorded tornado path comes from a 2013 event in Oklahoma. A tornado in El Reno had a path width of 2.6 miles, barely eclipsing an event in Hallum, Nebraska with a width of 2.5 miles⁵⁴. It should be noted, however that tornadoes of this size are very uncommon, even in heavily affected areas.

An inventory of serious tornado events in Connecticut (see [Table 3-8](#)) revealed that no tornadoes exceeded 1400 yards (roughly 0.8 miles) in width. The median width of these tornadoes was only 120 yards (roughly 0.07 miles). The maximum path distance belonged to a 1962 event that ran 11.6 miles through Hartford County and New Haven County. The 1979 tornado in Hartford County had the greatest path area, just under nine square miles. Considering that the NECCOG region has an area of over 560 square miles, a Connecticut-record tornado is likely to affect less than 2% of the entire region. The index value for Spatial Extent is one out of four, or "Small".

Warning Time

The National Weather Service issues Tornado Watches when tornadoes are possible in an area—normally due to violent thunderstorms—and Tornado Warnings when a tornado has been spotted. According to NOAA, the average lead-time for a Tornado Warning is 13 minutes before strike⁵⁵. This short lead-time contributes to the destructive nature of tornadoes, making it difficult to prepare find shelter before a tornado strike. Since there is less than six hours of warning before a tornado, the index value of Warning Time is four out of four.

⁵⁴ National Climatic Data Center, *Storm Events Database*

⁵⁵ National Oceanic and Atmospheric Administration, *Tornadoes 101*

Duration

Tornadoes are relatively short-lived compared to other natural hazards in the region. The longest United States tornado was the Tri-State Tornado in 1925. This tornado affected the states of Missouri, Illinois, and Indiana, lasting over three and a half hours. Tornadoes in Connecticut, however, are very short-lived and last only a few minutes. The index value of Duration is one out of four, meaning that tornadoes last less than six hours.

Table 3-8: Path Sizes for Significant Connecticut Tornadoes

Year	County	State	Intensity	Width (yards)	Length (miles)
1951	Middlesex	CT	F3	33	Not Specified
1954	Tolland	CT	F3	33	0.3
1962	New Haven	CT	F3	120	9.3*
1962	Hartford	CT	F3	120	2.3*
1971	New Haven	CT	F3	200	Not Specified
1979	Hartford	CT	F4	1400	11.3
1989	New Haven	CT	F4	100	3

* Different segments of the same tornado

Source: National Climatic Data Center, Storm Events Database

3.7 Drought

Drought differs from many of the region’s other hazards because it is a long-onset condition, brought on by unusual weather patterns across the continent. A drought occurs when there is deficiency in an area’s water supply over an extended period of time, resulting from below-average precipitation. The effects of drought differ based on a specific town’s water needs. In agriculture, soil moisture affects crop growth and stored water is typically used for irrigation. Thus, rural economies that are dependent on agriculture could be stressed when needing to conserve water. Higher-population cities, on the other hand, could be forced to place restrictions on public, commercial, or industrial water consumption. In extreme cases, famine, war, and wildfires have occurred around the world as results of drought.

According to NOAA, there are four types of drought. A “meteorological drought” is the broad term used to describe long-term dryness resultant of weather conditions. “Hydrological drought”, “agricultural drought”, and “socioeconomic drought” are terms that describe droughts as they impact different systems. The Drought Severity Classification (see [Table 3-9](#)), developed by the National Drought Mitigation Center (NDMC), categorizes droughts according to different indices that measure their individual effects.

Table 3-9: Drought Severity Classification Chart

Drought Severity	Return Period (years)	Possible Impacts	Standardized Precipitation Index (SPI)	NDMC Drought Category	Palmer Drought Index
Minor Drought	3 - 4	Short-term dryness slowing growth of crops or pastures; fire risk above average	-0.5 to -0.7	D0	-1.0 to -1.9
Moderate Drought	5 - 9	Some damage to crops or pastures; fire risk high	-0.8 to -1.2	D1	-2.0 to -2.9
Severe Drought	10 - 17	Crop or pasture losses likely; fire risk very high	-1.3 to -1.5	D2	-3.0 to -3.9
Extreme Drought	18 - 43	Major crop and pasture losses; extreme fire danger	-1.6 to -1.9	D3	-4.0 to -4.9
Exceptional Drought	44+	Exceptional and widespread crop and pasture losses; exceptional fire risk	less than -2	D4	-5.0 or less

Source: The National Drought Mitigation Center, U.S. Drought Monitor Classification Schemes

Connecticut’s population density and presence of agriculture and industry makes it vulnerable to the social, environmental, and economic effects of a major drought. The region’s climate makes drought unlikely. Northeastern Connecticut, and other rural parts of the state, could be at increased risk due to a lack of public drinking water. Much of the region is dependent on well water and these homes are more likely to experience shortages than homes and businesses connected to public supplies for surface water reservoirs.

According to the [2014 Connecticut Natural Hazards Mitigation Plan Update](#), climate change could be responsible for more-intense heat waves and variations in continental weather patterns. It should be recognized that drought conditions could be more prevalent in the future if climate change persists.

3.7.1 Notable Occurrences

According to the Northeast Regional Climate Center at Cornell University, the Central Climate Division of Connecticut, which includes northeastern Connecticut, has experienced 8 severe or extreme droughts, lasting two months or more, since 1895⁵⁶. According to the NRCC, the longest

⁵⁶ Northeast Regional Climate Center, *U.S. Drought Monitor Northeast*

of these droughts lasted 28 months—36 months according to the Connecticut Drought Preparedness and Response Plan—and occurred between the years 1964 and 1966⁵⁷.

The storm events database included one record of a severe drought in Windham County.

Drought: 04/12/2012 7:30 EST

The U.S. Drought Monitor declared severe drought (D2) over Windham County from April 12 through April 24. This was deemed a meteorological drought due to precipitation levels approximately one half of normal.

Source: Storm Events Database, NCDC at NOAA

3.7.2 Regional Risk Assessment

Probability

The Storm Events Database contains records of droughts as late as 1996. Six separate droughts were recorded for the state of Connecticut since then—including one for Windham County. All four counties in southern Connecticut experienced droughts in April, May, and June of 2002. According to Kevin McCarthy at the Connecticut Office of Legislative Research in 2003, major droughts in Connecticut occurred in the years 1964-1968, 1981, 1987, and 2002⁵⁸.

The index value for drought’s Probability is two out of four, or “Possible”. The historic incidence of drought in the region suggests that there is less than 20% chance, but greater than 1% chance, of a drought occurring in a given year in northeastern Connecticut.

Impact

Droughts are a unique hazard in that they generally do not cause direct property damage. Additionally, droughts in developed countries do not typically cause loss of life or injury. The vulnerability of a region to drought, however, can vary based on its reliance on water for agriculture, economy, and subsistence. In 2003, Connecticut adopted the Connecticut Drought Preparedness and Response Plan. This plan established a framework for drought monitoring and response. Then in December, 2008, the Connecticut Office of Policy and Management (OPM) issued Managing Water in Connecticut, a report that examines the current management of public water resources in Connecticut and explores options for improvements.

In Connecticut, a drought between the years 1964 and 1966 proved to slow forage production, hay and pasture yields, to about 60% of normal, and corn silage yields to 80-85% of normal. Tree fruits, some vegetable crops, corn, and strawberries saw slight yield reductions and heavier yield reductions where irrigation was not applied⁵⁹.

Windham County’s recent, 2012 drought did not cause any damage according to the Storm Events Database. No other records in the database, from Connecticut counties, included crop damage; although, this is likely inaccurate. Considering the history of drought the state, the index value for Impact is one out of four, or “Minor”. All people and property are vulnerable to drought; however, those reliant on on-site wells and those reliant on agriculture for livelihood should be considered especially vulnerable.

⁵⁷ Interagency Drought Working Group, *Connecticut Drought Preparedness and Response Plan*

⁵⁸ Kevin McCarthy, *OLR Backgrounder: Nor Any Drop to Drink- Preparing for Drought in Connecticut*

⁵⁹ Byron and Brumbach, *The 1964 Drought in Connecticut*

Spatial Extent

Despite slight, year-to-year fluctuations in precipitation and variations in water usage across the region, it is expected that all towns in northeastern Connecticut will be affected by a severe drought. This idea is supported by historic records in the Storm Events Database and from the NRCC. The index value for Spatial Extent is four out of four, or “Large”, meaning that it will affect over 50% of the region.

Warning Time

As mentioned earlier, droughts result from long-onset conditions and changes in weather patterns. Monitoring weather—temperature, humidity, wind, and amount of precipitation—allows advanced notice of drought conditions. Forecasting of local weather is increasingly accurate and typically available for seven day periods, with accuracy increasing for more immediate forecasts. Using current and past weather forecasts while monitoring water usage and availability can allow property owners, business owners, municipalities, utility companies, and farmers to plan for droughts.

Another resource for monitoring and anticipating drought conditions is the Drought Severity Classification from the National Drought Mitigation Center. The Drought Severity Classification for the entire United States is updated on a weekly basis and uses indexes—such as the Climate Prediction Center (CPC) Soil Moisture Monitor—to assess drought levels. Monitoring the weekly drought level, stakeholders will be able to anticipate the next week’s drought level if conditions persist, worsen, or improve. Additionally, the Connecticut Drought Preparedness and Response Plan established a monthly, criteria-based assessment of drought levels in the state. The Drought Advisory stage is the earliest warning for drought conditions and roughly corresponds to D1 on the Drought Severity Classification.

The index value for Warning Time is one out of four, meaning that there is typically more than 24 hours’ notice associated with the hazard. In reality, the warning time for drought is much longer.

Duration

Droughts are often long-lived compared to other natural hazards. A severe drought must persist long enough to have an impact on the region’s economy, environment, agriculture, or people. Of all of the region’s identified hazards, droughts last the longest.

The index value for Duration is four out of four, meaning that a drought typically lasts more than one week.

3.8 Earthquakes

Earthquakes are violent vibrations in the Earth’s crust, resulting from a release of localized tension, caused by crustal plates moving or subducting. As earthquake energy is released, it quickly radiates outward as waves, shaking and rolling the ground, potentially undermining, damaging, and collapsing buildings and structures, damaging roads and underground utilities, and downing power lines and trees. Extreme earthquakes can cause landslides, slumps, tsunamis, and avalanches. Additionally, smaller earthquakes or “aftershocks” can occur after a large earthquake,

as crustal plates reset and change position. Fortunately, seismic (relating to earthquakes) activity is very low in Connecticut, and earthquakes of significant magnitude do not pose a probable threat to the region.

An earthquake in Connecticut would be classified as an “intraplate” earthquake, which occurs at the interior of a crustal plate. Ninety percent of the world’s earthquakes are “interplate” earthquakes and occur at plate boundaries⁶⁰. The origin of an earthquake is deep underground and its location is known as the “hypocenter”. The “epicenter” is the location, on the Earth’s surface, directly above the hypocenter. Distance from these centers is an important factor when determining the severity of an earthquake at a given location; all other things being equal, a closer earthquake will have a greater impact. Another important factor is geology; bedrock geology and soil geology play important roles in the conduction of earthquake energy. Stable areas, sitting on solid bedrock experience less-destructive shaking than areas with underlying soils that are loose, unconsolidated, or partially saturated.

Table 3-10: Modified Mercalli Intensity Scalar Values and Descriptions, Compared with Approximate Richter and Moment Magnitude Scalar Values

MMI	Description	Richter Scale	MMS
I	Only felt by instruments	2	
II	Felt by few, especially on upper floors	2.5	
III	Felt indoors; vibrations similar to a large truck	< 3	> 2
IV	Felt indoors by many; dishes, windows may move	3.5	
V	Felt by most; tall objects may fall	< 4	> 3
VI	Felt by all; light damage	4	
VII	Very noticeable; damage to weaker buildings on fill	< 5	4
VIII	Walls, monuments, bookcases fall; soil liquefaction	< 6	5
IX	Buildings shift off of foundations; ground is cracked	< 7	< 6
X	Most structures severely damaged; rails bent	7	
XI	Few structures standing; large fissures in ground	7.5 - 8	< 7
XII	Total damage; objects thrown into the air	8.5	7.0 - < 8.0

Source: South Carolina Earthquake Education and Preparedness, Earthquake Size (Magnitude)

The Richter Scale was developed in the 1930s to measure the energy released by earthquakes. It is a logarithmic scale with a base of 10, meaning that each scalar value is an order of magnitude (10x) greater than the preceding value and an order of magnitude less than the proceeding value. Typically, earthquakes greater than 5.0 magnitude (expressed as “M5.0”) can cause damage to structures. M5.0 on the Richter Scale roughly corresponds to V on the Modified Mercalli Intensity Scale (MMI), commonly used to measure earthquake intensity by describing peoples’ perceptions and expected damage to buildings and goods; the MMI uses 12 Roman numeral

⁶⁰ Bruce Bolt, *Earthquakes: 2006 Centennial Update: The 1906 Big One*

values from I to XII. The Moment Magnitude Scale (MMS) is the current scale used to measure magnitude, replacing the Richter Scale. For a comparison of the three scales, see [Table 3-10](#).

Connecticut and New England have experienced few earthquakes in the past; however, the destructive nature of severe events suggests that steps should still be taken to protect the region's population and property. The entire region could either experience an earthquake directly or feel the effects of one from a considerable distance away. So far, earthquakes are unpredictable; however, they are extremely clustered, globally, and probabilities for future events can be mapped (see [Figure 3-4](#)).

3.8.1 Notable Occurrences

Since 1950 there have been 15 earthquakes of at least M1.0 in Connecticut, and one off of the coast in Long Island Sound, ranging between M1.7 and M3.8⁶¹. None of these earthquakes occurred in a NECCOG town.

The most severe earthquake in Connecticut's history occurred on May 16, 1791 in Moodus, Connecticut, a village in the town of East Haddam, near the mouth of the Connecticut River⁶². It is now believed that his earthquake would have registered VII in intensity, using the MMI scale⁶³. Later, in the nineteenth century, Connecticut experienced four separate earthquakes between 1837 and 1875.

An intensity V earthquake in southern Connecticut cracked plaster walls and damaged items. Recently, across the Connecticut River from Moodus, in the town of Chester, was the epicenter of a M2.0 earthquake in 2008⁶⁴. According to the [2014 Connecticut Natural Hazard Mitigation Plan Update](#), this Connecticut's most recent, noticeable earthquake.

Notable earthquakes that occurred outside of the state, but were still realized by Connecticut residents include: an intensity VII event in Massachusetts, in 1727; a M5.0 event in Canada, in 2008; and a M5.8 event in northern Virginia, in 2011^{65,66}. Although Connecticut did not sustain any damage from Virginia's 2011 earthquake, it halted play at the New Haven Open at Yale tennis tournament and prompted an evacuation of the Cullman-Heyman Tennis Center⁶⁷. Shaking was felt as far north as Quebec, Canada and Chicago, Illinois⁶⁸.

Plainfield Earthquake Swarm

In January 2015, twelve earthquakes, ranging between M1.0 and M3.3, shook the ground in Plainfield and Brooklyn; six of the earthquakes occurred on January 12th⁶⁹. In February, two additional earthquakes occurred in Plainfield. In all there were 14 confirmed earthquakes and

⁶¹ United States Geological Survey, *Connecticut Earthquake History*

⁶² United States Geological Survey, *Connecticut Earthquake History*

⁶³ State of Connecticut, *2014 Connecticut Natural Hazards Mitigation Plan Update*

⁶⁴ State of Connecticut, *2014 Connecticut Natural Hazards Mitigation Plan Update*

⁶⁵ United States Geological Survey, *Connecticut Earthquake History*

⁶⁶ State of Connecticut, *2014 Connecticut Natural Hazards Mitigation Plan Update*

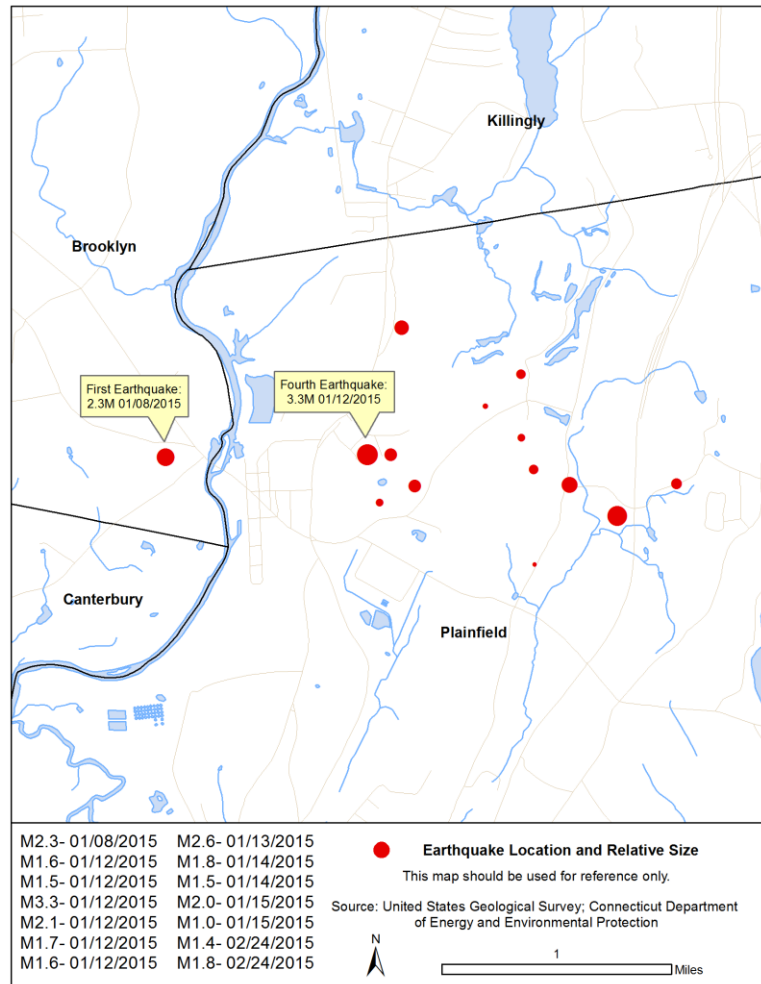
⁶⁷ Pat Eaton-Robb, *Earthquake Causes Evacuation at New Haven Open*

⁶⁸ United States Geological Survey, *M5.8- Virginia*

⁶⁹ United States Geological Survey, *Earthquake Hazards Program*

over 70 “micro-quakes” in Plainfield and the surrounding area⁷⁰ (see Figure 3-3). Fortunately, because no earthquakes were of significant magnitude, there was no quantifiable damage caused. Also, it is unclear if more earthquakes will occur; their cause is unknown and they occurred near an ancient fault in the underlying bedrock with no known prior activity. Nonetheless, the rarity of the events created a significant concern to people in the region, namely the town of Plainfield.

Figure 3-3: Approximate Locations of 14 Significant Earthquakes in Early 2015



3.8.2 Regional Risk Assessment

Probability

Earthquakes that occur, or are felt, in Connecticut are rarely intense enough to cause damage. The most recent, nearby earthquake of significant magnitude occurred in August, 2011 in Virginia. This M5.8 earthquake was felt in Connecticut but was of little significance.

The index value for Probability is one out of four, or “Unlikely”, meaning that an earthquake of a 5.0 magnitude has an annualized return rate of less than 1% (see Figure 3-4). Although there is a slightly higher probability—based on historic events—that a smaller earthquake will occur in Connecticut, these earthquakes have typically posed little or no threat to people or property.

Impact

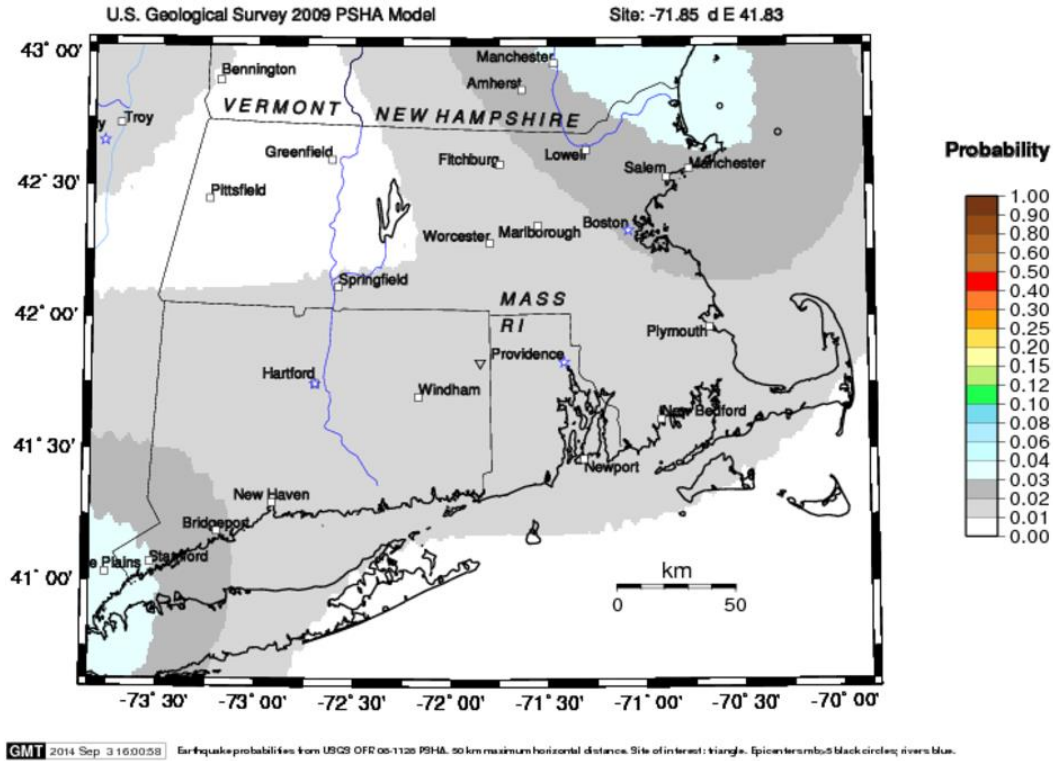
Although the maximum potential impact of an earthquake is extremely high, it is expected that future earthquakes in Connecticut will cause minimal—if any—destruction. The 1791 earthquake in Moodus, remains the Connecticut’s most severe. It was reported that sequential vibrations in the earth lasted much of the night, stonewalls and chimneys were damaged, and that fissures were left in the ground⁷¹. The areas surrounding Moodus have been characterized by above-average

⁷⁰ Connecticut Magazine, *More Earthquakes in Plainfield; 14 & Counting, 70+ Micro Quakes*

⁷¹ United States Geological Survey, *Connecticut Earthquake History*

Figure 3-4: Earthquake Probability in Southern New England

Probability of earthquake with M > 5.0 within 50 years & 50 km



Source: United States Geological Survey, 2009 Earthquake Probability Mapping

earthquake activity. These towns in the Lower Connecticut River Valley, in Middlesex and New London Counties are roughly one hour's drive from most NECCOG towns.

Considering the historic lack of deadly and destructive earthquakes in Connecticut, northeastern Connecticut in particular, the index value for Impact is one out of four, or “Minor”, meaning that, at most, few injuries and minor structure damage would be expected. A single earthquake in Connecticut would affect the entire region and all people and property should be considered vulnerable. Most structural damage should be sustained by brick, concrete, or masonry buildings.

Spatial Extent

When compared to the short-lived and unpredictable nature of the hazard, earthquakes have an extremely large spatial extent. Historically, earthquakes as distant as Ontario, Canada have been felt in Connecticut. The recent M5.8 earthquake in Virginia was felt as far north as Augusta, Maine⁷².

The index value for Spatial Extent is four out of four, or “Large”. If an earthquake occurred a NECCOG member town, it would affect over 50% of the region; however, this does not fully describe the spatial extent of earthquakes.

⁷² David Hench, *Mainers Report Feeling Tremors and Wondering What's Shaking*

Warning Time

Mentioned above, there is no current method for predicting earthquakes⁷³. The warning time associated with earthquakes was assessed an index value of four, meaning that there is less than six hours' notice before an earthquake.

Duration

In the case of more-extreme earthquakes on crustal boundaries, aftershocks can occur long after the initial earthquake⁷⁴. However, an earthquake in Connecticut should be short-lived and produce small aftershocks, if any. Because of this, the index value for Duration is one out of four, meaning that an earthquake typically last less than six hours.

3.9 Erosion

Erosion is known to currently threaten the town of Putnam along the banks of the Quinebaug River (see [Appendix 10](#)). In the region, erosion is not traditionally a threat to people and property, and for that reason, was not included as a *regional* hazard.

Erosion is the process by which soil and rock is removed, and deposited elsewhere, by wind or water. In particular, “fluvial erosion” occurs along rivers and stream. Fluvial erosion is dependent on the flow characteristics of a watercourse, the shape and material of its bank, and the amount of vegetative growth on its bank. Fluvial erosion may take place gradually or extremely quickly, in the case of a major flooding event.

3.9.1 Notable Occurrences

Erosion is not a pertinent issue in most northeastern Connecticut communities. Consequent to major rain events, fluvial erosion can change the characteristics of a river bank dramatically. Additionally, critical infrastructure, such as bridges, can be undermined and destroyed. If more instances of erosion are identified in northeastern Connecticut, subsequent plans may be expanded to include erosion as a region-wide natural hazard, following hazard identification by NECCOG and the NCEMC.

Gradual, fluvial erosion, has occurred along the Quinebaug River in Putnam. Dams along the Quinebaug River relax its flow and largely prevent conditions that cause gradual erosion. However, immediately downstream of the Cargill Falls Dam, in Putnam, John F. Simonzi Sr. Memorial Park (Simonzi Park) (see [Figure 3-5](#)) has continued to experience fluvial erosion that may threaten park land, the Putnam River Trail, and Kennedy Drive.

⁷³ Robert J. Geller, David D. Jackson, Yan Y. Kagan & Francesco Mulargia, *Earthquakes Cannot be Predicted*

⁷⁴ GNS Science, *How Long Does an Earthquake Last?*

3.9.2 Potential Impact

Anticipated Impact to Simonzi Park and the Putnam River Trail

Simonzi Park offers opportunities for passive recreation, as well as water access to the general public. Damages to the river bank reduce the amount of usable park land and may create an unsafe environment.

The Putnam River Trail is a paved pedestrian path that passes through Simonzi Park, paralleling Kennedy Drive and the Quinebaug River. In places, the Quinebaug River is already approaching the Putnam River Trail. If the Putnam River Trail were undermined due to erosion, the path could wash out and collapse into the river.

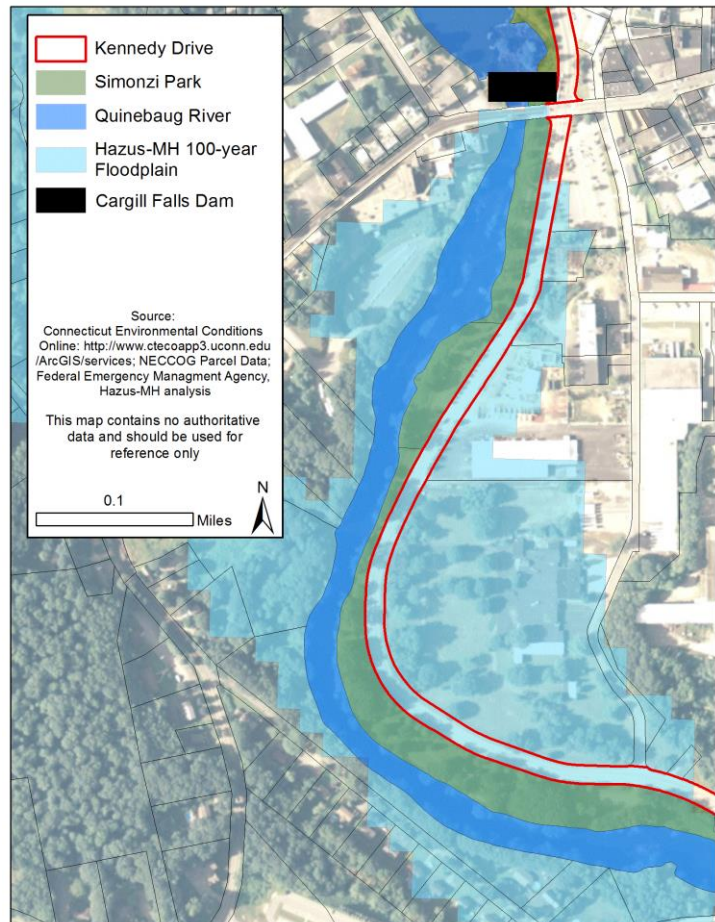
Anticipated Impact to Kennedy Drive

Kennedy Drive is a major collector road along the Quinebaug River in Putnam (see [Figure 3-5](#)). According to data collected by the Connecticut Department of Transportation in 2013, Average Daily Traffic (ADT) counts on Kennedy Drive, at Simonzi Park, were 11,800⁷⁵. With anticipated industrial expansion to the south, it should be expected that ADT in this location will rise, particularly freight traffic. Located underneath the Kennedy Drive right-of-way are water and sewer lines that are also vulnerable to the impacts of erosion. Damage to Kennedy Drive may require costly road and utility repairs and flood proofing. It will may result in displacement of traffic onto neighboring streets.

Future Probability

Erosion will continue to occur if left unmitigated at Simonzi Park, therefore there is 100% chance that it will occur in the future.

Figure 3-5: Simonzi Park and Kennedy Drive Relative to the Quinebaug River



⁷⁵ Connecticut Department of Transportation, 2011-2014 Average Daily Traffic Maps

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Chapter Four: Capability and Vulnerability Assessment

4.0 Capability and Vulnerability Assessment

It should be understood that the region's municipalities are not uniformly vulnerable to all natural hazards identified in [Chapter 3](#). Geography, population, development patterns, and specific capabilities help determine each hazard's impact on individual communities. The purpose of this chapter is to identify deviations from regional hazard vulnerability by assessing land use trends and characteristics of the natural environment, identifying existing critical facilities, recognizing capabilities and regulatory authorities related to natural hazards, and assessing environmental context in each municipality.

4.1 Capability Assessment

This section identifies and reviews current programs, personnel, boards, commissions, and committees, plans, and regulatory authorities, at different levels of government, that pertain to hazard mitigation. The Capability Assessment has two main components: a State and Regional Capability Assessment that outlines Connecticut's ability to mitigate on the state level as well as efforts for inter-municipal cooperation and programs through Northeastern Connecticut Council of Governments (NECCOG); and a Municipal Capability Assessment that describes, for each NECCOG member town, personnel, planning/regulatory authorities, emergency response capacity, and critical facilities. An additional component of the Capability Assessment is an assessment of local involvement in the National Flood Insurance Program (NFIP) (see [Chapter 4.1.1](#)). All local ordinances and regulations are named in [Chapter 4.1.3](#).

4.1.1 National Flood Insurance Program

The United States Congress created the National Flood Insurance Program through the passage of the National Flood Insurance Act of 1968. The program, under control of the Federal Emergency Management Agency (FEMA), provides alternative, government-funded insurance to property owners at risk from flooding. Local communities must adopt floodplain management ordinances in compliance with FEMA guidelines for property owners to be eligible. Local ordinances are intended to manage construction and land use in Special Flood Hazard Areas (SFHAs)—100-year flood zones and other special flood zones, depicted on Flood Insurance Rate Maps (FIRMs), drawn by FEMA. While scanned FIRMs are available online, maps for the region have not been combined and digitized into a format compatible with geographic information systems (GIS). Voluntown is the only town in the region with a GIS-compatible FIRM. Once a regional FIRM is completed, NECCOG and member towns expect to enhance their ability to share and produce NFIP-related information with citizens.

NFIP Participation

All municipalities in Connecticut, as well as a number of boroughs, have adopted floodplain management ordinances and regulations in compliance with minimum NFIP standards, outlined in 44 CFR §60.2 and additional State standards in Public Act 04-144. By 1991, all NECCOG member towns, and Killingly’s borough of Danielson, have practiced active floodplain management through one or more of the following: a code of ordinances, zoning regulations, and subdivision regulations. The Connecticut State Building Code, adopted by all NECCOG member towns, also enforces minimum NFIP standards.

Table 4-1: Community Flood Map Data

Town	Flood Insurance Study Available Online	Letters of Map Amendment	Repetitive Loss Properties	Number of Claims	Initial Flood Hazard Boundary Map Identified	Initial Flood Insurance Rate Map Identified	Current Effective Map Date	Began NFIP Participation
Ashford	Yes	1	0	0	11/8/1974	12/1/1981	12/1/1981	12/1/1981
Brooklyn	Yes	14	0	0	2/28/1975	1/3/1985	1/3/1985	1/3/1985
Chaplin	Yes	6	1	5	12/13/1974	1/6/1982	1/6/1982	1/6/1982
Canterbury	Yes	0	0	0	1/10/1975	10/16/1984	10/16/1984	10/16/1984
Eastford	Yes	2	0	0	3/15/1974	5/16/1983	5/16/1983	5/16/1983
Hampton	No	2	0	0	1/10/1975	12/4/1985	12/4/1985*	12/4/1985
Killingly	Yes	7	0	0	9/6/1974	1/3/1985	1/3/1985*	1/3/1985
Danielson (Killingly)	Yes	2	0	0	1/24/1975	11/1/1984	11/1/1984	11/1/1984
Plainfield	Yes	25	1	2	9/6/1974	6/17/1991	6/17/1991	6/17/1991
Pomfret	Yes	2	0	0	9/20/1974	4/17/1985	4/17/1985	4/17/1985
Putnam	Yes	15	1	2	9/6/1974	10/18/1988	10/18/1988	10/18/1988
Scotland	No	0	0	0	1/31/1975	12/4/1985	12/4/1985*	12/4/1985
Sterling	Yes	2	0	0	5/31/1974	3/4/1985	3/4/1985	3/4/1985
Thompson	Yes	17	1	3	5/17/1974	11/1/1984	NSFHA	11/1/1984
Union	No	1	0	0	12/4/1985	12/4/1985	12/4/1985*	12/4/1985
Voluntown	Yes	1	0	0	5/31/1974	6/3/1988	7/18/2011	6/3/1988
Woodstock	Yes	15	1	2	9/20/1974	11/1/1984	11/1/1984	11/1/1984

*No Elevation Determined - All Zone A, C, X

(NSFHA)= No Special Flood Hazard Area - All Zone C

Source: Connecticut Department of Energy and Environmental Protection Floodplain Administrator; Federal Emergency Management Agency, Federal Emergency Management Agency Community Status Book Report: Connecticut Communities Participating in the National Flood Program

- **Community Rating System-** Seeing the benefits of stricter floodplain management in certain Connecticut communities, NECCOG member towns are encouraged to augment floodplain management ordinances and regulations to exceed minimum criteria of the NFIP. None of the region’s communities participate in the NFIP’s Community Rating System (CRS), a voluntary program for governments that wish to exceed minimum floodplain management requirements.

According to flood insurance policy data, the town of Killingly, less the borough of Danielson, has experienced the greatest number of losses and holds the greatest number of policies (see [Table 4-4](#)). As a whole, the region has very few losses and policies, when compared with the state of Connecticut.

Strategy for Continued Participation in the NFIP

According to FEMA’s [Local Mitigation Plan Review Guide](#): *“The plan must describe each jurisdiction’s participation in the NFIP and describe their floodplain management program for continued compliance. Simply stating “The community will continue to comply with NFIP,” will not meet this requirement.”*

Being a rural region with typically small municipal governments, the NFIP is often administered by a part-time employee or employee with multiple responsibilities, and occasionally a volunteer commission member (see [Table 4-4](#)).

NECCOG member towns assure compliance with the NFIP by careful review of building permits to meet building codes, zoning regulations, and subdivision regulations; no NECCOG member towns have been placed on NFIP probation due to issuing building permits in floodplains.

NECCOG and the region’s communities are dedicated to improving local capabilities in the way of floodplain management and it is the intention of NECCOG to offer technical assistance (see [Table 4-2](#)).

[Table 4-2: Regional Mitigation Actions that Address Continued NFIP Compliance](#)

NECCOG Strategy for Continued NFIP Participation	Location in Plan
Inform and educate citizens about the availability of National Flood Insurance Program options	Chapter 5.2.3 Regional Mitigation Actions
Assure town floodplain management ordinances and regulations meet or exceed minimum requirements for participation in the National Flood Insurance Program	Chapter 5.2.3 Regional Mitigation Actions

Continued participation in the NFIP will be accomplished in the following ways:

- **Public Act 04-144-** The State of Connecticut, under Public Act 04-144, requires municipalities to adopt additional requirements in their floodplain management ordinance and/or regulations, when updating them for other reasons, to prohibit development that may increase the elevation of the identified floodway.
- **Community Assistance Visits-** The Connecticut Department of Energy and Environmental Protection (DEEP) and FEMA make Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs) to track changes in municipal floodplain management for all towns and boroughs in Connecticut. These allow the Connecticut Floodplain Administrator or FEMA to assess map accuracy and floodplain issues, review files, permits, and variances, and meet with local officials.
- **Connecticut State Building Code-** The Connecticut State Building Code is amended periodically and is a combination different international and national codes. The 2005 Connecticut State Building code meets the minimum requirements of the NFIP. All towns in Connecticut are required to adopt the Connecticut State Building Code but may also adopt additional requirements in local building codes. Currently, all NECCOG member towns follow only the Connecticut State Building Code, and in this way will continue NFIP compliance regardless of any unforeseen status change with the NFIP.
- **Continued review of building permits by Building Officials, NFIP Administrators, Zoning Enforcement Officials, and Zoning Commissions.**

Community Assistance Visits

Table 4-3: CAV and CAC Correspondence since Beginning NFIP Participation

Town	DEEP CAVs	DEEP CACs	FEMA CAVs
Ashford	2	1	0
Brooklyn	1	2	0
Canterbury	3	0	0
Chaplin	2	1	0
Eastford	4	1	0
Hampton	2	1	0
Killingly	2	1	1
Plainfield	3	1	0
Pomfret	3	1	0
Putnam	2	1	1
Scotland	2	1	0
Sterling	2	2	0
Thompson	1	3	1
Union	3	1	0
Voluntown	2	3	0
Woodstock	2	3	0

Source: Connecticut Department of Energy and Environmental Protection Floodplain Administrator

Table 4-4: NFIP Policies and Loss Statistics as of 1/31/2015

Town	NFIP Administrator	NFIP Policies	Total Losses	Repetitive Loss Properties	Total Insurance In-Force	Written Premiums In-Force
Ashford	ZEO/BO	4	2	0	\$1,330,000	\$1,763
Brooklyn	ZEO/TP	18	4	0	\$3,132,900	\$23,190
Canterbury	ZEO/TP (pt)	2	0	0	\$375,000	\$2,039
Chaplin	ZEO (pt)	3	7	1 (Single-family)	\$589,200	\$2,670
Eastford	FS	5	1	0	\$1,271,300	\$2,381
Hampton	ZEO (pt)	1	2	0	\$280,000	\$390
Killingly	TP	50	8	0	\$12,249,600	\$55,879
Borough of Danielson	TP*	3	0	0	\$525,000	\$1,039
Plainfield	BO	33	5	1 (Non-residential)	\$8,594,700	\$62,312
Pomfret	BO (pt)	7	4	0	\$1,585,200	\$4,216
Putnam	WA	15	3	1 (Single-family)	\$4,453,000	\$27,111
Scotland	ZEO/TP (pt)	2	0	0	\$308,000	\$609
Sterling	ZEO (pt)	4	3	0	\$905,300	\$4,093
Thompson	BO (pt)	19	7	1 (Non-residential)	\$3,818,600	\$15,512
Union	PZC	3	1	0	\$763,000	\$2,143
Voluntown	ZEO/BO	8	2	0	\$1,634,500	\$4,915
Woodstock	BO	19	9	1 (Single-family)	\$3,300,700	\$19,817
Total	NA	196	58	5	\$42,248,200	\$207,184
Connecticut	NA	41,624	27,286	NA	\$10,449,127,600	\$54,530,336

* Danielson is part of Killingly and does not have its own government

(pt)- Part-time

BO- Building Official

FS- First Selectman

PZC- Planning and Zoning Commission Chairman

TP- Town Planner

WA- Wetlands Agent

ZEO- Zoning Enforcement Official

Source: Connecticut Department of Energy and Environmental Protection Floodplain Administrator; Federal Emergency Management Agency, Loss Statistics Connecticut; Federal Emergency Management Agency, Policy Statistics Connecticut; Federal Emergency Management Agency, Losses by Flood Zone and Occupancy; Federal Emergency Management Agency, Policy and Loss Data by Community with County and State

Repetitive Losses

As part of the NFIP, FEMA tracks Repetitive Loss (RL) properties and Severe Repetitive Loss (SRL) properties: properties with multiple flood insurance claims and properties that meet a certain cost and frequency thresholds for flooding. According to DEEP, there are five RL properties and zero SRL properties in the region. Thompson, Plainfield, Chaplin, Woodstock, and Putnam each have one RL property. Respectively, these structures are non-residential, non-

residential, single-family, single-family, and single-family structures with a combined total of 14 claims.

4.1.2 State and Regional Capability Assessment

State of Connecticut

The State of Connecticut has multiple agencies and groups with responsibilities pertaining to hazard mitigation (see [Tables 4-5](#)).

Table 4-5: Connecticut State Agency and Division Responsibilities Pertaining to Hazard Mitigation

Agency or Division	Major Programs and Responsibilities
Department of Energy and Environmental Protection, Inland Water Resources Division	Acts as NFIP coordinating agency; keeps inventory of dams throughout the state; keeps file of Emergency Operations Plans created by owners of Class B and Class C dams; oversees floodplain mapping.
Department of Energy and Environmental Protection, Public Utilities Regulatory Authority	Administers the Microgrid Grant and Loan Pilot Program.
Department of Energy and Environmental Protection, Forestry Division	Administers federally-funded Volunteer Fire Assistance Program.
Department of Energy and Environmental Protection, Solid Waste Division	Prepares the State of Connecticut Disaster Debris Management Plan .
Department of Transportation	Removes snow, tree debris, and other debris from state-owned roadways; designs new infrastructure to better-withstand hazardous events; inspects state-owned bridges and inventories scour-prone bridges.
Department of Public Health	Prepares the Connecticut Public Health Emergency Response Plan ; plans and coordinates response to droughts and emergencies related to public drinking water.
Department of Emergency Services and Public Protection, Division of Emergency Management and Homeland Security	Coordinates state-wide emergency planning and preparedness programs; prepares plans for disaster mitigation, response, and recovery; supports local and regional emergency planning; reviews Local Emergency Operations Plans; coordinates emergency communications and information.
Department of Administrative Services, Division of Construction Services	Adopts and administers building codes and fire safety codes; provides GIS assistance to agencies.
Office of Policy and Management	Prepares the State's plan of conservation and development; integrates hazard mitigation policies with state projects; coordinates GIS data within the state.
Connecticut Geological Survey	Maps geologic data and assesses geologic hazards.

Source: State of Connecticut, 2014 Connecticut Natural Hazards Mitigation Plan Update

Table 4-6: Connecticut State Laws Pertaining to Hazard Mitigation

Law	Function
Public Act 04-144	Requires local floodplain management ordinances to account for compensatory storage and equal conveyance of floodwater.
Connecticut General Statutes Title 25, Ch. 476a, Sec. 25-68b to Sec. 25-68h	Requires State Agencies to comply with NFIP requirements; sets stormwater management standards for State activities.

Source: Connecticut General Assembly, Bill Info; Connecticut General Assembly, Statutes

Table 4-7: State-level Committees and Groups

Group	Function
Connecticut Interagency Hazard Mitigation Committee	Reviews and approves and recommends to DEMHS, project submissions for FEMA grant programs.
Critical Infrastructure and Key Resources Subcommittee	Maintains and inventories geographic information systems data for critical infrastructure and key resources.
The Adaption Subcommittee of the Governor's Steering Committee on Climate Change	Assess the impacts of climate change on infrastructure, the environment, agriculture, and the public.
State Vegetation Management Task Force	Develops tree care and clearing standards for municipal officials and departments.
State-Wide Long-Term Recovery Committee	Provides support to local government, non-profit organizations, and private firms to assist in recovering from losses and disasters.

Source: State of Connecticut, 2014 Connecticut Natural Hazards Mitigation Plan Update

Regional Cooperation, Programs, and Services

As mentioned in [Chapter 1](#), the Northeastern Connecticut Emergency Management Committee NCEMC meets regularly to discuss emergency preparedness in coordination with Region 4 of the Connecticut Department of Emergency Services and Public Protection, Division of Emergency Management and Homeland Security (DEMHS).

To aid in hazard mitigation efforts while reducing municipal costs of additional staffing, NECCOG staff provide professional engineering services to the towns of Ashford, Brooklyn, Canterbury, Pomfret, and Putnam, as well as hired land use planning, comprehensive planning, regulation drafting, and GIS assistance to all of its member towns; NECCOG also acts in coordination with the Connecticut Department of Transportation (ConnDOT) in transportation planning for the region and administers planning funds.

Table 4-8: Example Planning and Engineering Services for NECCOG

Service Description
Zoning and subdivision regulations for the town of Ashford
Eastford Plan of Conservation and Development
Sand and gravel regulations for the town of Killingly
Build-out analysis for the town of Pomfret
Brooklyn planning services (staffing)
Evaluation of potential Pomfret Community School supplemental drinking water well siting

Further, NECCOG offers the region’s chief elected officials (CEOs) opportunity to collaborate, plan, and inter-municipally fund projects or provide services that make their communities more resilient to, or prepared for, the effects of natural hazards. Examples include mutual aid agreements between towns for emergency response and regional cost-sharing and siting of a household hazardous waste facility¹.

4.1.3 Municipal Capability Assessment

The Municipal Capability Assessment describes a town’s own government and emergency functions, and regulatory authorities, as they relate to hazard mitigation.

Personnel

Municipal staffs in northeastern Connecticut’s towns are typically smaller than those elsewhere in the state. Volunteer members of boards and commissions, appointed officials, and part-time employees often take on a number of responsibilities of full-time, paid staff in larger towns.

All municipal governments in Connecticut have an appointed Emergency Management Director (EMD). EMDs work closely with CEOs to monitor preparedness and respond to disasters and emergencies. Typically in northeastern Connecticut, the EMD is a volunteer positions. A number of towns have also chosen to appoint a Deputy EMD. All towns in Connecticut are also mandated to keep and maintain a Local Emergency Operations Plan (LEOP) that describes response, warning, reporting, evacuation, recovery, and sheltering functions for municipal government in different emergency situations.

¹ NECCOG is seeking a grant for the construction of a regional household hazardous waste disposal facility in the town of Brooklyn.

All municipal governments in the region employ a public works department with at least one employee. For some of the region's smaller towns, public staff is small but all public works departments oversee the maintenance of town roads. All towns appoint or elect a Tree Warden that is responsible for the maintenance and removal of trees on town land and along roadways.

All State Routes, Interstate Highways, and US Routes 6 and 44 are maintained by the Connecticut Department of Transportation (ConnDOT). Additionally, dam inspection is performed by dam owners in compliance with DEEP guidelines. Owners of Class C and Class B dams must file an Emergency Action Plan or Emergency Operations Plan with DEEP and appropriate municipalities.

Planning/Regulatory Authority

Not every town in the region employs full-time staff dedicated to planning and/or zoning enforcement. All towns are mandated to employ a building official; however, this is also typically a part-time position. Few towns employ engineering personnel and five receive professional engineering from NECCOG's Engineering Services Program.

Floodplain management ordinances and applicable regulations, as well as additional ordinances and regulations that pertain to hazard mitigation, are discussed for each town. Documents and chapters are specifically cited.

Each town maintains a 5-year Capital Improvement Plan (CIP) and a Plan of Conservation and Development (POCD) that is updated every ten years.

Emergency Response

All towns in the region have at least one fire department. Most fire departments are made up of volunteers and many provide ambulance response. There are three facilities in the region that house only ambulances. Advanced Life Support (ALS) paramedic services—as opposed to Basic Life Support (BLS) or typical ambulance services—are coordinated through one or more of six sources, depending on the town. Most of the region's population relies on the Paramedic Intercept Program coordinated through NECCOG.

Few towns in northeastern Connecticut employ a police force. In lieu of a police force, the chief elected official acts as Chief of Police and orchestrates emergency functions, and 11 towns appoint citizen constables with limited policing authority. Currently, three towns participate in the state's Resident State Trooper program and all towns receive State Police response from a regional barracks. Most towns in the region rely on Connecticut State Police Troop D in Killingly.

Ashford Capability Assessment

Table 4-9: Emergency Services in Ashford

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Ashford Volunteer Fire Department, Company No. 1	Ashford Volunteer Fire Department, Company No. 1	Windham Hospital Paramedic Program	State Police Troop C	0
Ashford Volunteer Fire Department, Company No. 2				

- Personnel-** Ashford employs a Land Use Department Clerk, and a Land Use Department Administrator that acts as Zoning Enforcement Officer and Building Official. The town receives professional engineering through NECCOG. Ashford also appoints a Deputy EMD.
- Planning/Regulatory Authority-** Ashford has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission. Ashford regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Ordinances Adopted by and Special Acts Concerning the Town of Ashford, Connecticut contains the towns’ floodplain management ordinance, Resolution Concerning Flood Protection and Flood Insurance, which enables the establishment of Ashford’s Flood Plain Zone. Zoning Regulations for the Town of Ashford contain specific requirements for a special Flood Plain Zone, which includes any land located in Zone A on Ashford’s FIRMs. The Flood Plain Zone corresponds to the zone labeled “F” on Ashford’s Zoning Map. Zoning Regulations for the Town of Ashford also require new developments to construct a firefighting water supply. Developers may choose to construct a well, capable of meeting the dry hydrant requirements, or install a 15,000 gallon cistern. The Town of Ashford Land Subdivision Regulations require the placement of electrical and communications utilities underground in new developments and on newly created roads. The Town of Ashford Inland Wetlands and Watercourses Regulations establish an upland review area of 100 feet from all wetlands and watercourses except the Mount Hope River (200ft) and its tributaries (150ft)

Brooklyn Capability Assessment

- Personnel-** Brooklyn employs a relatively large public works department (Highway Department), a Land Use Administrator, Land Use Assistant/Building Office Assistant, an Assistant Zoning/Blight Enforcement Officer, and a Building Official. The town receives professional engineering through NECCOG. The Brooklyn EMD is supported by a regularly meeting committee, the Brooklyn Emergency Management and Homeland Security Committee.

Table 4-10: Emergency Services in Brooklyn

Fire	Basic Life Support	Advanced Life Support	Police	Constables
East Brooklyn Fire Department	East Brooklyn Fire Department	NECCOG	State Police Troop D	0
Mortlake Fire Company			2 Resident State Troopers	

- Planning/Regulatory Authority-** Brooklyn has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission. The town's Planning and Zoning Commission acts as Aquifer Protection Agency. Brooklyn regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Chapter 12, Flood Damage Prevention, of the Code of the Town of Brooklyn, contains the town's floodplain management ordinance, which applies to all land in the 100-year floodplain. Town of Brooklyn, Connecticut Zoning Regulations includes the 100-year floodplain in the unbuildable area of a Conservation Subdivision or R-30 residential zone. Subdivision Regulations of the Town of Brooklyn, Connecticut require that all land in the 100-year floodplain conform to the town's floodplain management ordinance. The regulations also require the placement of electrical and communications utilities underground and the provision of dry hydrants, fire ponds, or fire hydrants. Wetlands Regulations of the Town of Brooklyn establish an upland review area of 125 feet from all wetlands soils, and 175 feet from all watercourses.

Canterbury Capability Assessment

- Personnel-** Canterbury employs a Land Use Director, Land Use Administrative Assistant, and a part-time Building Official. Canterbury receives professional engineering through NECCOG.
- Planning/Regulatory Authority-** Canterbury has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission that also acts as the Aquifer Protection Agency for the town. Canterbury regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Table 4-11: Emergency Services in Canterbury

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Canterbury Volunteer Fire Department	Canterbury Volunteer Fire Department	American Ambulance	State Police Troop D	8
			NECCOG	
			Windham Hospital Paramedic Program	

Town of Canterbury Special Acts and Ordinances contains the town’s updated floodplain management ordinance, An Ordinance Amending an Ordinance Instituting Flood Plain Management for Designated Flood-prone Areas Adopted September 30, 1977. This ordinance outlines building requirements for all land in the 100-year floodplain, as delineated on Canterbury’s FIRMs. Town of Canterbury Inland Wetlands and Watercourses Regulations establish an upland review area of 100 feet from all wetlands and watercourses. across the Quinebaug River.

Chaplin Capability Assessment

Table 4-12: Emergency Services in Chaplin

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Chaplin Volunteer Fire Department	Hampton-Chaplin Ambulance Corps	Windham Hospital Paramedic Program	State Police Troop D	0
			1 Resident State Trooper	

- **Personnel-** Chaplin employs a part-time Zoning Enforcement Official, a part-time Building Official, and a part-time Tree Warden.
- **Planning/Regulatory Authority-** Chaplin has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission. Chaplin regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Chapter 8.12, Flood Plain Regulations, of the Town of Chaplin Zoning Regulations, establishes special regulations for land within zones A, A1-A30 (AE), and B of Chaplin’s FIRMs. Town of Chaplin Subdivision Regulations require that all electrical and communications facilities be buried in conservation subdivisions. Chaplin Inland Wetlands and Watercourses Regulations establish an upland review area of 100 feet from all wetlands and watercourses, except for the Natchaug River which has an upland review area of 200 feet.

Eastford Capability Assessment

Table 4-13: Emergency Services in Eastford

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Eastford Independent Fire Company	Ashford Volunteer Fire Department, Company No. 1	NECCOG	State Police Troop D	4

- **Personnel-** Eastford has a part-time Building Official and part-time Wetlands Agent.

- **Planning/Regulatory Authority-** Eastford has a Planning Commission and an Inland Wetlands and Watercourses Commission. Eastford is one of two towns in Connecticut without zoning regulations, although adoption of zoning regulations has been brought to Town Meeting in the past. The town is able to regulate the use of land through subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Town of Eastford Code of Ordinances includes the town’s floodplain management ordinance, Ordinance Amending the Flood Damage Prevention Ordinance, which regulates land use in all areas with a 1%, or greater, chance of yearly flooding. Subdivision Regulations for the town of Eastford state that the Planning Commission may require easements for the purpose of water access for firefighting. Inland Wetlands and Watercourses Regulations for the Town of Eastford establish an upland review area of 100 feet from any wetland or watercourse.

Hampton Capability Assessment

Table 4-14: Emergency Services in Hampton

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Hampton Fire Company	Hampton-Chaplin Ambulance Corps	Windham Hospital Paramedic Program	State Police Troop D	4

- **Personnel-** Hampton employs a part-time Building Official, and a part-time Land Use Planner/Zoning Enforcement Officer.
- **Planning/Regulatory Authority-** Hampton has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Agency. Hampton regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Zoning Regulations of Hampton, Connecticut establish special regulations for Flood Hazard Areas, all land in zones A, and A1-A30 (AE) on Hampton’s FIRMs. Inland Wetlands and Watercourses Regulations for the Town of Hampton, Connecticut establish an upland review area of 100 feet from any wetland or watercourse.

Killingly Capability Assessment

- **Personnel-** Killingly employs a large public works department and multiple other departments that aid in hazard mitigation. Town employees include a Building Official, Fire Marshall, Director of Planning and Development, Planner and Wetlands Agent, Zoning Enforcement Officer/Planning Assistant, Director of Public Works/Town Engineer, Assistant Town Engineer, and Engineering Technician.

Table 4-15: Emergency Services in Killingly

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Attawaugan Fire District	K-B Ambulance Corps	NECCOG	State Police Troop D	5
Danielson Fire Department			4	
Dayville Fire Company			Resident State Troopers	
East Killingly Fire Department				
South Killingly				
Williamsville Fire Company				

- Planning/Regulatory Authority-** Killingly has a combined Planning and Zoning Commission as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission that acts as Aquifer Protection Agency. Killingly governs land use by way of zoning regulations, subdivision regulations, inland wetlands and watercourses regulations, the Connecticut State Building Code, and a code of ordinances.

Chapter 7, Flood Damage Prevention and Control, of the Killingly Code of Ordinances establishes land use restrictions in all areas with a 1%, or greater, chance of yearly flooding. This ordinance is further supported in the Killingly Town Zoning Regulations and the Borough of Danielson Zoning Regulations, which regulate land in any flood zone found on Killingly's FIRMs. Subdivision Regulations for the Town of Killingly, CT require communications and electrical utilities be placed underground in new developments. Regulations for the Protection and Preservation of Inland Wetlands and Watercourses, for the town of Killingly, establish an upland review area of 200 feet from any wetland or watercourse.

Plainfield Capability Assessment

- Personnel-** Plainfield employs a large public works department (Highway Department) as well as other departments that aid in hazard mitigation. Town employees include Planning & Engineering Supervisor, Zoning Officer, Building Official, Assistant Building Official, Fire Marshall. Pomfret receives professional engineering services through NECCOG.
- Planning/Regulatory Authority-** Plainfield has a combined Planning and Zoning Commission that acts as Aquifer Protection Agency, as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission. Plainfield governs land use by way of zoning regulations, subdivision regulations, inland wetlands and watercourses regulations, the Connecticut State Building Code, and a code of ordinances.

Table 4-16: Emergency Services in Plainfield

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Atwood Hose Fire Company	Moosup-Plainfield Ambulance	American Ambulance	State Police Troop D	0
Central Village Fire Department				
Moosup Fire Department		NECCOG	Town-wide Police Force	
Plainfield Fire Company				

Zoning Regulations of the Town of Plainfield regulate the use of all land within Zone A of the town’s FIRMs. General requirements for new developments, in the Subdivision Regulations of the Town of Plainfield, include the placement of communications and electrical utilities underground and the provision fire ponds, dry hydrants, or fire hydrants. Inland Wetlands and Watercourses Regulations of the Town of Plainfield establish an upland review area of 100 feet from any wetland or watercourse.

Pomfret Capability Assessment

- **Personnel-** Pomfret employs, part-time, a Zoning Enforcement Officer, Town Planner, Building Official, and Fire Marshall.
- **Planning/Regulatory Authority-** Pomfret has a combined Planning and Zoning, as well as a Zoning Board of Appeals and an Inland Wetlands and Watercourses Commission. Pomfret governs land use by way of zoning regulations, subdivision regulations, inland wetlands and watercourses regulations, the Connecticut State Building Code, and a code of ordinances.

Table 4-17: Emergency Services in Pomfret

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Pomfret Volunteer Fire Department	K-B Ambulance Corps	NECCOG	State Police Troop D	7

The most recent floodplain management ordinance, Amendment to Floodplain Management Ordinance, in the Town of Pomfret Cumulative Supplement to Ordinances and Special Acts, regulates the use of land in all areas with a 1%, or greater, chance of yearly flooding. This ordinance is further enforced through the Zoning Regulations, Town of Pomfret, Connecticut. Subdivision Regulations, Town of Pomfret, Connecticut require the placement of electrical and communications utilities underground. Inland Wetlands and Watercourses Regulations of the Town of Pomfret establish an upland review area of 150 from most wetlands and watercourses, 500 feet from the Quinebaug River, and 300 feet from Mashamoquet Brook, Nightingale Brook, Durkee Brook, Blackwell Brook, and their tributaries.

Putnam Capability Assessment

Table 4-18: Emergency Services in Putnam

Fire	Basic Life Support	Advanced Life Support	Police	Constables
East Putnam Fire Department	East Putnam Fire Department	NECCOG	State Police Troop D	Vacant
Putnam Fire Department			Town Police Force for Special Services District	

- Personnel-** Putnam employs a large public works department, a Building Official, Zoning Enforcement Official, Town Planner, and a part-time Fire Marshall. Putnam receives professional engineering services through NECCOG.
- Planning/Regulatory Authority-** The town of Putnam has an Inland Wetlands and Watercourses Commission, a Planning Commission, a Zoning Commission, and a Zoning Board of Appeals. The Putnam Zoning Commission is the town’s Aquifer Protection Agency. Putnam governs land use by way of zoning regulations, subdivision regulations, inland wetlands and watercourses regulations, the Connecticut State Building Code, and a code of ordinances.

Putnam’s code of ordinances includes the town’s Flood Damage Prevention ordinance, adopted in 1988. This ordinance controls land use in Zone A on Putnam’s FIRMs. The Zoning Regulations of the Town of Putnam grants the Putnam Planning and Zoning Commission the power to regulate development and land use in “flood prone area as shown on the Town of Putnam Flood Hazard Boundary Map”. The Town of Putnam, Connecticut Subdivision Regulations require the placement of electrical and communications utility lines underground and require fire hydrants in new developments. The Inland Wetlands and Watercourses Regulations of the Town of Putnam establish an upland review area of 200 feet from areas depicted as “Green Belt Protection” areas in the Town of Putnam Plan of Conservation and Development (2005) (see Appendix 11) and 100 feet from all other wetlands and watercourses.

Scotland Capability Assessment

- Personnel-** Scotland employs a part-time Building Official, as well as a part-time Zoning Enforcement Officer.
- Planning/Regulatory Authority-** The town of Scotland has a combined Planning and Zoning Commission and an Inland Wetlands and Watercourses Commission. Scotland governs land use by way of zoning regulations, subdivision regulations, inland wetlands and watercourses regulations, the Connecticut State Building Code, and a code of ordinances.

Table 4-19: Emergency Services in Scotland

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Scotland Volunteer Fire Department	Scotland Volunteer Fire Department	Windham Hospital Paramedic Program	State Police Troop D	3

An Ordinance to Adopt and Administer the National Flood Insurance Program, Adopted at the Town Meeting May 13, 1977 in the Town of Scotland Special Acts, Ordinances, Resolutions, Memoranda of Understanding, and Policies outlines regulations for floodplain management in “A Zones” on Scotland’s FIRMS. Zone A is also included as “unbuildable area” in Planning and Zoning Regulations for the Town of Scotland, Connecticut. The Town of Scotland Subdivision Regulations cite that flood hazard requirements for new subdivisions must conform to those in the town’s zoning regulations. Scotland’s subdivision regulations also require the placement of electrical and communications utilities underground. Inland Wetlands and Watercourses Regulations of the Town of Scotland establish an upland review area of 100 feet from all wetlands and watercourses, except for the Shetucket River (200 feet) and Merrick Brook, Beaver Brook, Waldo Brook, and the headwaters of the Little River (150 feet).

Sterling Capability Assessment

Table 4-20: Emergency Services in Sterling

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Onceo Fire Company	Moosup-Plainfield Ambulance	NECCOG	State Police Troop D	3
Sterling Volunteer Fire Company				

- **Personnel-** Sterling employs a part-time Zoning Enforcement Officer, a part-time Building Official, and a part-time Wetlands Enforcement Agent.
- **Planning/Regulatory Authority-** Sterling has a combined Planning and Zoning Commission, an Inland Wetlands and Watercourses Commission, and a Zoning Board of Appeals. The town of Sterling regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Ordinance Amending the Flood Damage Prevention Ordinance is Sterling’s most recent floodplain management ordinance, in the Town of Sterling Ordinances and Regulations, and regulates the use of land in all areas with a one percent, or greater, chance of yearly flooding. This ordinance is also enforced through the Zoning Regulations for the Town of Sterling and the Sterling Subdivision Regulations. The Sterling Inland Wetlands and Watercourses Regulations establish an upland review area of 100 feet from all wetlands and watercourses, except for the Moosup River (200 feet).

Thompson Capability Assessment

Table 4-21: Emergency Services in Thompson

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Community Fire Company	Community Fire Company	NECCOG	State Police Troop D	5
East Thompson Volunteer Fire Department				
Quinebaug Volunteer Fire Department				
Thompson Fire Engine Company				
West Thompson Independent Fire Association				

- Personnel-** Thompson employs a relatively large public works department, a Director of Planning and Development, Zoning Enforcement Officer, Wetland Agent, Conservation Officer, and Building Inspector.
- Planning/Regulatory Authority-** Thompson has a combined Planning and Zoning Commission, an Inland Wetlands and Watercourses Commission, a Zoning Board of Appeals, and a Building Safety Committee for school projects. The Planning and Zoning Commission acts as the town’s Aquifer Protection Agency. Thompson regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

The Zoning Regulations of the Town of Thompson, CT regulates the use of all land in Zone A on the town’s Flood Insurance Rate Maps through the regulations’ Article IX, Section 1- Flood Control Measures. General requirements for new developments, in the Subdivision Regulations of the Town of Thompson, CT include the placement of communications and electrical utilities underground and the provision fire ponds, dry hydrants, or fire hydrants. Inland Wetlands and Watercourses Regulations of the Town of Thompson establish an upland review area of 100 feet from most wetlands and watercourses, and 200 feet from the ten “Significant Wetlands” defined in Town of Thompson Inland Wetland Inventory (1980) (see Appendix 12).

Union Capability Assessment

- Personnel-** Union’s public works director acts as Tree Warden and Zoning Enforcement Officer. Union’s staff also includes a part-time Building Official.
- Planning/Regulatory Authority-** Union has a Zoning Board of Appeals and a combined Planning and Zoning Commission that acts as the Inland Wetlands and Watercourses Agency. Union regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

Table 4-22: Emergency Services in Union

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Union Volunteer Fire Department	American Medical Response	American Medical Response	State Police Troop C	4
	Stafford Ambulance Association			
	Willington Fire Department			

The Town of Union, Connecticut Zoning Regulations, in Section 4.05, regulate land use in the 100-year floodplain by establishing the Floodprone Areas Zone on the town’s zoning map. Land within all “A Zones”, on Union’s FIRMs, is contained in the Floodprone Areas Zone. The Town of Union, Connecticut Subdivision Regulations require that, in new developments, electrical and communications utility wires be placed underground. The Inland Wetlands and Watercourses Regulations of the Town of Union establish and upland review area of 80 feet from all wetlands and watercourses, except when installing a subsurface waste disposal or drainage system (150ft).

Voluntown Capability Assessment

Table 4-23: Emergency Services in Voluntown

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Voluntown Volunteer Fire Company	Voluntown Volunteer Fire Company	American Ambulance	State Police Troop E	0

- **Personnel-** Voluntown employs a part-time Building Inspector/Zoning Enforcement Officer and a part-time Inland Wetlands Enforcement Officer.
- **Planning/Regulatory Authority-** Voluntown has a combined Planning and Zoning Commission, a Zoning Board of Appeals, and an Inland Wetlands and Watercourses Agency. Voluntown regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut State Building Code, and a code of ordinances.

The Voluntown Code of Ordinances, includes the town’s floodplain management ordinance, the Flood Damage Prevention Ordinance. This ordinance regulates land use in zones “A” and “AE”, found on Voluntown’s FIRMs. The Zoning Regulations of the Town of Voluntown, Connecticut state that no buildings can be located with 25 feet of a water body’s 100-year floodplain and that all development must adhere to the Flood Damage Prevention Ordinance. The Subdivision Regulations, Town of Voluntown, Connecticut also cite the Flood Damage Prevention Ordinance. The Subdivision Regulations, Town of Voluntown, Connecticut require, for fire wells or fire ponds in new development, as determined by the Voluntown Planning and Zoning Commission. The Town of Voluntown Inland Wetlands and Watercourses Regulation establish and upland review area of 200 feet from all wetlands and watercourses.

Woodstock Capability Assessment

Table 4-24: Emergency Services in Woodstock

Fire	Basic Life Support	Advanced Life Support	Police	Constables
Bungay Fire Brigade	Woodstock Volunteer Fire Association	NECCOG	State Police Troop D	7
Muddy Brook Fire Department				
Woodstock Volunteer Fire Association				

- **Personnel-** Woodstock employs a relatively large public works department, a Town Planner/Zoning Enforcement Officer, and a Building Official/Wetlands Agent.
- **Planning/Regulatory Authority-** Woodstock has a combined Planning and Zoning Commission, a Zoning Board of Appeals, and an Inland Wetlands and Watercourses Commission. Woodstock regulates the use of land through zoning regulations, subdivision regulations, wetlands regulations, the Connecticut Building Code, and a code of ordinances.

Ordinance Concerning Flood Protection and Flood Insurance under the National Flood Insurance Act of 1968 as Amended by the Flood Disaster Prevention Act of 1973 in Special Acts and Ordinances of the Town of Woodstock acts as the town’s floodplain management ordinance, regulating land use in all areas with a 1% or greater, yearly chance of flooding. This ordinance is cited in the Subdivision Regulations of the Town of Woodstock and the Town of Woodstock Zoning Regulations. The Subdivision Regulations of the Town of Woodstock require underground communications and electrical utility wires in new development, as well as underground water tanks for firefighting. The Inland Wetlands and Watercourses Regulations of the Town of Woodstock establish an upland review area of 100 feet from all wetlands and 125 feet from all watercourses.

4.2 Vulnerability Assessment

Vulnerability describes the people and property at-risk or likely to be affected by to the effects of identified natural hazards. Vulnerability differs with each natural hazard, but also differs geographically. Hazus-MH version 2.1², a software product developed by FEMA, which uses GIS methodology to estimate damages from flooding, wind, and earthquakes, was used in the Vulnerability Assessment. Raw outputs from Hazus-MH can be obtained from NECCOG staff (see Appendix 16 for contact information). Outputs are summarized in Chapter 4.2.1.

The Vulnerability Assessment is divided into the following sections:

² Hazus-MH version 2.1 was used as an extension to ESRI’s ArcGIS Desktop 10.0.

- **Total Exposure-** Total exposure is described as total replacement value of structures, people and special populations, and Critical Facilities in the region.
- **Quantitative Loss Estimates-** Loss estimates, in terms of damage to people and property were performed to model the effects of a 100-year flood, a 50-year hurricane wind, and a magnitude 5.0 earthquake centered in Moodus, Connecticut.
- **Municipal Vulnerability Assessment-** The Municipal Vulnerability Assessment qualitatively describes ways in which vulnerability *may* differ in each town, and in areas within each town.

4.2.1 Total Exposure

Structures

Inventory data from Hazus-MH software includes estimates of total structure value, by use, in each town (see [Table 4-25](#)).

Critical Facilities

For the purpose of the Vulnerability Assessment, Critical Facilities were determined to be schools, hospitals, dams, facilities that house hazardous waste, and emergency response facilities (see [Chapter 4.1.3](#)). These facilities were chosen because they (a) serve a defined and important function in the case of a disaster, or (b) greatly affect the vulnerability of a given area. An inventory of these critical facilities was developed using local knowledge (see [Appendix 13](#)). See [Figure 4-1](#) for a map of critical facilities, less dams, in the region.

People

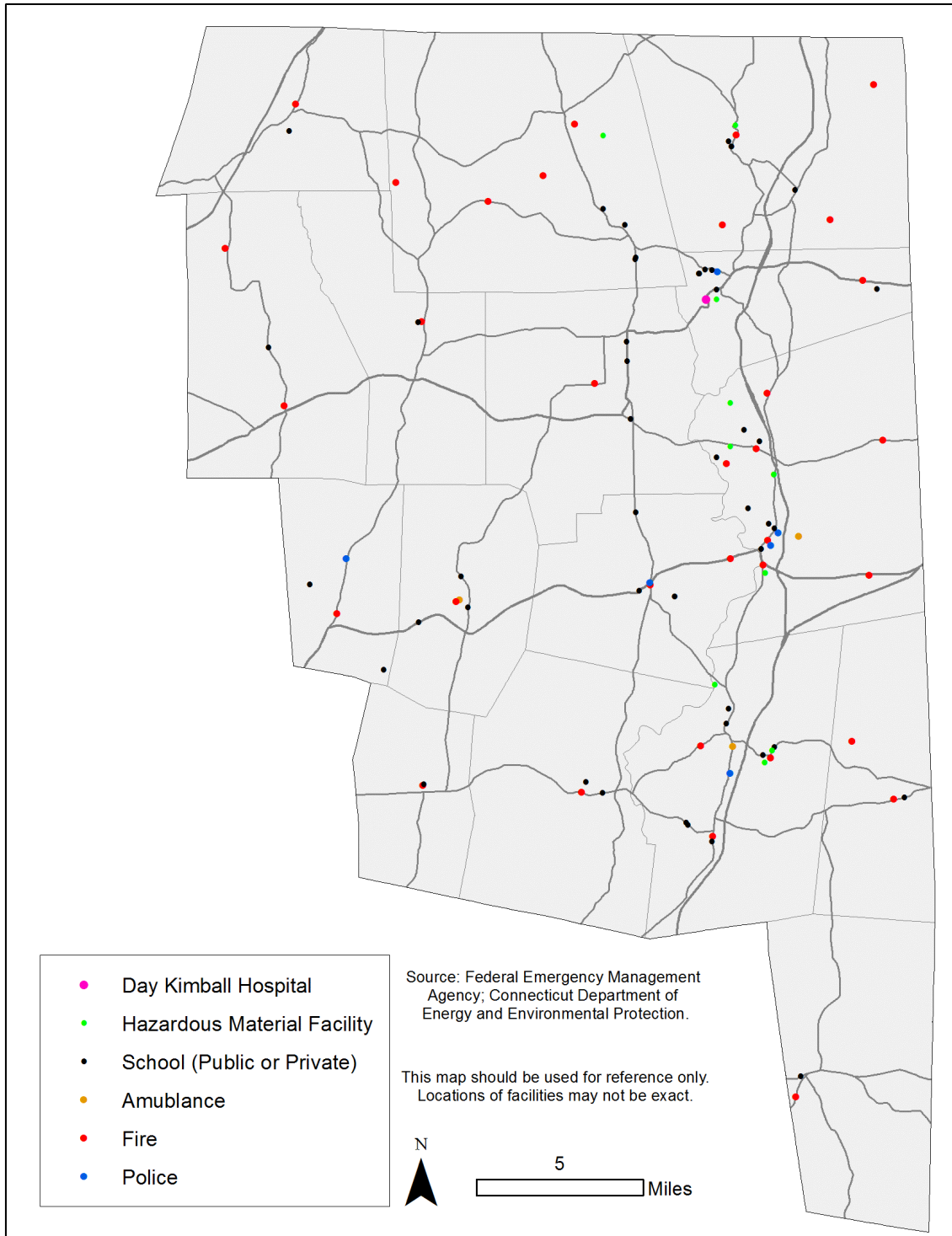
At the 2010 Decennial Census, the region was home to 96,617 people, and was projected to reach 99,835 people in 2015 (see [Table 2-1](#)). Further, 8.94% of the region's population was over the age of 70 in 2010 and 5.2% of the region's population was estimated to be disabled by 2013 (see [Tables 2-2 and 2-3](#)).

Table 4-25: Total Estimated Exposure Value of Structures in NECCOG Towns (X\$1,000)

Town	Residential	Commercial	Industrial	Agricultural	Religious	Governmental	Educational	Total
Ashford	\$262,239	\$26,824	\$5,861	\$2,589	\$6,813	\$625	\$4,516	\$309,467
Brooklyn	\$428,521	\$75,985	\$20,716	\$1,422	\$7,560	\$5,848	\$3,077	\$543,129
Canterbury	\$309,707	\$38,362	\$25,546	\$3,125	\$5,334	\$1,056	\$4,365	\$387,495
Chaplin	\$136,308	\$14,646	\$7,709	\$1,618	\$1,118	\$3,308	\$3,449	\$168,156
Eastford	\$106,270	\$12,312	\$14,435	\$1,781	\$3,846	\$2,556	\$3,425	\$144,625
Hampton	\$110,711	\$18,462	\$2,856	\$1,619	\$1,575	\$1,074	\$3,001	\$139,298
Killingly	\$953,245	\$283,128	\$133,987	\$3,568	\$16,666	\$13,554	\$28,524	\$1,432,672
Plainfield	\$794,761	\$141,890	\$124,322	\$3,749	\$15,341	\$9,484	\$10,323	\$1,099,870
Pomfret	\$226,655	\$46,528	\$62,825	\$2,350	\$3,587	\$546	\$4,430	\$346,921
Putnam	\$514,646	\$171,914	\$87,979	\$1,596	\$13,073	\$6,064	\$4,909	\$800,181
Scotland	\$91,002	\$9,498	\$4,796	\$647	\$1,013	\$4,802	\$1,750	\$113,508
Sterling	\$179,672	\$19,799	\$18,651	\$2,248	\$2,730	\$2,695	\$2,506	\$228,301
Thompson	\$505,113	\$85,963	\$50,786	\$3,129	\$7,637	\$3,672	\$8,424	\$664,724
Voluntown	\$178,037	\$13,723	\$4,711	\$2,400	\$4,412	\$957	\$568	\$204,808
Union	\$54,939	\$7,548	\$2,429	\$313	-	\$950	\$1,587	\$67,766
Woodstock	\$489,025	\$71,781	\$32,545	\$8,072	\$9,675	\$6,064	\$15,844	\$633,006

Source: Federal Emergency Management Agency, Hazus-MH 2.1 (inventory data)

Figure 4-1: All Critical Facilities Except for Dams



4.2.1 Quantitative Loss Estimates

Methodology

Hazus-MH software uses spatial data and a standardized methodology to estimate losses from flooding, hurricane wind, and earthquakes (see [Tables 4-26 through 4-27](#)). Loss estimates included critical facilities damages, impact on the population, total damage to structures, and infrastructure damage. See [Appendix 14](#) for flood maps of modeled 100-year flooding events in each town.

Limitations

Hazus-MH methodology is continuously refined with each software version. Loss estimates represent plausible scenarios using current scientific methods and do not necessarily reflect reality. Flood modeling for the town of Eastford is incomplete. Hazus-MH was unable to model flooding along the Natchaug River in the southern end of town.

Flooding Vulnerability

Flooding is capable of causing physical, water damage to structures, damage to roads, and damage to utilities that may result in fire. Flooding is also capable to causing injury and death by drowning. Floods may be especially dangerous when debris become waterborne and carried downstream.

Table 4-26: Loss Estimates from a 100-year Flood Event

Town	Building Damage	Facilities Damaged	Utility Damage	Transportation System Damage	People Displaced
Ashford	\$3,400,000	1 Fire Station (<\$1,000)	-	\$3,090	218
Brooklyn	\$10,266,000	None	-	-	463
Canterbury	\$5,408,000	None	-	-	222
Chaplin	\$4,581,000	None	-	\$1,950	172
Eastford*	\$2,264,000	None	-	-	104
Hampton	\$962,000	None	-	\$13,180	91
Killingly	\$50,506,000	1 School (\$361,000)	\$ 9,499,160	\$22,990	1,723
Plainfield	\$27,620,000	1 Fire Station (<\$1,000)	\$ 4,260,040	-	1,192
Pomfret	\$5,971,000	None	-	-	164
Putnam	\$29,328,000	1 Fire Station (<\$1,000); 3 Schools (\$3,888,140)	\$ 30,636,000	\$15,460	646
Scotland	\$76,000	None	-	-	5
Sterling	\$1,547,000	None	-	-	106
Thompson	\$17,431,000	None	\$ 30,636,000	\$36,280	1,047
Union	\$333,000	None	-	-	17
Voluntown	\$920,000	None	-	-	89
Woodstock	\$10,414,000	None	-	\$13,130	523

*Failure in Hazus-MH modeling resulted in incomplete analysis of the Natchaug River in Eastford

Source: Federal Emergency Management Agency, Hazus-MH 2.1 (analysis performed by NECCOG staff member)

According to Hazus-MH modeling, towns at increased flooding risk are typically those along the Quinebaug River or its tributaries, where early industries relied on the rivers' flow for power. Typically these areas are also home to "High Hazard" and "Significant Hazard" dams, such as Acme Pond Dam near the Acme Mill in Killingly.

Wind Vulnerability

A 50-year hurricane wind—which would result in a Category 2 or Category 3 hurricane—was considered a probabilistic scenario for modeling vulnerability and damage in the region. Wind damage in this scenario is primarily a function of land cover; developed areas proximate to tree cover and forests are typically at greater risk in any wind event. In particularly damaging winds, such as tornadoes and more extreme hurricanes, almost all structures and vulnerable to wind damage, regardless of their placement. In these scenarios, areas of high activity and dense development would be considered the most vulnerable.

Table 4-27: Loss Estimates from a 50-year Hurricane Wind Event

Town	Building Damage	Debris Generation	Households Displaced	Building Damage
Ashford	\$1,246,830	12,708 Tons	0 Households	\$1,246,830
Brooklyn	\$10,266,000	12,339 Tons	1 Household	\$10,266,000
Canterbury	\$2,158,000	18,084 Tons	0 Households	\$2,158,000
Chaplin	\$788,000	8,169 Tons	0 Households	\$788,000
Eastford	\$566,000	10,306 Tons	0 Households	\$566,000
Hampton	\$354,000	8,184 Tons	0 Households	\$354,000
Killingly	\$6,301,000	20,761 Tons	6 Households	\$6,301,000
Plainfield	\$5,236,000	15,482 Tons	4 Households	\$5,236,000
Pomfret	\$835,000	11,756 Tons	0 Households	\$835,000
Putnam	\$442,000	8,083 Tons	4 Households	\$442,000
Scotland	\$586,000	7,784 Tons	0 Households	\$586,000
Sterling	\$1,338,000	11,499 Tons	0 Households	\$1,338,000
Thompson	\$2,836,000	17,105 Tons	1 Household	\$2,836,000
Union*	\$189,633	5,535 Tons	0 Households	\$189,633
Voluntown	\$1,385,000	17,881 Tons	0 Households	\$1,385,000
Woodstock	\$2,578,000	19,911 Tons	0 Households	\$2,578,000

*Figures for Union estimated based on population and land share of its Census Tract

Source: Federal Emergency Management Agency, Hazus-MH 2.1 (analysis performed by NECCOG staff member)

Earthquake Vulnerability

A 5.0 magnitude earthquake centered Moodus, Connecticut was used to model earthquake vulnerability. Moodus, a village of the town of East Haddam, is the only known location in Connecticut where an earthquake of that magnitude has occurred. Towns in northeastern Connecticut were shown to sustain very little damage. Areas of dense development, towns such as Killingly, Plainfield, and Putnam, were shown to experience the most damage.

Table 4-28: Loss Estimates from a Magnitude 5.0 Earthquake in Moodus, CT

Town	Building Damage	Utility Damage	Transportation System Damage	Displaced Households
Ashford	\$40,000	-	-	0 Households
Brooklyn	\$32,000	\$1,000	-	0 Households
Canterbury	\$42,000	\$1,000	\$2,000	0 Households
Chaplin	\$21,000	\$6,000	\$1,000	0 Households
Eastford	\$9,000	\$1,000	\$1,000	0 Households
Hampton	\$18,000	\$1,000	-	0 Households
Killingly	\$88,000	\$88,000	\$87,000	0 Households
Plainfield	\$77,000	\$201,000	\$69,000	0 Households
Pomfret	\$17,000	\$1,000	-	0 Households
Putnam	\$28,000	\$16,000	\$1,000	0 Households
Scotland	\$20,000	\$1,000	-	0 Households
Sterling	\$10,000	\$1,000	-	0 Households
Thompson	-	\$10,000	\$1,000	0 Households
Union*	\$2,666	\$22,596	-	0 Households
Voluntown	\$10,000	\$1,000	-	0 Households
Woodstock	\$19,000	\$1,000	\$59,000	0 Households

*Figures for Union estimated based on population and land share of its Census Tract

Source: Federal Emergency Management Agency, Hazus-MH 2.1 (analysis performed by NECCOG staff member)

4.2.3 Municipal Vulnerability Assessment

All identified natural hazards are capable of causing direct and indirect damage to people, property, and crops (see [Table 4-29](#)), and may result in cascading disasters such as fire and blackouts.

Vulnerability of NECCOG member towns, to each identified hazard, varies geographically. There are a number of environmental qualities, both of the natural environment and the built environment that may lead to increased or decreased damage to people and property during

natural hazard events. See [Table 4-30](#) for town-level variations. These variables are described for each town.

Variables in Hazard Vulnerability

- **Elevation-** Areas of higher elevation typically experience more frequent and more intense snow storms. Hilltops and peaks may also experience higher winds.
- **Dense Development-** Areas of dense development are more vulnerable to most natural hazards because of high human activity and concentrations of people, and the number buildings and amount of utilities and infrastructure. Hail, lightning, tornadoes, earthquakes, and flooding likely have more destructive potential in heavily developed areas. Winter storms are likely to pose a significant threat in areas with heavy traffic.
- **Forested Land-** The amount of forested land cover proximate to development can greatly affect a community’s vulnerability to natural hazard events with high winds. Not only are structures and people vulnerable to damage from trees and tree debris, but overhead utility damage and isolation from emergency response can pose major threats to rural communities that may also have limited capacity to respond or remove road blockages.
- **Agriculture-** Communities that are reliant on agriculture are especially vulnerable to drought and hail, both of which damage crops. Flooding and wind events may also cause considerable damage to crops.

Table 4-29: Vulnerability to Identified Natural Hazards

Hazard	Direct Harm to People	Indirect Harm to People	Direct Harm to Property	Indirect Harm to Property	Crop Damage
Flooding	Drowning	Waterborne Objects, Electrocutation, Fire	Water Damage to Structures/Objects	Waterborne Objects, Utility Malfunctions, Fire	Drowning, Uprooting
Wind		Airborne Objects, Structure Collapse, Tree Debris, Isolation	Affects Poorly Built/Anchored Structures or Objects	Utility Malfunctions	Uprooting, Leaf/Fruit Damage
Severe Summer Storms	Electrocution, Hail Damage	Airborne Objects, Tree Debris, Isolation	Electrocution, Hail Damage	Utility Malfunctions, Fire	Hail Damage
Winter Storms	Hypothermia	Car Accidents, Structure Collapse, Isolation	Structure Collapse		
Tropical Cyclones		Airborne Objects, Structure Collapse, Tree Debris, Isolation	Wind Damage	Utility Malfunctions, Fire	Uprooting, Leaf/Fruit Damage
Tornadoes	Carried by Winds	Airborne Objects, Structure Collapse	Wind Damage, Structure Annihilation	Utility Malfunctions, Fire	Complete Annihilation
Drought		Wells Drying			Dehydration
Earthquakes		Structure Collapse, Falling Objects	Structural Damage/Collapse	Utility Malfunctions, Fire	
Erosion				Ground Failure below Structures	

Table 4-30: Environmental Characteristics of NECCOG Towns that May Contribute to Variations in Hazard Vulnerability

Town	Average Elevation (feet)	Maximum Elevation (feet)	"Developed" Land Cover	Forested Land Cover	"Agricultural Field" Land Cover
Ashford	641	1,202	7.4%	78.6%	7.0%
Brooklyn	325	733	9.9%	65.6%	12.4%
Canterbury	313	594	8.8%	67.6%	13.0%
Chaplin	457	775	7.7%	80.5%	5.2%
Eastford	622	935	6.6%	79.6%	7.0%
Hampton	539	814	7.2%	76.2%	9.9%
Killingly	442	803	15.8%	66.3%	4.3%
Plainfield	288	608	14.7%	59.4%	11.9%
Pomfret	497	863	7.3%	67.8%	17.1%
Putnam	389	662	18.3%	59.1%	7.1%
Scotland	348	642	5.9%	72.3%	16.9%
Sterling	481	761	7.6%	74.6%	9.7%
Thompson	452	706	11.0%	67.9%	7.7%
Union	877	1,310	6.0%	84.2%	2.6%
Voluntown	369	633	5.8%	81.0%	5.1%
Woodstock	605	1,043	8.1%	66.6%	15.9%

Source: United States Geological Survey, National Elevation Dataset (analysis performed by NECCOG staff member); Connecticut Center for Land Use Education and Research, 2010 Land Cover (analysis performed by NECCOG staff member)

Ashford Vulnerability Assessment

- Development Trends-** Ashford is a largely rural town with dense forests. When compared with other towns in the region, Ashford has no areas of significant development or human activity. Village centers and the communities of Ashford Lake and Lake Chaffee are the most densely developed portions of town. There are also a number of summer camps and campsites that become densely populated in warmer months. According to Ashford's 2005, Plan of Conservation and Development, it should be expected that Ashford will continue to develop and grow in population in the coming years. The town has identified the need for commercial and industrial expansion along Interstate 84. The high volume of traffic using the interstate and existing small-scale commercial uses create opportunity for future development. Ashford has also identified the need to concentrate future development around its existing village centers, with the goal that development is supportive of the town's rural character. Ashford is currently in the process of updating its POCD.

Proportionately, Ashford is the fifth-most forested town in the region, which may heighten the town's vulnerability to wind damage. In the northern Ashford, there are number of narrow, populated roads through the Natchaug State Forest and Yale-Myers Forest that may become inaccessible or isolated from emergency response in storms. Campsites should also be considered vulnerable to isolation.

In 2010, 7% of Ashford's land cover was designated "Agricultural Field", fewer than most towns in the region.

- **Flooding Vulnerability-** The Mount Hope River and the East Branch of the Mount Hope River are major watercourses with hazardous flooding potential. Additionally, Ashford is home to 25 dams. Goss Brook Dam is a Class C dam, and there are three Class B dams, Lake Chaffee Dam, Ashford Lake Dam, and happy Acres Pond Dam.
- **Elevation-** When compared with the rest of the region, Ashford—northern Ashford in particular—is at higher elevation. Overall Ashford is the second-highest town in the region, with elevations reaching over 1000 feet. Higher elevations should experience temperature conditions favorable to winter weather before low-lying areas, increasing the likelihood and severity of winter storms.

Brooklyn Vulnerability Assessment

- **Development Trends-** Development in Brooklyn is heaviest in East Brooklyn, across the Quinebaug River from Danielson. Along Route 6 in East Brooklyn are large retail chains, smaller commercial uses, restaurants, as well as high-density, medium-density, and mixed-use neighborhoods. Away from the Route 6 corridor, the eastern portion of Brooklyn is home to most of the town's agriculture. To the west, at the intersection of Routes 6 and 169, Brooklyn's village center is at the town's core. The village center has retained its colonial character but is no longer the town's focal point. Two important features of this village are the Brooklyn Fairgrounds and the Brooklyn Correctional Institution, a medium-security prison. According to Brooklyn's Plan of Conservation and Development, it should be expected that East Brooklyn will continue growth, commercially, industrially, and residentially. Away from East Brooklyn, "Residential-Agriculture", large-lot residential zoning that allows agricultural uses, is the dominant zone. These zone will likely remain low-density but experience residential growth in the coming years.

On the western shore of the Quinebaug River, Brooklyn generally low-lying with fine agricultural soils and farming activity. The western portion of town is forested—but largely unpreserved—and at slightly higher elevation. Proportionately, Brooklyn is one of the least forested towns in the region and should not be significantly vulnerable to wind. The community surrounding Paradise Lake in southern Brooklyn may be especially vulnerable to isolation from emergency response. This community is located in a highly forested area, far from major roads, and with only one point of egress and ingress.

In 2010, 12.4% of Brooklyn's land cover was designated "Agricultural Field", one of the greatest in the region. This may make Brooklyn especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Brooklyn is one of the region's seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. Additionally, Brooklyn is home to one Class B dam, Creamery Brook Dam. An identified and specific flooding threat in Brooklyn is on Day Street, along the banks of the Quinebaug River in the northeastern portion of town. Over a long period of time, a downstream dam in Danielson has caused the river to bow in the direction of Day Street. A serious flooding event in this portion of the Quinebaug River could potentially collapse a long section of this road.

- **Elevation-** Brooklyn is a low-lying town along the Quinebaug River and is not significantly elevated.

Canterbury Vulnerability Assessment

- **Development Trends-** The town of Canterbury is a low-lying town on the western shore of the Quinebaug River, which winds into the interior of the town's southeast quadrant, forming Aspinook Pond until the downriver mill village of Jewett City in Griswold. Although Canterbury is more developed than most other towns in the region, as a whole, there are no areas of town that are specifically dense in population, businesses, or human activity. Development in Canterbury is small-scale and largely spread-out. Canterbury's village center has a relatively high number of commercial land uses, as well as schools and homes in its "Village Commercial" zoning district. The village of Westminster has little commercial uses but some small-scale industrial land. Most residential development is single-family and exists on subdivided land, close to Routes 14 and 169. According to Canterbury's Plan of Conservation and Development (2010), it should be expected that residential development in Canterbury will continue due to rising home values. The document also identifies the need for business growth between the villages of Canterbury and Westminster and in southeastern portion of town, on the Quinebaug River.

Proportionately, Canterbury is not significantly forested and, as a whole, should not be especially vulnerable to wind, rather, 13% of the town's land is classified as "Agricultural Field". This may make Canterbury especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Canterbury is one of the region's seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. The Little River, in western Canterbury is also noteworthy in regards to potential impacts from flooding. Canterbury is home to 16 dams, zero Class B dams, and zero Class C dams.
- **Elevation-** Canterbury is a low-lying town along the Quinebaug River and is not significantly elevated.

Chaplin Vulnerability Assessment

- **Development Trends-** The town of Chaplin is one of the most densely forested towns in the region, traversed by the Natchaug River in the east. The Natchaug State Forest and James L. Goodwin State Forest account for a large portion of the town's forested land, although there are other large tracts of privately owned forests—many preserved. Development in Chaplin is small-scale and spread along major routes. Heaviest development in Chaplin occurs along Route 6 in the southern end of town. Chaplin Center is not especially dense; however, there are a number of camp sites along the Natchaug River which become densely populated with recreational vehicles during the summer. According to the 2010 Chaplin Plan of Conservation and Development, it should be expected that residential development in Chaplin will slowly continue. The town would like to see most commercial and residential growth occurring along the Route 6 corridor, west of its intersection with Route 198.

Proportionately, Chaplin is the third-most forested town in the region, which may heighten the town's vulnerability to wind damage. East of the Natchaug River, in the Natchaug State Forest, there are a number of populated, forested, narrow roads that may be especially vulnerable to isolation from emergency response.

In 2010, 5.2% of Chaplin's land cover was designated "Agricultural Field", fewer than most towns in the region.

- **Flooding Vulnerability-** The Natchaug River will likely pose the greatest hazardous flooding potential. In Chaplin, there is one Repetitive Loss structure, as defined by FEMA. Additionally, Chaplin is home to 12 dams; Mansure Pond Dam is a Class B dam.
- **Elevation-** Chaplin is not significantly elevated.

Eastford Vulnerability Assessment

- **Development Trends-** Eastford is a rural and heavily forested town with low population density. The Yale-Myers Forest and Natchaug State Forest account for a large portion of the town's land. Also, the Natchaug River forms in Eastford at the confluence of the Still River and Bigelow Brook. Residential development in Eastford is sparse and less-concentrated than most other towns. Eastford's village center includes a neighborhood of smaller-lot housing, as does the area surrounding Crystal Pond. However, these neighborhoods are less-dense than similar neighborhoods in the region. There are also a number of campsites in Eastford, along the Natchaug River, that become more populated in warm months. Commercial and industrial development in Eastford is also sparse.

The Route 44 corridor has seen little development and most commercial buildings are concentrated in the village of Eastford, including a used car dealership, a hardware store, and a restaurant. Notable industrial development includes aerospace company, Whitcraft Group, and wooden pallet recycling company, Industrial Pallet, LLC. Without zoning regulations, residential growth in Eastford should be expected to continue in currently undeveloped areas. Also, although the town is rural and located away from high-population centers, commercial and industrial growth may continue, increasing daily activity in town. The Town of Eastford Plan of Conservation and Development focuses heavily on the need for zoning.

Proportionately, Eastford is the fourth-most forested town in the region, which may heighten the town's vulnerability to wind damage. In the southern Eastford, Pifershire Road, and roads off of it, may become inaccessible or isolated from emergency response.

In 2010, 7% of Eastford's land cover was designated "Agricultural Field", fewer than most towns in the region.

- **Flooding Vulnerability-** The Natchaug River and its tributaries are major watercourses with hazardous flooding potential. Additionally, Eastford is home to 18 dams, zero Class B dams, and zero Class C dams.
- **Elevation-** When compared with the rest of the region, Eastford is at higher elevation. Higher elevations should experience temperature conditions favorable to winter weather before low-lying areas, increasing the likelihood and severity of winter storms.

Hampton Vulnerability Assessment

- **Development Trends-** The town of Hampton is rural and largely forested. The Natchaug State Forest and the James L. Goodwin State Forest account for a large percentage of the land in western Hampton and include large, woody, swamps. Eastern Hampton is also significantly forested, although most of this land privately owned. Development in Hampton is extremely sparse and largely reduced to residential uses. In the area surrounding Hampton Hill, there are some smaller-lot houses; however, this neighborhood is lightly developed when compared with other village centers in the region. Commerce is largely limited to agriculturally-based or at-home businesses and is often not the primary use of land. The Town of Hampton Plan of Conservation and Development, in 2007, identified the Route 6 corridor in western Hampton as a potential area for commercial and industrial growth. Currently there are some businesses and non-profits located in this area and it should be expected that zoning will allow further development.

Proportionately, Hampton is sixth-most forested towns in the region, which may heighten the town's vulnerability to wind damage. In the northern Hampton, there are number of homes located off of narrow roads in the Natchaug State Forest. In an extreme weather event, these roads may become inaccessible or isolated from emergency response.

In 2010, 9.9% of Hampton's land cover was designated "Agricultural Field", slightly greater than the regional average and the regional median. This may make Hampton especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Hampton has very few rivers and streams. The Little River may have some hazardous flooding potential, as well as areas downstream of Pine Acres Lake. Hampton is home to 16 dams, zero Class B dams, and zero Class C dams.
- **Elevation-** Hampton's maximum elevation is higher than the average for the region; however, it is not a significantly elevated town.

Killingly Vulnerability Assessment

- **Development Trends-** The town of Killingly is one of the least forested towns in the region. Development in Killingly is much more intensive than most other towns in the region. Danielson and Dayville, two former mill villages along the Quinebaug River, are the town's focus. Danielson is dense and urbanized while Dayville is home to newer, strip development along Interstate 395. Although smaller villages exist in the eastern portion of town, much that area remains rural with residential development. To the north and east of Alexander Lake in northwestern Killingly, on the Putnam town line, are large industrial complexes. According to the Town of Killingly, Plan of Conservation and Development: 2010-2020, the town will continue to promote industrial and commercial growth in existing areas. It is also expected that Killingly will continue to grow in population. Although the town wishes to promote residential growth in existing neighborhoods, it should be expected that new development will occur in rural Killingly.

Away from the Quinebaug River, which creates for the town's western border, there are forests and farmland as well as state forests and parks. Bordering Rhode Island, in East

Killingly are larger, forested tracts with pine and oak trees, underlain by sandy soil, as well as rocky peaks, woody swamps, and ponds. Communities in heavily forested portions East Killingly and South Killingly, especially along unimproved roads may be especially vulnerable to isolation from emergency response.

In 2010, 4.3% of Killingly's land cover was designated "Agricultural Field", less than the regional average and the regional median.

- **Flooding Vulnerability-** Killingly is one of the region's seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. Whetstone Brook and Fivemile River also pose flooding potential run through developed areas surrounding former mills. Killingly is home to 47 dams, seven Class B dams, Old Daniels Dam, Ballouville Dam, Middle Reservoir Dam, Pym Dam #3, Bear Hill Pond Dam, Elmville Pond Dam, and Five Mile Pond Dam, and one Class C dam, Acme Pond Dam.
- **Elevation-** As a whole, Killingly is not significantly elevated. Overall Killingly is very low-lying, while East Killingly is home to some smaller hilltops. Less than one mile from the town's border with Foster, Rhode Island is Jerimoth Hill, the highest point in Rhode Island.

Plainfield Vulnerability Assessment

- **Development Trends-** The town of Plainfield is one of the least forested towns in the region, with most of its forests in the eastern portion of town and agricultural land in the western portion of town, along the Quinebaug River. Development in Plainfield is more intensive than most other towns in the region. Commercial and industrial development is mostly centered in Plainfield's mill villages, with some development located along state routes or proximate to Interstate 395. Residential development in these villages is also dense; however, new development has occurred, and will likely continue, in rural lands in eastern Plainfield. According to the Town of Plainfield Plan of Conservation and Development, the town will continue to promote industrial and commercial growth in existing nodes and along major corridors. The town will attempt to focus population growth in former manufacturing areas and mill villages, but it should also be expected that residential growth will continue in rural areas.

There are no significant tracts of forested land in Plainfield other than a small portion of the Pachaug State Forest. Communities in forested portions eastern Plainfield may be especially vulnerable to isolation from emergency response.

In 2010, 11.9% of Plainfield's land cover was designated "Agricultural Field", greater than the regional average and the regional median. This may make Plainfield especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Plainfield is one of the region's seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. The Moosup River, Horse Brook, Mill Brook, and Lathrop

Brook also pose some flooding potential and pass through developed areas. In Plainfield, there is one Repetitive Loss structure. Additionally, Plainfield is home to 18 dams, Packers Pond Dam is a Class C dam.

- **Elevation-** Plainfield is a low-lying town along the Quinebaug River and is not significantly elevated.

Pomfret Vulnerability Assessment

- **Development Trends-** The town of Pomfret is not a significantly forested town; however, a large amount of its forested land is preserved. Development in Pomfret is less intensive than most other towns in the region. Commercial and industrial nodes exist in southeastern Pomfret, along the Quinebaug River, at the intersection of Route 101 and Route 169, and in Pomfret Center. There also exist large pockets of large-lot residential development on former farm land, mostly in the southern and eastern portions of town or along major routes. According to An Update of the Goals and Objectives of the Plan of Conservation and Development, for the town of Pomfret, the town wishes to limit growth to currently developed areas, along major routes. Commercial zones currently exist along the Quinebaug River, at the intersection of Route 101 and Route 169, along Route 169, and in Pomfret Center.

Pomfret is one of the least developed towns in the region. However, Pomfret School and the Rectory School become very densely populated during the academic year. Additionally, the Windham County 4H Camp at Taft Pond should be considered an especially vulnerable location during summer months. Communities in heavily forested portions western Pomfret may be especially vulnerable to isolation from emergency response.

Along the Quinebaug River, in the eastern portion of town, land is largely dedicated to agriculture. In 2010, 17.1% of Pomfret was classified as “Agricultural Field”, the greatest in the region. This may make Pomfret especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Pomfret is one of the region’s seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. Mashamoquet Brook, Wappoquia Brook, and Day Brook may also pose a threat from flooding. Additionally, Pomfret is home to 24 dams, Beaupres Pond Dam is a Class C dam and Abbotts Pond Dam is a Class B dam.
- **Elevation-** As a whole, Pomfret is not significantly elevated; however, portions of the sparsely populated northwest corner of town reach over 800 feet, and Pomfret has the fifth-highest maximum elevation. Higher elevations should experience temperature conditions favorable to winter weather before low-lying areas, increasing the likelihood and severity of winter storms.

Putnam Vulnerability Assessment

- **Development Trends-** The town of Putnam is the least forested town in the region as well as the smallest in area. Development in Putnam is more intensive than most other towns in the

region. Commercial and industrial development is heavily centered in downtown Putnam, the most heavily urbanized area in the region. Residential development is also extremely dense in downtown Putnam. East Putnam is more rural, with sparse residential development and little to no commercial and industrial development. According to the Putnam Plan of Conservation and Development, the town will should expect to experience further commercial and industrial growth in—including adaptive reuse—in currently developed and urbanized areas and areas along major routes. Putnam will likely remain an economic focal point in the region. The plan also identifies the need for preservation of farmland and forested land in East Putnam.

Most of the town’s forested land and agricultural fields are located in East Putnam, away from the dense downtown. Forests in East Putnam are mostly made up of oak and pine trees, underlain by sandy soil. Communities in heavily forested portions East Putnam may be especially vulnerable to isolation from emergency response.

In 2010, 7.1% of Putnam’s land cover was designated “Agricultural Field”, less than the regional average and the regional median.

- **Flooding Vulnerability-** Putnam is one of the region’s seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. Other flooding threats may come from the Fivemile River, Mary Brown Brook, Little River, Little Dam Tavern Brook, and Blackmore Brook. In Putnam, there is one Repetitive Loss structure. Additionally, Putnam is home to 18 dams, Metals Selling Dam and Cargill Falls Dam are Class B dams
- **Elevation-** Putnam is a low-lying town along the Quinebaug River and is not significantly elevated.

Scotland Vulnerability Assessment

- **Development Trends-** The town of Scotland is a largely forested and agricultural town, and is the only town in the region that borders the Shetucket River. Scotland is the second-least populated town in the region. Development in town is extremely sparse and largely reduced to residential uses. In the area surrounding Scotland’s village center, there are some smaller-lot houses, general store, and an auto repair shop. Other commerce is largely limited to agriculturally-based businesses and is often not the primary use of land. The town of Scotland is in the process of updating its Plan of Conservation and Development, but any future development will likely be low-impact and consistent with the town’s rural nature.

Forested land in Scotland is slightly higher than the regional average and the regional median, but there are no easily identifiable portions of town that may become isolated during a storm. Major forests in Scotland include the Mohegan State Forest and large, privately owned forests.

In 2010, 16.9% of Scotland was classified as “Agricultural Field”, the second-greatest in the region, behind Pomfret. This may make Scotland especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Scotland has very few rivers and streams but is the only town in the region that borders the Shetucket River, although briefly. The town is home to only five dams, zero Class B dams, and zero Class C dams.
- **Elevation-** Scotland is a low-lying town and no portions are significantly elevated.

Sterling Vulnerability Assessment

- **Development Trends-** The town of Sterling is largely forested and includes large tracts of the Pachaug State Forest. Development in Sterling is small-scale and largely centered in the villages of Sterling and Oneco. Both villages have more dense residential lots with some multi-family mill housing and small commercial uses. In the village of Sterling, there is also an industrial park. One of the properties in the industrial park is a tire-to-energy power plant that has suspended operations. According to Sterling's 2009 Plan of Conservation and Development, the town will seek to focus future housing development in the villages of Sterling and Oneco, discouraging further conversion of forest and farmland. The town will also encourage expansion of the Sterling Industrial Park.

Many of Sterling's forests are swampy or made of pine, oak, and hemlock that are underlain by sandy soil. Homes along Bailey Pond Road and Deerfield Shores may be especially vulnerable to isolation from emergency response in a storm.

In 2010, 9.7% of Sterling's land cover was designated "Agricultural Field", slightly greater than the regional average and the regional median. This may make Sterling especially vulnerable to hail and drought.

- **Flooding Vulnerability-** The Moosup River, Vaughn Brook, Brown's Brook, Sterling Pond, and Oneco Pond likely pose the greatest hazardous flooding potential in the town of Sterling. Additionally, Sterling is home to nine dams. Sterling Pond Dam is a Class C dam.
- **Elevation-** Sterling is not significantly elevated.

Thompson Vulnerability Assessment

- **Development Trends-** The town of Thompson is physically diverse, with a mix of agricultural fields and forested land, as well as high elevations and river valleys. Development in Thompson is more intensive than most other towns in the region. Commercial and industrial development is heavily centered in downtown Thompson, the most heavily urbanized area in the region. Residential development is also extremely dense in downtown Thompson. East Thompson is more rural, with sparse residential development and little to no commercial and industrial development. According to the Thompson Plan of Conservation and Development, the town should expect to experience further commercial and industrial growth in—including adaptive reuse—in currently developed and urbanized areas and areas along major routes. Thompson will likely remain an economic focal point in the region. The plan also identifies the need for preservation of farmland and forested land in East Thompson.

In the eastern and northern reaches of town, bordering Rhode Island and Massachusetts, are large forested tracts comprised of pine trees, oak trees, and sandy soil. Communities in

heavily forested portions East Thompson may be especially vulnerable to isolation from emergency response. In particular, there are a number of unimproved roads in heavily forested areas surrounding Quaddick Lake.

In 2010, 7.1% of Thompson's land cover was designated "Agricultural Field", less than the regional average and the regional median.

- **Flooding Vulnerability-** Thompson is one of the region's seven towns that borders the Quinebaug River. The flow of the Quinebaug River is dependent on tributary rivers and streams in a drainage basin that cover a very large area. Because of this, the Quinebaug River poses a serious, potential threat. The French River also poses a serious flooding threat because it passes through heavily developed mill villages. The Fivemile River and Blackwater Brook may also poses some flooding risk. Thompson is home to 18 dams, Metals Selling Dam and Cargill Falls Dam are Class B dams.
- **Elevation-** Thompson is not significantly elevated.

Union Vulnerability Assessment

- **Development Trends-** The town of Union has the highest maximum elevation in the NECCOG region, with its highest peak reaching over 1,300 feet in elevation. Union is the most forested town in the region and unique in that its tree cover is mainly coniferous. Union is also Connecticut's least populated town and the region's most forested town. Because of Interstate 84, which bisects Union, it is the second-least developed, behind Voluntown. Union's Plan of Conservation and Development identified possible growth areas for retail trade, industrial businesses, and commercial businesses. Most of these growth areas follow the Interstate 84 corridor. Currently, all development in Union is extremely sparse. There are no areas of significant commercial or industrial development and one area of significant residential development, Mashapaug Pond. Most of Union's land is preserved forest, held either by the State of Connecticut or Yale University, largely preventing heavy development.

Most of Union's land is preserved forest, with large tracts belonging to the Nipmuck State Forest, the Yale-Myers Forest, and Bigelow Hollow State Park. Throughout Union, there are a number of narrow, unimproved roads, some with residential development, through the Nipmuck State Forest and the Yale-Myers Forest. These roads may become inaccessible or isolated from emergency response.

In 2010, 2.6% of Union's land cover was designated "Agricultural Field", the least in the region.

- **Flooding Vulnerability-** Bigelow Brook and Roaring Brook are small channels with some hazardous flooding potential. Additionally, Union is home to 21 dams. Wells Pond Dam and Mashapaug Pond spillway are both Class B dams.
- **Elevation-** When compared with the rest of the region, Union is at higher elevation. Not only is Union the highest town in the region, it is the highest town in Connecticut, east of the Connecticut River. Higher elevations should experience temperature conditions favorable to winter weather before low-lying areas, increasing the likelihood and severity of winter storms.

Voluntown Vulnerability Assessment

- **Development Trends-** The town of Voluntown is the second-most forested town in the region. Voluntown is also the region's least developed town and is comprised, mostly, of preserved forest. The Voluntown Plan of Conservation and Development 2010 notes that growth in Voluntown should remain slow because of a lack of developable land. Currently, commercial development is most heavily concentrated in Voluntown's village center, along the eastern end of Route 138. Residential development, in Voluntown, is heaviest near Beach Pond, Bailey Pond, and the village center.

Voluntown has a rich mix of coniferous and deciduous tree cover, with most of the town's area belonging to the Pachaug State Forest. When compared with other towns in the region, Voluntown is not significantly developed. Areas of highest activity are the town's village center, Bailey Pond, and Beach Pond. There are also a number of private and state-owned camp sites in or along the Pachaug State Forest. Because of these locations, the town is more active in summer months.

In 2010, 5.1% of Voluntown's land cover was designated "Agricultural Field", less than the regional average and regional median.

- **Flooding Vulnerability-** The Wood River and Green Falls River are somewhat significant watercourses with some hazardous flooding potential. Additionally, Voluntown is home to 36 dams. Sawmill Pond Dam is a Class C dam, Yellow Mill Dam and Beach Pond Dam are Class B dams. Sawmill Pond Dam and Yellow Mill Dam would affect the neighboring town of Griswold in the event of dam failure.
- **Elevation-** Voluntown is not significantly elevated.

Woodstock Vulnerability Assessment

- **Development Trends-** The town of Woodstock is the largest town in the NECCOG region, in terms of area, and has the third-highest maximum elevation. Residential development in Woodstock is heavily concentrated around the town's village centers of South Woodstock and Woodstock Hill, as well as Witches Woods Lake, Upper Bungee Lake, Sansoucy Pond, and Wappaquasset Lake. Commercial development in Woodstock is small-scale and centered in South Woodstock and along Route 171, near Putnam. A large portion of Woodstock's land use is dedicated to agriculture. According Woodstock's draft 2014 Plan of Conservation and Development, the town should expect to steadily increase in population. It is the goal of the town to balance future housing needs with open space preservation and agriculture. The draft plan also notes that the town will seek to concentrate future commercial development in existing village centers.

The villages of Woodstock Hill and South Woodstock, as well as the communities surrounding Witches Woods Lake, Upper Bungee Lake, and Wappaquasset Lake, are the most densely populated portions of town. Also, the Woodstock Fair attracts large crowds to the Woodstock Fairgrounds during Labor Day weekend of each year.

Woodstock has a diverse landscape, with high peaks and large tracts of forested land in the northern and western portions of town, and agriculture in the hills and valleys of the central and eastern portions of town. In the western Woodstock, there are number of narrow, sparsely populated roads and unimproved dirt roads through forested land, as well as camps and densely developed lake-front neighborhoods that may become inaccessible or isolated from emergency response.

In 2010, 15.9% of Woodstock’s land cover was designated “Agricultural Field”, the third-greatest in the region. This may make Woodstock especially vulnerable to hail and drought.

- **Flooding Vulnerability-** Peake Brook, Lebanon Brook, and Bungee Brook are minor watercourses with some hazardous flooding potential. Additionally, Woodstock is home to 32 dams. Bungee Lake Dam, Bungee Dam, Wappaquasset Pond Dam, Painter Pond Dam, Sheperds Pond Dam, and Johnstone Pond Dam are Class B dams.
- **Elevation-** When compared with the rest of the region, portions of Woodstock—northwestern Woodstock in particular—are at higher elevation. Woodstock has the third-highest maximum elevation in the region, behind Union and Ashford. Higher elevations should experience temperature conditions favorable to winter weather before low-lying areas, increasing the likelihood and severity of winter storms.

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Chapter Five: Mitigation Strategy

5.0 Mitigation Strategy

The Mitigation Strategy outlines ways in which NECCOG and its member towns can reduce the long-term effects of natural hazards on people and property. Local Mitigation Actions and Regional Mitigation Actions are identified items that may be implemented by local municipalities, or the Northeastern Connecticut Council of Governments, and adhere to Regional Goals and Objectives outlined in this chapter.

See [Appendix 15](#) for a review of Local Mitigation Actions for the towns of Chaplin, Hampton, and Scotland, identified in the [2007 Pre-Disaster Natural Hazards Mitigation Plan](#), by the Windham Region Council of Governments.

5.1 Regional Goals and Objectives

In 2012, NECCOG staff, in cooperation with chief elected officials and Emergency Management Directors, developed four regional goals for implementing hazard mitigation actions. Corresponding to each goal is a series of objectives, guiding the achievement of that goal.

Goal 1: Implement Identified Mitigation Activities to Protect Life and Property

- **Objective A-** Maintain a current Hazard Mitigation Plan.
- **Objective B-** Appoint Emergency Management Directors to serve as the ongoing advisory group to address natural hazard mitigation issues.
- **Objective C-** Protect special-needs and vulnerable populations.
- **Objective D-** Minimize losses to areas of high economic value and protect historic properties and cultural resources.
- **Objective E-** Incorporate natural hazard mitigation into community plans and regulations.
- **Objective F-** Remove and/or limit placement of structures in the known paths of natural hazards.

Goal 2: Protect Existing Infrastructure and Design New Infrastructure to be Resilient to the Effects of Natural Hazards

- **Objective G-** Enforce appropriate building standards in accordance with existing codes, including floodplain ordinances.
- **Objective H-** Maximize immunity to natural hazards for critical facilities, infrastructure, and services.
- **Objective I-** Assure power is available for critical facilities and emergency services.

- **Objective J-** Identify and map vulnerable structures, critical facilities, and transportation routes.

Goal 3: Improve Education and Awareness of Hazards and Risks

- **Objective K-** Ensure that residents, businesses, non-profits, and governments understand the proper steps to protect themselves and their property from the impacts of natural hazard events.
- **Objective L-** Ensure effective communications with communities after a natural hazard event and update communities on the status of recovery.
- **Objective M-** Educate the public on the availability of natural hazard insurance (e.g. National Flood Insurance Program) options.
- **Objective N-** Encourage volunteer mitigation efforts that allow residents, businesses, and agencies to work together in neighborhoods communities to assist those who are vulnerable to the impacts of natural hazards.

Goal 4: Ensure That Public Funds are Used in the Most Efficient Manner

- **Objective O-** Develop mitigation actions, prioritized by the greatest impact to life, health, and property.
- **Objective P-** Maximize the use of outside funding sources.
- **Objective Q-** Encourage property-owner self-protection measures.

5.2 Action Plan

In Connecticut, implementation of hazard mitigation actions largely takes place on a municipal scale. Whereas multi-jurisdictional plans in other parts of the United States may be implemented by a county government, having specific powers separate from, and over, its incorporated and unincorporated areas, plans implemented by a Regional Council of Governments are more advisory in nature and should serve as a framework for individual action. However, when appropriate, inter-municipal actions can greatly reduce immediate and long-term costs of participating towns, and should be encouraged.

Applicable Mitigation Actions

After reviewing previous, multi-jurisdictional plans and best management practices for mitigation actions, and while considering Regional Goals and Objectives, NECCOG staff developed a comprehensive list of Applicable Mitigation Actions for each identified hazard. Applicable Mitigation Actions served as a framework that guided member towns' Local Mitigation Actions, and can be found in [Chapter 5.2.1](#).

Local Mitigation Actions

NECCOG staff worked with CEOs and EMDs to develop a list of Local Mitigation Actions, guided by findings in Chapters 3 and 4, and in adherence with the Regional Goals and Objectives. Local Mitigation Actions are described by priority level, responsible parties, potential funding sources, and corresponding hazards, and are listed in Chapter 5.2.2.

Regional Mitigation Actions

Acting as a medium for regional cooperation and coordination of planning activities, NECCOG staff believes that the organization should work to implement its own Regional Mitigation Actions to support and assist local efforts. Regional Mitigation Actions can be found in Chapter 5.2.3.

5.2.1 Applicable Mitigation Actions

Applicable Mitigation Actions address the identified hazards and fall into one of four categories: Local Planning and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, and Education and Awareness Programs. Applicable Mitigation Actions were reviewed by municipal CEOs and/or EMDs when selecting Local Mitigation Actions for inclusion in the Action Plan.

Actions Applicable to Most Natural Hazards

Public education and awareness campaigns describing local and regional risks and vulnerabilities; Public education and awareness campaigns describing at-home hazard mitigation practices; Installation of emergency power generators at vital and critical facilities, emergency shelters, and Emergency Operations Centers; Improvements to Emergency Operations Center; Improvements to emergency shelter; Development of an Interoperable Emergency Communications System; Review and renewal of local and regional Emergency Operations Plans.

Flooding

Improvement to provisions of floodplain management ordinances or regulations; GIS mapping of floodplains; Education related to the NFIP; Preservation or restoration of vegetation proximate to watercourses; increased inspection and maintenance to remove silt and debris from watercourses, drainage systems, and bridges; Purchase of repetitively flooded structures; Deed restrictions or easements on repetitively flooded property; maintenance and inspection of at-risk transportation infrastructure and accompanying drainage systems; Engineering of transportation infrastructure and drainage systems to reduce or eliminate future flood risk; inspection of dams, spillways, and levees; Analysis of dam safety and possible actions to reduce risk of dam failure; Engineering to reduce risk of dam failure (e.g. reconstruction, maintenance, removal, replacement); Dam or levee construction to protect property, utilities, critical habitat, or key infrastructure.

Wind

Increased tree clearing on town-owned and privately-owned roads, particularly in areas proximate to overhead utilities; Long term goals to bury overhead utilities; Ordinances or regulations to require underground electrical and communication utilities in new development; Enforcement of the Connecticut State Building Code.

Lightning

Installation of lightning rods on new or existing buildings; Installation of lightning detectors at outdoor recreational facilities; Long term goals to bury overhead utilities; Ordinances or regulations to require underground electrical and communication utilities in new development.

Thunderstorms

Flooding mitigation measures; *Wind* mitigation measures; *Lightning* mitigation measures; *Hail* mitigation measures.

Winter Storms/Nor'easters

Wind mitigation measures; Inventory populations at-risk to cold temperatures; Increased, preventative maintenance of roadways; Equipment purchases to improve preventative road maintenance.

Tropical Cyclones

Flooding mitigation measures; *Wind* mitigation measures; *Lightning* mitigation measures; *Hail* mitigation measures; Development of emergency evacuation routes.

Tornadoes

Wind mitigation measures; Implementation of a town-wide emergency alert system for Tornado Warnings; Development of emergency shelter-in-place procedures for schools and town-owned buildings; Emergency drills at schools and town-owned buildings.

Drought

Ordinance to limit water usage in severe droughts; Ordinance to require dry hydrants or underground cisterns on new development; Expansion of public water utilities.

Hail

Retrofitting of public buildings to withstand hail damage.

Earthquakes

Enforcement of the Connecticut State Building Code; Engineering of public and critical facilities to withstand major earthquakes; Development of emergency shelter-in-place procedures for schools and town-owned buildings; Emergency drills at schools and town-owned buildings.

Erosion

River bank stabilization through structural engineering (such as a wall); Planting or encouraging vegetative cover along river bank; Installing riprap shorelines.

5.2.2 Local Mitigation Actions

After considering Regional Goals and Objectives and reviewing Applicable Mitigation Actions, NECCOG staff and local decision makers developed lists of Local Mitigation Actions (see [Tables 5-2 through 5-17](#)) appropriate for each participating municipality. It should be understood that local governments may identify and choose to undertake additional actions, if they become appropriate, throughout the life-cycle of an active plan. Additionally, Local Mitigation Actions identified in the Action Plan are dynamic and may be modified, deferred, or eliminated, dependent on changing local needs and capacities. A review of each action's status will be conducted as part of The 2020 Update.

Action Review

Local Mitigation Actions were chosen after considering the expected and potential benefits of each item, relative to their local community.

Many Local Mitigation Actions are ongoing in nature and describe specific responsibilities that can be easily implemented by Selectmen, Public Works Departments, or other town employees and officials. These items are believed to be the most cost-efficient and require no special funding other than budgeted man hours.

Local Mitigation Actions that require specific, municipal, state, or federal funding will be reviewed and scrutinized by each town and approved or disapproved in that town's general budget. As is the case in most small, New England communities, each of NECCOG's member towns uses a Town Meeting or referendum to approve general budgets for each fiscal year. Preceding a meeting or referendum is a budget review process and an opportunity for public discussion, facilitated through public hearings and budget proposal postings, with a proposed Local Mitigation Action being displayed as a specific line item. This process serves as a careful analysis of costs and benefits for proposed Local Mitigation Actions.

When seeking state or federal funding for Local Mitigation Actions, additional analysis may be required by the agency administering funding. For example, mitigation actions that request funding through any one of FEMA's grant programs, require a formal Benefit-Cost Analysis (BCA). NECCOG may assist its member towns by employing FEMA's BCA Toolkit 5.0. Released in April, 2014, BCA Toolkit 5.0 offers a standardized methodology for comparing potential benefits to project costs.

Potential Funding Sources

Potential funding sources for Local Mitigation Actions are named for each item. While most actions will be funded, at least in part, through municipal monies, State of Connecticut agencies, FEMA, and other federal agencies can reduce a project's financial burden to the participating

community and create incentive to implement mitigation actions. Communities are encouraged to identify additional funding sources, not mentioned in the Action Plan. See [Table 5-1](#) for potential, outside funding sources.

Table 5-1: Potential outside funding sources for Local Mitigation Actions

Outside Funding Source	Administering Agency
Small Town Economic Assistance Program	Connecticut Office of Policy and Management
Urban Action Grant Program	Connecticut Office of Policy and Management
Local Bridge Program	Connecticut Department of Transportation
Surface Transportation Rural Program	Connecticut Department of Transportation
Town Aid Road Program	Connecticut Department of Transportation
Emergency Watershed Protection Program	United States Department of Agriculture
Hazard Mitigation Grant Program	Federal Emergency Management Agency
Flood Mitigation Grant Program	Federal Emergency Management Agency
Pre-Disaster Mitigation Grant Program	Federal Emergency Management Agency
Repetitive Flood Claims Program	Federal Emergency Management Agency
Severe Repetitive Loss Program	Federal Emergency Management Agency

Prioritization

Attached to each Local Mitigation Action is a standardized Priority Level that describes that action’s need for implementation relative to hazard risks, number of hazards addressed, and expected positive impact. Three Priority Levels, tied to identified risks and vulnerabilities using Risk Factor Values from Chapter 3, were used:

- **High Priority-** High Priority Local Mitigation Actions are (a) expected to immediately, and tangibly, reduce or eliminate definable vulnerability to “High Risk” natural hazards (flooding, wind, lightning, thunderstorms, winter storms, and tropical cyclones) or multiple natural hazards, and (b) are actions that a municipality expects to implement in the life of The 2015 Plan. Results from these actions should be seen immediately. By nature, many High Priority Local Mitigation Actions are capital improvements that affect real property and address new and existing infrastructure.
- **Medium Priority-** Medium Priority Local Mitigation Actions are (a) expected to immediately reduce or eliminate vulnerability to “Medium Risk” and “Low Risk” natural

hazards, or (b) are actions that require little or no planning or special funding (e.g. culvert inspections) but have largely intangible benefits.

- **Low Priority-** Low Priority Local Mitigation Actions are actions that a town would “like to see done” at some point but are not an immediate concern because of budgeting, personnel, or logistical constraints. These actions may otherwise be Medium or High Priority actions.
- **High* Priority-** High* Priority Local Mitigation Actions address almost all identified natural hazards, except for drought and erosion, by way of improving a town’s emergency preparedness (e.g. upgrades to a town’s Emergency Operations Center).

This prioritization method was developed by NECCOG staff and endorsed by local officials prior to submittal of Local Mitigation Actions.

Implementation

Action implementation is project-specific and may not always adhere to identified Priority Levels. Communities are encouraged to implement Local Mitigation Actions as they become appropriate.

Methods for implementing Local Mitigation Actions may also vary depending on the type of action being implemented. Local Mitigation Actions for which special budgeting is not necessary may be implemented by the responsible party or parties, at any time, and revolve throughout the year (e.g. culvert inspection or tree removal). Other actions may require special approval from legislative or regulatory bodies (e.g. adoption of an ordinance or regulation). As mentioned previously, Local Mitigation Actions that require budgeting and planning are only implemented after careful review of responsible parties and approval of the general public. If a project necessitates outside funding, analysis and project planning may be more intensive, depending on the source.

For each identified Local Mitigation Action, the party or parties, responsible for action implementation, were identified. Typically, responsible parties are within local government.

Progress Tracking and Plan Maintenance

As discussed in [Chapter 1.4](#), NECCOG staff will work with local officials to monitor progress of Local Mitigation Actions. Actions may be eliminated, deferred, added, or modified throughout the life of The 2015 Plan. A review of the status of each Local Mitigation Action will be conducted yearly. A complete analysis of Local Mitigation Action implementation will be finalized prior to the completion The 2020 Update.

Timeframe

Unless otherwise noted, all Local Mitigation Actions, once budgeted for, are able to be accomplished within The 2015 Plan’s five-year timeframe.

Local Mitigation Actions, Ashford

Table 5-2: Local Mitigation Actions, Ashford

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Knowlton Hall	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This is the town's public library and a possible shelter. Estimated Cost: \$49,950.
Ensure emergency shelters have adequate supplies for emergency response	Emergency Management Director	Municipal	High*	All natural hazards (except for Drought)	This is an easily implemented action.
Improve Lakeview Drive where there are drainage issues	Public Works	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Improper drainage may cause the road to flood and washout during heavy rain.
Examine Westford Hill Road Bridge crossing the Mount Hope River	Public Works	Municipal	Medium	Flooding	This bridge may be flooded in a heavy rain event.
Examine Axe Factory Road Bridge crossing Bigelow Brook	Public Works	Municipal	Medium	Flooding	This bridge is prone to scouring.

Local Mitigation Actions, Brooklyn

Table 5-3: Local Mitigation Actions, Brooklyn

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Quinebaug Valley Senior Citizens Center	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This senior center serves many of the surrounding towns.
Acquire backup power generator for East Brooklyn Fire Station	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This is a critical facility in the most populated portion of town.

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Monitor flooding on Day Street, from the Quinebaug River, and take necessary actions to reduce long-term damage	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Pre-Disaster Mitigation Grant Program (FEMA)/Municipal	High	Flooding	A portion of Day Street in eastern Brooklyn is in danger of washing out during A powerful flooding event.
Inspect and upgrade culverts and drainage infrastructure to prevent future flooding	Public Works	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Improve tree, limb, and brush removal on town-owned roads	Public Works	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Facilitate public outreach, regarding emergency preparedness, through the Brooklyn Emergency Management and Homeland Security Committee	Brooklyn Emergency Management and Homeland Security Committee	Municipal	Medium	All applicable hazards (TBD)	This is a committee in Brooklyn's town government that meets regularly to discuss emergency management issues.

Local Mitigation Actions, Canterbury

Table 5-4: Local Mitigation Actions, Canterbury

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Upgrade and purchase necessary communications equipment to facilitate Interoperable Communications System between town departments and the Emergency Operations Center	Selectmen/Emergency Management Director	Interoperable Emergency Communications Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This would greatly improve preparedness in coordinating municipal emergency functions.
Acquire backup power generators for critical facilities	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	No critical facilities have emergency power generators. *This may take longer than five years*

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Review and/or upgrade Emergency Shelter capacity	Emergency Management Director	Municipal	High*	All natural hazards (except for Drought)	
Redirect water flow or install greater drainage under John Brook Road	Public Works	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This road is prone to flooding.
Replace existing drainage piping on Colburn Road	Public Works	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This pipe cannot handle high water volumes.
Replace existing drainage piping on Cemetery Road	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This pipe cannot handle high water volumes.
Floodproof, upgrade, or replace bridge on Miller- Goodwin Connector over Little River	Selectmen/Public Works/Contracted	FHWA Scour Program (USDOT)/Small Town Economic Assistance Program (OPM)/Town Aid Road (ConnDOT)/Municipal	High	Flooding	This bridge is prone to scouring.
Floodproof, upgrade, or replace bridge on Woodchuck Hill Road over Little River	Selectmen/Public Works/Contracted	FHWA Scour Program (USDOT)/Small Town Economic Assistance Program (OPM)/Town Aid Road (ConnDOT)/Municipal	High	Flooding	This bridge is prone to scouring.
Floodproof, upgrade, or replace bridge on Hanover Road over Little River	Selectmen/Public Works/Contracted	Small Town Economic Assistance Program (OPM)/Town Aid Road (ConnDOT)/Municipal	High	Flooding	This bridge is prone to scouring.
Floodproof, upgrade, or replace bridge on Tracy Road over Kitt Brook	Selectmen/Public Works/Contracted	FHWA Scour Program (USDOT)/Small Town Economic Assistance Program (OPM)/Town Aid Road (ConnDOT)/Municipal	High	Flooding	This bridge is prone to scouring.
Examine dams on Baldwin Brook, above the Route 169 crossing	Public Works	Municipal	Medium	Flooding	Breaches of these dams may flood Route 169.
Examine Kitt Brook at the Route 169 crossing	Public Works	Municipal	Medium	Flooding	There are a number of upstream dams before this crossing.
Examine two flood-prone areas on Cemetery Road	Public Works	Municipal	Medium	Flooding	
Examine drainage piping and/or install new drainage piping on Wauregan Road	Public Works	Municipal	Medium	Flooding	
Improve tree, limb, and brush removal on town- owned roads	Public Works	Town Aid Road (ConnDOT)/Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical	

				Cyclones, Tornadoes	
Establish a public education campaign for proper tree removal operations and necessity	(TBD)	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	

Local Mitigation Actions, Chaplin

Table 5-5: Local Mitigation Actions, Chaplin

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generators for critical facilities	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	No Essential Facilities have backup power generators, including the town's Emergency Operations Center and Emergency Shelter. *This may take longer than five years*
Complete tri-town study of the feasibility of using Parish Hill High School as a sub-regional shelter	Selectmen (Chaplin, Hampton, Scotland)	Municipal	High*	All natural hazards (except for Drought)	The three towns have been discussing this possibility. It would greatly serve emergency preparedness in the rural area.
Rebuild Darling Pond Dam	Selectmen/Public Works/Contracted	Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Ongoing. Have already obtained one STEAP grant and wish to obtain another to finish the project. Engineering study completed.
Floodproof or replace England Road Bridge crossing the Natchaug River	Selectmen/Public Works/Contracted	FHWA Scour Program (USDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This bridge is prone to scouring.
Improve tree, limb, and brush removal on town-owned roads	Public Works	Municipal/Town Aid Road (ConnDOT)	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Develop a long-term plan to bury power lines	Public Works /Planning and Zoning Commission	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	

Inspect and upgrade culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	
Ensure that tree maintenance is being performed along private roads	Public Works	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Publish all town ordinances and regulations on town website	(Town Website Administrator)	Municipal	Medium	All applicable hazards (TBD)	The town's Code of Ordinances are not in digital format and not on the town's website.
Make available literature on natural disasters and preparedness at Chaplin Town Hall and at William Ross Library	Librarian/(TBD)	Municipal	Medium	All applicable hazards (TBD)	
Use the Government Access Channel to inform the public on hazard preparedness	(TBD)	Municipal	Medium	All applicable hazards (TBD)	
Educate school children about the risks of floods and other natural hazards	(TBD)	Municipal	Medium	All applicable hazards (TBD)	
Upgrade town snowplows with more modernized equipment, when applicable	Selectmen/Public Works	Municipal	Low	Winter Storms	

Local Mitigation Actions, Eastford

Table 5-6: Local Mitigation Actions, Eastford

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Ivy Glen Memorial Library	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	

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Acquire backup power generator for Town Grange	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	The Grange houses public works equipment
Acquire traveling backup power generator for local businesses	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This generator would likely be used for the town's only general store.
Provide storage area for sheltering equipment	Selectmen/Emergency Management Director	N/A	High*	All natural hazards (except for Drought)	
Implement Reverse 911 calling system	Selectmen/Emergency Management Director/Fire Chief	Municipal	High*	All applicable hazards	
Improve road drainage as applicable	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Rural Collector Program (USDOT)/Municipal	High	Flooding	
Correct major drainage and water-level issues at Ivy Glen Memorial Library	Selectmen/Public Works/ConnDOT	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/ConnDOT Funds/Municipal	High	Flooding	This area is occasionally flooded.
Develop and implement plan for dam inspections	Public Works	Municipal	High	Flooding	
Develop program to alleviate flooding due to beaver dams and related wildlife activity	Selectmen/Public Works	Municipal	High	Flooding	There are a number of ponds and swamps impounded by beaver dams in town, some near roads and houses.
Dig a new well to improve water supply to Town Office Building and Eastford School	Selectmen/Public Works/Contracted	Municipal	Medium	Drought	
Public education campaign on lightning risks	(TBD)	Municipal	Medium	Lightning, Thunderstorms	
Educate local landowners on eligibility for USDA's Emergency	(TBD)	Municipal	Medium	Flooding	

Watershed Protection Program					
Determine if, and how, the town can benefit from participation in the USDA's Emergency Watershed Protection Program	Selectmen/Emergency Management Director	N/A	Medium	Flooding	
Mandate dry hydrants in new building projects	Selectmen/Planning Commission	Municipal	Medium	Drought	This may be done through subdivision regulations and/or an ordinance.

Local Mitigation Actions, Hampton

Table 5-7: Local Mitigation Actions, Hampton

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Ensure that emergency shelter has adequate supplies to respond to emergencies	Selectmen/Emergency Management Director	Municipal	High*	All natural hazards (except for Drought)	
Acquire backup power generator for community center	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This could serve as a shelter.
Upgrade horn at the fire department	Selectmen/Fire Department	Municipal	High*	All natural hazards (except for Drought)	

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Reconstruct Parker Road where culverts are structurally weak	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Weak culverts may collapse and lead to flooding
Improve North Brook Street where there are drainage problems	Public Works	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	
Inspect and upgrade culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	
Examine Hammond Hill Road Bridge crossing the Little River	Public Works	Municipal	Medium	Flooding	This bridge is prone to scouring.
Examine Drain Street Bridge crossing the Little River	Public Works	Municipal	Medium	Flooding	This bridge is prone to scouring.
Examine East Old Route 6 Bridge crossing the Little River	Public Works	Municipal	Medium	Flooding	This bridge is prone to scouring.
Continue posting and updating town ordinances and regulations on the town's website	(Town Website Administrator)	Municipal	Medium	Flooding	
Make available literature on natural disasters and Fletcher Memorial Library	Librarian/(TBD)	Municipal	Medium	All applicable hazards	
Acquire backup generator for general store	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	Low	All natural hazards (except for Drought)	The Hampton General Store is the only store in Hampton.

Local Mitigation Actions, Killingly

Table 5-8: Local Mitigation Actions, Killingly

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Town Hall	Town Council/Town Manager/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High	All natural hazards (except for Drought)	If acquired, Town Hall would become the town's Emergency Operations Center.
Acquire backup power generator for community center	Town Council/Town Manager/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	If acquired, the community center would become a secondary shelter to serve Danielson.
Taken necessary action to eliminate flood risks from Acme Pond Dam on Acme Pond in East Killingly	Town Council/Town Manager/Town Engineer/Public Works/Contracted	Pre-Disaster Mitigation Grant Program (FEMA)/Municipal	High	Flooding	This is a Class C dam that may breach if no action is taken, presenting a serious threat to downstream people and property. *This may take longer than five years*
Monitor dams	Public Works	Municipal	Medium	Flooding	There are a number of Class B and Class C dams in town.
Expand brine and salt storage	Town Council/Town Manager/Public Works	Municipal	Medium	Winter Storms	
Acquire spray equipment for pretreating roads with liquid products	Town Council/Town Manager/Public Works	Municipal	Medium	Winter Storms	
Upgrade tree cutting equipment	Town Council/Town Manager/Public Works	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Acquire a self-contained sign trailer	Town Council/Town Manager/Public Works	Municipal	Medium	All natural hazards (except for Drought)	This would provide traffic control signs and barricades for emergency situations.

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Acquire a self-contained light tower	Town Council/Town Manager/Public Works	Municipal	Medium	All natural hazards (except for Drought)	This would allow for visibility, at night, during emergency situations.
Expand tree clearing budget	Town Council/Town Manager	N/A	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Digitally map FEMA floodplains using GIS	Town Council/Town Manager/Town Planner/Contracted	Municipal	Low	Flooding	*This may take longer than five years*

Local Mitigation Actions, Plainfield

Table 5-9: Local Mitigation Actions, Plainfield

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Perform flooding study and take appropriate flood mitigation action relative to Plainfield Village Sewage Treatment Plant	Selectmen/Public Works/Contracted	Flood Mitigation Assistance (FEMA)/Pre-Disaster Mitigation (FEMA)/Municipal	High	Flooding	This sewage treatment plant is near grade with Horse Brook and Mill Brook.
Monitor dams along the Moosup River and take appropriate action	Emergency Management Director/Public Works	Municipal	Medium	Flooding	These dams have breached in the past
Improve tree, limb, and brush removal on town-owned roads	Public Works	Town Aid Road (ConnDOT)/Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Inspect and upgrade damaged culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	

Local Mitigation Actions, Pomfret

Table 5-10: Local Mitigation Actions, Pomfret

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Town Hall	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This is the town's Emergency Operations Center. There is also a fire suppression system at Town Hall which requires electricity. Estimated Cost: \$75,000.
Acquire backup power generator for Pomfret School Field House	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This is a privately owned building that acts as the town's Emergency Shelter. Estimated Cost: \$75,000.
Provide handicapped-accessible restrooms at Pomfret School Field House	Selectmen/Emergency Management Director	Pomfret School/Municipal	High*	All natural hazards (except for Drought)	This is a privately owned building that acts as the town's Emergency Shelter.
Improve Clapp Road where there are drainage issues	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Municipal	High	Flooding	Three problem areas, road prone to washing out. Estimated Cost: \$13,642.
Improve Cotton Bridge Road where there are drainage issues	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Municipal	High	Flooding	Road prone to washing out. Estimated Cost: \$14,438.
Improve Bosworth Road where there are drainage issues	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Municipal	High	Flooding	Road prone to washing out.
Floodproof or replace Bosworth Road Bridge over Mashamoquet Brook	Selectmen/Public Works/Contracted	FHWA Scour Program (USDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This bridge is prone to scouring.

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Take necessary action to improve load capacity of Mashamoquet Brook to prevent flooding at Route 101	Selectmen/Public Works/Contracted	Emergency Watershed Protection Program (USDA)/Municipal	High	Flooding	This portion of the river is shallow and silted, resulting in flooding on Route 101 from backflow from the Quinebaug River.
Inspect Abbotts Pond Dam at Abbotts Pond, assuming permission from owner	Public Works	Municipal	High	Flooding	This is a Class B Dam located on private property.
Improve tree, limb, and brush removal on town-owned roads	Public Works	Town Aid Road (ConnDOT)/Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	

Local Mitigation Actions, Putnam

Table 5-11: Local Mitigation Actions, Putnam

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Putnam Police Department	Mayor/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards, except Drought, and man-made hazards	This is the town's Emergency Operations Center
Acquire backup power generator for Putnam Middle School	Mayor/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High	Flooding, Tropical Cyclones, Winter Storms	This is the town's Emergency Shelter
Implement recommended actions relative to stream bank erosion at Simonzi Park, on the Quinebaug River	Mayor-Contracted	Emergency Watershed Protection Program (USDA)/Municipal	High	Erosion	Estimated Cost: \$99,400. *This may take longer than five years*
Take necessary action to address flooding in the vicinity of Murphy Park, on the Little River	Mayor/Public Works/Contracted	Pre-Disaster Mitigation Grant Program (FEMA)/Municipal	High	Flooding	
Take necessary action to address flooding on	Mayor/Public Works/Contracted	Municipal/Pre-Disaster Mitigation Grant Program (FEMA)	High	Flooding	*This may take longer

Recreation Park Road, on the Little River					than five years*
Work with ConnDOT to develop long-term strategy to correct man-made flooding issues at 531 Providence Pike	Town Planner/ConnDOT	ConnDOT	High	Flooding, Tropical Cyclones, Winter Storms	Flooding is caused by runoff from Route 44 (Providence Pike)

Local Mitigation Actions, Scotland

Table 5-12: Local Mitigation Actions, Scotland

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Install a public warning system (siren) at fire station	Selectmen/Emergency Management Director/Fire Chief	Municipal	High*	All applicable hazards (TBD)	
Improve State Rt. 97 north of Gager Hill Road where drainage problems	Selectmen/ConnDOT	ConnDOT Funds	High	Flooding	Drainage problems are due to an improperly functioning catch basin.
Examine Brooklyn Turnpike Bridge crossing Merrick Brook	Public Works	Municipal	High	Flooding	This bridge is prone to scouring.
Examine Bass Road crossing Merrick Brook	Public Works	Municipal	High	Flooding	
Examine Brook Road crossing Merrick Brook	Public Works	Municipal	High	Flooding	
Examine Brook Road Extension crossing Merrick Brook	Public Works	Municipal	High	Flooding	
Examine Gager Road Crossing Merrick Brook	Public Works	Municipal	High	Flooding	
Examine Huntington Road crossing Merrick Brook	Public Works	Municipal	High	Flooding	

2015 Northeastern Connecticut Council of Governments Natural Hazard Mitigation Plan

Improve Toleration Road where there are drainage problems	Selectmen/Public Works/Contracted	Town Aid Road Program (ConnDOT)/Municipal	High	Flooding	
Pass an ordinance requiring burying power lines in future developments	Selectman/Planning and Zoning Commission/Town Residents	N/A	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Establish a public education campaign for proper tree planting and maintenance	(TBD)	Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Add dry hydrants or underground cisterns in wildfire-prone areas	Selectmen/Public Works	Municipal	Low	Wildfire (not an identified hazard)	This action was identified in WINCOG's 2007 hazard mitigation plan and was not eliminated during The 2015 Plan planning process. *This may take longer than five years*

Local Mitigation Actions, Sterling

Table 5-13: Local Mitigation Actions, Sterling

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Oneco Fire Company	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	
Acquire backup power generator for Sterling Community School	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	This is the town's Emergency Operations Center and Shelter.
Continually monitor Sterling Pond Dam and its	Public Works	Flood Mitigation Assistance (FEMA)/Hazard	High	Flooding	There are many structures directly

spillways and follow through with recommendations from ongoing engineering study		Mitigation Grant Program (FEMA)/Municipal			downstream from this dam.
At Margaret Henry Road, add culvert and raise road to prevent flooding	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/STP-Rural Collector Program (USDOT)/Small Town Economic Assistance Program (OPM)	High	Flooding	Estimated Cost: \$100,000.
Replace culverts on Gibson Hill Road	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	
Replace culvert on Saw Mill Hill Road	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	This is immediately downstream of a dam.
Acquire up-to-date contact information for people downstream of Sterling Pond	Administrative Assistant/Emergency Management Director	Municipal	Medium	Flooding	Telephone numbers and email addresses.
Improve tree, limb, and brush removal on town-owned roads	Public Works/Contracted	Town Aid Road (ConnDOT)/Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	

Local Mitigation Actions, Thompson

Table 5-14: Local Mitigation Actions, Thompson

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Acquire backup power generator for Town Hall	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	Town Hall is Thompson's Emergency Operations Center.

2015 Northeastern Connecticut Council of Governments Natural Hazard Mitigation Plan

Acquire backup power generators for food supply locations	Selectmen/Emergency Management Director	Pre-Disaster Mitigation Grant Program (FEMA)/Hazard Mitigation Grant Program (FEMA)/Municipal	High*	All natural hazards (except for Drought)	A number of dense villages in town have populations reliant on a limited number of nearby businesses for food supplies.
Map alternative road routes for flooding closures	Town Planner/Public Works	Municipal	High*	Flooding	
Examine Sand Dam Road at the beginning of Five Mile River	Public Works	Municipal	Medium	Flooding	This road is continually flooded and may wash out.
Examine Mechanicsville Dam, Wilsonville Dam, Blain Road Dam, Knights of Columbus Dam, and Fabyan Pond Dam	Public Works	Municipal	Medium	Flooding	
Examine Fabyan Road drainage and determine if improvements should be done	Public Works	Municipal	Medium	Flooding	
Examine all bridges that are prone to scouring	Public Works	Municipal	Medium	Flooding	Thompson has eight bridges that are prone to scouring.
Inspect and upgrade culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	

Local Mitigation Actions, Union

Table 5-15: Local Mitigation Actions, Union

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Improve tree, limb, and brush removal on town-owned roads	Public Works/Contracted	Town Aid Road (ConnDOT)/Municipal	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	The town should implement a more progressive preventative maintenance routine.
Promote tree trimming along privately owned roads	Public Works	N/A	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	There are many privately owned, unimproved roads with overhead utility lines.
Inspect and upgrade culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	

Post ordinances and regulations online	(Town Website Administrator)	Municipal	Medium	All applicable hazards (TBD)	The town's wetlands regulations, subdivision regulations, and town ordinances are not in digital format.
Inspect publicly owned dams and spillways	Public Works	Municipal	Medium	Flooding	

Local Mitigation Actions, Voluntown

Table 5-16: Local Mitigation Actions, Voluntown

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Review and/or upgrade Emergency Shelter capacity	Emergency Management Director	Municipal	High*	All natural hazards, except for Drought, and man-made hazards	
Acquire an emergency power generator for Town Hall	Selectmen/Emergency Management Director	Municipal/Hazard Mitigation Grant Program (FEMA)	High	All natural hazards (except for Drought)	
Improved removal of trees and tree limbs that pose a threat to roads, utilities, and public safety on town roads	Public Works	Municipal/Town Aid Road (ConnDOT)	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Inspect culverts, bridges, and drainage infrastructure for blockages and silting to prevent flooding	Public Works	Municipal/Town Aid Road (ConnDOT)	Medium	Flooding, Winter Storms, Tropical Cyclones	
Repair, restructure, or rebuild Forge Hill Road Bridge crossing the Pachaug River	Selectmen/Public Works/Contracted	Municipal/Local Bridge Program (ConnDOT)	Low	Flooding, Winter Storms, Tropical Cyclones	This bridge is prone to scouring and flooding. It is also immediately downstream from a dam.

Local Mitigation Actions, Woodstock

Table 5-20: Local Mitigation Actions, Woodstock

Description	Responsible Parties	Potential Funding Sources	Priority Level	Corresponding Hazards	Notes
Replace Butts Bridge, over Peake Brook, with a box culvert to improve drainage	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Estimated Cost: \$250,000-\$300,000.
Replace bridge on Peake Brook Road, over Peake Brook, with a box culvert to improve drainage	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Estimated Cost: \$250,000-\$300,000.
Replace bridge on Hopkins Road, over Stafford Brook, with a box culvert to improve drainage	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Estimated Cost: \$250,000-\$300,000.
Rebuild failing spillway on New Sweden Road over Swanberg Road	Selectmen/Public Works/Contracted	Flood Mitigation Assistance (FEMA)/Municipal/Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (STEAP)/Municipal	High	Flooding	Estimated Cost: \$50,000-\$75,000.
Install drainage upgrades on Roseland Park Road near Cornfield Point Condominiums	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Estimated Cost: \$100,000-\$125,000.
Install new drainage on Peak Brook Road to outlet upstream from Shepherds Pond Dam	Selectmen/Public Works/Contracted	Flood Mitigation Assistance (FEMA)/Municipal/Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (STEAP)/Municipal	High	Flooding	Estimated Cost: \$150,000.
Widen culvert on lower end of County Road	Selectmen/Public Works/Contracted	Town Aid Road (ConnDOT)/Small Town Economic Assistance Program (OPM)/Municipal	High	Flooding	Estimated Cost: \$150,000.
Improve tree, limb, and brush removal on town-owned roads	Public Works	Municipal/Town Aid Road (ConnDOT)	Medium	Wind, Lightning, Thunder Storms, Winter Storms, Tropical Cyclones, Tornadoes	
Inspect and upgrade culverts to prevent future flooding	Public Works	Municipal	Medium	Flooding	

5.2.3 Regional Mitigation Actions

Regional Mitigation Actions should be implemented, by NECCOG, with approval from member municipalities, with the intent of promoting future and current Local Mitigation Actions, and/or promoting Regional Goals and Objectives, by providing services or acting as a regional platform for planning, education, and information sharing.

Potential Funding Sources

Most Regional Mitigation Actions, if implemented, will be the responsibility of a NECCOG staff member and funded internally. However, Regional Performance Incentive (RPI) grants, offered through the Connecticut Office of Policy and Management (OPM), may be applicable for some Regional Mitigation Actions.

Implementation

In most cases, it will be the responsibility of NECCOG to implement its Regional Mitigation Actions, when appropriate, after considering the feasibility, overall costs, and expected benefits of each action. Other actions may be implemented in cooperation with chief elected officials, Emergency Management Directors, other local officials, or state government agencies.

It should be understood that all implemented Regional Mitigation Actions must first be approved by the region's chief elected officials.

Progress Tracking and Plan Maintenance

Similar to Local Mitigation Actions, Regional Mitigation Actions may be eliminated, deferred, added, or modified throughout the course of The 2015 Plan. That status of Regional Mitigation Actions will be continually tracked, then reassessed for future Hazard Mitigation Plans.

Regional Mitigation Actions

Table 5-21: Regional Mitigation Actions

Description	Responsible Parties	Potential Funding Sources
Inform and educate citizens about the availability of National Flood Insurance Program options	NCEMC/NECCOG Staff	NECCOG Funds
Identify the locations of vulnerable populations and establish a system to monitor their well-being during events	NCEMC/NECCOG Staff	NECCOG Funds
Assure town floodplain management ordinances and regulations meet or exceed minimum requirements for participation in the National Flood Insurance Program	NECCOG Town Governments/NECCOG Staff	Municipal Funds
Identify significant cultural and environmental features to protect from the effects of natural hazards	NCEMC/NECCOG Staff	NECCOG Funds
Improve partnerships and communication between school districts and the emergency management community	NCEMC/NECCOG Staff/School Districts	NECCOG Funds

2015 Northeastern Connecticut Council of Governments Natural Hazard Mitigation Plan

Routinely review, update, and modify The 2015 Plan, in accordance with the Plan Maintenance Strategy	NECCOG Staff/NCEMC	Pre-Disaster Mitigation Grant Program (FEMA)/NECCOG Funds
Assign Emergency Management Directors responsibility as an ongoing advisory group to address mitigation issues	NECCOG Town Governments	N/A
Assess local regulations and ordinances to determine how they can better address the impacts of natural hazards	NECCOG Staff	Regional Performance Incentive Program (OPM)/NECCOG Funds
Establish a Regional Tree Risk Mitigation Program- Assign a NECCOG staff member responsibility of coordinating with local tree wardens, public works departments, and Emergency Management Directors, to inventory and identify hazardous trees along local roadway, using GIS and USDA's i-Tree Tool.	NECCOG Staff	Regional Performance Incentive Program (OPM)/NECCOG Funds
Develop, in GIS format, detailed town-wide disaster mitigation map layers- It would be especially beneficial to digitize Flood Insurance Rate Maps.	NECCOG Staff	NECCOG Funds
Develop and implement a plan that would educate and inform local citizens of the dangers of particular natural hazards	NCEMC	NECCOG Funds
Evaluate the vulnerability of critical facilities and develop a plan to mitigate risks to facilities, personnel, and equipment	NECCOG Staff/NCEMC	NECCOG Funds
Inspect privately owned dams and assess their present, structural integrity- The results of a region-wide inspection would create a basis for developing a prioritized list of engineering actions.	NCEMC/NECCOG Staff/Property Owners	NECCOG Funds
Inventory beaver dams and assess potential impacts relative to their removal or failure- The results of a region-wide inventory would create a basis for developing a prioritized list of beaver dam management.	NCEMC/NECCOG Staff/Property Owners	NECCOG Funds
Assess, and determine the adequacy of, present fire protection capabilities, equipment, and facilities, with an emphasis in areas that depend on on-site wells	NCEMC/Fire Departments	NECCOG Funds
Integrate the findings of The 2015 Plan into community and regional plans and policies	NECCOG Town Governments	N/A

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Appendix 1

Town of Ashford

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Ashford Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Ashford; and

WHEREAS, the Town of Ashford, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Ashford and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Ashford to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Ashford Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Ashford's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Ashford Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Brooklyn

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Brooklyn Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Brooklyn; and

WHEREAS, the Town of Brooklyn, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Brooklyn and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Brooklyn to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Brooklyn Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Brooklyn's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Brooklyn Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Canterbury
Resolution Adopting the *2015 Northeastern
Connecticut Council of Governments Regional Hazard Mitigation Plan*

WHEREAS, the Town of Canterbury Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Canterbury; and

WHEREAS, the Town of Canterbury, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Canterbury and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Canterbury to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Canterbury Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Canterbury's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Canterbury Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Chaplin

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Chaplin Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Chaplin; and

WHEREAS, the Town of Chaplin, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Chaplin and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Chaplin to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Chaplin Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Chaplin's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Chaplin Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Eastford

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Eastford Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Eastford; and

WHEREAS, the Town of Eastford, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Eastford and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Eastford to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Eastford Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Eastford's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Eastford Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Hampton

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Hampton Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Hampton; and

WHEREAS, the Town of Hampton, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Hampton and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Hampton to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Hampton Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Hampton's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Hampton Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Killingly

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Killingly Town Council recognizes the threats that natural hazards pose to people and property with the Town of Killingly; and

WHEREAS, the Town of Killingly, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Killingly and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Killingly to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Killingly Town Council demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Killingly's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Killingly Town Council hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Plainfield

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Plainfield Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Plainfield; and

WHEREAS, the Town of Plainfield, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Plainfield and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Plainfield to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Plainfield Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Plainfield's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Plainfield Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Pomfret

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Pomfret Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Pomfret; and

WHEREAS, the Town of Pomfret, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Pomfret and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Pomfret to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Pomfret Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Pomfret's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Pomfret Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Putnam

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Putnam Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Putnam; and

WHEREAS, the Town of Putnam, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Putnam and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Putnam to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Putnam Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Putnam's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Putnam Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Scotland

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Scotland Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Scotland; and

WHEREAS, the Town of Scotland, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Scotland and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Scotland to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Scotland Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Scotland's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Scotland Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Sterling

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Sterling Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Sterling; and

WHEREAS, the Town of Sterling, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Sterling and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Sterling to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Sterling Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Sterling's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Sterling Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Thompson
Resolution Adopting the *2015 Northeastern
Connecticut Council of Governments Regional Hazard Mitigation Plan*

WHEREAS, the Town of Thompson Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Thompson; and

WHEREAS, the Town of Thompson, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Thompson and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Thompson to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Thompson Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Thompson's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Thompson Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Union

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Union Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Union; and

WHEREAS, the Town of Union, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Union and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Union to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Union Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Union's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Union Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Voluntown

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Voluntown Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Voluntown; and

WHEREAS, the Town of Voluntown, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Voluntown and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Voluntown to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Voluntown Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Voluntown's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Voluntown Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Town of Woodstock

Resolution Adopting the *2015 Northeastern*

Connecticut Council of Governments Regional Hazard Mitigation Plan

WHEREAS, the Town of Woodstock Board of Selectmen recognizes the threats that natural hazards pose to people and property with the Town of Woodstock; and

WHEREAS, the Town of Woodstock, in collaboration with the Northeastern Connecticut Council of Governments (NECCOG) has prepared a multi-hazard mitigation plan known as the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan in accordance with the disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan has identified mitigation goals and actions to reduce or eliminate long-term risk to people and property from the impacts of future natural hazards and disasters that affect the Town of Woodstock and the region; and

WHEREAS, the Federal Emergency Management Agency/ Department of Homeland Security has approved the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan, on condition of local adoption, enabling the Town of Woodstock to apply for Hazard Mitigation grant funding; and

WHEREAS, adoption by the Town of Woodstock Board of Selectmen demonstrates their commitment to achieving the hazard mitigation goals outlined in the Town of Woodstock's section of the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan,

NOW, THEREFORE, BE IT RESOLVED, that the Town of Woodstock Board of Selectmen hereby adopts the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

Date of adoption: _____

Signed: _____

Appendix 2

**Northeast CT Emergency Management Committee
to be held 6pm, Tuesday, November 15, 2011
at NECCOG, 125 Putnam Pike, Dayville, CT**

Agenda

6:00-6:45

- **Emergency Needs of Vulnerable Populations in NE CT. Invited guests include representatives of TVCCA, Day Kimball Hospital Homecare, Masonicare**

6:45-7:30

- **Hazard Mitigation Grant Program--NECCOG**
- **Other business**
- **Set next meeting date and location**

**Northeast CT Emergency Management Committee (NCEMC)
6pm, Tuesday, November 15, 2011 @ NECCOG**

Minutes

In attendance: Paul Yellen, EMD Plainfield; Ed Munroe, EMD Woodstock; Deb Richards, EMD Eastford; Mike Gardner, EMD Ashford; Carl Kvist, EMD Sterling; Don Buell, DEMD Sterling; Derek May, EMD Pomfret/NDDH Emergency Coordinator; Jim Larkin, NECCOG; Steve Benoit, EMD Thompson; Bill Poirier, DEMD Thompson; Marylou Underwood, TVCCA; Judie Blackmore, DKH Homecare; John Filchak, NECCOG; Holly Dominie, FEMA Community Mitigation Planner; Eldon Griffiths, American Red Cross; WINY radio reporter; Villager Newspapers reporter

Meeting began 6pm. Introductions performed.

Special Needs populations discussion

Group was addressed by Marylouise Underwood, Chief Operations Officer for Thames Valley Council for Community Action (TVCCA), 401 West Thames Street, Unit 201, Norwich, 06360, phone 860 425 6522, munderwood@tvcca.org. Tim Grills, Director of Nutrition Services, tgrills@tvcca.org, who directly takes care of the Northeast area, was unable to attend. TVCCA (Meals on Wheels) typically serves a population of ages 60+ who are physically or medically homebound. They provide meals 5 days a week, hot and cold. During the winter they provide their clients with 3 to 6 shelf stable emergency meals, but in the past have not made this a priority during the warmer months. They have a point of contact in each town on a daily basis, and would like to improve communications during an emergency. TVCCA would like to meet the EMDs in each town and get to know them ahead of time, getting an "approved" list of emergency contacts within each town, cell phone exchange with EMDs; obtaining authorization from clients to share their information with the EMD before a storm, would have liked to get more info on which roads were open, etc.

During the aftermath of Tropical Storm Irene they missed only one day of service. Had local volunteer drivers who continued to deliver meals and check on people on Sunday. If clients had no power they left a cold meal only to prevent spoilage. Didn't have a method to get MREs and water at first, then was able to order them through Putnam. They also provided clients with instructions on how to make MREs. They attended NECCOG CEO meeting during the storm. Had some clients they couldn't get in touch with. Derek will send them EMD list from DEMHS website.

Group was addressed by Judie Blackmore, Director, Day Kimball Homecare, JBlackmore@DayKimball.org. This is a VNA which offers skilled homecare for all ages including nursing, home health aides, supportive care and counseling. As soon as a new patient is enrolled, they work with the patient to set up an emergency plan. They maintain and regularly print paper backups of their patient priority list. Many patients are coming out of nursing homes these days into a home environment. During an emergency they work with the Day Kimball EOC, but are mainly out in the field. During the power outage after Tropical Storm Irene out of 440 patients they had 6 patients who were without power but would not leave home. For those patients they stayed in touch with the Fire Departments and CL&P, and had one generator supplied for a ventilator patient. They communicated with Hampton who helped plow a path to a Hospice patient. She noted that patient caregivers are also often very anxious and concerned and affected by the situation. She expressed concern about how to transport people from elderly housing, etc.

Derek will get an emergency assessment packet from DK Homecare as a sample for the EMDs. Paul noted that EMDs would be most concerned with knowing the needs of people identified as needing evacuation or assistance ahead of time.

Hazard Mitigation Planning

A presentation was made by John Filchak, NECCOG Director, and Holly Dominie, FEMA Community Mitigation Planner, holly.dominie@dhs.gov, regarding the development of a northeast regional Hazard Mitigation Plan (HMP). The basic process will be to identify risks within the town and region, identify possible mitigation actions, and develop a list of projects which the community should act on. NECCOG will be developing the plan with input and assistance from the towns. All 12 towns need to *actively* participate in the planning process and if a town can't show documented participation they can't benefit from the results. Once the plan is accepted, participating towns will potentially have access to hazard mitigation grants and monies. Regarding scope of the plan, FEMA is concerned only with natural hazards, but the plan can tie into other already developed plans. John will be presenting this to the town CEOs in December, and is looking to identify participants beyond just the EMDs. John proposed a series of meetings concluding with completion of the plan in fall 2012. EMDs present expressed the wish that these planning meetings should be held separately from NCEMC meetings. As appropriate the large group may break into smaller subgroups for focused discussions. The Hazard Mitigation Planning meetings will be facilitated and organized by NECCOG, potentially every other month third Tuesday starting in December. The disc "NE CT Regional Hazard Mitigation Plan Background Material" was distributed to the EMDs, which contains multiple tools for Hazard Planning.

Other business:

Carl relayed some messages from Tony Scalora from DEMHS Region 4: EMPG payments for 2011 have been running late. EMPG 2012 is coming soon. Towns should perform annual review of their EOPs, and expect to see the EOP review checkoff list soon. Town had elections in November, let DEMHS know of relevant changes or updates.

Trainings available potentially including nighttimes & weekends: WebEOC training; G-191 *ICS/EOC Interface*, a 6 hour class which includes a Tabletop Exercise, is available to a town or multiple towns. Request trainings by a letter to DEMHS. Derek will find out specifications needed for a WebEOC training location.

Ed asked what others are doing about returning cots to DEMHS. No one has seen a protocol to return them and are holding onto them for now.

John brought forth that WINCOG is still looking for several northeast towns to submit a signed MOU with DEMHS for regional projects. Contact Mark Paquette at WINCOG with questions.

Next NCEMC meeting scheduled for January 17th at 6pm.

Meeting adjourned 7:35pm.

**Northeast CT Emergency Management Committee
to be held 6pm, Tuesday, November 13, 2012
at NECCOG offices, 125 Putnam Pike (Rte 12), Dayville, CT**

Agenda

- Hazard Mitigation Plan
- Hurricane Sandy
- DEMHS update
- Other
- Set next meeting date and location

**Northeast CT Emergency Management Committee
held 6pm, Tuesday, November 13, 2012
at NECCOG offices, 125 Putnam Pike (Rte 12), Dayville, CT**

Minutes

Attending: Don Buell, Sterling EMD; Paul Yellen, Plainfield EMD; Steve Benoit, Thompson EMD; Derek May, Pomfret EMD/NDDH; Jim Larkin, NECCOG; Shawn Johnston, CL&P; Tony Scalora, DEMHS Region 4; Eldon Griffiths, Red Cross; John Filchak, NECCOG; Deb Richards, Eastford EMD; Ed Munroe, Woodstock EMD

NECCOG Hazard Mitigation Plan

John distributed draft version 11-12-12. Seeking town input and comment on this document. Towns to provide info and this group will look at it again in January. John will present to NECCOG CEOs on 11/30. Mitigation projects should show how actions taken will minimize financial damage or life loss. Plan will be a living document and updated every 5 years. Plan will be reviewed by DEEP and FEMA. Putting the document on the NECCOG website.

Hurricane Sandy

Plainfield--no major issues except power outage M-TH. CL&P rep, Selectman, Police Chief worked together as a decentralized EOC. CL&P reps did well to the point of their abilities. Shelter opened and staffed by Red Cross & town people but had minimal attendance. No disaster declaration for Windham county equates to no FEMA reimbursement.

Eastford--no major damage, trees on wires & roads and most of town out of power for 4 days. Frustration with promised CL&P crews not arriving multiple times.

Thompson--good CL&P liaison but AT&T wires still blocked some roads; CL&P forms worked well.

Woodstock-- 88% power outage. Improvement over last year, got crews to clear roads by 3rd day.

Sterling--fared pretty well. Wires & had hazardous road blockages. CL&P liaison was always available. Didn't get info back from working crews when something was fixed.

Pomfret--Fared well. In future power outages would like to have names of people remaining out of power so they could be checked on. Makesafe work went well, not as fast as wished but that's accepted.

Question asked about why CL&P wants pole number. Shawn says if pole # is known it's helpful because it helps them see which circuits are affected.

DEMHS Region 4 Report

For Hurricane Sandy region 4 had DOC staff in office 6 days 24/7. Was helpful to have a CL&P liaison in R4 office. Heavy impact on coastal homes. Windham County didn't reach FEMA damage threshold yet but is close and if reached, two PA meetings will be scheduled. FEMA assistance for bordering county works only for SBA (Small Business Administration) but not IA (Individual Assistance) or PA (Public Assistance). 11-26 2pm in Waterford PA meeting. Towns need to get their annual LEOP update to DEMHS by December 1st. LEOPs should have minimal changes, and they are basically looking for an email that the plan is updated and current. If you haven't already submitted the Mass Care summary tool get it to DEMHS by December 1st. EMPG award letters are going out from 2012 FY (10/11 to 9/12). EMPG package for 2013 will go out shortly. No foreseeable upcoming EOC grants.

During storm Ed got calls from DEMHS asking for answers he had just provided by WebEOC Sitrep, shows that WebEOC is not being watched. Tony says there is an ongoing WebEOC improvement group making WebEOC integration better. ICS forms were used as a training tool during the EPPI exercise but not widely used in the storm.

CL&P--Shawn. CL&P tried to make improvements over last year & heard our feedback tonight. Heard communication issue of getting information on repaired areas. Heard the call to get names of outage customers. This year was able to get towns the # of house outages by street. Thanked EMDs for their help. A town should consider consulting with CL&P before relocating a shelter to review potential power interruption issues.

Next meeting January 8th at NECCOG at 6pm.

Adjourned.

**Northeast CT Emergency Management Committee
To be held 6pm, Tuesday, January 8, 2012
at NECCOG offices, 125 Putnam Pike (Rte 12), Dayville, CT**

Agenda

- NECCOG towns Hazard Mitigation Plan
- DEMHS Region 4 update
- Upcoming Trainings
- Other Business
- Set next meeting date and location

**Northeast CT Emergency Management Committee
held 6pm, Tuesday, January 8, 2013
at NECCOG offices, 125 Putnam Pike (Rte 12), Dayville, CT**

Minutes

Attending: Paul Yellen, Plainfield EMD; Jim Larkin, NECCOG; Derek May, Pomfret EMD & NDDH; Roy Piper, Canterbury EM; Shawn Johnston, CL&P; Steve Benoit, EMD Thompson; Kevin Filchak, Brooklyn EM; Tony Scalora, DEMHS R4; Eldon Griffiths, Red Cross; Deb Richards, Eastford EMD; Ed Munroe, Woodstock EMD; Marty Nugent, Day Kimball Hospital

Meeting began 6:04pm

Roy Piper is assisting with Canterbury Emergency Management. Kevin Filchak is becoming EMD of Brooklyn end of January.

Jim reviewed development of NECCOG towns Hazard Mitigation Plan. Draft has passed initial DEEP and FEMA review. Jim distributed copies of Chapter 4 of the draft. NECCOG requests comments on the listed goals, objectives, and activities from the towns by Feb 8th. John Filchak will present to CEOs end of January. Jim will send out email with Chapter 4 as an attachment for comment.

Tony provided DEMHS Region 4 Update:

- Handed out EMPG 2013 program guidance distributed yesterday by email. Deadline to submit paperwork is Feb 23.
- DEMHS will be reviewing the old template for Local Emergency Plans this year.
- DEMHS looking at getting reimbursements back faster.
- DEMHS offices continue to move from Sigourney St in Hartford to DESPP in Middletown.
- A statewide exercise will occur this year, no date available, but won't be of the same scope as EPPi 7/2012. More likely will be one region heavily involved with other regions playing support roles.
- A workgroup is meeting to improve use of WebEOC. Mike Caplet with Region 4 is on the workgroup.
- REPT Training and Exercise Committee has funds available for regional trainings, apply for them if you are doing a training.
- DEMHS has shown commitment to maintaining the Regional Offices.

Training:

- Ham Radio Technician classes in Brooklyn January-March, and in Willington late January-March.

Other business:

- Reminder from ARES to test and use your ESF-6 supplied Ham radio at least monthly.
- New Plainfield EOC will be located at 51 Blackhill Rd (rte 14), formerly the Central Village Library. Hopefully up and running by April.
- Day Kimball is doing its annual HVA. Fared well in Sandy, and also identified improvements.
- Shawn says our town CEOs have received new printed CL&P "Red Books (12/12 version)". He will send an electronic version to Jim Larkin for distribution to CEOs. Back of the book describes how they identify "critical facilities". It's still up to the towns to prioritize and finalize

their critical infrastructure list. Shawn will send a copy of Red Book and the current lists of town-identified Critical Infrastructure also.

--Eldon says ESF6 Mass Care Trailers (w/ cots pillows etc) are getting filled and finished. Special Needs Trailers to be at the COGs. Looking for locations that are accessible and monitored. Outdoor, with 24/7 access. The storing town isn't responsible for towing them. They would take an F250 or equivalent to tow.

--Through ESF6 Mass Care each town will be receiving a medical bag for their shelter this year. ARC will be trying to review contents of all the shelter boxes. There should be a list of inventory in each of the boxes.

--DEMHS is developing a template for an MOU for multitown shelters.

--Eastford is seeking templates for emergency town use of busses. DKH has an MOU with NECCOG for evacuation busses. Thompson had 5 buses prepositioned around town during Sandy.

--Brief discussion on a community's response to Mass Casualty. Derek will see if we can get something for the March agenda. Sue Bolen, Region 4 IMT possible speakers.

--Deb and the other EMDs thanked Tony for coming up to attend these meetings.

Next meeting to be held March 12th, at 6pm. Roy offered the use of the Canterbury EOC which is located at the Town Community Center.

Meeting adjourned 7:45 pm.

**Northeast CT Emergency Management Committee
To be held 6pm, Tuesday, March 12, 2013
TO BE HELD AT CANTERBURY FIRE STATION
151 WESTMINSTER ROAD
CANTERBURY CT**

Agenda

- Sue Bolen, Red Cross, on Newtown response
- Wayne Gronlund & Walt Cox, on Region 4 Incident Management Team
- NECCOG towns Hazard Mitigation Plan update
- DEMHS Region 4 update
- Other Business
- Set next meeting date and location

**Northeast CT Emergency Management Committee
held 6pm, Tuesday, March 12, 2013
at the Canterbury Fire Station**

Minutes

Attending: Paul Yellen, EMD Plainfield; Walt Cox, CT-IMT4; Wayne Gronlund, CT-IMT4; Shawn Johnston, CL&P; Luther Therlow, EMD Canterbury; Roy Piper, Canterbury CERT/CT-IMT4; Eldon Griffiths, ARC; Kevin Filchak, EMD Brooklyn; Michael Gardner, EMD Ashford; Derek May, NDDH/EMD Pomfret; Sue Bolen, ARC; Anthony Scalora, DEMHS R4; Donald Buell, EMD Sterling; Jim Larkin, NECCOG; Marty Nugent, DKH. Canterbury CERT members: Gene Brustolon, JoAnn Brustolon, Elizabeth Davis, Ray Shinkiewicz, Phil Zapadka, Kate Zapadka, Elizabeth Piper

Community response to mass casualty incidents:

--Sue Bolen presented on her experience in Newtown. She was there providing Red Cross relief for five hours after the incident and for several days afterward. Delivered a powerpoint on Family Assistance Centers (FAC). A FAC can be set up in response to any mass casualty incident, a safe and private (no media) place where families can go for information, food, and a level of counseling. Families may be arriving over a period of several days. Families can come or go as they need. Rule of thumb is there will be 10 family members for every victim. The families determine who they want to be part of the FAC. A FAC is typically a function of the town, involving staff from multiple agencies. It will likely be close by to scene at first, but then will relocate further from the scene. The Newtown FAC was open for three weeks.

--Sue emphasized the need to get plans in place ahead of time to manage a whole-community response to mass casualty incident. Expect the media in force. Expect to be overwhelmed with well-intentioned volunteers and donations of "Stuff". There needs to be a way to track and credential volunteers, and a plan to deal with potentially truckloads of unsolicited donations. Newtown used 2-1-1 to take calls of people who wanted to help instead of having them come to the scene. ARC is now contacting those people to incorporate them into future disaster response. Sue Bolen can be reached at 860-625-0825 and at sue.bolen@redcross.org .

--Paul asked what assistance NDDH might provide such an instance. Derek stated NDDH has an office of trained people, phone and computer equipment, and could help with coordination and working with other agencies.

Region 4 Incident Management Team (IMT4):

--Powerpoint & presentation by Walt Cox & Wayne Gronlund. Upon request the IMT can deploy to support an incident's existing command structure. Team is good at planning out multiple operational periods. Can help with accountability, communication, and documentation. IMT4 has about 50 volunteers, organized into 4 groups with team leaders. They are a Type 4 team, which keeps them local to New England. A handout was distributed listing some of their activities, which included the Kleen Energy explosion, train derailments 2010, and the non-emergency Home Makeover. The IMT is

a good resource for an IC who is looking at a longer than usual event with multiple operational periods.

Hazard Mitigation Plan:

-- Jim Larkin states NECCOG is still looking for projects for section 4 of the plan. DEEP wants it submitted within a week or two. It is updateable. NECCOG has an engineer on staff to help develop project costs. There is a section for the Hazard Mitigation Plan on the NECCOG website. Contact Jim with questions.

DEMHS Region 4 update:

--Tony says ESF6 & DEMHS are developing a template to describe responsibilities of each town in multijurisdictional shelters. Hoping to get it official and signed off on soon. Paul stated that shared finances should be part of the MOU, as the Plainfield shelter during Irene was a staffing and financial challenge. Sue agreed that the expectation of sheltering is becoming more complex. Sue believes shared shelters are a solution. After storm Irene there were 200+ shelters open in the state. Michael suggested multi-jurisdictional shelters based on school group areas.

--DEMHS is working on a plan to mobilize Regional assets, hopefully will be developed before June.

--June 20-22nd are planned dates for EPPI exercise. Expected to be an Ice storm scenario, with Region 5 mainly affected, supported by the other regions.

--This year DEMHS will review LEOPs, with the intent to make them more operational than just administrative.

--EMPG has about half of the completed 2013 preliminary budgets. More paperwork is coming for signatures to acknowledge budgets.

--May 8th CCM conference in Cromwell. Tony encourages the person who does each town's EMPG reimbursements to attend the 2:00 to 2:30 workshop.

Other business:

--Red Cross DAT class at NDDH in Brooklyn on 3/14.

--20 new northeast Ham radio operators graduating from class at NDDH. Also a Ham class going on in Willington.

--WINCOG CERT class will be coming up May/June/July.

--Shawn says CL&P is meeting with towns quarterly. Working with towns is going well and can improve speed and communication.

--Thanks to Canterbury Vol. FD for allowing use of their meeting room. Tickets are available for their fundraiser Annual Dinner Dance at Wright's Mill Farm on Saturday, April 27th, \$20 each, call 860-230-1866.

-- Get resource typing updates to Jim at NECCOG. He will resend list.

Next meeting date 5/14 @ NECCOG.

**Northeast CT Emergency Management Committee
To be held 6:00pm, Tuesday, September 9, 2014**

**MEETING TO BE HELD AT NECCOG
125 Putnam Pike (Rte 12), Dayville (Killingly).**

Agenda

- Elections for NCEMC
- RESF5 Update—Jeff Williams
- DEMHS Region 4 update—Mike Caplet
- NECCOG Hazard Mitigation Plan status
- School Security planning
- Trainings & Exercises
- Citizen Corps update
- Other business
- Set next meeting date and location (proposed for November 11th)

**Northeast CT Emergency Management Committee
held 6:00pm, Tuesday, September 9, 2014
At NECCOG, 125 Putnam Pike Dayville, CT**

Attending:

Mike Caplet, DEMHS R4; Derek May, NDDH/Pomfret EMD; Paul Yellen, Plainfield EMD; Don Buell, Sterling, EMD; Eldon Griffiths, Red Cross; Stuart Cobb, Union EMD; James Randall, Chaplin EMD; Steve Benoit, Thompson EMD; Randy Burchard, Killingly EMD; Jim Larkin, NECCOG; Samuel Alexander, NECCOG

Annual NCEMC elections:

--Report of nomination committee given . Secretary and Chair only one nominee each. One ballot cast for each. Two nominations for Vice Chair Don Buell & Kevin Filchak. 8 votes cast. Results of election: Chair Paul Yellen; Vice Chair Don Buell; Secretary Derek May.

RESF5:

--Addressed by Mike Caplet. RESF5 looking for ideas to improve attendance & integrate region 4 Emergency Management groups. Discussion on idea of holding SECCOG-area EM meetings every other month when NCEMC meeting doesn't meet. Group willing to accept ESF5 items onto NCEMC agenda for discussion.

Region 4 Office update:

--Planner position still open at R4 office.
--Millstone training held today.
--CL&P trainings lately including at QVCC.
--Brooklyn and Woodstock Fairs were supported by DEMHS involved in planning. "Mass Gathering" can be self-defined by town, share info w. DEMHS. Ask R4 if you think you need regional support.
--R4 RILO position open. Acts as Intelligence liaison to fusion center.
--DEMHS always trying to make EMPG program easier to work with. Towns should contact R4 office if help is needed.
--Mike has been trying to make emails more specific using subject lines.
--Discussion on increasing use of 8TAC/8CALL radios. Group expressed interest in this. Hartford area performs a roll call on first Wednesday of month 2000hrs (8pm), contact R4 office if you wish to listen in.

Hazard Mitigation Plan:

--Samuel Alexander of NECCOG addressed 2015 Natural Hazard plan development, based on 2013 NECCOG area Natural Hazard Mitigation Plan. Will contact towns to set up public meetings within each town by November.

School Security Plans:

--NDDH is glad to be part of school planning and plan reviews. Planning seems to be at different levels within each school, with varying levels of participation.

Training & Exercises:

- Region 4 Red Cross is offering “Shelter Boot Camp”, with a goal of getting 100 additional people trained shelter operations. Training in Killingly on Sept 18th and at other locations.
- Oct 18th Disaster Volunteer Training Day @ Groton Sr. Ctr.
- Citizen Corps Conference October 16th in Westbrook--for CERTs and MRC. Jim will forward invite. Features speaker from Boston Marathon bombing.
- September 8th DEMHS offered Emergency Financial First Aid Kit as part of L.I.R. at QVCC.
- School Security Planning training was offered at EastConn in Hampton on August 25, 26th.
- Sept 19th--IED course in Preston.
- HAM radio class beginning at NDDH on Wednesday 9/17.

Other Business:

- Jim Larkin can send proposed changes to REPT structure.
- Local Recovery Coordinator to be designated within each town.
- Meeting to be held September 10 for Long Term Care.
- LEPC survey recently done by contractor for DEEP.

Next meeting to be held at Sterling EOC 11/18/14 at 6pm.

Northeast CT Emergency Management Committee
Meeting to be held 6:00pm, Tuesday, November 18, 2014
At
STERLING EOC
1183 Plainfield Pike, Oneco, CT 06373

Agenda

- NECCOG Hazard Mitigation Plan Update—Sam Alexander, NECCOG
- RESF5 update
 - Discussion on Leadership/Meeting Structure and Scheduling for SCCOG EMC & RESF5
 - RESF5 Update—Jeff Williams
 - DEMHS Region 4 update—Mike Caplet
 - 8Call/8Tac Radios Briefing – Wayne Gronlund (**BRING YOUR RADIO TO THE MEETING**)
 - Discussion on School Security Planning
 - Discussion on Trainings & Exercises
 - Full-Scale Mass Casualty Exercise – June 2015 in New London Harbor
 - Briefing on the State Fire Plan – Wayne Gronlund
- Citizen Corps update
- Other business
- Set next meeting date and location (proposed for January 13th)

**Northeast CT Emergency Management Committee
Meeting held 6:00pm, Tuesday, November 18, 2014
at
STERLING EOC
1183 Plainfield Pike, Oneco, CT**

Agenda

Attendance: Ernie Mellor, EMD Scotland; Steve Benoit, EMD Thompson; Brian Howell, EMD Thompson; Jim Randall, EMD Chaplin; Tom Borgman, EMD Ashford; Michael Gardner, DEMD Ashford; Deborah Richards, EMD Eastford; Randy Burchard, EMD Killingly; Wayne Gronlund, RESF4; Paul Yellen, EMD Plainfield; Don Buell, EMD Sterling; Derek May, NDDH/EMD Pomfret; Samuel Alexander, NECCOG; Mike Caplet, DEMHS Region 4

Meeting began at 6:08.

RESF5 update (Mike Caplet):

--Combining ESF5 activities into EM existing meetings to increase participation. Possibly Dec. 10th SCCOG-area evening meeting.

--REPT budget forming for next year. Need to do some strategic thinking on ESF5 needs. NECCOG representatives to REPT Steering committee are Ed Munroe, Paul Yellen, Tom Borgman.

--Paul Yellen, Brian Howell took annual EM oath given by Mike Caplet.

--Mike handed out ESU brochures, & books on Cybersecurity. Two copies to be held as loaners at NDDH for anyone who wants one.

--EMDs should interface with their schools on school security plans.

--DEMHS Reg 4 planning position interviews complete.

--Upcoming exercise June 2015 w/ Coast Guard & New London.

--SMART Triage training done recently 2x in Region 4. Ernie Mellor attended, played a CERT-like role, maybe opened the door to future CERT programs.

--WebEOC moving forward. Eventually there will be training classes.

--EMPG applications coming out in next few weeks with new forms included, will cover the year 10-1-14 to 9-30-15.

--Upcoming training: Housing, Hoarding, & Blight conference 9-25-14 at NDDH in Brooklyn CT, 8am to 3pm.

--Ebola updates keep being pushed out thru DEMHS Reg 4. Derek reports towns may see people under direct active 21-day monitoring.

--AT&T sold to Frontier Communications. New contact information sent out.

--Presentation given by Wayne Gronlund on state fire plan & 8Call/8Tac radios. Mike C. will help find us a Frequency Template for what is programmed into the radios.

NECCOG Hazard Mitigation Plan Update:

--Sam Alexander presented on progress of NECCOG Hazard Mitigation Plan. Will be looking for endorsement from town CEOs at early December NECCOG meeting.

Citizen Corps Update (Derek):

- NECT MRC added 2 more disaster volunteers this week, bringing total to over 100.
- Anyone who knows of people interested in a CERT class, talk to Jim Larkin at NECCOG.
- Mike C. reminds EMDs to get CERT activations to R4 DEMHS 2 weeks prior. Can send in entire roster initially, then send in a sign-in sheet after.
- Scotland's CERT now under NECCOG. They can contact Jim Larkin for info on grants.

Other Business:

- Jim asked if SMART Triage tags are they readable by Salamander system
- Ernie asked if there are replacement SMART training materials available?
- Don says Sterling will have Regional Sandbagger machine coming up, probably 1st Sat in December. Anyone invited to watch.
- Don looking for ideas on how other EMDs interface work & EMD responsibilities. Send direct input to Don.
- Mike Caplet says all EMDs are welcome at SCCOG-based ESF5 meetings.

Next NCEMC Meeting:

- To be held at the Thompson EOC, January 13th, 2015 at 6pm. Planning to be co-held with RESF5 meeting again.

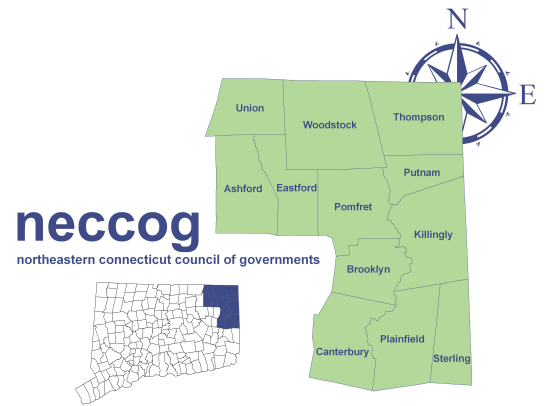
Meeting Adjourned 8:39 pm.

Meeting Notice and Agenda

September 30, 2011

8:00 a.m.

125 Putnam Pike, Dayville, CT



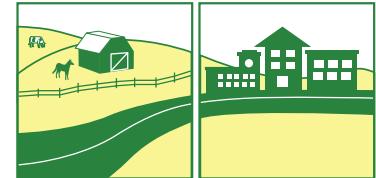
Agenda

1. **Open Meeting** - Robert Viens, Chairman

- Welcome, Introductions, Opening Comments

2. **Director's Report** - John Filchak, Executive Director

- Economic Development
- Animal Services Program
- Transportation
- Homeland Security/ Emergency Preparedness, FEMA
- Engineering Program
- HUD Sustainable Communities Grant
- Revaluation Program
- EPA Brownfields
- GIS Program
- Town Projects
- Transit District Status
- Web Site



Northeastern Connecticut
Transit District

3. **NECCOG and NECTD Budget and Work Plan, 2011-2012** (action item)

4. **Transportation Policies** (action items)

- a. Draft Public Involvement Plan
- b. Draft Title VI and Environmental Justice (including Limited English Proficiency Plan) Non-Discrimination Plan

5. **Northeast Connecticut Emergency Management Director Committee** and **TVCCA** - Lessons learned and Recommendations going forward after Irene

6. (8:30 a.m.) **Discussion and Potential Action**

Discussion with Northeast Utilities regarding how our Towns and the Utility can, going forward, better address/coordinate natural disasters (such as Hurricane Irene)

Bill Quinlan, CL&P Vice President Customer Solutions

7. **Resolution 11-09-01**, appointing Carl Kvist, EMD for the Town of Sterling, as one of the three NECCOG Representatives on the REPT Steering Committee and enabling the NECCOG Executive Director the authority to make future appointments to the REPT based on recommendation of the Northeast Connecticut Emergency Management Committee

8. State Transportation Improvement Program Reviews (action items)

- a. Project 0057-0117 , **PAVEMENT PRESERVATION**; GRISWOLD & PLAINFIELD, MP 24.01 TO MP 35.13 - Construction Phase, 2012 \$9.8 million - new project
- b. Project 0170-3009, **LED RE-LAMPING**, TRAFFIC SIGNALS (PHASE 2-DISTRICTS 3 & 4), Construction Phase 2012, \$4,571,000

9. Regional Referrals: (action items)

- a. Town of Willington, Subdivision Regulation Modification in response to Public Act 11-79
- b. Town of Woodstock, Zoning Amendment, Offsite Directional Signs

10. TEEG - Community Collaborative for Regional Juvenile Review Board

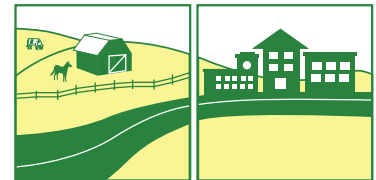
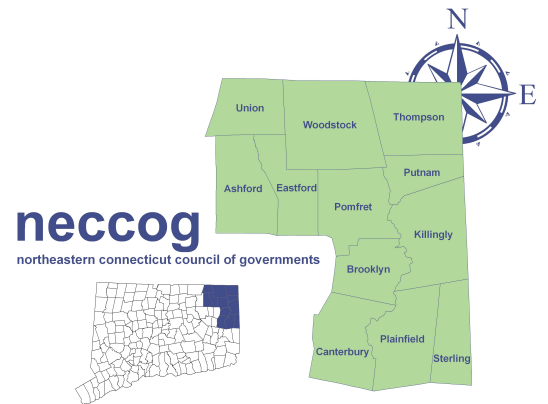
11. Executive Session, in accordance with Section 1-200(6)E “*discussion of any matter which would result in the disclosure of public records or the information contained therein described in subsection (b) of section 1-210*” Killingly Town Manager and Putnam Town Administrator are invited to participate. **Selectmen’s Roundtable**

Adjourn

Meeting Minutes

September 30, 2011

- ✓ Meeting opened by Chairman Viens at 8:00 a.m. and a quorum was noted as being in place (Ashford, Brooklyn, Canterbury, Eastford, Killingly, Plainfield, Pomfret, Putnam, Thompson, Union and Woodstock)
- ✓ NECCOG and NECTD 2011-12 Budgets and Work Plan (NECCOG) motion by Mr. Sweet, second by Mr. Tanner to approve as presented - adopted unanimously
- ✓ Transportation Policies: Public Participation and Title Vi - motion by Mr. Groh, second by Mr. Fletcher to approve as presented - adopted unanimously
- ✓ Resolution 11-09-1 appointing Carl Kvist as representative to the REPT Region IV Committee and empowering the Executive Director to make future appointments -motion by Mr. Fletcher, second by Mr. Sear to approve as presented - adopted unanimously
- ✓ Resolution 11-09-2 endorsing the Town of Sprague to join the Regional Revaluation Program -motion by Mr. Sweet, second by Mr. Young to approve as presented - adopted unanimously
- ✓ STIP Amendments -motion by Mr. Sweet, second by Mr. Sear to approve as presented - adopted unanimously
- ✓ Regional Referrals -motion by Mr. Sweet, second by Mr. Tanner to approve as presented - adopted unanimously
- ✓ Presentation/Discussion with Mr. Kvist representing the Emergency management Directors - Key Points included:
 - Need for more shelters and volunteers
 - Better understanding as to where Special Needs Persons reside and their needs
 - Cooperation was quite good
 - Need better participation by town EMD's at regional meetings
- ✓ TVCCA reported that communications is key and thanked the towns (especially Putnam) for facilitating MREs for their clients
- ✓ Discussion with Northeast Utilities (Bill Quinlan, Vice President for Customer Solutions) as to how we can do better going forward in response to storms resulting in power outages. The emphasis was on improving communications (towns liaisons) and having persons that can make decisions to allow town crews to act in a timely manner. Additionally, the need for more aggressive tree trimming was discussed. Concern was expressed that costs would be bourn by rate payers.
- ✓ TEEG made a presentation regarding Juvenile Justice and it was agreed that the Director would send a letter of support for their initiative.
- ✓ Congressional Update - Grant information was provided for potential funding opportunities
- ✓ Meeting Adjourned - 9:35 a.m.



Northeastern Connecticut
Transit District



January 27, 2012

Meeting Date Change

Northeast CT Regional Hazard Mitigation Plan Workshop Invitation

February 7, 2012

Tuesday

6:00 p.m.

Northeast CT Transit Building

125 Putnam Pike

Dayville, CT 06241

RE: Meeting Date Change/ Hazard Mitigation Plan/Identifying Risks

Due to the receipt of updated FEMA HAZ MIT Guidance documents the next meeting for the Northeast CT Regional Hazard Mitigation Plan will **not** be held on Tuesday, January 31. The meeting has been rescheduled for Tuesday February 7, 2012 @ 6:00 pm at the Northeast CT Transit Building. Discussion will be centered on identifying risks that affect all municipalities within the region as well as individual towns.

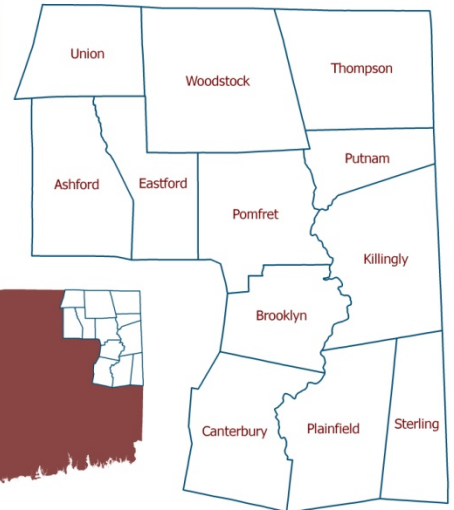
It is important that all 12 towns need to *actively* participate in the planning process in order to qualify under the Regional Plan. The municipality may appoint a representative to participate on their behalf, such as Selectmen, Public Works Director, Planner, Fire Marshal or other. While participation is required it is not limited to EMD's all interested parties are welcome.

Sorry for any inconvenience. Please **RSVP** if a representative from your municipality will be able to attend the new date. Any questions or concerns please contact;

John Filchak Executive Director

John.Filchak@neccog.org

860-774-1253



January 12, 2012

**Northeast CT
Regional Hazard Mitigation Plan
Workshop Invitation**

January 31, 2012

6:00 p.m.

Northeast CT Transit Building

125 Putnam Pike

Dayville, CT 06241

RE: Hazard Mitigation Plan/Identifying Risks

The next meeting for the Northeast CT Regional Hazard Mitigation Plan will be held on Tuesday, January 31, 6:00 pm at the Northeast CT Transit Building. Discussion will be centered on identifying risks that affect all municipalities within the region as well as individual towns.

It is important that all 12 towns need to *actively* participate in the planning process in order to qualify under the Regional Plan. The municipality may appoint a representative to participate on their behalf, such as Selectmen, Public Works Director, Planner, Fire Marshal or other. While participation is required it is not limited to EMD's all interested parties are welcome.

Any questions or concerns please contact;

John Filchak Executive Director

John.Filchak@neccog.org

860-774-1253

March 23, 2012

Regular Meeting Agenda

8:00 a.m.

125 Putnam Pike, Dayville, CT



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transit district

Meeting Agenda

1. **Open Meeting** - James S. Rivers, Chair

- Opening Remarks and Introductions
- Consideration of Previous Meeting Minutes
- Other Agenda Items
- Public Comment

2. **Director's Report and Discussion** - John Filchak, Executive Director

- Transit District Operations Update
- Transportation Planning and Assistance
- 5310 Program Status
- Homeland Security - including CERT Training
- Route 169 Plan Update Grant
- State Plan of Conservation and Development
- Town Projects
- Natural Hazard Mitigation Plan Status
- NECCOG Web Site
- GIS Program and Arc Reader
- 2012 CEDS Process
- Housing
- Legislative Update - including new initiative regarding regionalism

3. **Selectmen's Roundtable**

- Town Budget Status

Adjourn

Special Meeting

Chief-Elected Officials of the Northeast Probate District

1. **Northeast Probate District (26) Status and Related Issues** - The Honorable Leah Schad

Adjourn

DRAFT

March 23, 2012

Regular Meeting Minutes

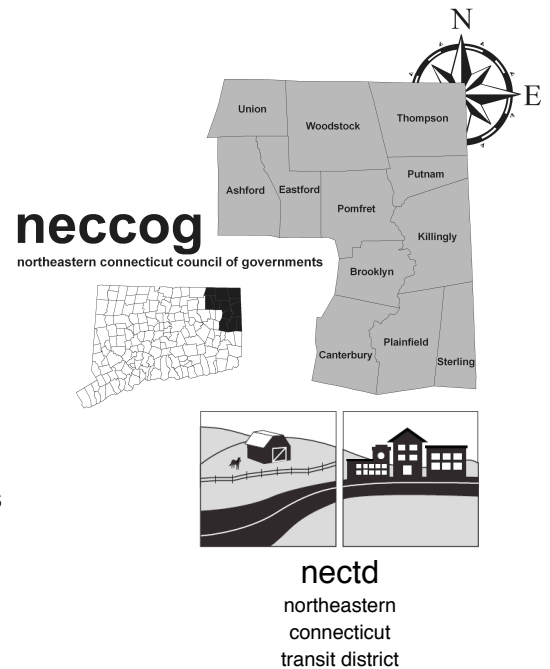
James S. Rivers, Chair of NECCOG opened the meeting at 8:00 a.m. and noted that a quorum was present (Ashford, Brooklyn, Canterbury, Eastford, Killingly, Pomfret, Thompson, Union and Woodstock)

The February Regular and March 2 Special Meeting Minutes were approved as presented.

During Public Comment Mr. Sarantopolis of Killingly made a statement regarding the need to have a county type organizations with real powers (compared to those of the COG) to take on the issues confronting the region.

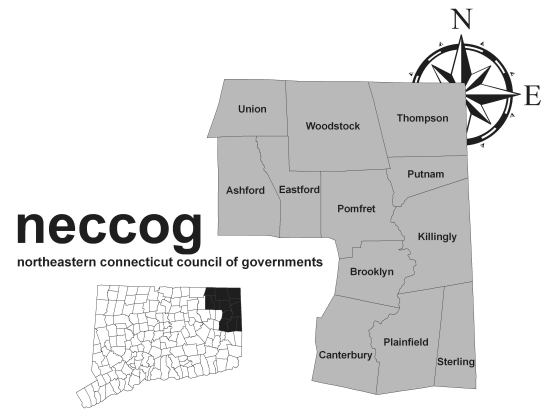
John Filchak, Executive Director updated the Council on the following:

- *Transit District* - ridership is strong and trending stronger (could be gas price related or a reflection of the route structure meeting the needs of the residents). He further noted that the District will hold a public hearing on March 30 for the four-year renewal of federal funding under the 5311 program.
- *Transportation Planning and Assistance* - The Director discussed the need to identify new projects so that they can be developed to a stage where funding could be possible.
- *5310 Program Status* - The Director noted that two applications have been received and that they would be reviewed at the May meeting.
- *Homeland Security* - including CERT Training - The Director reminded the members that a CEO meeting is scheduled for early May and that those wishing to use a proxy will need new letters. He further discussed the possibility of a new CERT class later in the year.
- *Route 169 Plan Update Grant* - The Director noted that the agreement on the grant is now signed and that work can begin. NECCOG will be looking to form a steering committee made up of two persons from each town - preferably one a business located on the roadway and the other a resident located along the roadway. The initial meeting is set for the end of April.
- *State Plan of Conservation and Development* - the Director noted that each town has been sent a review form by OPM and that NECCOG is the clearinghouse for this activity. He noted that this is an important element of the State POCD update.
- *Natural Hazard Mitigation Plan Status* - The Director noted that he had attended FEMA training on this subject, a second regional meeting had been held with the oversight committee and that he would soon be attending town-based meetings to inform the towns of the initiative and the progress to date.
- NECCOG Web Site - The Director asked the members for feedback on the new site.
- GIS Program and Arc Reader - The Director stated that a new person has been hired for the vacant GIS position and that the person will begin work on May 14. The Director noted that the installation of ArcReader is nearly complete.



April 27, 2012
Regular Meeting
Notice and Agenda

8:00 a.m.
Transit Building
125 Putnam Pike, Dayville, CT



Agenda

1. Open Meeting - James Rivers, Chair

- Welcome and Introductions
- Consideration of March 23, 2012 Meeting Minutes
- Other Agenda Items
- Public Comment

2. Director's Report and Discussion - John Filchak, Executive Director

- Transit District Operations Update
- 2012 CEDS Process
- Transportation Planning and Assistance
- Town Projects
- Homeland Security
- House Bill 5154 and other pending legislation
- Natural Hazard Mitigation Plan Status
- 2012 NECCOG/NECTD Budgets/Workplan
- Special Meeting Regarding Regional Tech Park Proposal

3. Presentation/Discussion - Southeastern Connecticut Council of Governments, Regional Affordable and Workforce Housing Program Proposal

4. Regional Referrals

- a. Town of Sprague - Zone Text Amendment, Special Permit and Site Plan Alteration/Modification Procedures

5. STIP/TIP Amendment/Actions

- a. Project #0170-3163, Statewide, CE BRIDGE INSP - UNDERWATER ON/OFF SYSTEM (FY12-14) - AC CONV., 2012, \$1.1 m (\$880,000 fed., \$220,000 State) New Project
- b. Project #0170-3163, Statewide, CE BRIDGE INSP - UNDERWATER ON/OFF SYSTEM (FY12-14) - AC ENTRY., 2012, \$0 New Project
- c. Project #0170-3163, Statewide, CE BRIDGE INSP - UNDERWATER ON/OFF SYSTEM (FY12-14) - AC CONV., 2012, \$1.1 m (\$880,000 fed., \$220,000 State) New Project
- d. Project #0170-3163, Statewide, CE BRIDGE INSP - UNDERWATER ON/OFF SYSTEM (FY12-14) - AC CONV., 2012, \$1.1 m (\$880,000 fed., \$220,000 State) New Project

6. Congressman Courtney's Update

7. Other Agenda Items/Business

8. Selectman's Roundtable

9. Adjourn

April 27, 2012

Regular Meeting Minutes

Ralph Fletcher opened the meeting at 8:05 a.m. and noted that a quorum was present (Ashford, Brooklyn, Canterbury, Killingly, Plainfield, Putnam, Thompson, and Woodstock

The March 23 Meeting Minutes were approved as presented - motion by Mr. Walker, second by Mr. Tanner

Director's Report - John Filchak, Executive Director updated the Council on the following: The District has submitted its new funding application to CONNDOT/FTA for 2012-2016 under the 5311 program. Ridership, he reported, is now averaging 187 passengers each day. Consideration is now being made for an additional bus route in the future. NECCOG has submitted its Unified Plan of Work for 2012-14 - this grant funds transportation planning. The Natural Hazard Mitigation Plan development continues and a draft done shortly. Director noted that the REPT is meeting on May 23 and that those who cannot attend may use a proxy. Finally, the Director reported that the Legislature is now considering legislation to reconfigure planning regions.

Regional Referral – Town of Sprague, Zone Text Amendment, Special Permit and Site Plan Alteration/Modification Procedures approved as presented by Mr. Sear and Mr. Grey.

STIP Amendments: Block Vote approved as presented by Mr Sweet and Mr. Walker

1. Project:0170-3163, Statewide, CE Bridge Insp – Underwater ON/OFF System (FY12-14) – AC Conv., 2012, \$1.1 m (\$880,000 fed., \$220,000 State) New Project
2. Project #0170-3163, Statewide, CE Bridge Insp – Underwater ON/OFF System (FY 12-14) – AC Entry., 2012, \$0 New Project
3. Project #0170-3163, Statewide, CE Bridge Insp – Underwater ON/OFF System (FY12-14) – AC Conv., 2012, \$1.1 m (\$880,000 fed., \$220,00 State) New Project
4. Project #0170-3163, Statewide, Ce Bridge Insp – Underwater ON/OFF System (FY12-14) – AC Conv.,2012 \$1.1 m (\$880,000 fed., \$220,000 State) New Project

5310 Application – Network Inc. - no recommendation - just acknowledging application accepted by Mr. Sweet and Mr. Tanner.

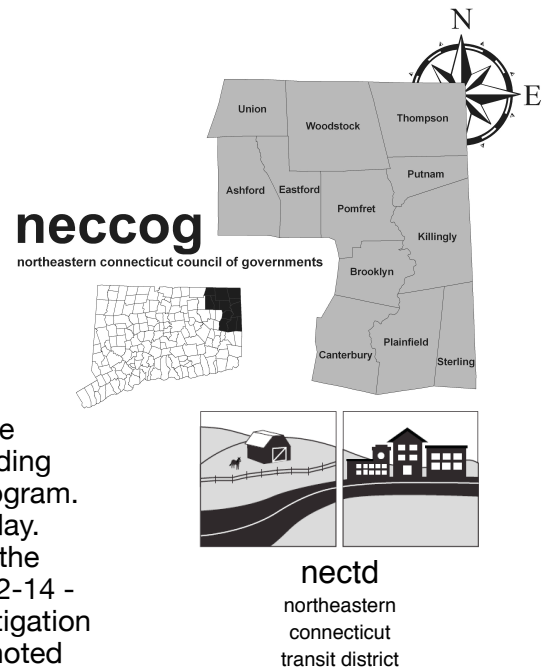
Resolution 04-01-12, Authorizing the Executive Director to execute and sign all agreements and documents on behalf of NECCOG was accepted by Mr. Sweet and Mr. Place

Congressman Courtney Update - FEMA class in Lebanon on May 24

Selectman's Roundtable, items discussed included:

- ▶ Recent open house for the new QV dispatch center
- ▶ Town Budget status
- ▶ CERT Training is scheduled for May 21st.
- ▶ Rte 169 Committee needs volunteer representatives.
- ▶ May 15th Meeting to be held with all Transportation providers.

Motion to **adjourn** at 8:35 a.m. by Mr. Sweet and Mr. Sear



October 2012 Regular Meeting

October 26, 2012

8:00 a.m. - NECCOG Offices
125 Putnam Pike
Dayville, CT



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Agenda (*amended*)

Open Meeting - Allan Walker, NECCOG Chair

- Opening Remarks
- Consideration of Previous Meeting Minutes
- Other Agenda Items
- Public Comment

Director's Report - John Filchak

- | | | |
|--------------------|----------------------------------|------------------|
| •Transit | •Natural Hazard Mitigation | •Animal Services |
| •Transportation | •Economic Development | •Engineering |
| •Homeland Security | •RPI Grant Options (new/pending) | •Town Projects |

Discussion and Action Items:

1. Regional Referrals

- a. Town of Killingly, Subdivision Application #12-1037
- b. Town of Brooklyn, Zone Text Change - Private School Definition
- c. Town of Killingly, Zone Text Change to add "Contractors' Businesses as a Special Permitted Use in the Industrial, Light Industrial and General Commercial Zones and to add definition of Contractor's Businesses to Section 310

2. RPI Grant Options

3. Selectmen's Roundtable

Adjourn - 10:00 a.m.

October 26, 2012 Regular Meeting Minutes

Chair Allan Walker opened the meeting at 8:06 a.m. and noted that a quorum was present (Ashford, Brooklyn, Canterbury, Killingly, Plainfield, Pomfret, Putnam, Sterling, Thompson, and Woodstock)

The **September 28 Meeting Minutes** were **approved** as presented – motion by Mr. Gray, second by Mr. Groh

Director's Report - John Filchak, Executive Director updated the council on the following: New **transit schedule** with an added shuttle run. The Director distributed **Economic Development Strategy** asking for any new or modified projects. He again noted that no clarity has been gained regarding funding for the **Worcester Urban Area**. The Director distributed to the members copies of the **Natural Hazard Mitigation Plan** "Risk Factor Criteria" for their review and information. The Director discussed a hand out with multiple suggested regional initiatives for the **Regional Program Initiative Grant Program**.

Maureen Nicholson of Pomfret spoke about adding a feasibility study for a **food processing facility** for local farmers as one of the Regional Incentive Program Studies. Members agreed with this addition.

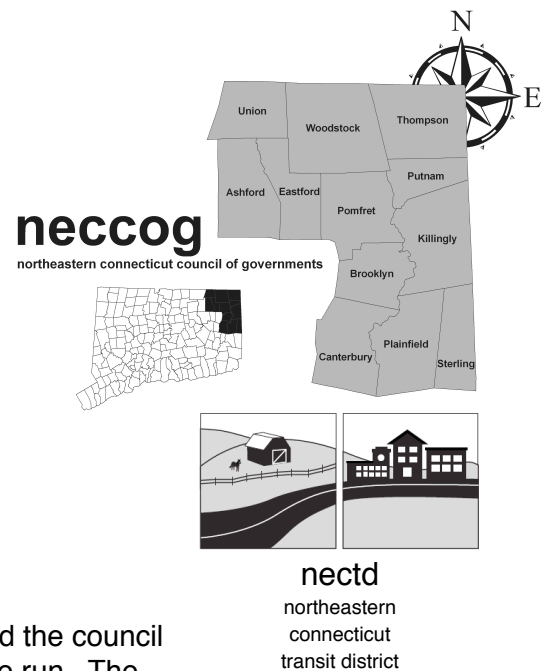
Regional Referrals: Block Vote approved unanimously motion by Mr. Sear, seconded by Mr. Cesolini

- Town of Killingly, Subdivision Application #12-1037
- Town of Brooklyn, Zone Text Change – Private School Definition
- Town of Killingly, Zone Text Change to add "Contractors' Businesses as a Special Permitted Use in the Industrial, Light Industrial and General Commercial Zones and to add definition of Contractor's Businesses to Section 310

State Senator Donald Williams briefed the Council on the pending storm (Sandy) and the possibility that it could be a storm of historic proportions. He indicated that CL&P had already requested 2300 out of state workers to help this storm.

Next Meeting is scheduled for Friday, November 30, 2012

Motion to adjourn at 9:15 a.m. by Mr. Fletcher and Mr. Sear



November 2012 Special Meeting

November 30, 2012
8:00 a.m.

**Meeting Location:
125 Putnam Pike
Dayville, CT**

Agenda

Open Meeting

- Opening Remarks
- Consideration of Previous Meeting Minutes
- Public Comment

Director's Report - John Filchak

- | | | |
|--------------------|----------------------------------|------------------|
| •Transit | •Natural Hazard Mitigation | •Animal Services |
| •Transportation | •Economic Development | •Engineering |
| •Homeland Security | •RPI Grant Options (new/pending) | •Town Projects |

Discussion and Action Items:

- 1. STIP Amendment** - Project #0170-3065, Statewide - REPAIR OR REPLACE DETERIORATED OVERHEAD SIGN SUPPORTS ON NHS ROUTES (FY13), Construction Phase, 2013 - \$2.7m (2.16 fed, 540 state) - INCRE. EST. FROM FED \$1.6M & CHANGE FUNDS FROM NHS TO NHPP
- 2. RPI Grant Options**
 - a. Regional Cattery and TNR Program
 - b. GIS Program Expansion
 - c. Regional Hazard Tree Mitigation Program
 - d. Regional Value-Added Ag Center Feasibility Study
 - e. Regional Equipment Sharing Program
 - f. Regional Land Use Enforcement Program
 - g. Regional Land Use Permit Program
 - h. Regional Youth Services Needs Assessment Study
 - i. Regional Alternative Fuels Feasibility Study

10. Senate-Elect Cathy Osten

11. Selectmen's Roundtable

Adjourn - 10:00 a.m.



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Meeting Review
November 30, 2012

Please note due to a lack of a quorum - the November 30, 2012 Meeting did NOT take place and NO actions were made by NECCOG or NECTD and accordingly NO minutes were made



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While there was no meeting, the agenda items were discussed as indicated on the original agenda.

Member towns present: Ashford, Brooklyn, Canterbury, Pomfret, Sterling, Killingly, and Thompson

The Director reviewed progress/status of various NECCOG programs and projects.

The Director overviewed and took questions regarding NECCOG's RPI initiatives.

State Senator-elect Cathy Osten discussed the pending legislative session and her focus areas. She also discussed the recent Region IV REPT meeting.



August 2014 Regular Meeting

August 22, 2014

9:00 a.m.

125 Putnam Pike

Agenda

Open Meeting - Allan Walker, Chair

- ▶ welcome and introductions
- ▶ minutes - June Regular meeting
- ▶ public comments/participation
- ▶ other agenda items for consideration

Director's Report - John Filchak

- | | | | |
|------------------------|---------------------|----------------------|----------------------|
| ✓CEDS Plan | ✓Transit | ✓Engineering Program | ✓MORE Commission |
| ✓Transportation | ✓Emergency Planning | ✓Paramedic Program | ✓Property Tax Reform |
| ✓Natural Disaster Plan | ✓GIS Program | ✓Animal Services | ✓Town Projects |
| ✓HHW Site/RPI | ✓Reval II | ✓Title VI | ✓Recognition |

Discussion and Action Items

1. **STIP Amendments:**
 - a. Project Number 0170-3107, Statewide - FY 13: STATEWIDE MARKETING (GREATER CT MODERATE)- TRANSFER TO FTA (5307S). Phase: OTH, 2015, \$541,000 New Project - Transfer from FTA
 - b. Project Number 0170-3107, Statewide - FY 13: STATEWIDE MARKETING (GREATER CT MODERATE)- TRANSFER TO FHWA (CMAQ). Phase: OTH, 2015, \$541,000 New Project - Transfer from FHWA
 - c. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: PD, 2015, \$200,000 New Project
 - d. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: ROW, 2015, \$50,000 New Project
 - e. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: FD, 2015, \$300,000 New Project
 - f. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: CON, 2017, \$1.2m New Project
2. **Resolution** 08-01-14, Reaffirming NECCOGs Title VI, LEP and Public Participation Policies
3. **Resolution** 08-02-14, Reaffirming NECTDs Title VI, LEP and Public Participation Policies
4. **Other Agenda Items**
5. **CEO Roundtable**
6. **Adjourn**

NECCOG and NECTD meetings are conducted in accessible locations and materials can be provided in accessible formats. If you would like special accommodations, such as an interpreter, please contact the NECCOG/NECTD at: (860)774-1253, or neccogoffices@neccog.org at least 3 days prior to the meeting. The NECCOG/NECTD fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The NECCOG/NECTD does not discriminate on the basis of race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, military service, or gender identity or expression. Any person who believes himself/herself or any specific class of persons have been subjected to discrimination prohibited by Title VI or related statutes or regulations may, himself/herself or via a representative, file a complaint with the NECCOG/NECTD.



Meeting Minutes - August 22, 2014 Regular Meeting

Meeting was **called to order at 9:00 a.m.** by Allan Walker (NECCOG Chair). The Chair noted that a quorum was present - Ashford, Chaplin, Eastford, Hampton, Killingly, Plainfield, Pomfret, Putnam, Scotland, Sterling, Thompson, Union, Voluntown and Woodstock

The **meeting minutes of June 2014 Regular Meeting** were approved unanimously as presented on a motion by Ms. Nicholson and a second by Mr. Gray.

Agenda was modified by replacing item 3 with a discussion and possible action on Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems - PROPOSED 2014 MODIFICATIONS on a motion from Ms. Nicholson and second by Mr. Sweet - passed unanimously.

The **Executive Director** provided an update on various NECCOG programs and projects, including: update of the **Animal Services Program** - noting that the program has now been in place for 10 years. The Director discussed the **Transit District's** ridership - which he indicated was holding steady and doing better than anticipated with the new Sunday routes. The Director discussed in detail the **Natural Hazard Mitigation Plan** and the efforts to get the plan back on track and submitted to DEEP and FEMA for review and approval. He further noted that a snag has developed with the corrections needed to the NHMP update for the former WINCOG towns in terms of the level of detail required. He indicated that NECCOG will be consulting with DEEP regarding incorporating the needed changes into the NECCOG plan to expedite the process. The Director discussed the **Special Education Reform Working Group** with the membership - noting that they are scheduled to complete their work by January. The Director reported that the **Paramecia Intercept Study** is waiting on a contract from OPM and that he has been assured that NECCOG should receive the contract within the next several weeks. The Director reported that the **new NECCOG website** is set for launch by the end of September and will include a new **GIS Viewer**. The Director updated the members on the next phase of the **Regional Reval Program** - noting that a coordinating committee of assessors and CEOs will oversee the next phase. The Director introduced **Sam Alexander** - the organization's new Regional Project Analyst. Finally, the Director announced the retirement of **April May** - noting that she will be deeply missed by the organization.

STIP Amendments were block voted and approved unanimously on a motion by Mr. Sweet and a second by Ms. Nicholson

- a. Project Number 0170-3107, Statewide - FY 13: STATEWIDE MARKETING (GREATER CT MODERATE)-TRANSFER TO FTA (5307S). Phase: OTH, 2015, \$541,000 New Project - Transfer from FTA
- b. Project Number 0170-3107, Statewide - FY 13: STATEWIDE MARKETING (GREATER CT MODERATE)-TRANSFER TO FHWA (CMAQ). Phase: OTH, 2015, \$541,000 New Project - Transfer from FHWA
- c. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: PD, 2015, \$200,000 New Project
- d. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: ROW, 2015, \$50,000 New Project
- e. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: FD, 2015, \$300,000 New Project

- f. Project Number 0108-0185, Plainfield - REHAB BR 00668 O/ MILL BROOK. Phase: CON, 2017, \$1.2m New Project

Resolution 08-01-14, Reaffirming NECCOGs Title VI, LEP and Public Participation Policies was approved unanimously - on a motion by Mr. Sweet and a second by Ms. Nicholson

Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems - PROPOSED 2014 MODIFICATIONS - members discussed and directed the Executive Director to submit comments asking for a continuance and any issues that may be appropriate.

Selectmen's Roundtable - members discussed confusion regarding pistol permit process - Mr. Hendricks stated that he had information that would be useful and would forward it to the Executive Director for dispersion to the membership.

Motion by Mr. Sirpenski and a second by Ms. Nicholson to **Adjourn** - 10:15 a.m.



September 2014 Regular Meeting

September 26, 2014

9:00 a.m.

Agenda

Open Meeting - Allan Walker, Chair

- ▶ Welcome and Introductions
- ▶ Consideration of August Meeting Minutes
- ▶ Public Participation
- ▶ Other Agenda Items

Director's Report - John Filchak, Executive Director

- ▶ Economic Development
- ▶ Emergency Management
- ▶ Transit District Operations
- ▶ Animal Services
- ▶ Town Projects
- ▶ Regional Reval II
- ▶ Pre-Hospital Emergency Services Study
- ▶ Property Tax Reform Meeting

Discussion and Action Items

1. Proposed Comments **Regarding Revisions To Regulations On Federal Acknowledgment Of Indian Tribes** (25 CFR 83 OR "PART 83")
2. **Approval of the Collective Bargaining Agreement** By and Between the Northeastern Connecticut Transit District and the Municipal Employees Union Independent Local 506, SEIU, AFL-CIO for the Period July 1, 2014 – June 30, 2017
3. **Executive Session** in accordance with the Connecticut Freedom of Information Act for the purpose of discussing the selection of a site or the lease, sale or purchase of real estate by either NECCOG or NECTD.
4. **Regional Performance Incentive Grant Program** - The next round of grant application will be solicited sometime in October or November (we then have until December 31 to file our grant applications). The purpose of this agenda item is to begin to discuss potential applications and their relative priority.
5. **Selectmen's Roundtable** -

Adjourn

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September 2014 Regular Meeting

September 26, 2014

9:00 a.m.

Supplemental Agenda

Add to Discussion and Action Items, after item 2 the following:

Updated NECCOG GIS Viewer Update Demonstration - this item will involve a presentation of the draft NECCOG GIS Viewer and its capabilities covering the 16 town region with a discussion to follow

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September Regular Meeting Minutes

Meeting was opened at 9:00 a.m. by Allan Walker. A **quorum was noted** (Ashford, Brooklyn, Canterbury, Eastford, Hampton, Killingly, Pomfret, Putnam, Scotland, Sterling, Thompson, Voluntown and Woodstock)

The **August 2014 Meeting minutes were accepted** as presented - motion by Mr. Brodeur, second by Mr. Gray - Mr. Lenky and Mr. Piper abstained as they were not present at the August meeting.

There was no public participation.

The Director gave his monthly update, including:

- ▶ NECCOG and NECTD's new audit firm (MahoneySabol) have begun work on the **2013-14 Audits**. Our Financials will be fully completed next week - the Audit is expected to be completed on schedule for submission to the State later this year.
- ▶ NECCOG/NECTD continues to interview for the two **Administrative Assistant** positions recently posted. We received 94 applications. Our hope is to select and fill these positions within two weeks.
- ▶ **New web site is delayed** due to our web person being on maternity leave. However, she is providing final proofs for each page and we expect to launch it sometime in October.
- ▶ **Emergency Management:**
 - ❑ **Natural Hazard Mitigation Plan** - The **corrected plan** (in accordance with FEMA comments) is near completion and will be sent for public comment in each of the 16 member towns in October. The Region's emergency management directors were given an overview of the draft at their September meeting. The plan is to submit the 16 town mitigation plan to DEEP and FEMA by the end of November or early December. **WINCOG Update issues**
 - ❑ **Emergency management Director Meeting** - NECCOG facilitated September Meeting
 - ❑ **Commissioner of DEMHS** will be **meeting** with CEOs and EMDs on **October 27 at 6:00 pm** at NECCOG
 - ❑ **Pre-Hospital Emergency Services Study** - OPM has sent us the final paperwork and we are now authorized to begin the study. An organizational meeting will be held in October. **\$87,000**
- ▶ **Economic Development**
 - ❑ **Comprehensive Economic Development Strategy (CEDS)** - Meeting was held with several of the member towns economic development staff asking for their assistance in identifying **business persons to participate** in the CEDS process. The CEDS process requires that not less than 51 percent of the CEDS participants be private-sector persons. Our plan is to identify the entire planning group and begin the CEDS development in late October.
 - ❑ **State Economic Policy Discussion** - I was asked by General Assembly staff to discuss regional economic development in terms of the current statutory framework and possible changes. We

discussed what constitutes a region (currently the statute speaks to “**one or more towns**” as constituting a region) and possible changes to that to better conform to the new regional structure of the State. Some discussion of tax policy as well - specifically the property tax. **How to stimulate economic growth**

- ▶ **Transit District Operations** - The District’s ridership is steady and the Sunday service continues to exceed expectations. Additionally, we may add another driver for the Elderly/Disabled Service as there is growing demand.
 - We are exploring a **smartphone app** that we may want to pursue that was previewed for the transit systems this week. The app allows Transit customers to know where each bus is in real time. It appears to be affordable (open source software) and should be eligible either directly through DOT or the RPI program.
- ▶ **Animal Services** - Activity level in terms of number of animals (especially dogs) remains higher than normal. Investigations are at a normal level. We have established a special fund for the so-called “Fire Dogs” that we received after a fire destroyed a home in Killingly. Veterinarian bills for each of the four dogs is the range of \$400 to \$600. To date, approximately \$700 has been donated. Our animal services van is still operational and safe - however, our mechanic has indicated that it may not last the current fiscal year. **New web site will have a set of donation boxes where persons can direct their donations to our shelter, general operations or specific animals**
- ▶ **Regional Reval II** - We have our committee (three selectmen and three assessors) to review the updated RFP. The region’s assessors, as a group, have reviewed the original RFP and are in the process of forwarding updated data and suggested changes. We have at least one additional town interested in participating and will know by the end of the month if it will participate. We expect the committee to review the RFP in early October and issue the RFP. The committee will review the RFP responses, interview the respondents, schedule public interviews and make a recommendation to NECCOG for the preferred vendor. **Assessors have told me they have no significant changes for the RFP**
- ▶ **Regional GIS** - We continue to work on a new regional viewer and are in discussion with our software provider and one of their partners on ways to correct current issues and make the viewer scalable for future applications (public works, health, land use management/enforcement). That state, there is a growing number of voices concerned about our GIS viewer and related services. How the current NECCOG viewer works, functionality is a problem for several towns (especially those that have recently joined), how parcel updates are made and a question as to whether or not NECCOG should be doing this in house or use a GIS vendor. My suggestion is that we form a working committee of three or four members to examine the issue (speak with the in-house users such as assessors, planners, public works and others) and options (repair the current system, issue an RFP for a vendor, etc.) so that all towns in NECCOG at least have the option of a GIS system that meets their current and future needs.
- ▶ **Town Projects** - We are beginning work on the **Eastford POCD update**. This should be about an eight month process and will include a town build-out and updated POCD document. We have been retained by **Ashford to facilitate a visioning process** related to the future of the town. **Pomfret maps** for their POCD
- ▶ **Transportation** - Work continues on the 16 town LongRange Transportation Plan and we have just returned to working on the Route 169 plan update (our intent is to begin public meetings later this year). Work continues on the Brooklyn Sidewalk Project and we anticipate DOT approval for work next Spring. **We are in need of potential projects for both the balance of the Worcester Urban funds and for our rural collector roads. I’ve also contacted CONNDOT about conducting Title VI training in the region**

Discussion and Action Items

1. Proposed Comments **Regarding Revisions To Regulations On Federal Acknowledgment Of Indian Tribes** (25 CFR 83 OR "PART 83")

The Executive Director provided a brief history of NECCOG's involvement in the recognition process and the need to continue involvement in the most current actions by the Bureau of Indian Affairs. On a motion by Ms. Nicholson and a second by Mr. Ives the letter was approved with the stipulation that the second to last paragraph be moved and be made the third paragraph of the letter. Passed unanimously.

2. **Updated NECCOG GIS Viewer Update Demonstration** - this item will involve a presentation of the draft NECCOG GIS Viewer and its capabilities covering the 16 town region with a discussion to follow. Associate Director Jim Larkin gave an overview and demonstration of the new NECCOG GIS Viewer. He addressed questions and indicated that the new viewer still needs a few adjustments before it is made operational. These include the ability to generate an abutters list and the ability to have the viewer automatically updated when a town assessor updates cams data. He also discussed issues with current parcel updates that were not made know to NECCOG until recently. These incidents affect several dozen parcels and will be addressed during the next several months. He also noted that NECCOG is working directly with its software provider and one of their partners to work out the issues with the new viewer.
3. **Approval of the Collective Bargaining Agreement** By and Between the Northeastern Connecticut Transit District and the Municipal Employees Union Independent Local 506, SEIU, AFL-CIO for the Period July 1, 2014 – June 30, 2017 - tabled
4. **Executive Session** On a motion from Mr.Piper and a second by Mr. Hallbergh the motion was made to enter into executive session for in accordance with the Connecticut Freedom of Information Act for the purpose of discussing the selection of a site or the lease, sale or purchase of real estate by either NECCOG or NECTD. It was further agree and voted on to allow Mr. Hendricks to attend the Executive Session.
5. **Regional Performance Incentive Grant Program** - The next round of grant application will be solicited sometime in October or November (we then have until December 31 to file our grant applications). Mr. Ives brought up the possibility of a regional HHW facility and offered Brooklyn's transfer station as a possible site. Mr. Falzarano brought up the possibility of a common human resources expert for the region to be based at NECCOG.

Selectmen's Roundtable

Mr. Falzarano brought up the fact that the Dempsey Center in Putnam is for sale and that he has discussed with Congressman Courtney the possibility of using the site as a satellite facility for veterans. Mr. Lenky discussed the possible need to create a shared or common building official/land use inspector. The issue of blight was discussed and the relative lack of options in terms of either the health department or an ordinance in addressing the issue. Mr. Zambo invited all to Ashford's 300 Anniversary celebration on October 11 starting at 10:00 am.

Motion to adjourn by Mr. Ives, second by Mr. Syme — 10:40 am



October 2014 Regular Meeting

October 24, 2014

9:00 a.m.

Location: 125 Putnam Pike, Dayville, CT

Agenda

Open Meeting - Allan Walker, Chair

- ▶ Welcome and Introductions
- ▶ Consideration of September Meeting Minutes
- ▶ Public Participation
- ▶ Other Agenda Items

Director's Report - John Filchak, Executive Director

- ▶ Economic Development
- ▶ Emergency Management
- ▶ Transit District Operations
- ▶ Animal Services
- ▶ Town Projects
- ▶ Regional Reval II
- ▶ Natural Hazard Mitigation Plan
- ▶ Pre-Hospital Emergency Services Study
- ▶ Property Tax Reform Meeting

Discussion and Action Items

1. **Approval of the Collective Bargaining Agreement** By and Between the Northeastern Connecticut Transit District and the Municipal Employees Union Independent Local 506, SEIU, AFL-CIO for the Period July 1, 2014 – June 30, 2017
2. **Regional Referrals:**
 - a. Town of Putnam - Zoning Text Amendment for Parking in Industrial Plants, Docket #2014-07
 - b. Town of Brooklyn - Request to Amend Article 3 Section 3.4.8.2 to allow multi-family dwellings in accordance with Article 7 by Special Permit in the Planned Commercial Zone and amend Article 3 Section 3.4.8.6.6 to except multi-family dwellings from a regulation prohibiting three story buildings within 200' of a property line. Requesting to amend Article 7 Section 7.2.3 to allow maximum height of 45' and 3 stories for multi-family dwellings in the Planned Commercial Zone.
3. **Regional Performance Incentive Grant Program** - The purpose of this agenda item is to continue discussion regarding potential applications and their relative priority.
 - ▶ HHW Facility in Brooklyn
 - ▶ Uniform Chart of Accounts
 - ▶ Nutmeg Network Connections
 - ▶ Human Resources
 - ▶ Insurance
 - ▶ Shared Inspections
 - ▶ Cattery
 - ▶ IT Assistance/ Maintenance
 - ▶ Public Works Vehicle Maintenance
 - ▶ Back-Office Functions
 - ▶ Land Use Planning
 - ▶ Recreation
 - ▶ Regional Police Force or Shared State Troopers
 - ▶ Share Constables
4. **Selectmen's Roundtable**

Adjourn

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Meeting Minutes, October 2014

Meeting called to order by Chairman Walker at 9:02 am and a **quorum was noted** (Brooklyn, Scotland, Plainfield, Killingly, Woodstock, Putnam, Canterbury, Eastford, Pomfret, Chaplin and Voluntown)

On a motion by Ms. Nicholson and a second by Mr. Piper the **September minutes were approved** as submitted.

During **Pubic participation**

- Sue Starkey from NDDH spoke on Ebola preparedness, Housing Property issues, and Generations 30th year celebration
- Hoween Flexer from Danielson Goodwill Career Services introduced herself and gave a brief overview of the services offered.

On a motion by Ms. Nicholson and a second by Mr. Ives **STIP Amendments were added to the agenda.**

Director's Report

- ▶ One of the two Administrative Assistants has been hired and we are still in search of the second.
- ▶ The new website is now back on track and we hope to finalize and load by the first or second week of November.
- ▶ **Emergency Management:**
 - ❑ **Natural Hazard Mitigation Plan** - The corrected plan, in accordance with FEMA comments (both those received for NECCOG and WINCOG), is now in process of public comments in each of the 16 member towns. To date, five hearings have been held and most other towns are scheduled. **It is imperative that each town hold a meeting and provide comment for us to secure approval by FEMA and DEEP.**
 - ❑ **Commissioner of DEMHS** will be **meeting** with CEOs and EMDs on **October 27 at 6:00 pm** at NECCOG
 - ❑ **Pre-Hospital Emergency Services Study** - The contract has been signed and the first \$25,000 of the total grant has been received. The initial meeting of the Advisory Committee is now scheduled for November 5.
- ▶ **Transit District Operations** - The District's ridership is steady. A meeting with representatives from several churches was held about the possibility of providing rides for various services on Sunday mornings. We indicated that it was something we could do and the representatives we met with are developing a list of persons, locations, destinations, etc., so that we may solidify the service.

- ▶ **Animal Services** - Activity level in terms of number of animals remains higher than normal. Investigations are at a normal level.
 - ❑ NECCOG received a \$175,000 grant through the RPI program to put in place a pilot program for the Region to put in place a Spay, Neuter, Release and Maintain Program.
 - ❑ Large Animal Rescue Clinic is being held on October 25 at NECCOG.
 - ❑ Our animal services van is on its last legs - we may be forced/probably will be forced to replace it. The plan had been to replace it with another Transit vehicle, but that process has been delayed.
- ▶ **Regional Reval II** - The advisory committee held its first meeting and there were no changes needed to the RFP. The RFP is being finalized and should be ready for issuance in the next two to three weeks. We have one additional town that is considering joining the program and they need a few questions answered prior to any commitment.
- ▶ **Regional GIS** - We have acquired a new software extension for our basic software that will allow us to address the shortcomings identified for the Council at last month's meeting. We are still on track to have the new site operational on or before December 31. Previews will be conducted and adjustments made before it is launched.
- ▶ **Transportation** - We expect approval of the Brooklyn Sidewalk project at anytime - which will then give us a solid estimate of the funds remaining for urban area projects. Several roads have now been reclassified as "**collector roads**" - Jim Larkin will forward the new list when we receive it from CONNDOT.
- ▶ **Town Projects** - Work continues on the "**Our Town-Our Future**" project in Ashford where we are serving as facilitator for the project. This project may evolve into an update for their POCD. The **Eastford POCD** update is moving forward - with a scheduled kick-off event in early December. We are also providing maps for the **Pomfret POCD** and the **Woodstock POCD** updates.
- ▶ **MORE Commission** - All activity has ceased until after the election. You can expect more consolidation discussion and perhaps actions to align other services with either individual or combined COGs - such as health districts, workforce boards, state delivery of services, DEMHS, etc.
- ▶ **Legislative Issues** - need issues > such as: Authority for a health district to intervene when there is a home in unsanitary conditions

Discussion and Action Items

1. **Approval of the Collective Bargaining Agreement** By and Between the Northeastern Connecticut Transit District and the Municipal Employees Union Independent Local 506, SEIU, AFL-CIO for the Period July 1, 2014 – June 30, 2017 - motion by Mr. Ives, second by Mr. Falzarano, **passed unanimously**

2. Regional Referrals:

- a. Town of Putnam - Zoning Text Amendment for Parking in Industrial Plants, Docket #2014-07 - motion by Mr. Sweet, second by Ms. Nicholson to approve as having no regional impact - **passed**
- b. ~~Town of Brooklyn - Request to Amend Article 3 Section 3.4.8.2 to allow multi-family dwellings in accordance with Article 7 by Special Permit in the Planned Commercial Zone and amend Article 3 Section 3.4.8.6.6 to except multi-family dwellings from a regulation prohibiting three story buildings within 200' of a property line. Requesting to amend Article 7 Section 7.2.3 to allow maximum height of 45' and 3 stories for multi-family dwellings in the Planned Commercial Zone. **Withdrawn**~~

3. STIP Amendments: **block vote approval** on a motion by Mr. Sweet and second by Ms. Nicholson

- a. Project 0108-0185, Plainfield - Route 12, REHAB BR 00668 O/ MILL BROOK - PD Phase (2015), \$200,000 - New Project
- b. Project 0108-0185, Plainfield - Route 12, REHAB BR 00668 O/ MILL BROOK - ROW Phase (2015), \$50,000 - New Project
- c. Project 0108-0185, Plainfield - Route 12, REHAB BR 00668 O/ MILL BROOK - FD Phase (2015), \$300,000 - New Project
- d. Project 0108-0185, Plainfield - Route 12, REHAB BR 00668 O/ MILL BROOK - CON Phase (2015), \$1,200,000 -- New Project

4. Regional Performance Incentive Grant Program -

- Mr. Syme discussed a study in progress for Chaplin, Hampton and Scotland examining their regional school system and the need to apply for RPI funds to cover the anticipated costs for Phase II of the study.
- Uniform Chart of Accounts was discussed and it was agreed that OPM should be invited to attend an upcoming meeting to further explain this issue.
- Mr. Falzarano discussed the possibility for regional human resources assistance.
- Regional healthcare was discussed - including the "EastConn" model
- Ms. Hanson discussed Regional IT assistance
- The regional cattery was also discussed

5. Selectmen's Roundtable

- Mr. Falzarano discussed the DMR facility in Putnam and the possibilities of turning it into a veteran's facility - discussion that this may be a good candidate for an RPI feasibility study
- Title VI was discussed and the Director noted that he was working on holding a workshop in the near future
- Ms. Nicholson asked about municipal purchasing cards - Killingly indicated that it uses this approach with success
- Social media policy was discussed and Mr. Hendricks indicated that he would circulate guidance that he has recently gained for the benefit of the other member towns

Adjournment - motion by Mr. Piper and second by Mr. Cesolini - 10:40 am



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Meeting Notice and Agenda

December 4, 2014

9:00 am

Scotland Community Room (firehouse complex)

47 Brook Road, **Scotland, CT**

Agenda

Open Meeting - Allan Walker, NECCOG Chair

- Welcome
- Introductions

1. **Regional Natural Hazard Mitigation Plan Endorsement** - The draft plan, which has now been heard in each of the member towns, is ready of submission to DEEP and FEMA. The proposed endorsement action would allow the plan to move forward for state/federal review and approval.
2. **Regional Performance Incentive Grant Program Initiatives**

Potential applications include, but are not limited to:

- Household Hazardous Waste Facility to be built in Brooklyn
- Three-Town (Chaplin, Hampton, Scotland) School Study, Part III
- Uniform Chart of Accounts
- Value-Added Agricultural Feasibility Study
- Regional Human Resources/Back Office Functions
- Regional Cattery
- Regional IT Assistance
- Regional Insurance Coverage for Town Needs
- Regional Economic Development/Marketing

Adjourn

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Meeting Minutes

Special Meeting - December 4, 2014

9:00 am - Scotland Community Room (firehouse complex) - 47 Brook Road, **Scotland, CT**

Allan Walker convened the meeting at 9:10 a.m and noted that a quorum was present - Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Pomfret, Scotland, Thompson and Woodstock

1. **Regional Natural Hazard Mitigation Plan Endorsement** - The draft plan was discussed by the Executive Director who noted that the Plan is fully complete in terms of Chapters 1,2, and 3 and has now been heard in each of the member towns and is ready of submission to DEEP and FEMA. On a motion from Ms. Nicholson and a second by Mr. Cahill the Plan was approved for submission.
2. **Regional Performance Incentive Grant Program Initiatives** - The Executive Director distributed a summary (attached) of potential RPI grant initiatives.

The discussion was led off by a brief presentation by Eric Lindquist from the Office of Policy and Management (OPM) regarding the State's incentives and policy regarding a Uniform Chart of Accounts. Mr. Lindquist explained the special grant program to initiate the transition to UCOA for towns.

The Council reviewed each and decided to authorize the Director to prepare and submit the following grant applications:

- ▶ Three Town Implementation Plan - for Chaplin, Hampton and Scotland
- ▶ Value-Added Agriculture Feasibility Study
- ▶ Regional IT Assistance Pilot
- ▶ Back Office Functions
- ▶ Enhanced Animal Services Facility
- ▶ Regional Household Hazardous Waster Facility
- ▶ Regional Economic Development/Marketing Initiative

Consensus was reached that RPI Applications would be prepared and submitted for the following: Three Town Implementation Plan, Value-Added Agriculture Feasibility Study, Regional IT Assistance Pilot, Enhanced Animal Services Facility, Back Office Functions Feasibility Study, Regional Household Hazardous Waster Facility and Regional Economic Development/Marketing Initiative.

The Director also updated the Council on the issuance of an RFP regarding Pre-Hospital Emergency Care, the Reval Program and the status of the new GIS Viewer and related issues to GIS - noting that a special presentation will be made in January.

Meeting adjourned at 10:35



northeastern connecticut council of governments

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pomfret - putnam - scotland - sterling - thompson - union - voluntown - woodstock

Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational, public meeting regarding its 2015 Regional Hazard Mitigation Plan.

This meeting will take place at the Ashford Municipal Office Building on November 19, 2014 at 7:00pm.

Format:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process

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Town of Ashford



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Hazard Mitigation Plan with neccog

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Event:	Hazard Mitigation Plan with neccog	Venue:	Ashford Municipal Office Building
Start:	November 19, 2014 7:00 pm	Phone:	860.487.4400
End:	November 19, 2014 8:00 pm	Address:	5 Town Hall Rd, Ashford, CT, 06278, United States
Category:	Front Page News		
Organizer:	Ashford Emergency Management		
Updated:	November 18, 2014		

 [2015 Regional Hazard Mitigation Plan with Northeastern CT Council of Governments](#)

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Meeting Notice and Agenda

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational hearing regarding NECCOG's 2015 Regional Hazard Mitigation Plan.

This meeting will take place at the Clifford B. Green Memorial Center on October 22, 2014 at 7:00pm.

Agenda:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process

NECCOG meetings are conducted in accessible locations and materials can be provided in accessible formats. If you would like special accommodations, such as an interpreter, please contact the NECCOG at: (860)774-1253, or neccogoffices@neccog.org at least 3 days prior to the meeting. The NECCOG fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The NECCOG/NECTD does not discriminate on the basis of race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, military service, or gender identity or expression. Any person who believes himself/herself or any specific class of persons have been subjected to discrimination prohibited by Title VI or related statutes or regulations may, himself/herself or via a representative, file a complaint with the NECCOG.



northeastern connecticut council of governments

ashford - brooklyn - canterbury - chaplin - eastford - hampton - killingly - plainfield
pomfret - putnam - scotland - sterling - thompson - union - voluntown - woodstock

Informational Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational meeting regarding the organization's 2015 Regional Hazard Mitigation Plan.

This meeting will take place at Canterbury Town Hall, on Monday, November 17, 2014 at 7pm.

Agenda:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process, via the webpage

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AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT
Date: November 6, 2014
Time: 7:00 P.M.
Place: Chaplin Town Hall

1. Call to Order
2. Additions to Agenda
3. First Audience of Citizens
4. NECCOG Presentation: 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan
5. Approve minutes of: Regular Meeting Minutes of October 2, 2014.
6. Communications and Reports
 - A. Trooper Report – October 2014
 - B. Board Members Reports
 - C. Board of Finance Discussion
 - D. Correspondence
7. Old Business
 - A. STEAP Grant (Darling Pond, North Bear Hill Bridge)
 - B. Community & Economic Development Commission
 - C. Discuss All Pending and New FOI Requests
 - D. Update on Progress Report on the Cohen Project
 - E. Building/Infrastructure
 - F. Discussion regarding Recreation Commission
 - G. Annual Report
 - H. Firehouse Rental: Discussion regarding future rentals and revised contract.
8. New Business
 - A. Tax Collector Refunds
 - B. Resignations/Appointments
 - C. Approval of Certified Resolution for Historic Documents Preservation Grant#024-PC-15, Cycle 2, FY 2015
 - D. Review 2014-2015 Approved Wages/DPW Job Titles.
9. Other Business
10. Second Audience of Citizens - Note: Comments are limited to agenda items and subject to Chair discretion.
11. Agenda Suggestions for next meeting
12. Date, time, and place of next meeting (December 4, 2014 @ 7:00pm @ the Town Hall)
13. Adjourn

AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT
Date: November 6, 2014
Time: 7:00 P.M.
Place: Chaplin Town Hall

Members Present: William H. Rose IV; John Smith; Suzanne Gluck, Administrative Assistant and Recording Secretary.

Members Absent: Irene Schein, Selectman.

Others Present: Jim Randall, Emergency Preparedness; Dick Weingart, Board of Finance; Sam Alexander, NECCOG Representative.

Regular Meeting

1. **Call to Order**

Bill Rose called the meeting to order at 7:08pm

2. **Additions to Agenda**

Bill Rose motioned to add agenda item under #8E: "Declaration of Surplus Equipment". John Smith seconded the motion. All in favor.

3. **First Audience of Citizens**

Old Route 6 Sign: Jim Randall informed the Board that the old Route 6 sign has been down for about a week. Bill Rose will let the Steve Guay, Forman of the DPW crew know.

4. **NECCOG Presentation**

Samuel Alexander from NECCOG presented the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan. The goal is to have the plan in final draft for January 2015. This plan will be mandatory in order to receive FEMA funds. Once the plan is completed it will be posted to the Chaplin website.

5. **Approve Minutes**

John Smith made a motion to approve the minutes of October 2, 2014 Regular Meeting of the Board of Selectmen. Bill Rose seconded the motion. No discussion and corrections. All in favor.

6. **Communications and Reports**

A. Trooper Report – October 2014

The Board reviewed the monthly report. For the next meeting Mr. Rose requested a more detailed report showing activity before, during, and after the Speed Enforcement grant was used.

B. Board Members Reports

Airline Trail: Bill Rose reported that the airline trail will be complete this week. There may be some extra funds which would allow the town to put in benches and extra signage.

AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT

Date: November 6, 2014

Time: 7:00 P.M.

Place: Chaplin Town Hall

Mark Miles: Bill Rose reported that one of the DPW employees, Mark Miles, has given his notice and his last day is November 21, 2014. This position has been advertised and the town has received many applications. Interviews will begin in a week or so.

P/T Driver: Bill Rose reported that a part-time, on-call driver with a CDL for snow plowing has been hired. He will cover for vacations and be an extra driver for the storms. It is difficult finding someone to fill a position like this and Mr. Rose recommends hiring a 4th full-time highway person. More projects can get done.

C. Board of Finance Discussion

Dick Weingart reported that at the BOF meeting on Monday the main order of business is to get budget documents approved. Val Garrison has all the budget sheets updated and the plan is to send them out earlier than last year. The BOF will put together a calendar of events and submit a copy to the Board of Selectmen. Dick Weingart also reported that they need to continue to work on the CIP plan and purchasing processes. It would be helpful to have some type of cost estimate report before projects begin. According to Mr. Weingart the audit continues.

D. Correspondence

Nothing to report at this time.

7. Old Business

A. STEAP Grant (Darling Pond, North Bear Hill Bridge)

Bill Rose reported that new STEAP funds are available for Darling Pond and we are in the process of submitting our application due on 11/28/14.

Mr. Rose also reported that the final design is almost completed for North Bear Hill Bridge and the permitting process is in place.

B. Community & Economic Development Commission

Nothing to report at this time.

C. Discuss All Pending and New FOI Requests

Nothing to report at this time.

D. Update on Progress Report on the Cohen Project

Ms. Gluck reported that two letters were sent and to this date there has been no response.

AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT

Date: November 6, 2014

Time: 7:00 P.M.

Place: Chaplin Town Hall

E. Building and Infrastructure

Bill Rose reported that pipes were replaced under some roads, paving done on Ridge Road, a section of Bedlam road was paved and a section of Parish Hill Road paved and chip sealed.

John Smith reported that they cancelled the electric contract at the Senior Center because the rates keep going up and went back to CL&P. We now have all bills with CL&P but next year can find something more reasonable. Mr. Smith recommends a memo to go out to staff to be sure there are no more buildings under other plans and if so, we can get involved in getting them standardized. Bill Rose will talk to Joe Pinto about the firehouse and their plan. John Smith stated that the schools have a good plan currently and we should reach out to Ken Henrici, Superintendent to get details on what they have.

F. Discussion regarding Recreation Commission

Bill Rose reported that we recently advertised for the Director of the Recreation Commission position and have received some applications. Mr. Rose made a motion to form a committee to assist in the hiring process. This committee should consist of two Recreation Commission members and two Board of Selectmen members. The committee will interview the applicants, make recommendations to the Board of Selectmen and the BOS will hold a Special Meeting to choose the final candidate for the position. John Smith seconded the motion. All in favor. Mr. Rose stated that a tentative date of November 18th will be scheduled for the Special meeting if all interviews can get scheduled in time.

G. Annual Report

Bill Rose reported that an email was sent out by Diana Fiasconaro to all parties involved that their 2013-2014 Annual Reports are due on November 21, 2014.

H. Firehouse Rental

The Board of Selectmen reviewed the final contract for firehouse rentals. Bill Rose made a motion to approve the contract and regulations. John Smith seconded. All in favor.

8. New Business

A. Tax Collector Refunds

Bill Rose made a motion to approve a tax refund to:

Glenn Coolbeth in the amount of \$88.32

Linda Gonnelli in the amount of \$24.19

Jacob Annati in the amount of \$253.06

**AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT**

Date: November 6, 2014

Time: 7:00 P.M.

Place: Chaplin Town Hall

Mary Washburn in the amount of \$90.43

Mary Washburn in the amount of \$17.87

Carl Washburn Jr in the amount of \$55.38

Carl Washburn Jr in the amount of \$9.46

John Smith seconded the motion and it passed unanimously.

B. Resignations/Appointments

None at this time.

C. Approval of Certified Resolution for Historic Documents Preservation

Grant#024-PC-15, Cycle 2, FY 2015

Bill Rose read the resolution. John Smith motioned to pass the resolution. Bill Rose seconded the motion.

D. Review 2014-2015 Approved Wages/DPW Job Titles.

Bill Rose reported that the Approved Wages for 2014-2015 job descriptions need to be adjusted. Mr. Rose made a motion that the listed Truck Driver PT/OC rated at \$15.65 should state that it is a Non-CDL position. Also an additional position of Driver P/T On-Call CDL at a rate of \$20.87 needs to be added. John Smith seconded the motion. All in favor.

E. Declaration of Surplus Equipment

Bill Rose reported that the freezer at the Senior Center needs replacement. John Smith made a motion to declare the freezer as surplus equipment to be scrapped. Bill Rose seconded the motion. All in favor

9. Other Business

None at this time.

10. Second Audience of Citizens - Note: Comments are limited to agenda items and subject to Chair discretion.

Jim Randall asked where the benches and tables were added at the airline trail. Mr. Rose stated that it hasn't been done yet; we will see what funds are left over on this project. John Smith asked if improvements will be made in the parking area and Mr. Rose reported that if the funds are available we can grade and add millings.

AGENDA
BOARD OF SELECTMEN MEETING
CHAPLIN, CONNECTICUT
Date: November 6, 2014
Time: 7:00 P.M.
Place: Chaplin Town Hall

11. Agenda Suggestions for next meeting

- Trooper Reports
- Board Members Reports
- Board of Finance Discussion
- Correspondence
- STEAP Grant (Darling Pond, North Bear Hill Bridge)
- Discuss All Pending and New FOI Requests
- Discussion regarding Recreation Commission
- Tax Collector Refunds
- Resignations/Appointments
- Other Business
- Update on DPW Open Position
- School Study Update
- Other Business

12. Date, time, and place of next meeting (December 4, 2014 @ 7:00pm @ the Town Hall)

13. Adjourn

Bill Rose motioned that the meeting be adjourned at 8:38pm. John Smith seconded the motion. All in favor.

Regular Meeting of the Eastford Board of Selectmen

**Monday, October 6, 2014 7:00 pm
Eastford Town Office Building
16 Westford Rd.
Eastford, CT 06242**

Agenda

.....

- 1. Call to Order**
- 2. Citizens Comments**
- 3. Approval of Minutes**
 - **Regular meeting of the Board of Selectmen on September 8, 2014**
- 4. NECCOG 2015 Natural Hazard Mitigation Plan**
Samuel Alexander, NECCOG Regional Project Analyst
- 5. Approval of Property Tax Refunds**
- 6. Tax Sales of Auctioned Properties**
- 7. Restructuring of Eastford Finance Department**
- 8. Resolution to Approve Commercial Property Assessed Clean Energy (C-PACE) Agreement**
- 9. First Selectman's Report**
- 10. Communications**
 - **Summary of Spectra Energy Proposed Atlantic Bridge Expansion Project**
 - **Sexual Assault Crisis Center Letter**
 - **CCM Prescription Discount Card Report**
 - **State Police Staffing Changes and Report**
 - **LoCIP Approval Notification**
- 11. Add to the Agenda upon two-thirds vote of members present and voting**
- 12. Citizens Comments**
- 13. Adjournment**

**THESE MINUTES HAVE NOT BEEN READ OR APPROVED BY THE BOARD
OF SELECTMEN AND ARE SUBJECT TO CHANGE**

**Regular Meeting of the Eastford Board of Selectmen
Monday, October 6, 2014, 7:00 PM
Eastford Town Office Building
16 Westford Road
Eastford, CT 06242**

Agenda

.....

- 1. Call to Order**
- 2. Citizens Comments**
- 3. Approval of Minutes**
 - **Regular meeting of the Board of Selectmen on September 8, 2014**
- 4. NECCOG 2015 Natural Hazard Mitigation Plan**
Samuel Alexander, NECCOG Regional Project Analyst
- 5. Approval of Property Tax Refunds**
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 - **LoCIP Approval Notification**
- 11. Add to the Agenda upon two-thirds vote of members present and voting**
- 12. Citizens Comments**
- 13. Adjournment**

.....

Present: Arthur Brodeur/First Selectman, Terry Cote/Selectman, Robert Torcellini/Selectman

Also Present: Sam Alexander/NECCOG, Deborah Richards/Eastford EMD, Christine Hustus/Tax Collector

Call to Order:

AB called the meeting to order at 7:00 pm.

Citizens Comments:

Jim Trowbridge presented the Board of Selectmen a letter he wrote of his thoughts regarding the Camp Nahaco Park Commission. He also spoke regarding the Nahaco Caretaker’s cabin. He thought that the Caretaker position should be filled with someone who will care for the Park in exchange for permission to live in the cabin.

Chuck Lee stated that the Camp Nahaco Park Commission wants to know what the Towns’ (Eastford & Woodstock) expectations are for the park.

Tom Latham stated that he sent an email regarding the Caretaker’s cabin.

Approval of Minutes:

RT/TC moved to approve the minutes of the regular Board of Selectmen meeting on September 8, 2014. Unanimous

NECCOG 2015 Natural Hazard Mitigation Plan:

Samuel Alexander, NECCOG Regional Project Analyst spoke regarding the 2015 Natural Hazard Mitigation Plan. He was looking for input on storm detection and preparedness in town facilities, and he delineated those actions required of Eastford in preparation of the Plan.

Approval of Property Tax Refunds:

TC/RT moved to approve the property tax refunds as submitted by the Tax Collector. Unanimous

Tax Sales of Auctioned Properties:

Tax Collector Christine Hustus stated there would be a Tax Sale in the Town Office Building on October 22nd that could potentially involve 5 properties in Town. She outlined the options the Board had regarding the properties if minimum bids were not forthcoming – Town taking title, accepting lower bids, and postponing sale. The Board will meet on October 15th to direct the Tax Collector on these options.

Restructuring of Eastford Finance Department:

AB/TC moved to restructure the Finance Department consistent with the plan presented by the First Selectman. Unanimous

EASTFORD FINANCE DEPARTMENT

FINANCE DIRECTOR

Financial Management Guidance

Finance Department Support

(Appointed each January/Volunteer)

TOWN TREASURER

(Custody of funds

Banking

Check Signing

Statutory Treasury

***General Finance
(Employee or Elected/
Hourly)***

TOWN ACCOUNTANT

(Recordkeeping/Reporting)

Governmental Accounting

Manual/Internal Controls

Financial Reports/Audit

***Operating & Capital Budgets
Long-Term Financial Plans
Risk Management/Grants
(Employee/Hourly)***

***MUNICIPAL
ACCOUNTING
CONSULTANT***

***(Advises Department
and First Selectman)***

***Governmental
Accounting***

***Manual/Internal
Controls***

***Financial
Reports/Audit***

(Contract/Hourly)

All people in these positions function under supervision/direction of the First Selectman.

Finance Director consults with the First Selectman and EES Superintendent on wide range of financial matters.

Finance Director departmental support is project and problem solving oriented with a focus on developing, documenting, implementing and maintaining best practices in all aspects of Town finances.

Town Treasurer must fulfill all statutory responsibilities of the position, as well as additional finance related duties assigned by the Finance Director or First Selectman. Statutory duties center on the custody of funds, including the deposit of revenues and payments on order of (based on signed checks presented) the BOS and BOE. A Deputy Treasurer is appointed to fill in when the Treasurer is absent.

Town Treasurer will work 10AM until 12PM on Wednesdays, and is available to sign checks at other times. Compensation is \$20/hour. This Treasurer structure will begin in November 2015 when Town Treasurer becomes an employee position, or upon election should this remain a political position.

Town Accountant with the support of the Municipal Accounting Consultant and the Finance Director will have primary responsibility for Governmental Accounting, the Accounting/Internal Control Manual, Financial Reporting and the annual Audit. The Accountant will also assist the First Selectman and Finance Director in developing Operating & Capital Budgets, as well as Long-Term Financial Plans, for presentation to and consideration of the BOS. There will be other responsibilities related to Risk Management (insurance) and Grants in support of the First Selectman.

AB/RT moved to appoint Thomas Latham to the concurrent position of Finance Director and Town Treasurer effective with adoption of this motion. Unanimous

Resolution to Approve Commercial Property

Assessed Clean Energy (C-PACE) Agreement:

AB/TC moved to approve the resolution which enters the Town of Eastford into an agreement with C-PACE. Unanimous

First Selectman's Report:

- **Natural Gas Pipeline Update**
- **Update on property on corner of Westford and Ashford Roads**
- **Update on Catch Basin Cleaning in Town**
- **Road Paving on Route 244**
- **Road Paving on French Road**
- **New Backhoe is on it's way from Missouri**
- **David Jakubowski/Eagle Scout Candidate is rehabilitating the General Lyon Monument and doing other clean up and painting in the cemetery**
- **Chili/Apple Cook Off at Coriander's on Saturday**
- **Ashford Parade starting at 10:00 am on Saturday**
- **Open House at Buell's Orchard on Saturday and Monday**
- **CT Intelligence Center – CT Law enforcement to increase patrols in light of increased security alerts.**
- **Northeast Probate Court is open in Putnam**
- **Next Board of Selectmen meeting is on November 10th due to election set up on November 3rd.**
- **December Board of Selectmen meeting is on the 8th**

Communications:

- **Summary of Spectra Energy Proposed Atlantic Bridge Expansion Project**
- **Sexual Assault Crisis Center Letter**
- **CCM Prescription Discount Card Report**
- **State Police Staffing Changes and Report**
- **LoCIP Approval Notification**

Add to the Agenda:

TC/AB moved to add an appointment to the School Readiness Council. Unanimous

Appointment to the School Readiness Council:

TC/AB moved to appoint Jennifer Barlow to the School Readiness Council.

Unanimous

Citizens Comments:

Jim Trowbridge stated the Republican Town Committee will once again send a representative to all municipal meetings. He appreciates the work done by the Board of Selectmen.

Adjournment:

TC/RT moved to adjourn at 8:21 pm. Unanimous.

Respectfully submitted by: _____
Brenda A. Willis, Secretary

Approved, November 10, 2014 _____
First Selectman, Arthur W. Brodeur

Hampton Connecticut

164 Main Street, Hampton, CT 06247
Mailing: P. O. Box 143, Hampton, CT 06247
Phone: (860) 455-9132
Fax: (860) 455-0517
Tuesdays: 9:00a-4:00p
Thursdays: 10:00a-7:00p; Bldg Dept: 6:00p-8:00p Thursdays Only



NECCOG Regional Hazard Mitigation Plan- Information Session

Date: Tue, Oct 21, 2014

Time: 7:00 PM

Location: Hampton Town Hall Community Room

Sam Alexander, from NECCOG, will be giving an informational presentation regarding the 2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan. He will review the plan's content, the need for a plan, and the regulations governing the creation of the plan. He will also elicit feedback from the public and members of departments, boards, and commissions that wish to attend. The public is invited to view drafted sections of the plan, as they are refined, at <http://necog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>.

[RETURN TO CALENDAR](#)

Search

Event Calendar

October 2014						
Su	M	Tu	W	Th	F	Sa
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

UPCOMING EVENTS

Tuesday, Oct 7th

- Inland Wetlands & Watercourses Commission Meeting

Wednesday, Oct 8th

- Hampton Seniors
- Board of Education Policies Committee Meetings
- Fletcher Memorial Library Board Special Meeting
- Green Energy Committee Meeting
- Yoga

Friday, Oct 10th

- Windham County 4-H - Private Event

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Town of Hampton, Connecticut.

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northeastern connecticut council of governments

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pomfret - putnam - scotland - sterling - thompson - union - voluntown - woodstock

Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational, public meeting regarding its 2015 Regional Hazard Mitigation Plan.

This meeting will take place at the Killingly Town Hall on November 20, 2014 at 7:00pm.

Format:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

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17. Council Member Reports

Mr. Cesolini reported that the new Dayville Fire District building is up. Also, NDDH has a full schedule.

Ms. Ricci reported on the Dayville Fire District building, and the second grade field trip.

Mr. Alemian reported on the Board of Recreation, and attended the Agriculture Commission meeting.

Mr. Gosper reported on the Zoning Board of Appeals.

Ms. LaBerge reported on the Historic District Commission, Killingly Community Engagement Commission.

Mr. Grandelski reported on the Housing Authority and the Conservation Commission. He also commented on the Downtown Beautification project.

Mr. Sarantopoulos reported on the Board of Education, the Water Pollution Control Authority, the Planning and Zoning Commission and the Council of Government meeting.

Mr. Hallbergh reported on The Whistling Train ribbon cutting, Vet clinic ribbon cutting, Teacher of the Year function, Veterans Day celebration in Davis Park.

17. Communications

Town Manager: Downtown project update.

Town Attorney: None

19. Adjournment

Mr. Alemian made a motion, seconded by Ms. Ricci to adjourn the meeting.

Voice Vote: Unanimous

Motion Passed

The meeting ended at 10:57 p.m.

Respectfully submitted,

Elizabeth Buzalski
Council Secretary

KILLINGLY TOWN COUNCIL
SPECIAL MEETING
Tuesday, September 2, 2014

The Town Council of the Town of Killingly held a Special Meeting on Tuesday, September 2, 2014 at 7:00 p.m. in the Town Manager's Conference Room of the Killingly Town Hall, 172 Main Street, Danielson, Connecticut. The agenda was as follows:

1. Call to Order
2. Roll Call
3. Citizens' Statements and Petitions

- 4. New Business
 - 4a. Public presentation of local Hazard Mitigation Plan by Sam Alexander of NECCOG
- 5. Adjournment

- 1. Chairman Hallbergh called the special meeting to order at 7:06 p.m.
- 2. On Roll Call, all counselors were present, except Ms. Wakefield, Mr. Cesolini and Mr. Alemian. Council Secretary Buzalski was also present.

3. Citizens Statements and Petitions: None

- 4. New Business:
 - 4a. Public presentation of local Hazard Mitigation Plan by Sam Alexander of NECCOG

Sam Alexander of NECCOG presented a local Hazard Mitigation Plan and responded to council member questions and comments.

5. Adjournment

Ms. LaBerge made a motion, seconded by Mr. Grandelski to adjourn the meeting.
Voice Vote: Unanimous
Motion Passed.

The meeting ended at 8:10 p.m.

Respectfully submitted,

Elizabeth Buzalski
Council Secretary



northeastern connecticut council of governments

ashford - brooklyn - canterbury - chaplin - eastford - hampton - killingly - plainfield
pomfret - putnam - scotland - sterling - thompson - union - voluntown - woodstock

Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational meeting regarding NECCOG's 2015 Regional Hazard Mitigation Plan.

This session will take place at the Plainfield Town Hall in the Multi-purpose Room on November 12, 2014 at 6:00pm.

Format:

6:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

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Northeastern Connecticut Council of Governments meeting

Wednesday, November 12, 2014 | 6:00pm
(Time Zone: US/Eastern)

Category: General

More Info: <http://www.plainfieldct.org/docs/community/neccogmtg111214.pdf>

**TOWN OF POMFRET
BOARD OF SELECTMEN AGENDA
MONDAY, OCTOBER 20, 2014 AT 8:00 AM
POMFRET COMMUNITY/SENIOR CENTER**

I. Regular Meeting

- 1. Open Regular Meeting/Approve Minutes October 6, 2014.**
- 2. Items to Add to Agenda**
- 3. Citizen Participation & Communications**

II. Current Business

- 1. NECCOG Presentation: Regional Hazard Mitigation Plan**
- 2. Discussion:Text Amendment–Town Signs**
- 3. Possible Depository Approval: Morgan Stanley Smith Barney**

III. New Business

- 1. Resolution Approval: Homeland Security Grant Program**
- 2. Discussion on Designated Funds/Recommendation to Board of Finance**
- 3. Purchase Order Policy/Purchase Cards – Discussion & Possible Action**

IV. Other Business

- 1. Acceptance of Resignation – ZBA**
- 2. ZBA Appointment**
- 3. Conservation Commission – Reappointments & Clarification of Term**
- 4. Road Issues**
- 5. General Discussion**
- 6. Pistol Permits Issued: Cela Bekim, 214 Orchard Hill Road, 10/16/14;
Sandra Garcia, 2 Sandra Circle, 10/16/14.**
- 7. Tax Refunds/Abatements: As Attached**

V. Citizen's Comments

VI. Adjournment

**TOWN OF POMFRET
BOARD OF SELECTMEN MINUTES
MONDAY, OCTOBER 20, 2014 AT 8:00 AM
POMFRET COMMUNITY/SENIOR CENTER**

In Attendance: First Selectman Maureen Nicholson, Selectmen Barry Jessurun, Peter Mann. Also present: Samuel Alexander, NECCOG; Glenn Postemski, Director Public Works; Derek May, Emergency Manager; Liz Cartier, Gail McElroy.

I. Regular Meeting

1. Open Regular Meeting/Approve Minutes October 6, 2014 – M.

Nicholson opened meeting at 8:00 AM. P. Mann moved to approve minutes. B. Jessurun seconded. All in favor.

2. Items to Add to Agenda - None

3. Citizen Participation & Communications - None

II. Current Business

1. NECCOG Presentation: Regional Hazard Mitigation Plan – Samuel Alexander with NECCOG provided a presentation regarding the information being considered for the 2015 Regional Hazard Mitigation Plan. This is a continuation of the 2013 Plan and both State and FEMA approval will be sought. Ten areas of risk have been identified and were reviewed. Discussion regarding some of the mitigation projects Pomfret would be interested in. The 2015 document should be completed soon and is available to view on-line. Some additional discussion.

2. Discussion:Text Amendment–Town Signs – M. Nicholson stated that this amendment would be put on hold for now. PCS is looking into a temporary banner which will provide a better idea of the size and appearance of a permanent sign. Other municipal signs that would eventually be put up would be similar in design to that at PCS. The amendment will be revisited once feedback is obtained regarding the temporary banner.

3. Possible Depository Approval: Morgan Stanley Smith Barney – P. Mann has spoken with the Treasurer and is still uncomfortable with this firm as a depository. The CD's in question have come due since the last meeting and have been rolled into an approved institution. No action taken.

III. New Business

1. Resolution Approval: Homeland Security Grant Program – This is an annual renewal and participation allows the Town to receive some money toward Emergency Management, participate in regional exercises, and qualify for regional money. P. Mann moved to approve the Resolution for participation in the Homeland Security Grant Program. B. Jessurun seconded. All in favor.

2. **Discussion on Designated Funds/Recommendation to Board of Finance**
– M. Nicholson stated that in light of past discussion with the auditors she would like to see the Dog Fund eliminated as a separate line item and to move the School Building Fund of just over \$11,000 back into the general fund. The Building Fund has been stagnant for many years. So moved by B, Jessurun. Seconded by P. Mann. All in favor. She also stated that she has asked the Board of Finance to consider setting up a Designated Surplus Fund for the General Government budget as has been done for the Board of Education. This could be used, with approval, to cover unexpected capital expenses. She has asked that \$50,000 of the General Government surplus from 2013-2014 go into this fund. They have taken no action on this as yet. Discussion.
3. **Purchase Order Policy/Purchase Cards – Discussion & Possible Action**
– The original policy put into place is no longer relevant to the actual business of the Town. This will need revision to better reflect purchasing procedures. M. Nicholson is also exploring the use of Purchasing Cards. No action taken at this time.

IV. Other Business

1. **Acceptance of Resignation – ZBA** – Postponed at this time.
2. **ZBA Appointment** – Postponed at this time.
3. **Conservation Commission – Reappointments & Clarification of Term**
– Pam Cartledge and Cheryl Champ were up for 3-year renewals on January 1, 2014 to run through January 1, 2017. This has not been put into the official record. E. Kimball was appointed to the Commission in June for a six-year term. This term is in error and should reflect a three-year term – running through to January 1, 2017. P. Mann moved to approve as stated. B. Jessurun seconded. All in favor.
4. **Road Issues** – Some discussion regarding wash-outs on Duffy Road and Wolf Den Drive.
5. **General Discussion** – M. Nicholson stated that a group of residents in the Paine Road area have formed a Neighborhood Watch Group. Their sign has been stolen. The Senior Advocate Commission has voted to require a membership effective January 1st. The Senior Association would likely be the entity of the group functioning within the Center and the annual dues is currently \$5.00. This is common practice in Senior Centers around the State. The rain last week resulted in a leak coming through the roof on the third floor and the basement was flooding. Repairs will need to be looked into.
6. **Pistol Permits Issued:** Cela Bekim, 214 Orchard Hill Road, 10/16/14; Sandra Garcia, 2 Sanda Circle, 10/16/14 – Noted for Record
7. **Tax Refunds/Abatements: As Attached** – P. Mann moved to approve as presented. B. Jessurun seconded. All in favor.

- V. **Citizen's Comments** – Gail McElroy asked about the terms for the Senior Advocate Commission. She also stated that she is waiting for curb repair

outside of her house. These repairs will likely be done next year when all can be done at one time.

VI. **Adjournment** – B. Jessurun moved to adjourn. P. Mann seconded. All in favor. Meeting adjourned at 9:30 AM.

Respectfully submitted,

Bonnie Ryan, clerk

Date approved_____



northeastern connecticut council of governments

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Meeting Notice and Agenda

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational meeting regarding NECCOG's 2015 Regional Hazard Mitigation Plan.

This meeting will take place in the Community Room at Putnam Town Hall on November 5, 2014 at 5:30pm.

Format:

5:30

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process

NECCOG meetings are conducted in accessible locations and materials can be provided in accessible formats. If you would like special accommodations, such as an interpreter, please contact the NECCOG at: (860)774-1253, or neccogoffices@neccog.org at least 3 days prior to the meeting. The NECCOG fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The NECCOG/NECTD does not discriminate on the basis of race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, military service, or gender identity or expression. Any person who believes himself/herself or any specific class of persons have been subjected to discrimination prohibited by Title VI or related statutes or regulations may, himself/herself or via a representative, file a complaint with the NECCOG.



**TOWN OF SCOTLAND
BOARD OF SELECTMEN**

Scotland Town Hall 9 Devotion Road, P.O. Box 288 Scotland, CT 06264
(860) 456-7797 x 1

**PUBLIC HEARING
6:00 PM**

- I. Call to order
- II. Presentation of Hazardous Mitigation Plan
- III. Adjourn

**BOARD OF SELECTMEN MEETING
OCTOBER 8, 2014
7:00 PM**

AGENDA

- I. Call to Order
- II. Additions to Agenda
- III. Audience for Citizens
- IV. Approval of Minutes of September 24, 2014
- V. Treasurer Report
- VI. Correspondence
- VII. First Selectman Report
- VIII. Old Business
- IX. New Business
 - a) Emergency Management / Homeland Security Resolution 2014
- X. Second Audience for Citizens
- XI. Adjourn



TOWN OF SCOTLAND
BOARD OF SELECTMEN

Scotland Town Hall 9 Devotion Road, P.O. Box 288 Scotland,
CT 06264

First Selectman: (860) 456-7797 ext. 1

MINUTES

October 8th, 2014

Hazard Mitigation

Public Hearing

I. Call to order

1st Selectman Daniel Syme called to order at 6:03 pm the public hearing for NECCOG's Hazard Mitigation plan for the Town of Scotland. Present were selectmen Claire D'Appolonio, Rod Perry, Emergency Management Director Ernest Mellor, Fire Marshalls Dana Barrow and John Beck, ZEO Elizabeth Burdick, Neccog's Hazard Mitigation Planner Samuel Alexander, and town residents.

II. Hazard Mitigation Plan Presentation

Samuel Alexander presented a draft using a power point program covering the various aspects of the plan. Areas such as the need, federal and state criteria, identification of potential hazards, and the town plan for addressing such hazards were covered. Question and answered period followed involving all attendees.

III. Adjournment

Rod Perry motioned, Claire D'Appolonio second, for adjournment. Hearing adjourned at 6:55 pm



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Meeting Notice and Agenda

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational meeting regarding the organization's 2015 Regional Hazard Mitigation Plan.

This meeting will take place at Sterling Town Hall, Room 15, on Monday, November 10, 2014 at 4pm.

Agenda:

4:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process

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Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational, public meeting regarding its 2015 Regional Hazard Mitigation Plan.

This meeting will take place at the Thompson Town Hall on November 13, 2014 at 7:00pm.

Format:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

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Town of Union

Connecticut
Established 1734

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Public Forum

Date : 20 October 2014 **From :** 7:00pm **To :**
Category : General

Event Description :

A public forum will be held on October 20, 2014 at 7:00 p.m. in the Upper Level Meeting Room of the Union Town Hall, 1043 Buckley Hwy. to discuss a proposed hazard mitigation plan for the Town of Union with a presentation by NECCOG.

[Close](#)



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Meeting Notice

The Northeastern Connecticut Council of Governments (NECCOG) will be conducting an informational meeting regarding its 2015 Regional Hazard Mitigation Plan.

This meeting will take place at the Voluntown Volunteer Fire Company (205 Preston City Road, Voluntown, CT 06384) on November 24, 2014 at 7:00pm.

Format:

7:00

Presentation- Samuel Alexander of NECCOG will present on the scope of the region's draft plan

Discussion- Those in attendance will have an opportunity to offer input into the scope and methodology of the plan

Questionnaire- Those in attendance will have an opportunity to complete a questionnaire on the region's identified natural hazards and potential mitigation measures

A current draft of the plan is available, online at:

<http://neccog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>

The public is invited to view the draft online and offer input throughout the drafting process

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**Town of Woodstock
Board of Selectmen
Regular Meeting
Thursday, November 6, 2014
4:00 PM – Room A**

AGENDA

1. Call to Order
2. Approve the Minutes of October 2, 2014 Regular Board of Selectmen Meeting and October 24, 2014 Special Board of Selectmen Meeting
3. Presentation by Sam Alexander, NECCOG, on Natural Hazard Mitigation Plan
4. Consider Resolution Accepting Conservation Easement at 224 English Neighborhood Road
5. Warn Special Town Meeting
6. Accept the Resignation of Andrew Massey from the Inland Wetlands and Watercourse Agency effective November 6, 2014
7. Consider the Appointment of Carl Knittel as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2016
8. Tax Rebates
9. Correspondence and Announcements
10. Citizen's Comments
11. Adjournment

**Town of Woodstock
Board of Selectmen
Regular Meeting
Thursday, November 6, 2014
4:00 PM – Room A**

PRESENT: D. Mitchell Eaffy, Chandler Paquette, Allan Walker, Jr.
OTHERS PRESENT: Sam Alexander, Everett Cowley, Joni Cullan, Greg Favreau, James Kaeding, Carl Knittel, Preston Schultz, Tom Trowbridge, Kevin Withers

1. Call to Order

Walker called the meeting to order at 4:00 p.m.

Paquette moved to add the following items to the agenda:

Item 7a: Consider the Appointment of Patricia Lacasse as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2015; Item 7b: Consider the Appointment of Gregory Favreau as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2014 and Item 7c: Consider the Appointment of Wayne Durst as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2016. **Motion carried unanimously.**

2. Approve the Minutes of October 2, 2014 Regular Board of Selectmen Meeting and October 24, 2014 Special Board of Selectmen Meeting

Eaffy moved to approve the minutes of the October 2, 2014 Regular Board of Selectmen Meeting and the October 24, 2014 Special Board of Selectmen Meeting. **Motion carried unanimously.**

3. Presentation by Sam Alexander, NECCOG, on Natural Hazard Mitigation Plan

Sam Alexander reviewed the Regional Natural Hazard Mitigation Plan written by staff at NECCOG. The Plan will be submitted to DEMHS and FEMA in December 2014. After receipt of FEMA's approval, each Town will be asked to officially approve the Regional Plan pertaining to their town.

4. Consider Resolution Accepting Conservation Easement at 224 English Neighborhood Road

Walker reported that the Planning and Zoning Commission approved an easement at 224 English Neighborhood Road pending the Board of Selectmen's acceptance of the easement. **Paquette moved** to approve the following resolution. **Motion carried unanimously.**

Town of Woodstock
Board of Selectmen
Resolution Accepting Conservation Easement
224 English Neighborhood Road

WHEREAS, the Woodstock Planning and Zoning Commission approved a two lot subdivision at 224 English Neighborhood Road (“the Subdivision Plan”), and

WHEREAS, the Subdivision Plan includes a 29.7+/- conservation easement to be conveyed by the Grantor to the Town of Woodstock as Grantee on a portion of subdivided Lot 16, which lot is improved with an existing house known as 224 English Neighborhood Road, and

WHEREAS, Lot 16 includes additional land in addition to the area covered by the conservation easement for a total lot area of 40.8+/- acres, including the house and other existing structures, and

WHEREAS, the Subdivision Plan requires that a Mylar depicting the conservation easement as accepted by the Town acting through its Board of Selectmen be signed by the Planning & Zoning Commission Chairman prior to filing on the Land Records, and

WHEREAS, Town Staff has reviewed the final copy of the Subdivision Plan, prepared by CME Associates, Inc., last revised on 9/30/2014, and found it to be complete and accurate.

NOW, THEREFORE BE IT RESOLVED:

1. The Woodstock Board of Selectmen hereby accepts the conveyance of the Conservation Easement on 29.7+/- acres of land located on Lot 16, 224 English Neighborhood Road, Woodstock, Connecticut as depicted on the Subdivision Plan; and

2. The First Selectman is authorized to execute any and all documents to complete the acceptance of the conveyance of the Conservation Easement.

Approved by the Board of Selectmen on November 6, 2014.

Allan D. Walker, Jr., First Selectman; Chandler L. Paquette, Selectman; D. Mitchell Eaffy, Selectman

5. Warn Special Town Meeting

Eaffy moved to warn a Special Town Meeting on November 19, 2014 at 7:00 pm. **Motion carried unanimously.**

TOWN OF WOODSTOCK
NOTICE OF SPECIAL TOWN MEETING
November 19, 2014
7:00PM

A Special Town Meeting of the electors and citizens qualified to vote in town meetings of the Town of Woodstock, Connecticut, will be held on Wednesday, November 19, 2014 at 7:00 p.m. at the Woodstock Town Hall, 415 Route 169, Woodstock, Connecticut to consider the following actions and to vote on the following matters:

- 1.) To elect a Moderator;
- 2.) To consider and vote upon the following Resolution:

RESOLVED, that the Town of Woodstock approve the Contract between the Town of Woodstock and Gutchess Lumber, Inc. of Cortland, New York to allow the harvesting of timber on the 113 acre parcel of Town-owned land located on Perrin Road, Map 6389, Block 70, Lot 22, according to the Contract as

recommended by the Board of Selectmen. A copy of the proposed Contract is available in the Town Clerk's office.

- 3.) To transact such other business as may properly come before said meeting.
- 4.) To adjourn.

Dated at Woodstock, Connecticut, this 6th day of November, 2014.

Allan D. Walker, Jr., First Selectman, Chandler Paquette, Selectman, D. Mitchell Eaffy, Selectman

Attest: Judy E. Walberg, Town Clerk

6. Accept the Resignation of Andrew Massey from the Inland Wetland and Watercourse Agency effective November 6, 2014

Paquette moved to accept the resignation of Andrew Massey from the Inland Wetlands and Watercourse Agency effective November 6, 2014. **Motion carried unanimously.**

7. Consider the Appointment of Carl Knittel as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2018

Paquette moved to appoint Carl Knittel as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2018. **Motion carried unanimously.**

7a. Consider the Appointment of Patricia Lacasse as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2015

Eaffy moved to appoint Patricia Lacasse as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2015. **Motion carried unanimously.**

7b. Consider the Appointment of Gregory Favreau as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2014

Paquette moved to appoint Gregory Favreau as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2014. **Motion carried unanimously.**

7c. Consider the Appointment of Wayne Durst as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2016

Eaffy moved to appoint Wayne Durst as a Full Member of the Inland Wetlands and Watercourse Agency for the term of November 6, 2014 through December 31, 2016. **Motion carried unanimously.**

8. Tax Rebates

Paquette moved to approve the following tax rebates:

- Jay Wildgoose in the amount of \$33.96
- Peterson LT Trust in the amount of \$100.64
- Honda Lease Trust in the amount of \$199.10
- Ocwen Loan Servicing LLC in the amount of \$198.78
- Wheels LT in the amount of \$67.24

Motion carried unanimously.

9. Correspondence and Announcements

None.

10. Citizen's Comments

James Kaeding and Kevin Withers asked questions about the harvesting of timber on Town-owned land located on Perrin Road. Tom Trowbridge, Forester of the project, reviewed the status of the project and stated that the Board of Selectmen asked him to write a Forest Management Plan for the Town which will be complete by November 12, 2014.

11. Adjournment

Paquette moved to adjourn at 4:50 p.m. **Motion carried unanimously.**

Respectfully submitted,

Joni Cullan, Recording Clerk

Appendix 3

Hazard Vulnerabilities

In your own experience, how is your community vulnerable to the following natural hazards?

Flooding:

Wind:

Lightning:

Thunderstorms:

Winter Storms/Nor'easters:

Hurricanes/Tropical Storms:

Tornadoes:

Drought:

Hail:

Earthquakes:

Identifying Proper Mitigation Actions

What are some possible actions that the community, or the region's communities, can take to mitigate the possible effects of the following natural hazards?

Flooding:

Wind:

Lightning:

Thunderstorms:

Winter Storms/Nor'easters:

Hurricanes/Tropical Storms:

Tornadoes:

Drought:

Hail:

Earthquakes:

Appendix 4

Natural Hazard Identification and Risk Assessment Matrix

Name of Community: _____

Directions for Using Natural Hazard Identification and Risk Assessment Matrix

- Column 1, **Hazard Identification**. Column 1 provides a listing of natural hazards that have occurred in the NECCOG Region. All Hazards Mitigation Plans are required to address natural hazards. The list may be modified.
- Column 2, **Hazard Frequency**. Assign a low, medium or high numerical rating to this hazard based on the frequency of past occurrences.
- Column 3, **Hazard Probability**. Assign a low, medium or high numerical rating to this hazard based on the probability of this hazard occurring again.
- Column 4, **Health and Public Safety**. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing injuries, sickness and/or deaths.
- Column 5, **Home Damage**. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing damages to homes.
- Column 6, **Business Disruption**. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing damage to businesses and/or interrupting business trade.
- Column 7, **Public Expenditures**. Assign a low, medium or high numerical rating to this hazard based on the amount of local, state and federal funds expended on past hazard recovery activities.
- Column 8, **Magnitude of Population at Risk**. Assign a low, medium or high numerical rating to this hazard based on the amount of the planning area's population that are still vulnerable to injury, sickness and/or death from this hazard.
- Column 9, **Magnitude of Homes at Risk**. Assign a low, medium or high numerical rating to this hazard based on the amount of homes still vulnerable to damages from this hazard.
- Column 10, **Magnitude of Businesses at Risk**. Assign a low, medium or high numerical rating to this hazard based on the amount of businesses still vulnerable to damages or interruption of business trade.
- Column 11, **Adjustment**. This column allows for using other criteria that a local government may want to be considered in evaluating the risk of a particular hazard. A hazard's impact on critical facilities could be included here. Public infrastructure damage is another example that could be added. This column can also be used to modify the results of a row total if for some reason the scoring process for a given hazard is unreasonable compared to others.
- Column 12, **Risk Assessment Rating Total**. This Column provides the total rating of each hazard in Column 1 by adding the numerical rating for each of the criterion in Columns 2 through 11. ***The hazard row with the highest numbers should be the hazards that pose the highest risk.***

Appendix 5



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2015 neccog regional hazard mitigation plan



§ 201.6 Local Mitigation Plans.

The local mitigation plan is the **representation of the jurisdiction's commitment to reduce risks from natural hazards**, serving as a **guide for decision makers** as they commit resources to reducing the effects of natural hazards. **Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding.**

Developing a

Hazard Mitigation Plan

Northeastern Connecticut

Preparation and drafting of a regional plan began in 2011 with a **Mitigation Kick-off Meeting**, as well as a series of subsequent meetings with the region's Emergency Management Directors, and resulted in a draft plan for the year 2013. [The 2015 NECCOG Regional Hazard Mitigation Plan](#) is a continuation of the

processes and analyses that led to the 2013 draft plan, modified to suit federal regulations.

Draft chapters of [The 2015 NECCOG Regional Hazard Mitigation Plan](#) will be continually added and can be found below

[Table of Contents](#) [Chapter 1](#) [Chapter 2](#)

Comments and suggestions on the plan's content should be directed to Samuel Alexander, Regional Project Analyst: samuel.alexander@neccog.org

The public is also invited to view presentations at the following events:

Scotland Board of Selectmen Meeting 10/08 @ 6pm, Scotland Town Hall
Pomfret Board of Selectmen Meeting 10/20 @ 8am, Pomfret Senior/Community Center
Union Board of Selectmen Meeting 10/20 @ 7pm, Union Town Hall
Ashford Board of Selectmen Meeting 10/29 @ 7pm, Ashford Town Offices
Hampton Board of Selectmen Meeting 11/03 @ 7pm, Hampton Town Hall
Chaplin Board of Selectmen Meeting 11/06 @7pm, Chaplin Town Hall
Killingly Town Council Meeting 11/10 @7pm, Killingly Town Hall

Past presentations:

Eastford Board of Selectmen Meeting 10/06 @ 7pm, Eastford Town Office Building



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2015 neccog regional hazard mitigation plan



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Developing a

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Draft chapters of The 2015 NECCOG Regional Hazard Mitigation Plan are continually being refined and completed. They can be found below:

[Table of Contents](#) [Chapter 1](#) [Chapter 2](#) [Chapter 3](#)

Comments and suggestions on the plan's content should be directed to Samuel Alexander, Regional Project Analyst: samuel.alexander@neccog.org

Feel free to include a completed **questionnaire** in your message.

The public is also invited to view presentations at the following events:

Ashford 10/29 @ 7pm, Ashford Town Offices
Hampton Board of Selectmen Meeting 11/03 @ 7pm, Hampton Town Hall
Putnam 11/5 @ 5:30pm, Putnam Town Hall
Woodstock Board of Selectmen Meeting 11/06 @4pm, Woodstock Town Hall
Chaplin Board of Selectmen Meeting 11/06 @7pm, Chaplin Town Hall
Sterling 11/10 @4pm, Sterling Town Hall
Killingly Town Council Meeting 11/10 @7pm, Killingly Town Hall
Plainfield 11/12 @6pm, Plainfield Town Hall

Past presentations:

Eastford Board of Selectmen Meeting 10/06 @ 7pm, Eastford Town Office Building
Scotland Board of Selectmen Meeting 10/08 @ 6pm, Scotland Town Hall
Pomfret Board of Selectmen Meeting 10/20 @ 8am, Pomfret Senior/Community Center
Union Board of Selectmen Meeting 10/20 @ 7pm, Union Town Hall
Brooklyn 10/22 @ 7pm, Green Memorial Center

Edit



ashford • brooklyn • canterbury • chaplin • eastford • hampton • killingly • plainfield • pomfret • putnam • scotland • sterling • thompson • union • voluntown • woodstock



results through regionalism



menu

natural hazard mitigation plan formulation

The Northeastern Connecticut Council of Governments (NECCOG) Regional Hazard Mitigation Plan is, according to FEMA guidelines and regulations, intended to reduce or mitigate the impacts of natural hazards on the Region. Natural hazards in their various forms are inevitable and predictable for the northeastern Connecticut region. We know that their affects range from a nuisance to catastrophic. Understanding these threats and taking preemptive actions to mitigate their impacts will better protect people and property. Natural hazards present significant risks (people and property) throughout Connecticut and southern New England. They also pose considerable economic costs that can be reduced with the proper mitigation actions. While our towns, first responders and emergency managers know how to effectively respond to hazards as they occur – we can also protect our communities by planning for potential hazards before they occur. Rain, wind, ice, hail, thunderstorms, fog, tornado, snow and earthquake bring unique threats and challenges. Emergency management is a continuous process through which communities prepare, respond and recover from emergencies and disasters. Hazard mitigation is a critical element of this process and serves two primary purposes—to protect people and property, and limit the costs of disaster response and recovery. The most significant reason for mitigation planning is that it saves lives.

Preparation and drafting of a regional plan began in 2011 with a **Mitigation Kick-off Meeting**, as well as a series of subsequent meetings with the region's Emergency Management Directors, and resulted in a draft plan for the year 2013. That plan was submitted to Department of Energy and Environmental Protection and to FEMA for review and

approval. The plan was subsequently sent back by those agencies for further refinement and public input. The **2015 NECCOG Regional Hazard Mitigation Plan** is a continuation of the processes and analyses that led to the 2013 draft plan, modified to suit federal regulations.

Draft chapters of The **2015 NECCOG Regional Hazard Mitigation Plan** will be continually added and can be found below:

- **Table of Contents**
- **Chapter 1**
- **Chapter 2**
- **Chapter 3**
- **Chapter 4.0**
 - **Chapter 4.1**
 - **Chapter 4.1-4.16 (incomplete)**
- **Chapter 5**

Please note that these chapters are drafts will be completed in mid-December, 2014. Drafting will be open until the plan is submitted and participation is *strongly* encouraged from the public, municipal officials and employees, private stakeholders, non-profit stakeholders, members of Connecticut State Government Agencies, and anyone with an interest in the hazard mitigation process. Comments and suggestions on the plan's content should be directed to Samuel Alexander, Regional Project Analyst:

samuel.alexander@neccog.org

Feel free to include a completed **questionnaire** in your message. The public is also invited to view presentations at the following events:

- All meetings have been completed. Please contact Samuel Alexander if you would like to receive a copy of an informational presentation or set up a time to meet and discuss the plan.

quick links:

- **[natural hazard mitigation plan formulation](#)**
- **[pre-hospital emergency care study](#)**
- **[route 169 national scenic byway management plan update](#)**
- **[comprehensive economic development strategy](#)**

Edit

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results through regionalism

natural hazard mitigation plan formulation

The Northeastern Connecticut Council of Governments (NECCOG) Regional Hazard Mitigation Plan is, according to FEMA guidelines and regulations, intended to reduce or mitigate the impacts of natural hazards on the Region. Natural hazards in their various forms are inevitable and predictable for the northeastern Connecticut region. We know that their affects range from a nuisance to catastrophic. Understanding these threats and taking preemptive actions to mitigate their impacts will better protect people and property. Natural hazards present significant risks (people and property) throughout Connecticut and southern New England. They also pose considerable economic costs that can be reduced with the proper mitigation actions. While our towns, first responders and emergency managers know how to effectively respond to hazards as they occur – we can also protect our communities by planning for potential hazards before they occur. Rain, wind, ice, hail, thunderstorms, fog, tornado, snow and earthquake bring unique threats and challenges. Emergency management is a continuous process through which communities prepare, respond and recover from emergencies and disasters. Hazard mitigation is a critical element of this process and serves two primary purposes—to protect people and property, and limit the costs of disaster response and recovery. The most significant reason for mitigation planning is that it saves lives.

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Statement of Purpose and Table of Contents (updated 12/17)

Chapter1 (updated 12/17)

Chapter2 (updated 12/17)

Chapter3 (updated 12/17)

Chapter4 (updated 12/17)

Chapter5 (updated 12/17)

Drafting will be open until the plan is submitted and participation is *strongly* encouraged from the public, municipal officials and employees, private stakeholders, non-profit stakeholders, members of Connecticut State Government Agencies, and anyone with an interest in the hazard mitigation process. Comments and suggestions on the plan's content should be directed to Samuel Alexander, Regional Project Analyst:

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quick links:

[natural hazard mitigation plan formulation](#)

[pre-hospital emergency care study](#)

[route 169 national scenic byway management plan update](#)

[comprehensive economic development strategy](#)

Appendix 6

KILLINGLY EDITION ReminderNews

Hazard Mitigation Plan discussed at informational meeting



NECCOG's Program Analyst Samuel Alexander and Plainfield Emergency Director Paul Yellen are working together on Plainfield's hazard mitigation needs. Photo by D. Coffey.

By Denise Coffey,
Reminder News

NOVEMBER 17, 2014, 12:18 PM

The Northeastern Connecticut Council of Governments held an informational meeting in Plainfield on Nov. 12 on a regional Hazard Mitigation Plan being drafted for submission to the Federal Emergency Management Agency. The plan is a prerequisite for federal funding for local mitigation projects. Community outreach and public participation are required for the drafting of the plan.

NECCOG Project Analyst Samuel Alexander and Plainfield Emergency Management Director Paul Yellen were on hand to discuss the way local hazards were identified and prioritized for purposes of the project. Such a plan ensures that the region and its member towns are compliant with the Federal Disaster Mitigation Act of 2000 (DMA 2000) and eligible to compete for Pre-Disaster Mitigation (PDM) project funds

The plan, which is currently limited to natural disasters, will provide a framework for evaluating, prioritizing and funding projects. Eligible projects include those that protect utilities, water and sewer systems, roads and bridges. Flood control activities, structural demolition, relocation or elevation, as well as voluntary acquisition of open space are also included measures.

"We're trying to identify natural disaster incidents that have happened in the past, have the potential to happen or might happen," Yellen said. Because the impact of such incidents can be far reaching, it's important to have plans in place. When hurricane Irene hit in August, 2011, Yellen was on the job for seven straight days. "That storm required a lot of coordination between town and state officials, first responders and utility crews," he said.

Alexander is using FEMA-developed methodologies, GIS mapping, and qualitative and quantitative data to assess specific vulnerabilities for towns. In northeastern Connecticut, those vulnerabilities are usually winter storms, high wind events and flooding.

Northeastern District Department of Health Emergency Preparedness Coordinator Derek May said the benefits of having such a plan can help towns address dangers before a natural disaster or weather event takes place. A plan can buttress applications for funds to purchase a generator to serve an emergency shelter, raising up a structure that has been prone to flooding, or building a berm around a water pumping station. It's also important for reimbursement for damages.

"If you didn't have one of these plans in place and something occurred, you might not be eligible to get federal reimbursement," May said.

"We want the public to know there is a plan, and they can offer input on it," said Yellen.

Alexander said the project should be complete by mid-December. Drafts of the plan are available on the website at <http://necog.org/programs-services/northeastern-ct-natural-hazard-mitigation-plan-2015/>. He can be reached at 860-774-1253 or samuel.alexander@necog.org.

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Stirring Daily



Ashford is ready for the worst

By AKAYA MCELVEEN
Chronicle Staff Writer

ASHFORD — In simplest terms, recent activity in Ashford courtesy of the Northeastern Connecticut Council of Governments consists of the town preparing for the worst and hoping for the best.

Late last week, NECCOG hosted an informational public meeting in Ashford regarding its 2015 Regional Hazard Mitigation Plan.

Led by Samuel Alexander, regional project analyst of NECCOG, the meeting took place Thursday in the Ashford Town Office Building.

Alexander said the purpose of updating the plan is so the towns can apply for Federal Emergency Management Agency (FEMA) grants.

"I think the purpose of the plan is not only to make our towns eligible for certain FEMA grants, but it should also be used as reference," Alexander said. "You can incorporate it into future plans, and it's something that gives them an idea of certain vulnerabilities in each town which differ from regional risks."

The plan is intended to reduce or mitigate the impacts of natural disasters in the region.

NECCOG's 2015 plan identifies and assesses regional natural hazards, as well as risks and vulnerabilities associated with those hazards.

It also identifies municipal and regional mitigation projects that seek to reduce risk to life, limb and property.

The plan, which must be approved every other year, also outlines funding opportunities through federal grant programs.

NECCOG'S 2013 plan was sent to the state Department of Energy and Environmental Protection as well as to FEMA, but the plan did not receive approval.

Alexander said the 2015 Hazard Mitigation Plan will act as a continuation of the 2013 plan and the 2015 plan will correct any areas of deficiency the last draft may have had.

"This 2015 plan is kind of just revisiting it to redraft it and ensure compliance, and also to incorporate four new towns into the region (Chaplin, Hampton, Scotland and Voluntown)," he said.

Alexander outlined NECCOG's timeline for completing the 2015 plan and stated the final draft for the 2015 plan will be completed this December and submitted to the U.S. Department of Emergency Management and Homeland Security as well as to FEMA for review.

Ashford is just one of many towns that is included in NECCOG's overall plan.

"The purpose of this plan is FEMA has a few different grant programs that our towns can be eligible for. This will make them eligible for that," Alexander

said. "This plan will identify regional and municipal risks, but also capabilities. Different towns have different capacities to mitigate."

During the public meeting, Alexander briefly assessed the regional and municipal vulnerabilities, risks and hazards of the Town of Ashford.

"Some towns can be more vulnerable than other towns," Alexander said. "For instance, Union and Ashford may be more vulnerable to winter storms just by being at a higher elevation, whereas Brooklyn and Killingly may be more vulnerable to flooding."

Alexander said NECCOG uses a software program that can predict the outcomes of natural disasters in the region.

"FEMA makes this free software called Hazus. It allows you to model a 100-year flood event and gives you 100-year flood event, hurricane event and earthquake, and it gives you for all three of those hazards an estimation of property damage, shelter requirements and things like that. It's a great program to use for that, and we will use it for all of our towns," he said.

Alexander said there are actions the Town of Ashford can take that can lessen the impact of natural disasters.

Included in the suggested actions were the cutting back of trees that could possibly land in the middle of the road during a storm or inspecting things such as drains and keep up with maintenance.

Alexander also said the town should know where their town shelters are in case of emergencies.

Michael Gardener, a deputy in the Emergency Management Department, said in case of an emergency, Ashford School will act as a shelter for the town which can house approximately 200 people, has a generator, bathroom, and showers.

"Some of the things you're talking about, some of the preventive maintenance things — the inspection of the storm drains, and the cutting back of trees — those are things that are done routinely by public works," said Ashford First Selectman Michael Zambo to Alexander.

Alexander said his suggested actions would come as an addition to the routine maintenance.

Thomas Borgman, Ashford's emergency management director, said Ashford is "used to being sufficient because they don't expect the services to be here."

Borgman said he appreciates NECCOG's help in trying to prevent hazards from happening, and having a plan for the town should anything were to happen.

A digital copy of the draft can be found at <http://www.neccog.org>. For more information, contact Alexander at samuel.alexander@neccog.org or (860)774-1253, ext. 22.

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FRIDAY, NOVEMBER 18, 2011

THIS WEEK'S QUOTE

"There are some things you learn best in calm, and some in storm."

INSIDE

- A8-9 — OPINION
- A12 — SPORTS
- B1 — HOT SPOT
- B3 — OBITS
- B4 — CALENDAR

LOCAL



Unique dog is Bradley's "Sandy" Page A2

SPORTS



Lady Centaurs crush Panthers in CIAC quarterfinal Page A12

EVERYDAY ECOLOGIST PAGE A5

OPINION GET YOUR POINT ACROSS PAGE A8

WHAT TO DO A CALENDAR OF AREA EVENTS PAGE B4

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NECCOG moves ahead with emergency plan

'WE WANT TO GET IT ON THE BOOKS AND DONE'

BY MEGHAN COUTURE
VILLAGER STAFF WRITER

KILLINGLY — After the statewide emergencies caused by Tropical Storm Irene and Winter Storm Alfred, the Northeast Connecticut Council of Governments is moving on creating a hazard mitigation plan to better prepare for future effects of natural disasters.

Specifically, the Northeast Connecticut Emergency Management Committee (NCEMC) met on Tuesday, Nov. 15 to review the emergency needs of the vulnerable populations within the 12 NECCOG towns and to discuss beginning the process of drafting such a plan.

"Mitigation is all about getting in front of things to minimize the impact of the different hazards that are out there," said NECCOG Executive Director John Filchak, "and to also act as a guide for official decision-makers."



John Filchak

help with addressing certain vulnerable aspects of the towns when such a disaster should occur.

To generate a better understanding among members of NCEMC, representatives from Thames Valley Council for Community Action (TVCCA) and Day Kimball Homecare were invited to explain their emergency tactics, how the past two disasters impacted their services, and how providing service-

Turn To **NECCOG**, page **A15**

The NCEMC Hazard Mitigation Plan will focus mainly on natural, weather-related hazards.

FEMA Community Mitigation Planner Holly Dominie attended the meeting to address more specifically the benefits of a plan, how to begin drafting one, and what requirements the plan needs to meet in order for NECCOG's 12 towns to be eligible for grant money that could potentially

PCS students ready to play

BOARD GAME FUNDRAISER TO BENEFIT D.C. TRIP

BY TERRI VIANI
VILLAGER STAFF WRITER

POMFRET — The game's afoot in Pomfret and it's all the doing of parent and teacher organizers of the annual Pomfret Community School eighth grade trip to Washington D.C., who are putting together a Pomfret version of Monopoly — "Pomfretopoly" — as a way to raise money for the trip.

"We have three major fundraisers for the trip that I do during the year," said eighth grade trip organizer Jan Rondeau, who has been organizing the trip for 11 years along with the eighth grade class advisors. "Then I tell parents at the beginning of the year, any fundraisers they want to do, just come to me, ask me what they need to do. This group of parents has come up with

phenomenal ideas. This Pomfretopoly is just amazing."

The Pomfretopoly board game will feature Pomfret landmarks, businesses and families in place of the usual Monopoly Atlantic City streets and utilities. Spaces on the game board are currently for sale to local businesses. One hundred percent of profits from space sales will go to cover production costs, then 8th graders will sell the produced

Turn To **TRIP**, page **A15**



Terri Viani photo

Trip organizer Jan Rondeau and parent volunteer Mindy Hudon display a sample "Pomfretopoly" game.

Through the years, library has remained constant

'EXEMPLIFIES THE COMMUNITY SPIRIT OF THIS SMALL RURAL TOWN'

BY TERRI VIANI
VILLAGER STAFF WRITER

EASTFORD — The story of the Eastford Public Library is the story of space.

Not the exciting, Buzz Aldrin-conquering-the-Final-Frontier kind of

Terri Viani photo

Librarian Susan Shead gets to work at the Eastford Public Library last week.

space, mind you, but the somewhat more pedestrian space of, "We really need more closets in here," and "Shove over, will ya?"

The library got its start in 1887 when Frederick Sumner purchased 50 books from a book agent and, along with a number of other subscribers, started the Eastford

Turn To **LIBRARY**, page **A10**



Navy veteran Mary Levesque braves the blustery weather to attend.



HONORING OUR VETERANS

Terri Viani photos

WOODSTOCK — On Friday, Nov. 11, American Legion Post 111 in Woodstock held its annual Veterans Day ceremony on the Woodstock Town Common.

For more photos, turn to page A11!

At left: Commander Todd Smith bows his head during the convocation.

'Small businesses are big business for Connecticut'

BUSINESS OUTREACH TOUTS NEW PROGRAMS FOR LOCAL COMPANIES

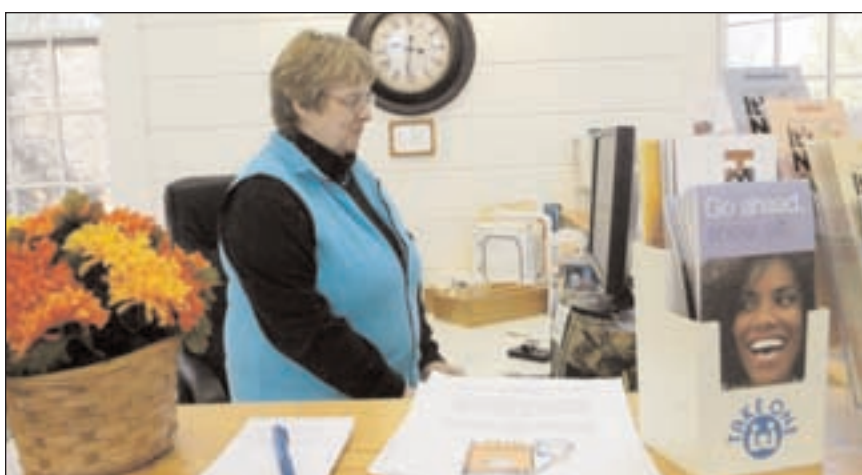
BY MEGHAN COUTURE
VILLAGER STAFF WRITER

DANIELSON — Department of Economic and Community Development Commissioner Catherine Smith and Deputy Commissioner Ron Angelo held a business outreach event, "Reinventing Connecticut," at Quinebaug Valley Community College on Monday, Nov. 14, to share the state's new initiatives to aid in small business growth.

The General Assembly recently passed a bill approving a two-year, \$626 million program including pro-business measures that will hopefully increase the state's job growth and help businesses thrive.

Specifically, \$180 million in funding will be offered to small businesses

Turn To **BUSINESS**, page **A10**



NECCOG towns urged to participate in emergency plan

NECCOG

continued from page 1

es in such disasters could be improved upon with help from the towns.

During Irene and Alfred, citizens who relied on electronic medical devices, such as oxygen, were put in jeopardy due to the long string of outages. Having roads cleared for caretakers to travel to the citizens' homes were another concern, as was the issue of food safety with TVCCA. However, communication was the unanimous suggestion for improvement.

"One of the big things, I think, is definitely communication," said TVCCA Representative Marylou Underwood. "Learning who is who, especially with who is the emergency management directors in

each of the towns, learning faces so we know who the players are."

Members of NCEMC agreed, as it is difficult for them to know who exactly is most vulnerable during the disasters so they may be checked up on, or who is already completing the checks.

"With our fire departments doing wellbeing checks, we found out that that person is also being checked on by another group, or maybe we are worried about a house that's empty, but there might be an organization that knows where that person is," said Pomfret's Emergency Management Director Derek May. "I think we should start to look at some of this as a group."

Director of Day Kimball Homecare Judie Blackmore agreed, emphasizing communication regarding road blockages.

"We worry about transportation if

we had to evacuate a client," said Blackmore. "I think there would be a benefit to providing lists of clients [with consent] to each other [to help us locate vulnerable clients]."

Including information about such citizens in the Hazard Mitigation Plan would provide a safer way of distributing services during natural disasters.

Moving on to the Hazard Mitigation Plan, NCEMC is hoping to have a one drafted and adopted by the autumn of 2012, with Tuesday's meeting acting as the big kick off of the project.

"We began back in 2003 to do a mitigation plan," said Filchak. "We had a grant from FEMA to do that, and we didn't finish. Now we've circled back, and we're committed to putting one in place — we've allocated time and resources to do so this fiscal year. If it goes into the next fiscal

year, that's fine too, but we want to get it on the books and done."

Filchak stressed the most important factor in the plan is complete participation by all 12 NECCOG towns — something that had many NCEMC members nervous with various other commitments already in place. For monies to be granted by FEMA, all towns must actively participate in the process.

"The plan has to demonstrate that as a region, all of these 12 communities were actively engaged," said Filchak. "You can't tag along for the ride and reap the benefits."

With the grant money, the towns would be able to work on projects that would deter the natural disasters from causing more damage than necessary. There is also other grant money available through various state programs to work on little projects, such as tree trimming.

"NECCOG has been talking about even setting up a regional tree trimming program — getting aggressive with that using some grant money that's available through the state," said Filchak. "When you go down the roads, you can see how many branches are just sitting there on the wires."

While the National Weather Service predicts a harsher winter than last, other natural disasters may not be too far off.

"We've been caught off guard by two big storms," said Filchak. "Connecticut has its Natural Hazards Mitigation Plan, and one of the things that made me a little nervous when I went through it is that all of our towns are blank."

NECCOG will be presented information about the working hazard mitigation plan at its December meeting.

Students raising money for trip with 'Pomfretopoly'

TRIP

continued from page 1

Pomfretopoly games for \$30 each, with 100 percent of that sale money going into student accounts for the trip. Parent volunteer Mindy Hudon, whose twin boys Marshall and Mitchell will be taking the trip this year, came up with the idea of Pomfretopoly. "After our meeting in June with Jan, she said she would like other fundraisers and so I went home and Googled

unique fundraisers and this 'townopoly' thing came up," said Hudon. "This was the only thing that seemed interesting to me."

Organizers are also holding an art contest as part of the Pomfretopoly fundraiser.

"We're looking for artists or photographers to submit photographs or artwork for the center of the board and the game cover," said Hudon. "I'm hoping we get people to enter and that we get a lot of different options."

There is a \$25 donation fee to enter the contest. Pomfret Community School teachers will choose the winning entries.

Pomfret Community School eighth graders have been taking an annual four-day trip to Washington, D.C., since 1976. This year, the trip will cost \$750 per student and, while parents do contribute some money to the trip, Rondeau and other organizers have asked them to refrain from simply handing

their children checks for the entire amount. Instead, students are encouraged to earn the money by working at one of the many fundraisers held throughout the year. Any money earned is placed into individual student accounts and kept track of by the school secretary.

"Every student earns the trip," said Rondeau. "We want them to own it."

Hudon admitted her first reaction was to just hand her boys the money until she attended an open house about the trip.

"They said 'No, we want them to earn it,'" she said. "So, I've been booking them to work everywhere."

In addition to Pomfretopoly, students have earned money by working at the Pomfret corn maze, having an apple booth at Positively Pomfret and selling butter braids, to name only a few of the fundraising events.

This year, 55 eighth graders will make the trip.

"No student is left behind," Rondeau said, adding that anonymous donations and community support often make up the financial difference for students whose families are not able to contribute financially.

"Pomfret basically knows — 8th grade, Washington, D.C. — May comes along, that's what it is," Rondeau added. "We have an outpouring of support for this trip, immensely, in Pomfret. It's an icon."

Rondeau said that although organizing 55 restless eighth graders into an organized trip is a lot of work and sometimes stressful, she does it because "I love watching the kids in D.C. It's just an amazing sight to see these kids and see their expressions."

The kids are excited too. "I think it is a great thing that 8th graders get to do this

every year," said Mitchell Hudon. "It makes students look forward to becoming an 8th grader. I believe that this trip is the greatest thing ever."

The Pomfretopoly game is available for preorder at the Vanilla Bean, Celebrations and Hazlewood in Pomfret and will also be available for preorder from PCS eighth grade students after the holidays. Completed games will be ready in March 2012. Artists and photographers interested in entering the art contest portion of the fundraiser or those interested in purchasing space on the board should contact Mindy Hudon at mhtalkalot@aol.com.

Terri Viani may be reached at (860) 928-1818, ext. 110, or by e-mail at twiani@villagernewspapers.com.



POLICE LOG

Editor's Note: The information contained in these police logs was obtained through either press releases or other public documents kept by each police department, and is considered to be the account of police. All subjects are considered innocent until proven guilty in a court of law.

TROOP D POLICE LOGS KILLINGLY

WEDNESDAY, NOV. 9

Justin Adams, 27, of 122 Lewis Blvd, Danielson, was charged with criminal violation of protective order.

Charles Fogue, 26, of 84 Kenneth Drive, Dayville, was charged with larceny 6th.

Luis Thomas, 19, of 30 Proulx St., Brooklyn, was charged with larceny 6th.

THURSDAY, NOV. 10

Mathew Johnson, 26, of 171 Valley Road, Danielson, was charged with violation of probation.

Alan Kindler, 53, of 40 Fairmount St., Putnam, was charged with reckless endangerment 1st and illegal use of a firearm under the influence.

Jason Billings, 35, of 120 North St., Danielson, was charged with criminal violation of restraining order.

SATURDAY, NOV. 12

Andre Dugas, 26, of 290 Putnam Road, Wauregan, was charged with procure possession of liquor.

Cheryl Ezzell, 50, of 31 Shepard Hill Road, Danielson, was charged with procure possession of liquor, risk of injury to child, and interfering with an emergency call.

Daniel O'Leary, 18, of 31 Shepard Hill Road, Danielson, was charged with procure possession of liquor, and impairing the morals of children.

Gary Phillios, 38, of 15 Moosup Gardens Road, Plainfield, was charged with larceny 4th.

Mark Jerioski, 27, of 14 Blumenthal Drive, Killingly, was charged with disorderly conduct, assault 2nd, operating under the influence, and failure to obey control signal.

MONDAY, NOV. 14

Michael Saddler, 35, of 109 Lewis Blvd, Killingly was charged with violation of probation.

Rebecca Baker, 34, of 313 Hampton Road, Chaplin, was charged with violation of probation.

DANIELSON

WEDNESDAY, NOV. 10

Ryan Plouf, 23, of 20 Central Street, Danielson was charged with possession of heroin and intent to sell.

Jason Denham, 39, of 24 Goddard Road, Webster, Mass., was charged with failure to appear 2nd.

BROOKLYN

MONDAY, NOV. 14

Matthew Gilmartin, 53, of 49 Quebec Square, Brooklyn, was charged with burglary 3rd, breach of peace, and interfering with an emergency call.

PUTNAM POLICE DEPARTMENT LOGS

WEDNESDAY, NOV. 9

Michael Neuman, 21, of Corrigan Correctional Institute, was charged with burglary 3rd, larceny 4th, and criminal mischief 2nd

THURSDAY, NOV. 10

Ralph Lechause, 49, of 39 Elmdale Road, Canterbury, was charged with operating under suspension, passing in a no passing zone, and traveling too fast for conditions.

Alfred Cournoyer, 58, of 44 Myers St., Putnam, was charged with disorderly conduct.

FRIDAY, NOV. 11

Kristyn Laplante, 48, of 7 Summit Drive, Wallingford, was charged with operating under the influence, failure to drive right, interfering with police, and driving with a head light out.

SATURDAY, NOV. 12

Kurt Woehrman, 48, of 122 Powhattan St., Putnam, was charged with driving under the influence and evading responsibility.

SUNDAY, NOV. 13

James Campbell, 25, of 5 Brookside Lane, Woodstock, was charged with assault 3rd and disorderly conduct.

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Gnarly Head Zinfandel	\$8.99
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Jazy Jack or Jill Moscato	\$8.99
Black Oak Zinfandel	\$6.99 ea. or 2/ \$12.00
Schmitt Sohne QBA Riesling	\$7.99

Wine Tastings Tues. & Wed.

BEER

Bud or Bud Lite 24 pk, bottles, loose case	\$17.99 + dep
Becks 24 pk, Loose bottles case	\$19.99 + dep
Smully Nose 12 pk bottles all varieties	\$13.99 + dep
Molson 12 pk bottles all varieties	\$11.99 + dep
Natural Regular or Light 30 pk cans	\$15.99 + dep
Coors Light 24 pk loose suitcase	\$16.99 + dep
Busch & Busch Light 16 oz. 18 pk cans	\$11.99 + dep
Miller Lite 24 pk loose cans	\$16.99 + dep
Corona Regular or Light 18 pk bottles	\$17.99 + dep
Narragansett 12 pk bottles	\$9.99 + dep

SPIRITS

Svedka Vodka 1.75 All flavors	\$14.99 after MIR
Sky Vodka 1.75.....	\$16.99 after MIR
Russian Standard Vodka 1.75	\$17.99 after MIR
Ketel One Vodka 1.75	\$34.99
Stolichnaya Vodka 1.75	\$28.99
Belvedere Vodka 1.75	\$41.99
Seagrams Gin 1.75	\$16.99
Blackbeard Spiced Rum 1.75	\$24.99
Malibu Rum 1.75	\$24.99
Frangelico Gift Sets 750.....	\$19.99
Jagermeister 750	\$17.99
Café Patron 1.75	\$42.99
Botticelli Gourmet Cappuccino Liqueur w/ Glasses	\$14.99
José Cuervo Silver or Gold 1.75	\$16.99
Baileys All flavors 750	\$24.99
Canadian Mist 1.75	\$16.99

American Owned & Operated

Appendix 7

jbutler@seccog.org

Mon, Dec 08, 2014 11:01 am

Jim,

Could you please forward this message along to your staff.

The 2015 NECCOG Regional Hazard Mitigation Plan is nearing completion. However, we would like to offer neighboring Councils of Government the opportunity to offer information and suggestions relative to hazard data and methodology in the draft document. All suggestions will be heard and considered when assessing regional risks and the specific vulnerabilities of our 16 towns.

The draft can be found at <http://neccog.org/programs-services/natural-hazard-mitigation-plan-formulation/> and those interested in offering input are encouraged to call or email me.

Thank you very much,
Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@neccog.org

lwrap@crcog.org

Mon, Dec 08, 2014 10:46 am

Mr. Wray,

Would you please forward this message along to the CRCOG staff.

The 2015 NECCOG Regional Hazard Mitigation Plan is nearing completion. However, we would like to offer neighboring Councils of Government the opportunity to offer information and suggestions relative to hazard data and methodology in the draft document. All suggestions will be heard and considered when assessing regional risks and the specific vulnerabilities of our 16 towns.

The draft can be found at <http://neccog.org/programs-services/natural-hazard-mitigation-plan-formulation/> and those interested in offering input are encouraged to call or email me. Additional sections will be updated as completed and I would be happy to supply drafted sections or appendices that are not currently available at neccog.org.

Thank you very much,

Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@neccog.org

kevin.flynn@doa.ri.gov

Mon, Dec 08, 2014 11:26 am

Mr. Flynn,

My name is Sam Alexander, from the Northeastern Connecticut Council of Governments--the regional planning entity for Connecticut's northeast corner. I was wondering if you could forward this message along to the Rhode Island Division of Planning.

The Northeastern Connecticut Council of Governments is nearing completion of its 2015 Regional Hazard Mitigation Plan. At this time, we are reaching out to neighboring Councils of Governments and, in Rhode Island's case, state planning agencies, to allow an opportunity to offer information and suggestions relative to natural hazard data and methodology in the draft document. All suggestions will be heard and considered when assessing regional risks and the specific vulnerabilities of our 16 towns--five of which border Rhode Island.

The draft can be found at <http://necog.org/programs-services/natural-hazard-mitigation-plan-formulation/> and those interested in offering input are encouraged to call or email me. I would be happy to supply additional information, sections, and appendices upon request.

Thank you very much for your time,

Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@necog.org

igallagher@pvpc.org

Mon, Dec 08, 2014 1:33 pm

Ms. Gallagher,

My name is Sam Alexander from the Northeastern Connecticut Council of Governments. Could you please forward this message along to PVPC staff.

The 2015 Northeastern Connecticut Council of Governments is nearing completion of its 2015 Regional Hazard Mitigation Plan. At this time, we would like to offer nearby planning organizations the opportunity to offer suggestions relative to hazard data and methodology in the draft document. All suggestions will be heard and considered when assessing regional risks and the specific vulnerabilities of our 16 towns--one of which, Union, borders Holland and Wales.

A current draft can be found at <http://neccog.org/programs-services/natural-hazard-mitigation-plan-formulation/>, and those interested in offering input are encouraged to call or email me. I would be happy to supply any additional information, text, or appendices that are not currently available at neccog.org.

We expect to submit a completed plan in January, 2015.

Thank you,

Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@neccog.org

ladams@cmrpc.org

Mon, Dec 08, 2014 10:54 am

Mr. Adams,

My name is Sam Alexander from the Northeastern Connecticut Council of Governments. Could you please forward this message along to the CMRPC staff.

The 2015 Northeastern Connecticut Council of Governments is nearing completion of its 2015 Regional Hazard Mitigation Plan. At this time, we would like to offer neighboring planning organizations the opportunity to offer information and suggestions relative to hazard data and methodology in the draft document. All suggestions will be heard and considered when assessing regional risks and the specific vulnerabilities of our 16 towns.

A current draft can be found at <http://neccog.org/programs-services/natural-hazard-mitigation-plan-formulation/>, and those interested in offering input are encouraged to call or email me. I would be happy to supply any additional information, text, or appendices that are not currently available at neccog.org.

Thank you very much and have a great day,

Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@neccog.org

sgtprochaska@staffordct.org, nsedlak@cox.net, "Stuart Cobb"
<scobb@willingtonfire.org>, oem@mansfieldct.org, mlicata@windhamct.org, chief24@hotmail.com, JPArpin@aol.com,
firemarshal@griswold-ct.org, EOC@northstonyingtonct.gov

Mon, Dec 08, 2014 9:57 am

Good Morning,

The Northeastern Connecticut Council of Governments is in the process of drafting its 2015 Hazard Mitigation Plan. A current draft of the plan is available at <http://necog.org/programs-services/natural-hazard-mitigation-plan-formulation/> for download.

If you would like to offer input into the plan's methodology, data, and scope, I would be happy to hear you and consider additions to our plan. Please feel free to contact me directly.

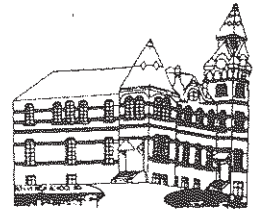
Thank you,
Samuel Alexander
Regional Project Analyst
Northeastern Connecticut Council of Governments
860.774.1253 x22
samuel.alexander@necog.org

Appendix 8



TOWN OF PUTNAM

TOWN HALL
126 CHURCH STREET
PUTNAM, CONNECTICUT 06260



MEMORANDUM

TO: John Filchak
FROM: Doug Cutler
DATE: December 10, 2012
RE: Regional Hazard Mitigation Plan

Per your December 3 email, the Town of Putnam is submitting the following two activities for inclusion under the Regional Hazard Mitigation Plan:

Simonzi Park – The town has conducted engineering design work for streambank stabilization/remediation of approximately 1,000 feet streambank on the Quinebaug River fronting Simonzi Park. The river at this point is causing significant streambank erosion that is left to continue would endanger a number of town critical infrastructure improvements, including Simonzi Park, the Putnam River Trail, Kennedy Drive (a major connector road from I-395 to our downtown), and water and sewer lines. Engineering design and plans have been completed for streambank stabilization at the Park.

531 Providence Pike – Recent improvements to a curve on Route 44 increased the impervious surface area causing an increase in runoff draining onto the property at this address of Robert Schellinger. During periods of heavy rains, water floods his property and has caused extensive damage to his house and personal property. The water drains from Route 44 into a culvert that then directs the water to a natural collection point behind Mr. Schellinger’s property.

Please include these projects into the Natural Hazard Mitigation Plan. Should you have any questions, please feel free to get in touch with me.

Town of Putnam is an Affirmative Action/Equal Opportunity Employer

Mayor’s Office 963-6800	Economic Development . . . 963-6834	Planning Commission 963-6803	Town Clerk 963-6807
Animal Control 963-6804	Fire Marshall 963-6805	Public Works 963-6813	Town Hall Fax 963-6814
Assessor 963-6802	Inland-Wetlands 963-6803	Revenue Collector 963-6806	Treasurer 963-6809
Building/Zoning 963-6803	Parks & Recreation 963-6811	Refuse & Recycling 963-6818	ZBA Commission 963-6803

Appendix 9

Location	County/Zone	State	Date	Time	Event Type	Deaths	Injuries	Property Damage	Crop Damage	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/19/1996	14:00	Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	4/16/1996	10:30	Flash Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	4/16/1996	13:05	Flash Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	1/24/1998	2:30	Flash Flood	0	0	0.00K	0.00K	
WARRENVILLE	WINDHAM CO.	CT	3/9/1998	16:00	Flash Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	3/9/1998	2:00	Flood	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/9/1998	20:30	Flood	0	0	0.00K	0.00K	
PUTNAM	WINDHAM CO.	CT	6/14/1998	13:30	Flash Flood	0	0	0.00K	0.00K	
NORTHEAST PORTION	NEW LONDON CO.	CT	6/18/1998	16:00	Flash Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	1/15/1999	11:00	Flash Flood	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/22/2001	6:00	Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	3/30/2001	11:45	Flood	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/30/2001	18:30	Flood	0	0	0.00K	0.00K	
HAMPTON	WINDHAM CO.	CT	6/17/2001	14:54	Flash Flood	0	0	0.00K	0.00K	
COUNTYWISE	NEW LONDON CO.	CT	6/17/2001	14:07	Flash Flood	0	0	0.00K	0.00K	
VOLUNTOWN	NEW LONDON CO.	CT	4/13/2004	18:30	Flash Flood	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/8/2005	10:15	Flood	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	10/15/2005	7:30	Flood	1	0	600.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/15/2005	21:00	Flood	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/15/2005	0:50	Flood	0	0	100.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/15/2005	3:00	Flood	0	0	300.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/15/2005	7:09	Flood	1	0	500.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/15/2005	8:25	Flood	0	0	50.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/15/2005	9:05	Flood	0	0	250.00K	0.00K	
WILLIMANTIC	WINDHAM CO.	CT	10/28/2006	15:00	Flood	0	0	2.00K	0.00K	
WINDHAM	WINDHAM CO.	CT	2/13/2008	16:50	Flood	0	0	20.00K	0.00K	
WINDHAM	WINDHAM CO.	CT	3/8/2008	13:50	Flood	0	0	0.00K	0.00K	
WINDHAM	WINDHAM CO.	CT	6/27/2009	19:19	Flash Flood	0	0	30.00K	0.00K	
WOODSTOCK	WINDHAM CO.	CT	3/29/2010	20:40	Flood	0	0	0.00K	0.00K	
EAST NEW LONDON	NEW LONDON CO.	CT	3/29/2010	18:00	Flood	0	0	260.00K	0.00K	
NEW LONDON CO.	NEW LONDON CO.	CT	6/23/2011	13:36	Flash Flood	0	0	0.00K	0.00K	
WEST WOODSTOCK	WINDHAM CO.	CT	6/18/2013	15:40	Flash Flood	0	0	15.00K	0.00K	
NEW LONDON CO.	NEW LONDON CO.	CT	9/2/2013	12:05	Flash Flood	0	0	0.00K	0.00K	
NEW LONDON CO.	NEW LONDON CO.	CT	9/2/2013	12:30	Flash Flood	0	0	0.00K	0.00K	
ALMYVILLE	WINDHAM CO.	CT	3/30/2014	14:50	Flood	0	0	0.00K	0.00K	
Location	County/Zone	State	Date	Time	Event Type	Wind Speed	Deaths	Injuries	Property Damage	Crop Damage
WINDHAM CO.	WINDHAM CO.	CT	7/14/1956	11:00	Thunderstorm Wind	58 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/30/1960	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/7/1966	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/20/1968	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	5/29/1969	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/8/1971	16:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	6/8/1971	17:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	7/5/1974	16:00	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	3/13/1976	13:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	11/17/1977	18:33	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/19/1978	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/10/1979	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/3/1980	16:15	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/13/1984	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/13/1984	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	6/13/1984	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/7/1984	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	5/13/1985	18:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

TOLLAND CO.	TOLLAND CO.	CT	6/20/1985	16:26	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/20/1985	16:55	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/24/1985	12:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	9/6/1985	16:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/8/1986	8:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	7/25/1987	13:00	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/12/1988	18:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	10/14/1989	20:45	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/20/1990	19:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	10/18/1990	19:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	10/18/1990	20:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	10/18/1990	21:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/12/1991	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/12/1991	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/12/1991	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	6/12/1991	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	6/12/1991	15:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/16/1991	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/21/1991	15:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/23/1991	15:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/27/1992	14:58	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	7/14/1992	16:55	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/14/1992	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/14/1992	16:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/14/1992	17:51	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/4/1992	14:33	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/11/1992	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	8/11/1992	14:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	8/11/1992	15:25	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Putnam	WINDHAM CO.	CT	8/28/1993	15:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Scotland	WINDHAM CO.	CT	8/28/1993	15:25	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
Pomfret	WINDHAM CO.	CT	9/3/1993	22:42	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	9/3/1993	22:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
N Portion	WINDHAM CO.	CT	7/8/1994	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Woodstock	WINDHAM CO.	CT	7/28/1995	1:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Plainfield	WINDHAM CO.	CT	8/4/1995	17:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Eastford	WINDHAM CO.	CT	8/12/1995	18:36	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	7/19/1999	13:35	Lightning		0	0	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/19/1999	12:50	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
CANTERBURY	WINDHAM CO.	CT	7/19/1999	13:14	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	7/19/1999	16:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
MOOSUP	WINDHAM CO.	CT	7/23/1999	18:35	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	8/5/1999	14:50	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/2/2000	17:17	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
HAMPTON	WINDHAM CO.	CT	8/10/2000	1:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/10/2001	17:35	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	8/10/2001	12:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	8/10/2001	13:32	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	5/31/2002	17:30	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
ASHFORD	WINDHAM CO.	CT	8/2/2002	15:12	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	8/16/2002	14:05	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/22/2003	17:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	8/21/2004	7:25	Lightning		0	2	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	8/21/2004	13:25	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	8/5/2005	16:13	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K

WOODSTOCK	WINDHAM CO.	CT	8/13/2005	19:10	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/1/2006	17:02	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/3/2006	16:30	Thunderstorm Wind	61 kts. EG	0	0	50.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	7/18/2006	20:32	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
DANIELSON	WINDHAM CO.	CT	7/18/2006	20:59	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
VOLUNTOWN	NEW LONDON CO.	CT	7/18/2006	21:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	8/2/2006	16:40	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
KILLINGLY CENTER	WINDHAM CO.	CT	8/2/2006	17:30	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
EASTFORD	WINDHAM CO.	CT	5/16/2007	16:05	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	10/20/2007	1:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	10/20/2007	1:10	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
STERLING	WINDHAM CO.	CT	3/5/2008	6:10	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
NORTH GROSVENOR DALE	WINDHAM CO.	CT	4/1/2008	22:04	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
UNION	TOLLAND CO.	CT	7/1/2008	18:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/3/2008	17:18	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/27/2008	16:17	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
THOMPSON	WINDHAM CO.	CT	9/9/2008	11:25	Thunderstorm Wind	50 kts. EG	0	0	7.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/7/2009	14:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
CHAPLIN	WINDHAM CO.	CT	7/7/2009	14:00	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	5/4/2010	16:24	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/10/2010	17:45	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
EASTFORD	WINDHAM CO.	CT	6/10/2010	17:56	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	6/10/2010	18:15	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
NORTH GROSVENOR DALE	WINDHAM CO.	CT	7/21/2010	15:45	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/24/2010	14:47	Lightning		0	0	10.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/24/2010	14:47	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/9/2011	0:40	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
ASHFORD	WINDHAM CO.	CT	12/22/2011	0:00	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
STERLING	WINDHAM CO.	CT	12/22/2011	0:02	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
CANTERBURY	WINDHAM CO.	CT	6/22/2012	15:45	Thunderstorm Wind	50 kts. EG	0	0	30.00K	0.00K
SCOTLAND	WINDHAM CO.	CT	6/22/2012	15:45	Thunderstorm Wind	50 kts. EG	0	0	30.00K	0.00K
VOLUNTOWN	NEW LONDON CO.	CT	7/1/2012	15:30	Thunderstorm Wind	61 kts. EG	0	0	7.50K	0.00K
POMFRET	WINDHAM CO.	CT	7/20/2013	13:55	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
KILLINGLY CENTER	WINDHAM CO.	CT	7/20/2013	14:24	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	7/20/2013	14:30	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
SOUTH KILLINGLY	WINDHAM CO.	CT	7/20/2013	14:40	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/3/2014	20:40	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
Location	County/Zone	State	Date	Time	Event Type	Wind Speed	Deaths	Injuries	Property Damage	Crop Damage
TOLLAND CO.	TOLLAND CO.	CT	8/20/1951	15:30	Tornado	F2	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	5/10/1954	8:30	Tornado	F3	0	2	25.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	7/14/1956	11:00	Thunderstorm Wind	58 kts.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/8/1956	15:30	Tornado	F0	0	0	0.25K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	9/7/1958	15:10	Tornado	F2	0	2	250.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	4/26/1961	10:15	Tornado	F1	0	0	2.50K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/19/1965	16:05	Tornado	F2	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/17/1968	17:00	Tornado	F1	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	9/18/1973	11:08	Tornado	F1	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	7/5/1974	16:00	CST	Thunderstorm Wind	50 kts.	0	0	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/3/1980	16:15	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/24/1985	11:45	Tornado	F1	0	0	2.500M	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/26/1985	12:45	Tornado	F1	0	0	0.25K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	7/25/1987	13:00	CST	Thunderstorm Wind	60 kts.	0	0	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	10/14/1989	20:45	CST	Thunderstorm Wind	50 kts.	0	0	0.00K
WINDHAM CO.	WINDHAM CO.	CT	7/14/1992	16:30	Tornado	F1	0	0	0.00K	0.00K
Scotland	WINDHAM CO.	CT	8/28/1993	15:25	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/19/1996	14:00	High Wind	50 kts.	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/19/1996	14:00	High Wind	50 kts.	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/27/1996	12:00	High Wind	50 kts.	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/27/1996	12:00	High Wind	50 kts.	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/25/1996	7:30	High Wind	50 kts.	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/25/1996	7:30	High Wind	50 kts.	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/6/1997	14:29	EST	High Wind	50 kts.	0	0	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/6/1997	13:00	High Wind	65 kts.	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	11/11/1998	7:30	EST	High Wind	55 kts.	0	0	0.00K
CANTERBURY	WINDHAM CO.	CT	7/19/1999	13:14	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	7/19/1999	16:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/19/1999	12:50	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
MOOSUP	WINDHAM CO.	CT	7/23/1999	18:35	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	8/5/1999	14:50	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/2/2000	17:17	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
HAMPTON	WINDHAM CO.	CT	8/10/2000	1:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/12/2000	10:45	EST	High Wind	50 kts. E	0	0	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/17/2000	11:00	High Wind	50 kts. E	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/17/2000	11:00	High Wind	50 kts. E	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/10/2001	17:35	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	8/10/2001	13:32	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	8/10/2001	12:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	5/31/2002	17:30	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
ASHFORD	WINDHAM CO.	CT	8/2/2002	15:12	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	8/16/2002	14:05	Thunderstorm Wind	50 kts. E	0	0	2.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/22/2003	17:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/27/2003	18:00	High Wind	50 kts. EG	0	0	25.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/13/2003	19:00	High Wind	50 kts. EG	0	0	50.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	11/13/2003	19:00	High Wind	50 kts. EG	0	0	50.00K	0.00K
ASHFORD	WINDHAM CO.	CT	8/21/2004	13:25	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/1/2004	13:00	High Wind	58 kts. EG	0	0	25.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/8/2005	20:00	High Wind	50 kts. EG	0	1	45.00K	0.00K
SOUTH WINDHAM	WINDHAM CO.	CT	7/19/2005	16:45	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	8/5/2005	16:13	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	8/13/2005	19:10	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	9/29/2005	11:10	High Wind	58 kts. EG	0	0	20.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	9/29/2005	12:44	Strong Wind	40 kts. EG	0	0	10.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/25/2005	5:56	EST	Strong Wind	42 kts. EG	0	0	1.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	10/25/2005	12:06	High Wind	58 kts. EG	0	0	15.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/18/2006	10:44	EST	High Wind	50 kts. MG	0	0	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/18/2006	9:45	High Wind	58 kts. EG	0	0	50.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/18/2006	10:33	High Wind	36 kts. MS	0	0	10.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/18/2006	11:33	High Wind	58 kts. EG	0	0	35.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/18/2006	9:45	High Wind	58 kts. MG	0	0	75.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/17/2006	14:06	EST	High Wind	53 kts. EG	0	0	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/1/2006	17:02	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/3/2006	16:30	Thunderstorm Wind	61 kts. EG	0	0	50.00K	0.00K
VOLUNTOWN	NEW LONDON CO.	CT	7/18/2006	21:00	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K
BROOKLYN	WINDHAM CO.	CT	7/18/2006	20:32	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
DANIELSON	WINDHAM CO.	CT	7/18/2006	20:59	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
KILLINGLY CENTER	WINDHAM CO.	CT	8/2/2006	17:30	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
THOMPSON	WINDHAM CO.	CT	8/2/2006	16:40	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/29/2006	9:30	High Wind	50 kts. EG	0	0	10.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	10/29/2006	11:47	High Wind	50 kts. EG	0	0	8.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/1/2006	20:30	EST-5	High Wind	50 kts. EG	0	0	0.00K

TOLLAND (ZONE)	TOLLAND (ZONE)	CT	4/15/2007	21:49	Strong Wind	40 kts. EG	0	0	5.00K	0.00K
EASTFORD	WINDHAM CO.	CT	5/16/2007	16:05	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	10/20/2007	1:10	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	10/20/2007	1:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STERLING	WINDHAM CO.	CT	3/5/2008	6:10	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/8/2008	18:18	Strong Wind	42 kts. MG	0	0	10.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/8/2008	21:43	High Wind	51 kts. MG	0	0	0.00K	0.00K
NORTH GROSVENOR DALE	WINDHAM CO.	CT	4/1/2008	22:04	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
UNION	TOLLAND CO.	CT	7/1/2008	18:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/3/2008	17:18	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/27/2008	16:17	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
THOMPSON	WINDHAM CO.	CT	9/9/2008	11:25	Thunderstorm Wind	50 kts. EG	0	0	7.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/25/2008	16:34	Strong Wind	43 kts. MG	0	0	0.20K	0.00K
CHAPLIN	WINDHAM CO.	CT	7/7/2009	14:00	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/7/2009	14:00	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/3/2009	6:53	High Wind	50 kts. EG	0	0	5.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/25/2010	9:00	EST-5	Strong Wind	47 kts. EG	0	0	30.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/13/2010	17:00	High Wind	50 kts. EG	0	0	50.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	4/29/2010	14:00	EST-5	Strong Wind	40 kts. EG	0	0	100.00K
PLAINFIELD	WINDHAM CO.	CT	5/4/2010	16:24	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
EASTFORD	WINDHAM CO.	CT	6/10/2010	17:56	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	6/10/2010	18:15	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/10/2010	17:45	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
NORTH GROSVENOR DALE	WINDHAM CO.	CT	7/21/2010	15:45	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/24/2010	14:47	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/16/2010	9:00	EST-5	Strong Wind	40 kts. EG	0	0	100.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/1/2010	14:14	Strong Wind	40 kts. EG	0	0	30.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/19/2011	11:13	High Wind	51 kts. MG	0	0	20.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	6/9/2011	0:40	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
ASHFORD	WINDHAM CO.	CT	12/22/2011	0:00	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
STERLING	WINDHAM CO.	CT	12/22/2011	0:02	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/27/2011	22:00	High Wind	53 kts. EG	0	0	3.00K	0.00K
CANTERBURY	WINDHAM CO.	CT	6/22/2012	15:45	Thunderstorm Wind	50 kts. EG	0	0	30.00K	0.00K
SCOTLAND	WINDHAM CO.	CT	6/22/2012	15:45	Thunderstorm Wind	50 kts. EG	0	0	30.00K	0.00K
VOLUNTOWN	NEW LONDON CO.	CT	7/1/2012	15:30	EST-5	Thunderstorm Wind	61 kts. EG	0	0	7.50K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/29/2012	10:00	EST-5	High Wind	61 kts. EG	0	0	1.000M
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/29/2012	14:52	High Wind	50 kts. EG	1	2	439.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	10/29/2012	11:47	High Wind	53 kts. EG	0	0	438.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/26/2012	23:00	EST-5	High Wind	50 kts. EG	0	0	2.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/31/2013	3:00	EST-5	High Wind	50 kts. EG	0	0	50.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/31/2013	4:57	High Wind	50 kts. EG	0	0	20.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/31/2013	3:52	High Wind	52 kts. MG	0	0	15.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	7/20/2013	14:30	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
KILLINGLY CENTER	WINDHAM CO.	CT	7/20/2013	14:24	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/20/2013	13:55	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
SOUTH KILLINGLY	WINDHAM CO.	CT	7/20/2013	14:40	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/27/2013	7:20	Strong Wind	35 kts. EG	0	0	15.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/3/2014	20:40	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	8/13/2014	9:25	Strong Wind	45 kts. EG	0	0	5.00K	0.00K
Location	County/Zone	State	Date	Time	Event Type	Deaths	Injuries	Property Damage	Crop Damage	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/2/1996	21:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/2/1996	21:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/3/1996	4:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/7/1996	16:00	Blizzard	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/7/1996	16:00	Heavy Snow	0	0	0.00K	0.00K	

WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/7/1996	16:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/2/1996	22:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/2/1996	22:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/3/1996	0:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/16/1996	12:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/16/1996	12:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/2/1996	7:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/2/1996	10:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/2/1996	10:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/3/1996	4:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/3/1996	4:00	Winter Weather	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/7/1996	10:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/7/1996	10:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	4/7/1996	18:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	4/7/1996	18:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	4/9/1996	16:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	4/9/1996	18:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	4/9/1996	18:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/6/1996	5:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/6/1996	5:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/7/1996	16:00	Heavy Snow	0	0	2.000M	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/7/1996	16:00	Heavy Snow	0	0	1.000M	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/24/1997	18:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/24/1997	18:00	Winter Weather	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/14/1997	8:00	Ice Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/31/1997	15:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/31/1997	15:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	4/1/1997	6:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	4/1/1997	0:00	Heavy Snow	0	0	500.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	4/1/1997	0:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/10/1997	15:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/23/1997	9:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/23/1997	9:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/15/1998	16:00	Ice Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/15/1998	16:00	Ice Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/21/1998	22:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/25/1999	19:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/25/1999	0:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/25/1999	0:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/15/1999	5:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/15/1999	0:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/15/1999	0:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/20/1999	9:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/20/1999	9:00	Winter Weather	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/13/2000	6:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/13/2000	6:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/17/2000	3:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/21/2000	14:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/25/2000	6:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/25/2000	6:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/18/2000	21:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/18/2000	11:30	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/18/2000	11:30	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/26/2000	4:30	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	11/26/2000	4:30	Winter Weather	0	0	0.00K	0.00K

TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/30/2000	13:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/30/2000	13:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/20/2001	21:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/20/2001	21:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/21/2001	10:30	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/30/2001	6:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/30/2001	6:00	Winter Weather	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/5/2001	16:15	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/5/2001	14:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/5/2001	14:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/25/2001	5:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/25/2001	5:00	Winter Weather	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/5/2001	23:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/5/2001	13:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/5/2001	13:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/9/2001	15:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/9/2001	15:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/16/2002	22:00	Ice Storm	0	0	500.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	11/27/2002	8:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/27/2002	1:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	11/27/2002	2:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/5/2002	18:30	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/5/2002	10:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/5/2002	10:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/3/2003	14:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/3/2003	14:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/7/2003	14:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/7/2003	5:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/7/2003	5:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/17/2003	12:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/17/2003	10:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/17/2003	10:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/6/2003	17:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/6/2003	10:00	Winter Storm	0	0	50.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/6/2003	10:00	Winter Storm	0	0	50.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/5/2003	22:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/5/2003	22:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/6/2003	12:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/27/2004	19:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/27/2004	19:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/28/2004	5:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/5/2005	9:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/5/2005	9:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/6/2005	10:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/8/2005	7:00	Winter Storm	0	0	50.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/8/2005	7:00	Winter Storm	0	0	50.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/22/2005	21:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/22/2005	15:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/22/2005	15:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/24/2005	18:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/24/2005	18:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/25/2005	1:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/1/2005	0:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/1/2005	0:00	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/8/2005	16:00	Winter Weather	0	0	0.00K	0.00K

WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/23/2005	19:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/24/2005	7:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/9/2005	14:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/3/2006	8:30	Heavy Snow	0	0	15.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/3/2006	9:50	Heavy Snow	0	0	5.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/12/2006	10:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/12/2006	4:00	Winter Storm	0	0	10.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/12/2006	4:30	Winter Storm	0	0	10.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/2/2006	18:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/13/2007	23:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/13/2007	23:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/16/2007	11:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/16/2007	12:00	Winter Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/13/2007	11:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/13/2007	11:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/14/2008	3:03	Heavy Snow	0	0	25.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/14/2008	3:06	Heavy Snow	0	0	16.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/22/2008	12:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/19/2008	13:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/19/2008	13:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/19/2008	13:29	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/31/2008	9:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/31/2008	10:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/6/2009	21:00	Ice Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/7/2009	9:25	Winter Weather	0	0	5.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/1/2009	21:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/1/2009	23:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/1/2009	23:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/19/2009	22:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/19/2009	20:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/19/2009	20:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/10/2010	8:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/16/2010	16:41	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/26/2010	11:30	Blizzard	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/26/2010	12:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/26/2010	11:30	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/7/2011	20:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/11/2011	23:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/11/2011	23:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/12/2011	0:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/21/2011	3:00	Winter Storm	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/21/2011	3:30	Winter Storm	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/26/2011	10:30	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/26/2011	19:00	Heavy Snow	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/26/2011	14:00	Heavy Snow	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/1/2011	4:00	Ice Storm	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/1/2011	6:30	Winter Storm	0	0	850.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/1/2011	7:00	Winter Storm	0	0	500.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/8/2011	6:00	Winter Weather	0	0	0.00K	0.00K
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	10/29/2011	12:00	Heavy Snow	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	10/29/2011	12:00	Heavy Snow	0	0	3.000M	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	10/29/2011	12:00	Winter Weather	0	0	0.00K	0.00K
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/16/2012	22:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/16/2012	23:00	Winter Weather	0	0	0.00K	0.00K
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/19/2012	21:00	Winter Weather	0	0	0.00K	0.00K

NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/21/2012	5:30	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/21/2012	8:00	Winter Weather	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/21/2012	8:00	Winter Weather	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/24/2012	1:00	Winter Weather	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/29/2012	12:00	Winter Weather	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/29/2012	12:00	Winter Weather	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	11/7/2012	14:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	11/7/2012	15:00	Winter Weather	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	12/29/2012	13:30	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/29/2012	14:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	12/29/2012	14:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/8/2013	18:00	Blizzard	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/8/2013	12:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/8/2013	11:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	3/7/2013	17:50	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/7/2013	4:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/7/2013	4:00	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	3/18/2013	20:00	Winter Weather	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	3/18/2013	22:00	Winter Weather	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	12/14/2013	17:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/2/2014	6:00	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	1/2/2014	0:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/2/2014	2:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	1/21/2014	12:30	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	1/21/2014	13:00	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/5/2014	3:00	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/5/2014	3:00	Heavy Snow	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	2/13/2014	1:30	Heavy Snow	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	2/13/2014	6:30	Heavy Snow	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	2/13/2014	6:30	Heavy Snow	0	0	0.00K	0.00K	
Location	County/Zone	State	Date	Time	Event Type	Deaths	Injuries	Property Damage	Crop Damage	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	9/6/2008	14:00	Tropical Storm	0	0	4.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	8/28/2011	5:49	Tropical Storm	0	0	20.000M	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	8/28/2011	5:56	Tropical Storm	0	0	20.000M	0.00K	
Location	County/Zone	State	Date	Time	Event Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
TOLLAND CO.	TOLLAND CO.	CT	8/20/1951	15:30	Tornado	F2	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	5/10/1954	8:30	Tornado	F3	0	2	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/8/1956	15:30	Tornado	F0	0	0	0.25K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	9/7/1958	15:10	Tornado	F2	0	2	250.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	4/26/1961	10:15	Tornado	F1	0	0	2.50K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/19/1965	16:05	Tornado	F2	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/17/1968	17:00	Tornado	F1	0	0	25.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	9/18/1973	11:08	Tornado	F1	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	6/24/1985	11:45	Tornado	F1	0	0	2.500M	0.00K
WINDHAM CO.	WINDHAM CO.	CT	8/26/1985	12:45	Tornado	F1	0	0	0.25K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	7/14/1992	16:30	Tornado	F1	0	0	0.00K	0.00K
Location	County/Zone	State	Date	Time	Event Type	Deaths	Injuries	Property Damage	Crop Damage	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	4/1/2002	0:00	Drought	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	5/1/2002	0:00	Drought	0	0	0.00K	0.00K	
NORTHERN NEW LONDON (ZONE)	NORTHERN NEW LONDON (ZONE)	CT	6/1/2002	0:00	Drought	0	0	0.00K	0.00K	
WINDHAM (ZONE)	WINDHAM (ZONE)	CT	4/12/2012	7:30	Drought	0	0	0.00K	0.00K	
TOLLAND (ZONE)	TOLLAND (ZONE)	CT	4/12/2012	7:30	Drought	0	0	0.00K	0.00K	
Location	County/Zone	State	Date	Time	Event Type	Size	Deaths	Injuries	Property Damage	Crop Damage
TOLLAND CO.	TOLLAND CO.	CT	8/27/1959	18:30	Hail	0.75 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/3/1960	8:30	Hail	1.75 in.	0	0	0.00K	0.00K

NEW LONDON CO.	NEW LONDON CO.	CT	7/5/1963	15:35	Hail	1.00 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	7/7/1966	16:00	Hail	1.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	5/29/1969	17:00	Hail	2.75 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/20/1969	18:00	Hail	1.13 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	10/6/1971	13:20	Hail	0.75 in.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	7/8/1972	15:45	Hail	1.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	7/5/1974	16:00	Hail	0.75 in.	0	0	0.00K	0.00K
WINDHAM CO.	WINDHAM CO.	CT	5/30/1979	13:30	Hail	1.50 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	6/26/1988	8:12	Hail	2.25 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	11/11/1991	2:15	Hail	1.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	11/11/1991	2:40	Hail	1.75 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	6/27/1992	14:31	Hail	0.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	8/11/1992	14:30	Hail	0.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	8/11/1992	14:50	Hail	0.75 in.	0	0	0.00K	0.00K
Scotland	WINDHAM CO.	CT	8/13/1994	17:05	Hail	0.75 in.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	5/1/1997	17:45	Hail	0.75 in.	0	0	0.00K	0.00K
CHAPLIN	WINDHAM CO.	CT	8/3/1997	16:40	Hail	0.75 in.	0	0	0.00K	0.00K
VOLUNTTOWN	NEW LONDON CO.	CT	6/20/1998	13:40	Hail	1.00 in.	0	0	0.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/24/1999	14:02	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/24/1999	16:44	Hail	1.00 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	8/5/1999	14:45	Hail	1.50 in.	0	0	0.00K	0.00K
EASTFORD	WINDHAM CO.	CT	5/24/2000	14:55	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/10/2001	17:17	Hail	0.75 in.	0	0	0.00K	0.00K
PUTNAM	WINDHAM CO.	CT	7/22/2003	16:58	Hail	0.75 in.	0	0	0.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	7/2/2004	13:48	Hail	1.75 in.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	7/3/2006	16:40	Hail	1.00 in.	0	0	0.00K	0.00K
PLAINFIELD	WINDHAM CO.	CT	7/18/2006	20:44	Hail	0.88 in.	0	0	0.00K	0.00K
UNION	TOLLAND CO.	CT	7/1/2008	17:40	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	6/27/2009	17:28	Hail	0.88 in.	0	0	0.00K	0.00K
CANTERBURY	WINDHAM CO.	CT	6/27/2009	18:17	Hail	0.88 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	6/27/2009	19:45	Hail	0.75 in.	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/1/2012	14:09	Hail	0.75 in.	0	0	0.00K	0.00K
UNION	TOLLAND CO.	CT	7/18/2012	13:40	Hail	1.00 in.	0	0	0.00K	0.00K
EASTFORD	WINDHAM CO.	CT	7/18/2012	13:50	Hail	1.75 in.	0	0	0.00K	0.00K
THOMPSON	WINDHAM CO.	CT	7/18/2012	14:00	Hail	1.75 in.	0	0	0.00K	0.00K
PUTNAM	WINDHAM CO.	CT	7/18/2012	14:00	Hail	1.75 in.	0	0	0.00K	0.00K
ASHFORD	WINDHAM CO.	CT	7/18/2012	14:12	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/18/2012	14:20	Hail	0.88 in.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	5/21/2013	15:16	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	5/21/2013	15:46	Hail	0.75 in.	0	0	0.00K	0.00K
POMFRET	WINDHAM CO.	CT	7/20/2013	14:00	Hail	0.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	9/3/2013	12:20	Hail	1.00 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	9/3/2013	12:24	Hail	1.00 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	9/3/2013	12:52	Hail	1.00 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	9/3/2013	13:05	Hail	1.75 in.	0	0	0.00K	0.00K
NEW LONDON CO.	NEW LONDON CO.	CT	9/3/2013	13:12	Hail	1.25 in.	0	0	0.00K	0.00K
BROOKLYN	WINDHAM CO.	CT	5/25/2014	13:38	Hail	0.75 in.	0	0	0.00K	0.00K
WOODSTOCK	WINDHAM CO.	CT	5/25/2014	13:46	Hail	1.00 in.	0	0	0.00K	0.00K
TOLLAND CO.	TOLLAND CO.	CT	8/7/2014	15:52	Hail	1.00 in.	0	0	0.00K	0.00K

Hazard	County	State	Begin Date	End Date	Inuries	Deaths	Property Damage
Flooding	Windham	CT	1/23/1966	1/24/1966	0	0	\$43,333
Flooding	Windham	CT	12/26/1975	12/28/1975	0	0	\$2,600
Flooding	Windham	CT	1/28/1976	1/28/1976	0	0	\$2,500
Flooding	Windham	CT	1/25/1978	1/25/1978	0	0	\$21,667
Flooding	Windham	CT	2/6/1978	2/7/1978	0	0.25	\$2,166,667
Flooding	Windham	CT	10/3/1979	10/3/1979	0	0	\$52,525
Flooding	Windham	CT	3/22/1980	3/22/1980	0	0	\$17,105
Flooding	Windham	CT	6/6/1982	6/6/1982	0	1	\$14,772,727
Flooding	Windham	CT	3/19/1983	3/21/1983	0	0	\$14,130
Flooding	Windham	CT	3/29/1984	3/29/1984	0	0	\$135,417
Flooding	Windham	CT	4/5/1984	4/5/1984	0	0	\$1,354
Flooding	Windham	CT	5/26/1984	5/31/1984	0	0	\$1,354,167
Flooding	Windham	CT	8/7/1984	8/7/1984	0	0	\$3,611
Flooding	Windham	CT	5/23/1989	5/23/1989	0	0	\$22,807
Flooding	Windham	CT	10/15/2005	10/15/2005	1	1	\$2,311,111
Flooding	Windham	CT	10/28/2006	10/28/2006	0	0	\$2,261
Flooding	Windham	CT	2/13/2008	2/14/2008	0	0	\$21,010
Flooding	Windham	CT	6/27/2009	6/27/2009	0	0	\$31,837
Hazard	County	State	Begin Date	Notes			Damage
Wind	Windham	CT	2/18/1960	SNOW, WIND			\$46,429
Wind	Windham	CT	7/30/1960	WIND, TIDE, RAIN			\$4,643
Wind	Windham	CT	8/30/1960	WIND, RAIN, HAIL, AND LIGHTNING			\$46,429
Wind	Windham	CT	12/11/1960	SNOW AND WIND			\$46,429
Wind	Windham	CT	9/27/1962	Wind			\$46,429
Wind	Windham	CT	12/30/1962	Wind and Cold			\$46,429
Wind	Windham	CT	2/19/1963	SNOW & WIND			\$46,429
Wind	Windham	CT	4/4/1963	Wind			\$4,643
Wind	Windham	CT	1/13/1964	Snow and wind			\$4,643
Wind	Windham	CT	1/23/1966	SNOW, WIND, FLOOD			\$43,333
Wind	Windham	CT	12/24/1966	Thunderstorms, snow, wind			\$433
Wind	Windham	CT	12/29/1966	Rain, wind			\$4,333
Wind	Windham	CT	2/16/1967	WIND			\$43,333
Wind	Windham	CT	10/18/1967	Rain, wind			\$4,333
Wind	Windham	CT	3/1/1968	Snow, wind			\$4,063
Wind	Windham	CT	5/29/1968	Heavy rain, wind			\$4,063
Wind	Windham	CT	8/9/1968	Wind, heavy rain, lightning			\$40,625
Wind	Windham	CT	8/20/1968	Lightning, wind			\$8,125
Wind	Windham	CT	9/11/1968	Heavy rain, wind			\$4,063

Wind	Windham	CT	11/11/1968	Wind, tide, rain, snow	\$40,625
Wind	Windham	CT	2/9/1969	SNOW, WIND	\$38,235
Wind	Windham	CT	2/23/1969	SNOW, WIND	\$38,235
Wind	Windham	CT	5/3/1969	Dust Devil	\$306
Wind	Windham	CT	5/29/1969	WIND, LIGHTNING, HAIL	\$38,235
Wind	Windham	CT	12/26/1969	SNOW, GLAZE, RAIN, WIND, THUNDERSTORM	\$382,353
Wind	Windham	CT	2/2/1970	HEAVY RAIN, WIND, GLAZE, SNOW	\$288,889
Wind	Windham	CT	4/2/1970	Heavy rain, wind	\$3,611
Wind	Windham	CT	8/28/1970	LIGHTNING, WIND	\$96,296
Wind	Windham	CT	12/16/1970	SNOW, GLAZE, WIND	\$36,111
Wind	Windham	CT	3/3/1971	Snow, glaze, wind	\$3,421
Wind	Windham	CT	4/6/1971	Snow, wind, tide	\$3,421
Wind	Windham	CT	6/8/1971	LIGHTNING,WIND	\$34,211
Wind	Windham	CT	8/27/1971	RAIN, WIND, TIDE	\$342,105
Wind	Windham	CT	1/25/1972	WIND	\$34,211
Wind	Windham	CT	2/18/1972	SNOW, WIND, RAIN, TIDE	\$342,105
Wind	Windham	CT	7/25/1972	Lightning, wind	\$13,684
Wind	Windham	CT	11/8/1972	WIND, RAIN	\$39,098
Wind	Windham	CT	11/14/1972	Snow, rain, wind	\$3,421
Wind	Windham	CT	12/4/1972	Glaze, rain, wind	\$3,421
Wind	Windham	CT	1/28/1973	SNOW, GLAZE, WIND	\$32,500
Wind	Windham	CT	2/2/1973	RAIN, GLAZE, WIND	\$32,500
Wind	Windham	CT	10/29/1973	heavy rain, wind	\$0
Wind	Windham	CT	12/2/1974	Surf, rain, wind	\$28,261
Wind	Windham	CT	4/3/1975	Wind, rain	\$2,600
Wind	Windham	CT	2/2/1976	Wind	\$25,000
Wind	Windham	CT	12/13/1976	Wind	\$25,000
Wind	Windham	CT	1/7/1977	heavy snow and wind	\$2,321
Wind	Windham	CT	1/10/1977	snow, heavy rain and wind	\$2,321
Wind	Windham	CT	1/28/1977	wind	\$2,321
Wind	Windham	CT	3/22/1977	Wind, Heavy Rain, Heavy Snow	\$23,214
Wind	Windham	CT	6/10/1977	high wind	\$2,321
Wind	Windham	CT	1/9/1978	Wind, Rain	\$21,667
Wind	Windham	CT	1/20/1978	Northeaster, Wind, Heavy Snow	\$216,667
Wind	Windham	CT	2/6/1978	Blizzard, Wind, Snow, Flood	\$2,166,667
Wind	Windham	CT	6/19/1978	Lightning, Heavy Rain, Wind, Hail	\$21,667
Wind	Windham	CT	12/17/1978	high wind	\$2,167
Wind	Windham	CT	8/10/1979	Lightning, High Wind	\$1,969,697
Wind	Windham	CT	6/3/1980	High winds	\$68

Wind	Windham	CT	7/16/1980	Lightning, wind	\$1,711
Wind	Windham	CT	7/22/1980	wind, lightning	\$17,105
Wind	Windham	CT	10/25/1980	high wind	\$1,710,526
Wind	Windham	CT	11/10/1980	High wind	\$1,711
Wind	Windham	CT	12/3/1980	Wind	\$1,711
Wind	Windham	CT	2/11/1981	High Wind	\$1,548
Wind	Windham	CT	9/8/1981	High Wind	\$15,476
Wind	Windham	CT	11/12/1982	Windstorm, Heavy Rain	\$1,477
Wind	Windham	CT	3/29/1984	Snow/Wind/Flood	\$135,417
Wind	Windham	CT	6/13/1984	Lightning and Thunderstorm Winds	\$1,354
Wind	Windham	CT	8/7/1984	Thunderstorm Winds, Lightning, Local Flooding	\$3,611
Wind	Windham	CT	3/31/1987	High Winds	\$125,000
Wind	Windham	CT	11/20/1988	Wind	\$12,037
Wind	Windham	CT	12/28/1988	Wind	\$12,037
Wind	Windham	CT	9/22/1989	HIGH WINDS	\$11,404
Wind	Windham	CT	11/16/1989	HIGH WINDS	\$11,404
Wind	Windham	CT	11/20/1989	HIGH WINDS	\$11,404
Wind	Windham	CT	10/18/1990	High Winds	\$10,833
Wind	Windham	CT	11/11/1990	High Winds	\$10,833
Wind	Windham	CT	4/21/1991	High Wind	\$10,484
Wind	Windham	CT	8/19/1991	High Winds	\$1,048,387
Wind	Windham	CT	10/30/1991	Wind	\$10,484
Wind	Windham	CT	1/23/1992	Wind	\$10,156
Wind	Windham	CT	3/13/1993	High Winds	\$13,131
Wind	Windham	CT	12/23/1994	HIGH WINDS	\$95,588
Wind	Windham	CT	11/12/1995	HIGH WINDS	\$495,238
Wind	Windham	CT	2/25/1996	HIGH WIND	\$240,741
Wind	Windham	CT	5/31/2002		\$2,506
Wind	Windham	CT	8/2/2002		\$2,506
Wind	Windham	CT	8/16/2002		\$2,506
Wind	Windham	CT	7/22/2003		\$6,190
Wind	Windham	CT	11/13/2003		\$61,905
Wind	Windham	CT	8/21/2004	Thunderstorm Wind	\$5,977
Wind	Windham	CT	12/1/2004	High Wind	\$17,931
Wind	Windham	CT	3/8/2005	High Wind	\$26,000
Wind	Windham	CT	7/19/2005	Thunderstorm Wind	\$5,778
Wind	Windham	CT	8/5/2005	Thunderstorm Wind	\$5,778
Wind	Windham	CT	8/5/2005	Thunderstorm Wind	\$5,778
Wind	Windham	CT	8/13/2005	Thunderstorm Wind	\$5,778

Wind	Windham	CT	9/29/2005	Strong Wind			\$11,556
Wind	Windham	CT	10/25/2005	High Wind			\$11,556
Wind	Windham	CT	1/18/2006	High Wind (G58)			\$94,203
Wind	Windham	CT	5/21/2006	Thunderstorm Wind (G50)			\$9,043
Wind	Windham	CT	5/21/2006	Thunderstorm Wind (G50)			\$5,652
Wind	Windham	CT	6/1/2006	Thunderstorm Wind (G50)			\$16,957
Wind	Windham	CT	7/3/2006	Thunderstorm Wind (G61)			\$56,522
Wind	Windham	CT	7/18/2006	Thunderstorm Wind (G50)			\$16,957
Wind	Windham	CT	7/18/2006	Thunderstorm Wind (G50)			\$5,652
Wind	Windham	CT	7/18/2006	Thunderstorm Wind (G50)			\$5,652
Wind	Windham	CT	7/28/2006	Thunderstorm Wind (G50)			\$5,652
Wind	Windham	CT	8/2/2006	Thunderstorm Wind (G50)			\$11,304
Wind	Windham	CT	8/2/2006	Thunderstorm Wind (G50)			\$2,261
Wind	Windham	CT	10/29/2006	High Wind (G50)			\$8,667
Wind	Windham	CT	10/20/2007	Thunderstorm Wind (50EG)			\$1,095
Wind	Windham	CT	3/5/2008	Thunderstorm Wind (50EG)			\$2,101
Wind	Windham	CT	3/8/2008	High Wind			\$7,879
Wind	Windham	CT	7/3/2008	Thunderstorm wind (50EG)			\$3,152
Wind	Windham	CT	7/27/2008	Thunderstorm wind (50EG)			\$5,253
Wind	Windham	CT	9/9/2008	Thunderstorm Wind (50EG)			\$7,354
Wind	Windham	CT	6/27/2009	Thunderstorm Wind (50EG)			\$10,612
Wind	Windham	CT	7/7/2009	Thunderstorm Wind (50EG)			\$5,306
Wind	Windham	CT	7/7/2009	Thunderstorm Wind (50EG)			\$1,061
Wind	Windham	CT	12/3/2009	High Wind			\$5,306
Wind	Windham	CT	5/4/2010				\$5,200
Wind	Windham	CT	6/10/2010				\$15,600
Wind	Windham	CT	6/10/2010				\$10,400
Wind	Windham	CT	6/10/2010				\$5,200
Wind	Windham	CT	7/21/2010				\$10,400
Wind	Windham	CT	7/24/2010				\$10,400
Hazard	County	State	Begin Date	End Date	Injuries	Deaths	Property Damage
Lightning	Windham	CT	6/8/1971	6/8/1971	0	0	\$34,211
Lightning	Windham	CT	7/25/1972	7/25/1972	0	0	\$13,684
Lightning	Windham	CT	8/3/1974	8/3/1974	0	1	\$0
Lightning	Windham	CT	4/23/1976	4/23/1976	0	0	\$250
Lightning	Windham	CT	7/1/1976	7/1/1976	0	0	\$2,000
Lightning	Windham	CT	6/26/1977	6/26/1977	0	0	\$185,714
Lightning	Windham	CT	7/13/1977	7/13/1977	0	0	\$9,286
Lightning	Windham	CT	7/21/1977	7/21/1977	0	0	\$18,571

Lightning	Windham	CT	9/2/1977	9/2/1977	0.5	0	\$9,286
Lightning	Windham	CT	9/20/1977	9/20/1977	0	0	\$18,571
Lightning	Windham	CT	11/17/1977	11/17/1977	0	0	\$2,321
Lightning	Windham	CT	6/19/1978	6/19/1978	0	1	\$21,667
Lightning	Windham	CT	8/10/1979	8/10/1979	0.75	0	\$1,969,697
Lightning	Windham	CT	10/3/1979	10/3/1979	0	0	\$52,525
Lightning	Windham	CT	7/16/1980	7/16/1980	0	0	\$1,711
Lightning	Windham	CT	7/22/1980	7/22/1980	0	0	\$17,105
Lightning	Windham	CT	7/29/1980	7/29/1980	0	0	\$17,105
Lightning	Windham	CT	8/6/1980	8/6/1980	0	0	\$13,684
Lightning	Windham	CT	9/17/1980	9/18/1980	0	0	\$171
Lightning	Windham	CT	10/8/1982	10/9/1982	0	0	\$2,364
Lightning	Windham	CT	6/13/1984	6/13/1984	0	0	\$1,354
Lightning	Windham	CT	7/5/1984	7/5/1984	0	0	\$1,354
Lightning	Windham	CT	8/7/1984	8/7/1984	0	0	\$3,611
Lightning	Windham	CT	7/14/1988	7/14/1988	0	0	\$24,074
Lightning	Windham	CT	8/21/2004	8/21/2004	2	0	\$0
Lightning	Windham	CT	7/24/2010	7/24/2010	0	0	\$10,400
Hazard	County	State	Begin Date	Notes			Damage
Thunderstorm	Windham	CT	7/30/1960	Coastal - Severe Storm/Thunder Storm - Wind			\$4,643
Thunderstorm	Windham	CT	8/30/1960	Hail - Lightning - Severe Storm/Thunder Storm - Wind			\$46,429
Thunderstorm	Windham	CT	9/2/1961	Severe Storm/Thunder Storm			\$46,429
Thunderstorm	Windham	CT	6/19/1962	Hail - Severe Storm/Thunder Storm			\$464
Thunderstorm	Windham	CT	10/4/1962	Severe Storm/Thunder Storm			\$4,643
Thunderstorm	Windham	CT	5/19/1964	Severe Storm/Thunder Storm			\$4,643
Thunderstorm	Windham	CT	1/29/1966	Severe Storm/Thunder Storm - Winter Weather			\$4,333
Thunderstorm	Windham	CT	6/10/1966	Severe Storm/Thunder Storm			\$173,333
Thunderstorm	Windham	CT	12/24/1966	Severe Storm/Thunder Storm - Wind - Winter Weather			\$433
Thunderstorm	Windham	CT	12/29/1966	Severe Storm/Thunder Storm - Wind			\$4,333
Thunderstorm	Windham	CT	3/5/1967	Severe Storm/Thunder Storm - Winter Weather			\$43,333
Thunderstorm	Windham	CT	6/12/1967	Severe Storm/Thunder Storm			\$4,333
Thunderstorm	Windham	CT	10/18/1967	Severe Storm/Thunder Storm - Wind			\$4,333
Thunderstorm	Windham	CT	3/17/1968	Severe Storm/Thunder Storm			\$40,625
Thunderstorm	Windham	CT	5/29/1968	Severe Storm/Thunder Storm - Wind			\$4,063
Thunderstorm	Windham	CT	6/25/1968	Severe Storm/Thunder Storm			\$4,063
Thunderstorm	Windham	CT	8/9/1968	Lightning - Severe Storm/Thunder Storm - Wind			\$40,625
Thunderstorm	Windham	CT	9/11/1968	Severe Storm/Thunder Storm - Wind			\$4,063
Thunderstorm	Windham	CT	11/11/1968	Coastal - Severe Storm/Thunder Storm - Wind - Winter Weather			\$40,625
Thunderstorm	Windham	CT	3/24/1969	Severe Storm/Thunder Storm			\$3,824

Thunderstorm	Windham	CT	7/28/1969	Severe Storm/Thunder Storm	\$38,235
Thunderstorm	Windham	CT	12/14/1969	Severe Storm/Thunder Storm - Winter Weather	\$38,235
Thunderstorm	Windham	CT	12/26/1969	Severe Storm/Thunder Storm - Wind - Winter Weather	\$382,353
Thunderstorm	Windham	CT	2/2/1970	Severe Storm/Thunder Storm - Wind - Winter Weather	\$288,889
Thunderstorm	Windham	CT	4/2/1970	Severe Storm/Thunder Storm - Wind	\$3,611
Thunderstorm	Windham	CT	2/7/1971	Severe Storm/Thunder Storm - Winter Weather	\$3,421
Thunderstorm	Windham	CT	2/13/1971	Severe Storm/Thunder Storm	\$34,211
Thunderstorm	Windham	CT	7/1/1971	Severe Storm/Thunder Storm	\$34,211
Thunderstorm	Windham	CT	8/27/1971	Coastal - Severe Storm/Thunder Storm - Wind	\$342,105
Thunderstorm	Windham	CT	2/18/1972	Coastal - Severe Storm/Thunder Storm - Wind - Winter Weather	\$342,105
Thunderstorm	Windham	CT	3/3/1972	Severe Storm/Thunder Storm	\$3,421
Thunderstorm	Windham	CT	11/8/1972	Severe Storm/Thunder Storm - Wind	\$39,098
Thunderstorm	Windham	CT	11/14/1972	Severe Storm/Thunder Storm - Wind - Winter Weather	\$3,421
Thunderstorm	Windham	CT	12/4/1972	Severe Storm/Thunder Storm - Wind - Winter Weather	\$3,421
Thunderstorm	Windham	CT	2/2/1973	Severe Storm/Thunder Storm - Wind - Winter Weather	\$32,500
Thunderstorm	Windham	CT	3/2/1973	Severe Storm/Thunder Storm	\$6,500
Thunderstorm	Windham	CT	10/29/1973	Severe Storm/Thunder Storm - Wind	\$0
Thunderstorm	Windham	CT	3/21/1974	Severe Storm/Thunder Storm	\$0
Thunderstorm	Windham	CT	5/12/1974	Severe Storm/Thunder Storm	\$28
Thunderstorm	Windham	CT	7/5/1974	Severe Storm/Thunder Storm	\$283
Thunderstorm	Windham	CT	12/2/1974	Coastal - Severe Storm/Thunder Storm - Wind	\$28,261
Thunderstorm	Windham	CT	4/3/1975	Severe Storm/Thunder Storm - Wind	\$2,600
Thunderstorm	Windham	CT	12/26/1975	Flooding - Severe Storm/Thunder Storm	\$2,600
Thunderstorm	Windham	CT	1/28/1976	Flooding - Severe Storm/Thunder Storm	\$2,500
Thunderstorm	Windham	CT	1/10/1977	Severe Storm/Thunder Storm - Wind - Winter Weather	\$2,321
Thunderstorm	Windham	CT	3/22/1977	Severe Storm/Thunder Storm - Wind - Winter Weather	\$23,214
Thunderstorm	Windham	CT	1/9/1978	Severe Storm/Thunder Storm - Wind	\$21,667
Thunderstorm	Windham	CT	1/25/1978	Flooding - Severe Storm/Thunder Storm	\$21,667
Thunderstorm	Windham	CT	6/19/1978	Hail - Lightning - Severe Storm/Thunder Storm - Wind	\$21,667
Thunderstorm	Windham	CT	7/29/1980	Lightning - Severe Storm/Thunder Storm	\$17,105
Thunderstorm	Windham	CT	6/6/1982	Flooding - Severe Storm/Thunder Storm	\$14,772,727
Thunderstorm	Windham	CT	10/8/1982	Lightning - Severe Storm/Thunder Storm	\$2,364
Thunderstorm	Windham	CT	11/12/1982	Severe Storm/Thunder Storm - Wind	\$1,477
Thunderstorm	Windham	CT	3/19/1983	Flooding - Severe Storm/Thunder Storm	\$14,130
Thunderstorm	Windham	CT	4/5/1984	Flooding - Severe Storm/Thunder Storm	\$1,354
Thunderstorm	Windham	CT	5/26/1984	Flooding - Severe Storm/Thunder Storm	\$1,354,167
Thunderstorm	Windham	CT	6/13/1984	Lightning - Severe Storm/Thunder Storm - Wind	\$1,354
Thunderstorm	Windham	CT	8/7/1984	Flooding - Lightning - Severe Storm/Thunder Storm - Wind	\$3,611
Thunderstorm	Windham	CT	8/11/1989	Severe Storm/Thunder Storm	\$11,404

Thunderstorm	Windham	CT	5/31/2002	Severe Storm/Thunder Storm - Wind	\$2,506
Thunderstorm	Windham	CT	8/2/2002	Severe Storm/Thunder Storm - Wind	\$2,506
Thunderstorm	Windham	CT	8/16/2002	Severe Storm/Thunder Storm - Wind	\$2,506
Thunderstorm	Windham	CT	7/22/2003	Severe Storm/Thunder Storm - Wind	\$6,190
Thunderstorm	Windham	CT	8/21/2004	Severe Storm/Thunder Storm - Wind	\$5,977
Thunderstorm	Windham	CT	7/19/2005	Severe Storm/Thunder Storm - Wind	\$5,778
Thunderstorm	Windham	CT	8/5/2005	Severe Storm/Thunder Storm - Wind	\$5,778
Thunderstorm	Windham	CT	8/5/2005	Severe Storm/Thunder Storm - Wind	\$5,778
Thunderstorm	Windham	CT	8/13/2005	Severe Storm/Thunder Storm - Wind	\$5,778
Thunderstorm	Windham	CT	5/21/2006	Severe Storm/Thunder Storm - Wind	\$9,043
Thunderstorm	Windham	CT	5/21/2006	Severe Storm/Thunder Storm - Wind	\$5,652
Thunderstorm	Windham	CT	6/1/2006	Severe Storm/Thunder Storm - Wind	\$16,957
Thunderstorm	Windham	CT	7/3/2006	Severe Storm/Thunder Storm - Wind	\$56,522
Thunderstorm	Windham	CT	7/18/2006	Severe Storm/Thunder Storm - Wind	\$16,957
Thunderstorm	Windham	CT	7/18/2006	Severe Storm/Thunder Storm - Wind	\$5,652
Thunderstorm	Windham	CT	7/18/2006	Severe Storm/Thunder Storm - Wind	\$5,652
Thunderstorm	Windham	CT	7/28/2006	Severe Storm/Thunder Storm - Wind	\$5,652
Thunderstorm	Windham	CT	8/2/2006	Severe Storm/Thunder Storm - Wind	\$11,304
Thunderstorm	Windham	CT	8/2/2006	Severe Storm/Thunder Storm - Wind	\$2,261
Thunderstorm	Windham	CT	10/20/2007	Severe Storm/Thunder Storm - Wind	\$1,095
Thunderstorm	Windham	CT	3/5/2008	Severe Storm/Thunder Storm - Wind	\$2,101
Thunderstorm	Windham	CT	7/3/2008	Severe Storm/Thunder Storm - Wind	\$3,152
Thunderstorm	Windham	CT	7/27/2008	Severe Storm/Thunder Storm - Wind	\$5,253
Thunderstorm	Windham	CT	9/9/2008	Severe Storm/Thunder Storm - Wind	\$7,354
Thunderstorm	Windham	CT	6/27/2009	Severe Storm/Thunder Storm - Wind	\$10,612
Thunderstorm	Windham	CT	7/7/2009	Severe Storm/Thunder Storm - Wind	\$5,306
Thunderstorm	Windham	CT	7/7/2009	Severe Storm/Thunder Storm - Wind	\$1,061
Thunderstorm	Windham	CT	5/4/2010	Severe Storm/Thunder Storm - Wind	\$5,200
Thunderstorm	Windham	CT	6/10/2010	Severe Storm/Thunder Storm - Wind	\$15,600
Thunderstorm	Windham	CT	6/10/2010	Severe Storm/Thunder Storm - Wind	\$10,400
Thunderstorm	Windham	CT	6/10/2010	Severe Storm/Thunder Storm - Wind	\$5,200
Thunderstorm	Windham	CT	7/21/2010	Severe Storm/Thunder Storm - Wind	\$10,400
Thunderstorm	Windham	CT	7/24/2010	Severe Storm/Thunder Storm - Wind	\$10,400
Hazard	County	State	Begin Date	End Date	Property Damage
Winter Storm	Windham	CT	2/18/1960	2/19/1960	\$46,429
Winter Storm	Windham	CT	3/3/1960	3/5/1960	\$4,643
Winter Storm	Windham	CT	12/11/1960	12/12/1960	\$46,429
Winter Storm	Windham	CT	1/19/1961	1/20/1961	\$464,286
Winter Storm	Windham	CT	2/4/1961	2/4/1961	\$46,429

Winter Storm	Windham	CT	12/30/1962	12/31/1962	\$46,429
Winter Storm	Windham	CT	2/19/1963	2/20/1963	\$46,429
Winter Storm	Windham	CT	1/13/1964	1/14/1964	\$4,643
Winter Storm	Windham	CT	3/29/1965	3/29/1965	\$4,643
Winter Storm	Windham	CT	1/23/1966	1/24/1966	\$43,333
Winter Storm	Windham	CT	1/29/1966	1/29/1966	\$4,333
Winter Storm	Windham	CT	2/24/1966	2/26/1966	\$4,333
Winter Storm	Windham	CT	12/24/1966	12/25/1966	\$433
Winter Storm	Windham	CT	2/7/1967	2/7/1967	\$43,333
Winter Storm	Windham	CT	2/23/1967	2/23/1967	\$4,333
Winter Storm	Windham	CT	3/3/1967	3/3/1967	\$173,333
Winter Storm	Windham	CT	3/5/1967	3/7/1967	\$43,333
Winter Storm	Windham	CT	3/15/1967	3/16/1967	\$43,333
Winter Storm	Windham	CT	3/22/1967	3/22/1967	\$43,333
Winter Storm	Windham	CT	12/28/1967	12/29/1967	\$43,333
Winter Storm	Windham	CT	1/14/1968	1/14/1968	\$40,625
Winter Storm	Windham	CT	3/1/1968	3/1/1968	\$4,063
Winter Storm	Windham	CT	11/11/1968	11/13/1968	\$40,625
Winter Storm	Windham	CT	12/12/1968	12/12/1968	\$8,125
Winter Storm	Windham	CT	12/22/1968	12/22/1968	\$8,125
Winter Storm	Windham	CT	1/29/1969	1/29/1969	\$3,824
Winter Storm	Windham	CT	2/9/1969	2/10/1969	\$38,235
Winter Storm	Windham	CT	2/23/1969	2/25/1969	\$38,235
Winter Storm	Windham	CT	11/26/1969	11/26/1969	\$76,471
Winter Storm	Windham	CT	12/14/1969	12/15/1969	\$38,235
Winter Storm	Windham	CT	12/26/1969	12/27/1969	\$382,353
Winter Storm	Windham	CT	2/2/1970	2/4/1970	\$288,889
Winter Storm	Windham	CT	3/29/1970	3/29/1970	\$36,111
Winter Storm	Windham	CT	3/31/1970	3/31/1970	\$36,111
Winter Storm	Windham	CT	12/11/1970	12/13/1970	\$36,111
Winter Storm	Windham	CT	12/16/1970	12/17/1970	\$36,111
Winter Storm	Windham	CT	12/22/1970	12/22/1970	\$36,111
Winter Storm	Windham	CT	2/7/1971	2/9/1971	\$3,421
Winter Storm	Windham	CT	3/3/1971	3/5/1971	\$3,421
Winter Storm	Windham	CT	4/6/1971	4/7/1971	\$3,421
Winter Storm	Windham	CT	2/18/1972	2/20/1972	\$342,105
Winter Storm	Windham	CT	11/14/1972	11/15/1972	\$3,421
Winter Storm	Windham	CT	12/4/1972	12/6/1972	\$3,421
Winter Storm	Windham	CT	12/15/1972	12/16/1972	\$34,211

Winter Storm	Windham	CT	12/21/1972	12/22/1972	\$3,421
Winter Storm	Windham	CT	1/28/1973	1/29/1973	\$32,500
Winter Storm	Windham	CT	2/2/1973	2/3/1973	\$32,500
Winter Storm	Windham	CT	12/16/1973	12/17/1973	\$325,000
Winter Storm	Windham	CT	1/3/1974	1/4/1974	\$28
Winter Storm	Windham	CT	1/9/1974	1/11/1974	\$0
Winter Storm	Windham	CT	1/19/1974	1/19/1974	\$28
Winter Storm	Windham	CT	2/2/1974	2/3/1974	\$0
Winter Storm	Windham	CT	2/6/1974	2/7/1974	\$0
Winter Storm	Windham	CT	3/29/1974	3/29/1974	\$0
Winter Storm	Windham	CT	12/21/1975	12/22/1975	\$260
Winter Storm	Windham	CT	12/29/1976	12/29/1976	\$2,500
Winter Storm	Windham	CT	1/7/1977	1/7/1977	\$2,321
Winter Storm	Windham	CT	1/10/1977	1/10/1977	\$2,321
Winter Storm	Windham	CT	3/22/1977	3/22/1977	\$23,214
Winter Storm	Windham	CT	5/9/1977	5/10/1977	\$464,286
Winter Storm	Windham	CT	1/14/1978	1/14/1978	\$3,467
Winter Storm	Windham	CT	1/18/1978	1/20/1978	\$21,667
Winter Storm	Windham	CT	1/20/1978	1/20/1978	\$216,667
Winter Storm	Windham	CT	2/6/1978	2/7/1978	\$2,166,667
Winter Storm	Windham	CT	1/1/1981	1/5/1981	\$15,476
Winter Storm	Windham	CT	4/6/1982	4/6/1982	\$14,773
Winter Storm	Windham	CT	3/8/1983	3/10/1983	\$28,261
Winter Storm	Windham	CT	3/13/1984	3/14/1984	\$180,556
Winter Storm	Windham	CT	3/29/1984	3/29/1984	\$135,417
Winter Storm	Windham	CT	11/19/1986	11/19/1986	\$1,300,000
Winter Storm	Windham	CT	2/15/1990	2/16/1990	\$10,833
Winter Storm	Windham	CT	12/2/1991	12/3/1991	\$20,968
Winter Storm	Windham	CT	12/6/1996	12/6/1996	\$17,815
Winter Storm	Windham	CT	12/7/1996	12/7/1996	\$2,888,889
Winter Storm	Windham	CT	4/1/1997	4/1/1997	\$468,468
Winter Storm	Windham	CT	3/5/2001	3/6/2001	\$2,139,918
Winter Storm	Windham	CT	3/9/2001	3/10/2001	\$855,967
Winter Storm	Windham	CT	3/6/2003	3/6/2003	\$61,905
Winter Storm	Windham	CT	1/8/2005	1/8/2005	\$57,778
Winter Storm	Windham	CT	1/3/2006	1/3/2006	\$11,304
Winter Storm	Windham	CT	2/12/2006	2/12/2006	\$11,304
Winter Storm	Windham	CT	1/14/2008	1/14/2008	\$11,205

Appendix 10

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"LET NOT A MAN GUARD HIS DIGNITY, BUT LET HIS DIGNITY GUARD HIM."

Friday, January 18, 2008

Parental involvement urged for budget

SURVEY TO BE COMPLETED BY JAN. 28

BY CHENOA PIERCE
VILLAGER STAFF WRITER

PUTNAM — The Board of Education is aiming to get as many parents involved in the education budget as possible, and the Jan. 15 meeting was one of several attempts to have parents, teachers and the general public have their voices heard.

The meeting started off with an open forum that allowed parents to take the floor to voice their concerns and opinions on the school district budget. Due to the large turnout, Board of Education Chairman Robert Barden informed the crowd that each person would be allowed a three-minute time limit and, after everyone had had the chance to speak and time allowed, citizens could speak again.

Many parents expressed con-

Turn To **SCHOOL**, page **A15**



Chenoa Pierce photo

SNOW GLOBE SURPRISE

Route 171 in Putnam may have been cleared of snow, but the trees along the edge of the roadway glittered like the inside of a snow globe as the wind blew on Jan. 15, the day after Winter Storm Christopher, the first snowstorm of 2008, paid a visit to the Quiet Corner.

Education issues discussed

CABE LEGISLATIVE MEETING HELD

BY JOSH SAYLES
VILLAGER STAFF WRITER

DAYVILLE — Representatives from various boards of education around northeast Connecticut met with local legislators to discuss several issues when the Connecticut Association of Boards of Education (CABE) held a legislative breakfast at Killingly Intermediate School on Wednesday, Jan. 9.

One major spot of contention was the fact that "funding for early childhood education tends to go to cities and not rural areas, although [the rural areas] need it just as badly," according to Richard Murray, Killingly Board of Education chairman and CABE Executive Committee secretary treasurer.

"One of the concerns that I heard was that we need to better fund early childhood education," said state Rep. Mike Alberts (R-Woodstock). "... These first years of education are critical, and the people in the community have

Turn To **CABE**, page **A15**

Simonzi Park riverbank project in full swing

AREA TO GET CANOE LAUNCH, 27 ADDITIONAL LIGHTS

BY CHENOA PIERCE
VILLAGER STAFF WRITER

PUTNAM — Work on restoring Simonzi Park to its former glory is well underway in downtown Putnam. The park, which is bordered by the Quinebaug River, Kennedy Drive and Sunset Avenue, is undergoing renovations to keep it open and accessible to visitors who seek to use it for many different recreational activities.

According to Town Administrator Doug Cutler, the Riverbank Stabilization Project has been underway since the fall of 2007, with the project coming to the table in September. Physical work on the project began in October when the town received the work

contract and picked a company to complete the work.

"We were awarded the contract in October," he said, noting that CME Associates was the company chosen to handle the project with members of the Eastern Connecticut Conservation District (ECCD) taking over as project manager.

The project will cost a grand total of \$50,000, but taxpayers need not worry that their pockets are about to get looser — the project is covered under the STEAP (Small Town Economic Assistance Program) grant the town received in 2006.

There are many things that this project seeks to do. One of the main things is to keep the riverbank

from eroding away, a problem that has been occurring in the park for several years.

"There is a stream bank erosion that has taken place over many years and is detrimental to the park," according to a copy of the Riverbank Stabilization Project proposal provided to the Villager.

"It's eroding badly," said Cutler, who is keeping a close eye on the project.

In addition to curing the erosion problem, the town is looking to add some elements to the park that will allow for more recreational uses.

For instance, a canoe launch is planned for the park, as well as the

Turn To **SIMONZI**, page **A16**



Chenoa Pierce photo

This photo shows a small portion of Simonzi Park, which is currently undergoing renovations to stop erosion and make the park more accessible after dark.



Brad Tilles photo

Congressman Joe Courtney (D-2nd District) spoke to a crowd of concerned residents at Quinebaug Valley Community College on Monday night.

Courtney holds forum for local residents

CONGRESSMAN ANSWERS QUESTIONS, SPEAKS CANDIDLY ABOUT PROJECTS

BY BRAD TILLES
VILLAGER STAFF WRITER

DANIELSON — Congressman Joe Courtney (D-2nd District) is reaching out to his constituents by keeping informed of their questions and concerns on how things are going in Washington, D.C., as well as what he is doing for residents here in the Quiet Corner.

Courtney held a "Town Hall Forum" on Monday, Jan. 14, at Quinebaug Valley Community College (QVCC) auditorium with about 50 local residents in attendance. Courtney discussed an array of topics with them, including heating costs, educational grant money, and transportation services for the disabled and military veterans.

Courtney opened the meeting by explaining some of the work he has been doing during his first year in the United States House of Representatives, such as serving on the Armed Services Committee.

"We've had great progress this year in terms of turnaround in the direction in that the Pentagon and the White House have been holding back the size of our budget," Courtney said.

In addition, Courtney has been working to maintain jobs at the Groton Submarine Base. "At the end of the budget process this year, we did seek in getting advanced procurement toward construction of a second submarine covering \$80 million, which is a huge break for Eastern

Connecticut in terms of trying to stabilize the industrial base and try to avoid almost the evaporation of a sizeable fleet," he said.

Courtney also spoke about his involvement on the Education and Labor Committee and emphasized the importance of training young students to prepare to enter the workforce. He outlined the Pell Grant Education Program, which recently rose 25 percent in funding over the next few years due to the College Cost Reduction Act that he worked on. The act also helped lower interest rates on student loans and created more grants available to career-specific students.

Turn To **COURTNEY**, page **A13**

INSIDE
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B1 — HOT SPOT
B4 — OBITS
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B7 — RELIGION



LOCAL
KITTY
SAVED!
PAGE A2



LEARNING
JUNIOR HONORS
PAGE A6

VILLAGER TRIVIA
When did the Space Shuttle Challenger explode and what was determined to be the cause? Answer on page 2.

Putnam Villager

Vol. V, No. 30

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Friday, April 16, 2010

THIS WEEK'S QUOTE

'It's easy to make a buck. It's a lot tougher to make a difference.'

INSIDE

- A8-9 — OPINION
- A12 — SPORTS
- B1 — HOT SPOT
- B3-4 — OBITS
- B5 — RELIGION
- B5-6 — CALENDAR

LOCAL



Egg-stravagant Event
page 4

LEARNING



A Gift for Storytelling
page 6



FUN CONNECTICUT FACT OF THE WEEK:

The UConn women's basketball team, in winning its seventh NCAA basketball championship, became the first-ever NCAA women's basketball team to have consecutive unbeaten seasons — and, in the process, beat its own NCAA Division I winning record of 70 games. In addition to the UConn Women's 78-game winning streak, do you know what else the state of Connecticut is proudly known for when it comes to intercollegiate basketball?

See answer, page A2 in Almanac.

Simonzi Park riverbank eroding

LAND, WATERWAYS GETTING TOUCHUPS, REPAIRS

BY MATT SANDERSON
VILLAGER STAFF WRITER

PUTNAM — The exposed roots tell the story of a swollen New England river.

It is where the Quinebaug River meets the shore of the John F. Simonzi Sr. Memorial Park riverbank. A patch of land has been visible for several years, and some trees look like they are clinging on by only a few strong roots. Town officials and engineers have been studying how to approach this

Turn To **PARKS**, page **A7**



Matt Sanderson photo

Encroaching erosion of the riverbanks along the Quinebaug River walking trail in John F. Simonzi Sr. Memorial Park. Putnam has hired CME Associates, of Woodstock, to design plans to control the erosion situation, which is being caused by not only the river, but also storm water run-off from Kennedy Drive. To deal with the run-off, CME has proposed installing vegetative storm water retention basins on the park's grounds. The town is looking to add lighting to the river trail.

Turnout low for budget hearing

BY MATT SANDERSON
VILLAGER STAFF WRITER

PUTNAM — Fewer than 25 residents attended the Putnam Board of Finance 2010-'11 budget public hearing at the middle school Monday night, April 12.

The board holds its regular meeting at 7:30 p.m. Monday, April 26, at 7:30 p.m. at Town Hall to render its opinions, and possible cuts, to the proposed \$21.4 million combined 2010-'11 town and school budgets.

Board of Finance Chairman Anthony Falzarano said the hearing was "a little livelier" than last year's, but was still puzzled about

Turn To **BUDGET**, page **A14**

A homecoming for Hill

SOLDIER TO RETURN FROM YEARLONG DUTY IN IRAQ

BY RICH HOSFORD
VILLAGER STAFF WRITER

WOODSTOCK — A Woodstock family is excited and ready to welcome home a son who has been serving his country overseas.

Matthew Hill, of Woodstock, a member of the Army First Air Cavalry Brigade, Air Assault Team, has finished a yearlong tour of duty and is scheduled to arrive home sometime this month.

Turn To **HILL**, page **A10**



Courtesy photo

Matthew Hill, of the Army First Air Cavalry Brigade, Air Assault Team, has finished a yearlong tour of duty in Iraq. Hill will return to the United States sometime this month.

Warner's life, novels remembered

120TH BIRTHDAY CELEBRATED AT PUTNAM ELEMENTARY

BY MATT SANDERSON
VILLAGER STAFF WRITER

PUTNAM — Under her watch, Gertrude Chandler Warner made sure young minds questioned the things in life that makes one wonder, such as nature and space.

Having sat in her first-grade classroom at Israel Putnam School on School Street in 1942, resident Sandra Cutler Ames said the late Warner was one of her only three mentors in life. She said Warner's caring, compassion and interest in the lives of her students helped shaped many, many lives.

As author of the "Boxcar Children" mysteries series, Warner's influence has not ceased. Her work is globally recognized, with many young readers of her time seeking out the town of Putnam, to learn more about the woman who introduced numerous

Turn To **BOXCAR**, page **A15**



Courtesy photos

Third-graders from Putnam Elementary School, avid readers of local author Gertrude Chandler Warner's Boxcar Children mystery series, created and presented dozens of projects in her honor during Warner's 120th birthday celebration held last Sunday, April 11, at Putnam Middle School.



Courtesy photo

Marianapolis Preparatory School Headmistress Marilyn S. Ebbitt has announced she will retire at the end of the 2011 school year.

Ebbitt announces retirement

WILL STEP DOWN AS MARIANAPOLIS HEADMISTRESS IN 2011

BY RICH HOSFORD
VILLAGER STAFF WRITER

THOMPSON — Marianapolis Preparatory School will soon be saying farewell the person who has been its leader for the past nine years.

Headmistress Marilyn S. Ebbitt has announced she will retire at the end of the 2011 school year.

In her letter of resignation to the School's Board of Directors, dated March 29, Ebbitt stated, "The acad-

Turn To **EBBITT**, page **A11**



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Parks getting upgrades through STEAP grant

PARKS

continued from page A1

issue.

The remaining \$375,000 from a Small Town Economic Assistance Program grant received in 2006 has allowed the town to upgrade, monitor and manure its parks, recreation fields and river connectors.

"These have been on the books for one to two administrations," Town Administrator Doug Cutler said about the STEAP-funded projects. "This is all under the guise of protecting natural resources and our greenways trail plan."

One of the largest of the projects is the John F. Simonzi Sr. Memorial Park Improvement Project, an attempt to fend off ongoing river-bank erosion problems from the Quinebaug River and runoff rainwater from Kennedy Drive.

Cutler said the town has been working with CME Associates, a Woodstock-based civil engineering firm, to come up with a solution. Through a request-for-proposals, he said Putnam awarded CME with preparing a design and engineering erosion control plans.

Cutler said they had originally set aside \$50,000 from the STEAP grant to cover the cost of the erosion control; however, when they learned the rainwater run-off from Kennedy Drive was dually responsible for the erosion along the Quinebaug River, they took another \$10,000 leftover from the grant to plant onsite retention basins. Also, a portion of those funds were used to design a canoe launch at the park.

"These are various shrubs and plants to soak the water up before hitting the river," said Cutler. "It doesn't impact people's ability to use the trail. It's a natural way to control water flow. The Army Corps of Engineers and the department of Environmental Protection recommended this."

Scott Young, director of civil engineering at CME, said that if not



Using a STEAP grant from 2006, Putnam has done some major upgrades to Francis H. Murphy Recreation Park off Keech Street, which included the removal of a dam last summer and repairing the athletic fields.

dealt with and the erosion persists, it will eventually impact Simonzi Park.

While treating the erosion, Young said a canoe access and boat launch area will be constructed. It is unclear if the original STEAP funds can completely cover that cost, according to the town.

"For this project, CME provided land surveying, wetlands delineation, flood flow calculation, design and vegetative and structural slope stabilization measures, and permitting assistance," Young said in an e-mail.

He said the design calls for placing large rocks, or rip rap, along the bottom of the slope, which is about 2 feet above the river's flow height.

Then, Young said that, above the large rocks to the top of slope, the vegetation will be planted to provide erosion protection from both the water running over the bank and for the flood levels of the river.

"To prevent erosion from the public, there will be several sets of stairs placed at regular intervals to allow access to the river for fishing and other recreational activities,"

added Young.

The second phase of the project requires a design of low-impact storm water treatment, which involves collecting the storm water from the west side of Kennedy Drive and diverting it to areas called for-bays, where sand and other sediment settle.

"The forbays will be small depressions in the lawn areas less than 1 foot deep that will allow the town to remove the sediment on a regular basis," Young continued. "From the forbay, the storm water will then enter into a rain garden for further treatment and infiltration." Young said the rain garden will be planted with a special soil that allows rainwater to seep in, but also stores the water for treatment. The vegetation planted, said Young, will be able to withstand flood and drought conditions and will only be about 1 foot deep.

He noted that the detention basins have been designed to contain the runoff from a 100-year storm event. Putnam has experienced more of the STEAP funds' use, as \$175,000 was used last August to demolish



Using a STEAP grant, Putnam added asphalt to the dirt surfaced walking path in 2008 at Owen Tarr Sports Complex.

the century-old dam at the Francis H. Murphy Recreation Park. The water barrier was originally built to allow a swimming area for people looking to swim in the Little River.

Cutler said safety concerns stemming from heavy rains in 2005, when the river spilled over its banks and flooded sections of the nearby little league fields, prompted the removal of the dam.

Young and Economic and Community Development Director Delpha Very confirmed that about \$40,000 of the STEAP funds went toward the construction of the Putnam Farmers' Market.

Cutler added that a portion of STEAP funds were used to extend the sidewalk from Day Kimball Hospital to Sabin Street, as well as to spend \$17,000 of those funds to resurface a walking path around the Owen Tarr Sports Complex in 2008.

Parks and Recreation Director Willie Bousquet said the town is looking at trying to use whatever is leftover from those STEAP funds to install trail lighting to Simonzi

Park. The plan is to install a dozen light poles from Kennedy Drive, across the municipal park and down to the footbridge where it crosses the river.

"Where we're at, we're not sure what amount is left, or how much more we can complete with the funding we have," he said. "Some projects have been done. Now, we're at the point to figure what funds are available. We're not sure if we can get everything done on this. The least prioritized part is the lighting."

Bousquet added that the town did field reclamation at Murphy Park with the STEAP monies.

"This has been a three-year situation with five years of a funding scenario," he said. "This is the third phase. The STEAP funding has been a great asset to the town."

Matt Sanderson may be reached at (860) 929-1818, ext. 110, or by e-mail at matt@villagernewspapers.com.

Exchange Club holds wine tasting fund-raiser

POMFRET — The Exchange Club of Northeast Connecticut will hold its Annual Wine Tasting fund-raiser for the Prevention of Child Abuse at 6 p.m. Wednesday, April 21, at The Harvest in Pomfret.

April is National Child Abuse Prevention Month, and each year, Exchange Clubs throughout the nation work to raise public awareness, increase community involvement and raise funds to prevent child abuse locally and throughout the nation.

Sponsored by Pomfret Spirit Shoppe owner Mary Patenaude and 15 area wine, beer and soft drink distributors, including Sharp Hill Winery of Pomfret and Taylor Brook Winery of Woodstock, this year's event will feature an expanded assortment of hors d'oeuvres and food stations specifically designed to complement a wide assortment of wines. Piano accompaniment throughout the evening will be performed by Dorrie Nang.

"Our annual Wine Tasting has become one of the most popular and important events for our local Exchange Club," said Dr. Roland Lupien, president of the Exchange Club of Northeast Connecticut. "This event, and all Exchange Club meetings, provides a wonderful opportunity for business and community leaders to network and support each other, while also helping local organizations working to prevent child abuse."

Tickets are \$40 per person. Reservations can be made by calling Ron Robinson of the Exchange Club at (860) 774-7867.

Proceeds for the fund-raiser will be directed toward local efforts to prevent child abuse. The National Exchange Club (NEC) has long been committed to making a difference in the lives of children, families and communities through its national project, the prevention of child abuse. To date, the NEC Foundation and its Exchange Club partners have helped more than 140,000 children and 100,000 families eliminate child abuse in their daily lives. The NEC Foundation is endorsed by the National Council of Juvenile and Family Court Judges, and was the winner of a Presidential Award from the White House Office of Private Sector Initiatives. The award recognizes exemplary community outreach and volunteer service projects sponsored by businesses, trade associations, professional societies and other private organizations.

The Exchange Club of Northeast Connecticut meets monthly at JD Cooper's in Putnam and is actively recruiting new civic-minded members. The National Exchange Club is an all-volunteer, national service organization for men and women who want to serve their community, develop leadership skills and enjoy new friendships. Exchange is made up of nearly 800 clubs and more than 25,000 members throughout the United States and Puerto Rico. The name "Exchange" was selected because the group wanted to exchange ideas and information with like-minded individuals about how to better serve their communities.

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The Bulletin

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Erosion, flooding eating away at Simonzi Park in Putnam

Because northeastern Connecticut has no regional plan to deal with natural hazards, Putnam can't apply for grant funding to fix damage near Simonzi Park.



Recommend 0

By ROBIN CASSELLA

Posted Oct. 21, 2011 at 12:01 AM
Updated Oct 21, 2011 at 9:04 PM

Putnam, Conn.

Because northeastern Connecticut has no regional plan to deal with erosion hazards, Putnam can't apply for grant funding to fix damage caused by flood Park.

Town Administrator Doug Cutler said the Northeastern Connecticut Council is developing a regional plan for all northeastern towns instead of each town's mitigation plan.

Cutler discussed the problem at a recent Board of Selectmen meeting.

Erosion at Simonzi Park is causing flooding and drainage runoff from the Quaker River. The problem has been made worse by recent rain.

"What's put at risk is the eventuality that the park would be eroded away,"

Cutler said. "We want to ensure that we don't get to a point where we have an emergency situation. Hopefully we'd be able to mediate to control it."

Deal Dubreuil, of Putnam, walks the river trail along Simonzi Park every day. He said the erosion has gotten worse and he hopes something can be done to alleviate it.

"Some of the trees are already in the river," he said. "They've been talking about fixing it for a long time."

Cutler said there is a plan to fix the erosion, but funds have not been available.

The town can't apply for Federal Emergency Management Agency money to correct the problem until the council of governments' hazard mitigation plan is approved by the state.

"Hazard mitigation deals with looking at potential natural hazards, such as flooding, ice storms — a different variety of things that can happen — and coming up with strategies that can minimize damages," council of governments Executive Director John Filchak said.

Filchak expects the regional plan to be in place sometime early next year.

"Mitigation money is not to repair something that is broken; it's to repair it before its broken," Filchak said.



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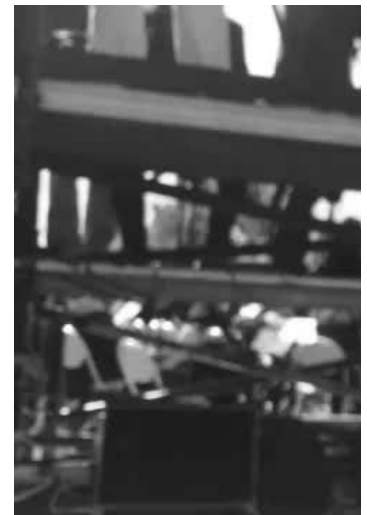
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Cutler also mentioned that the runoff from Simonzi Park has been flooding the basement of one resident who lives along Route 44. The resident has had to replace his furnace and rugs, Cutler said.

"It occurs because the culvert can't take the amount of water, so it forms a stream and comes into his basement," Cutler said.

If it can be proven that the damage to the residence was caused by Tropical Storm Irene, then funding may be available to pay for his repairs.

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TV GUIDE



Bill Murray Pops Out of a Cake to Say Goodbye to David Letterman



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5/20 8:45 am Senior Citizen Breakfast

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5/20 9:30 am Toddler Trails and Tales

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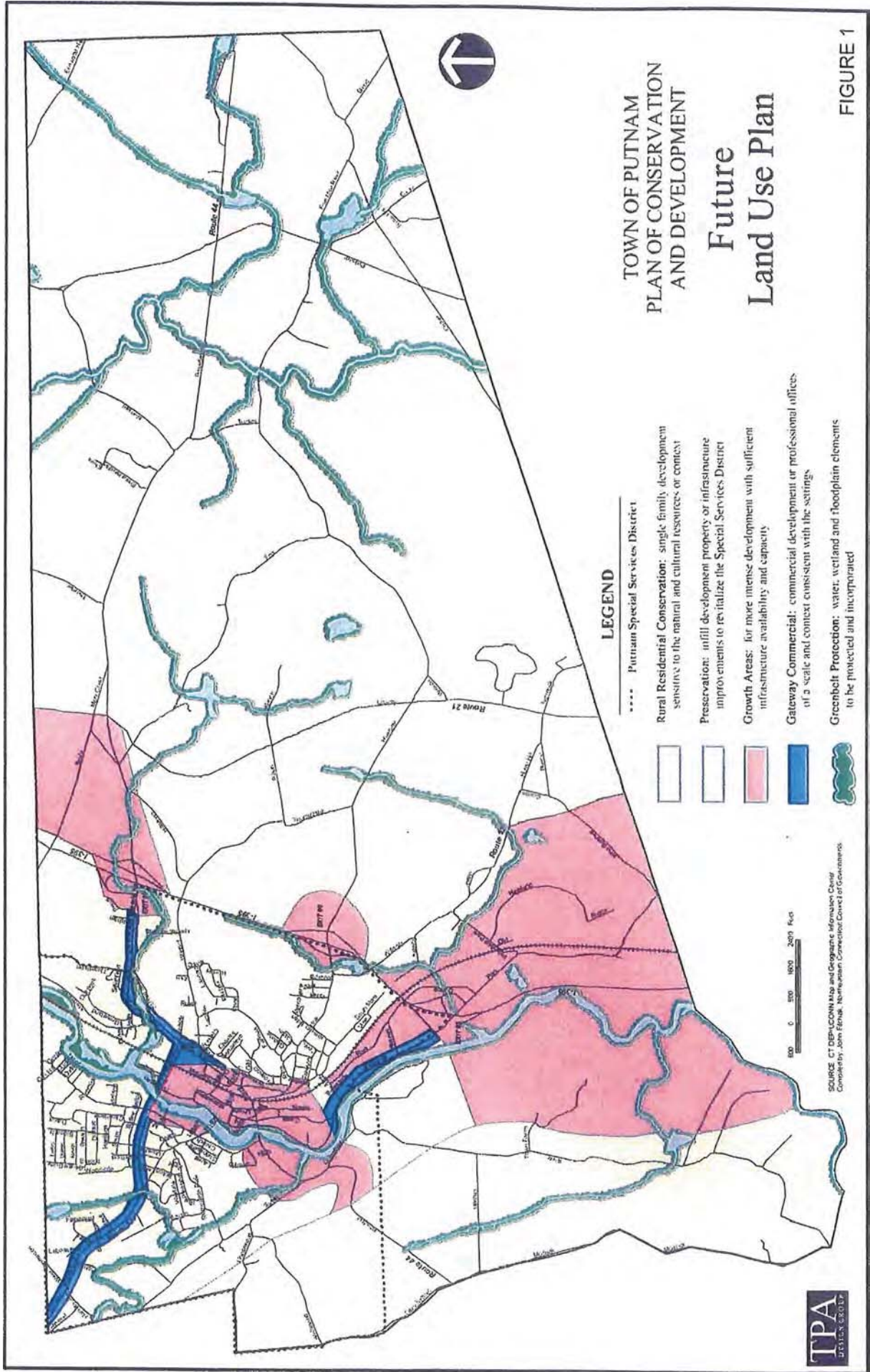
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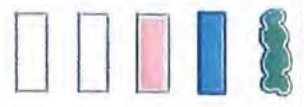
Appendix 11



**TOWN OF PUTNAM
PLAN OF CONSERVATION
AND DEVELOPMENT
Future
Land Use Plan**

LEGEND

- Putnam Special Services District
- Rural Residential Conservation: single family development sensitive to the natural and cultural resources or context
- Preservation: infill development property or infrastructure improvements to revitalize the Special Services District
- Growth Areas: for more intense development with sufficient infrastructure availability and capacity
- Gateway Commercial: commercial development or professional offices of a scale and context consistent with the settings
- Greenbelt Protection: water, wetland and floodplain elements to be protected and incorporated



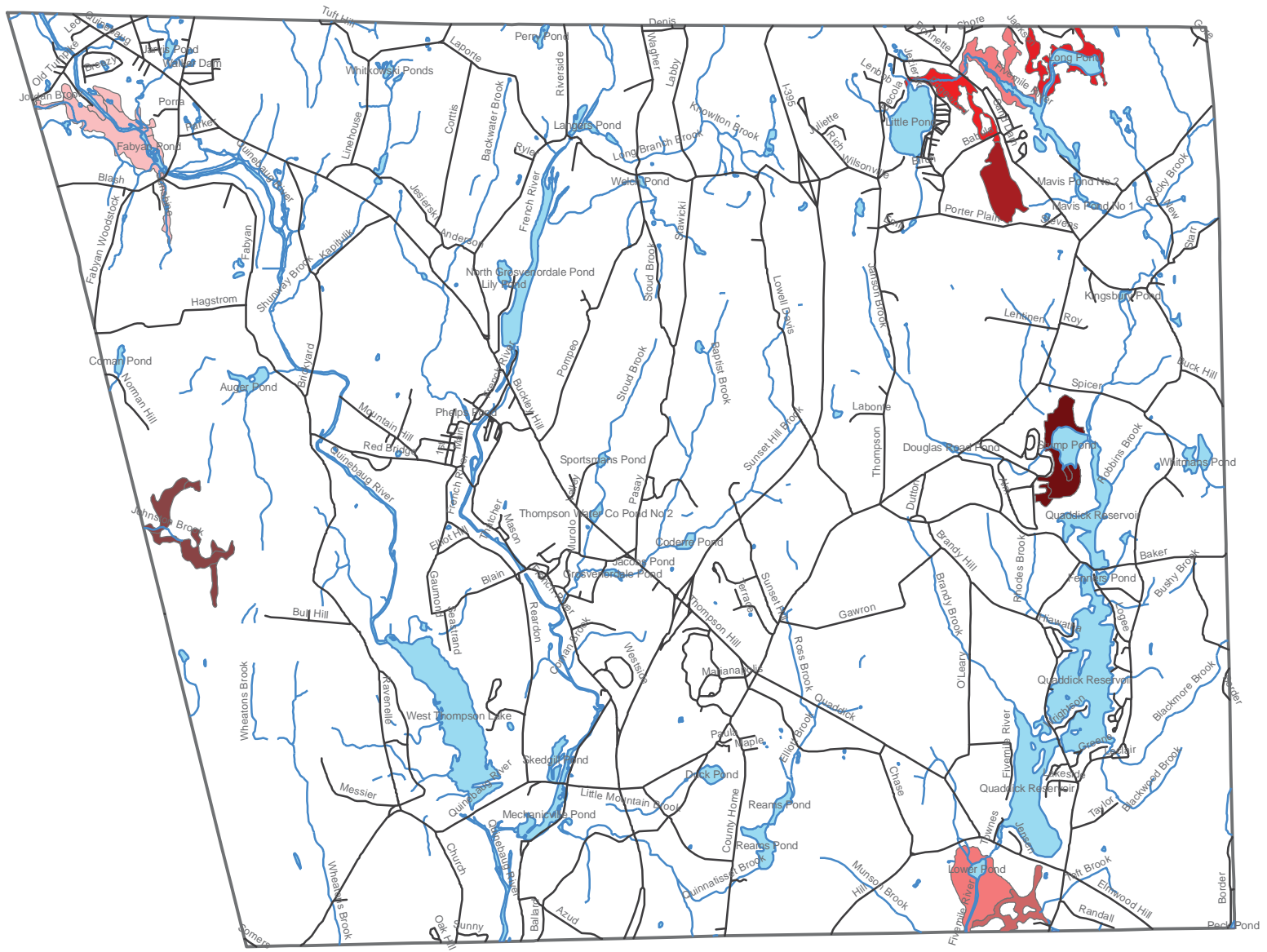
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SOURCE: CT DEPT. OF CONN. MAP AND GEOGRAPHIC INFORMATION CENTER
Compiled by: John Ebnak, Northeastern Connecticut Council of Governments



FIGURE 1

Appendix 12



Appendix 13

Schools, Fire, Ambulance, Police, Hospitals

Ashford Volunteer Fire Department	Ashford	Fire
Ashford Volunteer Fire Department (2)	Ashford	Fire
Ashford School	Ashford	School
East Brooklyn Fire Department	Brooklyn	Fire
Mortlake Fire Company	Brooklyn	Fire
Brooklyn Resident Trooper	Brooklyn	Police
Brooklyn Community Correctional Center	Brooklyn	School
Brooklyn Elementary School	Brooklyn	School
Brooklyn Middle School	Brooklyn	School
Learning Clinic Inc (The)	Brooklyn	School
Canterbury Volunteer Fire Company	Canterbury	Fire
Dr. Helen Baldwin Middle School	Canterbury	School
Canterbury Elementary School	Canterbury	School
Chaplin Volunteer Fire Department	Chaplin	Fire
Chaplin Resident State Trooper	Chaplin	Police
Parish Hill High School	Chaplin	School
Chaplin Elementary School	Chaplin	School
Eastford Independent Fire Company	Eastford	Fire
Eastford Elementary School	Eastford	School
Hampton-Chaplin Ambulance Corps	Hampton	Ambulance
Hampton Fire Company	Hampton	Fire
Greenwood Sudbury School	Hampton	School
Eastconn Special Education	Hampton	School
Hampton Elementary School	Hampton	School
K-B Ambulance Corps	Killingly	Ambulance
Attawaugan F District	Killingly	Fire
East Killingly Fire Department	Killingly	Fire
Dayville Fire Company	Killingly	Fire
Danielson Fire Department	Killingly	Fire
South Killingly Fire Station	Killingly	Fire
Willaimsville Fire Company	Killingly	Fire
Killingly Police Department	Killingly	Police
Connecticut State Police Troop D	Killingly	Police
Killingly High School	Killingly	School
Killingly Memorial School	Killingly	School
St James School	Killingly	School
H. H. Ellis Technical High School	Killingly	School
Goodyear Early Childhood Center	Killingly	School
Killingly Central School	Killingly	School
Killingly Intermediate School	Killingly	School
Moosup-Plainfield Ambulance	Plainfield	Ambulance
Plainfield Fire Company	Plainfield	Fire
Atwood Hose Fire Company	Plainfield	Fire
Moosup Fire Department	Plainfield	Fire
Central Village Fire Company	Plainfield	Fire
Plainfield Police Department	Plainfield	Police
Shepard Hill Elementary School	Plainfield	School

Schools, Fire, Ambulance, Police, Hospitals

Plainfield High School	Plainfield	School
Moosup Elementary School	Plainfield	School
Plainfield Central Middle School	Plainfield	School
Plainfield Memorial School	Plainfield	School
Early Childhood Center	Plainfield	School
Plainfield Catholic School	Plainfield	School
Pomfret Volunteer Fire Department	Pomfret	Fire
Pomfret Community School	Pomfret	School
Rectory	Pomfret	School
Pomfret School	Pomfret	School
East Putnam Fire Department	Putnam	Fire
Putnam Police Department	Putnam	Police
Day Kimball Hospital	Putnam	Care Facility
Putnam Elementary School	Putnam	School
Putnam High School	Putnam	School
Putnam Middle School	Putnam	School
Tri-State Christian Academy	Putnam	School
St Mary School	Putnam	School
Scotland Volunteer Fire Department	Scotland	Fire
Scotland Elementary School	Scotland	School
Sterling Volunteer Fire Company	Sterling	Fire
Oneco Fire Company/Sterling F District	Sterling	Fire
Sterling Memorial School	Sterling	School
Thompson Fire Engine Company	Thompson	Fire
West Thompson Independent Fire Association	Thompson	Fire
Quinebaug Volunteer Fire Department	Thompson	Fire
East Thompson Volunteer Fire Department	Thompson	Fire
Mary R. Fisher Elementary School	Thompson	School
Thompson Middle School	Thompson	School
Tourtellotte Memorial High School	Thompson	School
Marianapolis Prep School	Thompson	School
St Joseph School	Thompson	School
Community Fire Company	Thomspson	Fire
Union Volunteer Fire Department	Union	Fire
Union Elementary School	Union	School
Voluntown Volunteer Fire Company	Voluntown	Fire
Voluntown Elementary School	Voluntown	School
Bungay Fire Brigade	Woodstock	Fire
Muddy Brook Fire Department	Woodstock	Fire
Woodstock Volunteer Fire Association	Woodstock	Fire
Woodstock Middle School	Woodstock	School
Woodstock Elementary School	Woodstock	School
Woodstock Academy	Woodstock	School
Hyde School	Woodstock	School

Hazardous Materials Facilities

Killingly	Spirol International Corp., Delta Rubber Co., Rogers Corp., Plastics Color and Compounding Inc.
Plainfield	Griswold Rubber Co., Kaman Aerospace Group, C&M Corp.
Putnam	Nutmeg Container Corp.
Thompson	Sanitary-Dash Manufacturing Co.
Woodstock	Rogers Corp.

Dams in the region

ASHFORD	MOREY POND DAM
ASHFORD	SUSTEK POND DAM
ASHFORD	LITTLE POND DAM
ASHFORD	ARMITAGE POND DAM
ASHFORD	LAKE CHAFFEE DAM
ASHFORD	WESTFORD MARSH #2 DAM
ASHFORD	WESTFORD POND DAM
ASHFORD	CENTER POND DAM
ASHFORD	WESTFORD MARSH #1 DAM
ASHFORD	KOVALESKI POND DAM
ASHFORD	ASHFORD LAKE DAM
ASHFORD	HARAKLEYS POND DAM
ASHFORD	STOWELL POND DAM
ASHFORD	SABO POND DAM
ASHFORD	LIPPS POND DAM
ASHFORD	AMIDON FARM DAM
ASHFORD	KLECAK POND DAM
ASHFORD	POOLE POND DAM
ASHFORD	GOSS BROOK DAM
ASHFORD	UPTON DAM
ASHFORD	HAPPY ACRES POND DAM
ASHFORD	UPTON POND DAM
ASHFORD	MORITZ POND DAM
ASHFORD	ADZINA DAM
ASHFORD	KNOWLTON POND DAM
BROOKLYN	BUSH HILL POND DAM
BROOKLYN	{unnamed dam}
BROOKLYN	NOVA POND DAM
BROOKLYN	RAKAK DAM
BROOKLYN	KRAUSE POND DAM
BROOKLYN	CUNNEEK POND DAM
BROOKLYN	WINDHAM COUNTY CONSERVATION DISTRICT 1 DAM
BROOKLYN	WINDHAM COUNTY CONSERVATION DISTRICT 2 DAM
BROOKLYN	PIELOLA POND DAM
BROOKLYN	LESAGE POND DAM
BROOKLYN	CREAMERY POND DAM
BROOKLYN	STONY BROOK DAM
BROOKLYN	BASSETT POND DAM
BROOKLYN	STRETSON POND DAM
CANTERBURY	PARADISE LAKE DAM
CANTERBURY	WRIGHT POND DAM
CANTERBURY	VERKADE NURSERY POND DAM
CANTERBURY	BUCKHILL ROAD POND DAM

CANTERBURY	WAUREGAN ROAD SWAMP DAM
CANTERBURY	BENNETT BROOK POND DAM
CANTERBURY	{unnamed dam}
CANTERBURY	ULASIK POND DAM
CANTERBURY	TRACY ROAD POND DAM
CANTERBURY	FORT NED POND DAM
CANTERBURY	MUDHOLE BROOK POND DAM
CANTERBURY	BENNETTS POND DAM
CANTERBURY	POTTER POND DAM
CANTERBURY	PECK POND DAM
CANTERBURY	BATES POND DAM
CANTERBURY	VEIT POND DAM
CANTERBURY	LISBON POND DAM
CHAPLIN	UPPER COLTS POND DAM
CHAPLIN	LOWER COLTS POND DAM
CHAPLIN	WILDLIFE MARSH SITE #1
CHAPLIN	REEDS POND DAM
CHAPLIN	BUJACK ROAD POND DAM
CHAPLIN	UPSON LAKE DAM
CHAPLIN	WILDLIFE MARSH #2
CHAPLIN	DARLING POND DAM
CHAPLIN	BLACK SPRUCE POND
CHAPLIN	AMES BROOK DAM
CHAPLIN	MANSURE POND
CHAPLIN	LYNCH POND DAM
EASTFORD	MORSE RESERVOIR DAM
EASTFORD	CRYSTAL POND DAM
EASTFORD	CAMP NAHACO DAM
EASTFORD	PORK HILL POND DAM
EASTFORD	LAKE LEAKALOT MORE DAM
EASTFORD	CARDER POND DAM
EASTFORD	LAKE LEAKALOT DAM
EASTFORD	TATEM POND DAM
EASTFORD	ALEKSA DAM
EASTFORD	PHOENIXVILLE PARK POND DAM #2
EASTFORD	PHOENIXVILLE PARK POND DAM #1
EASTFORD	STONES BROOK POND DAM
EASTFORD	WHETONS MILL POND DAM
EASTFORD	{unnamed dam}
EASTFORD	HALL POND DAM (NORTH&SOUTH)
EASTFORD	BEAVERDAM MARSH POND DAM
EASTFORD	{unnamed dam}
EASTFORD	HALLS POND (SOUTH)
HAMPTON	KENYON ROAD POND DAM
HAMPTON	HAMPTON RESERVOIR

Dams in the region

HAMPTON	{unnamed dam}
HAMPTON	BURDICK BROTHERS DAM
HAMPTON	{unnamed dam}
HAMPTON	EDWIN WAY TEALE POND DAM
HAMPTON	AQUA SWAMP DAM
HAMPTON	RIVER RUN DAM
HAMPTON	FULLER DAM
HAMPTON	{unnamed dam}
HAMPTON	LITTLE RIVER POND DAM
HAMPTON	RICHARD BROWN POND DAM
HAMPTON	BROWN HILL (CEDAR SMP)
HAMPTON	PINE ACRES LAKE
HAMPTON	UPPER DAM
HAMPTON	LOWER POND DAM
KILLINGLY	CREED POND DAM
KILLINGLY	OLD DANIELS DAM
KILLINGLY	WHEATONS POND DAM
KILLINGLY	BALLOUVILLE DAM
KILLINGLY	FEDOROWICZ POND DAM
KILLINGLY	BREAKNECK POND DAM
KILLINGLY	CEMETERY POND DAM
KILLINGLY	LEONARD POND DAM
KILLINGLY	EDDY PRAY RESERVOIR DAM
KILLINGLY	{unnamed dam}
KILLINGLY	KILLINGLY POND DAM
KILLINGLY	SMALL POND DAM
KILLINGLY	NORTH ALVIA CHASE RESERVOIR DAM
KILLINGLY	ALEXANDER LAKE DAM
KILLINGLY	MIDDLE RESERVOIR DAM
KILLINGLY	ACME POND DAM
KILLINGLY	PYRM DAM #3
KILLINGLY	CHASE RESERVOIR DAM
KILLINGLY	BEAR HILL POND DAM
KILLINGLY	CARTON POND DAM
KILLINGLY	BOG MEADOW RESERVOIR DAM
KILLINGLY	LITTLE POND DAM
KILLINGLY	HALE DAM
KILLINGLY	ROGERS DAM
KILLINGLY	BEND POND DAM
KILLINGLY	VALLEY POND DAM
KILLINGLY	WHOSE POND DAM
KILLINGLY	BORDER POND DAM
KILLINGLY	CRYSTAL POND DAM
KILLINGLY	ELMVILLE POND DAM
KILLINGLY	SLATER BROOK POND DAM

KILLINGLY	LAKE WINDHAM DAM
KILLINGLY	LAKE MITCHELL DAM
KILLINGLY	LAKE BELLE DAM
KILLINGLY	LAKE ALBERT DAM
KILLINGLY	SMITH POND DAM
KILLINGLY	COOK HILL ROAD POND DAM
KILLINGLY	POLANSKI POND DAM
KILLINGLY	SAVOIE POND DAM
KILLINGLY	RAYMOND LEMIEUX DAM
KILLINGLY	FIVE MILE POND DAM
KILLINGLY	TETREAULT POND DAM
KILLINGLY	FURNACE POND
KILLINGLY	ROSS POND DAM
KILLINGLY	QUINEBAUG POND DAM
KILLINGLY	QUANDOCK BROOK DAM
KILLINGLY	{unnamed dam}
PLAINFIELD	SNAKE MEADOW POND DAM
PLAINFIELD	AQUA POND DAM
PLAINFIELD	WAUREGAN POND DAM
PLAINFIELD	MOOSUP POND DAM
PLAINFIELD	MOOSUP RIVER DAM #1
PLAINFIELD	BRUNSWICK MILLS DAM #2
PLAINFIELD	BRUNSWICK MILL DAM #1
PLAINFIELD	MOOSUP RIVER DAM #2
PLAINFIELD	HEADRACE GATES DAM
PLAINFIELD	HEADRACE DAM
PLAINFIELD	KAMAN TAILRACE DAM
PLAINFIELD	MOOSUP RIVER DAM #3
PLAINFIELD	BOSKOVICH POND DAM
PLAINFIELD	SCHAPER POND DAM
PLAINFIELD	EVANS POND DAM
PLAINFIELD	FIRE PROTECTION POND DAM
PLAINFIELD	PACKERS POND DAM
PLAINFIELD	LOCKES MEADOW POND DAM
POMFRET	DEANS POND #3 DAM
POMFRET	NEW POND DAM
POMFRET	DEANS POND #1 DAM
POMFRET	DEANS POND #2 DAM
POMFRET	MATHEWSON ROAD POND DAM
POMFRET	RAGGED HILL POND DAM
POMFRET	NIGHTINGALE POND DAM
POMFRET	HOLLOW POND DAM
POMFRET	VAIDA POND DAM
POMFRET	LOOS POND DAM
POMFRET	CRYSTAL POND DAM

Dams in the region

POMFRET	ABBOTTS DAM
POMFRET	SMALL POND DAM
POMFRET	KELLY POND DAM #2
POMFRET	TAFT POND DAM
POMFRET	PROMFRET 4H LOWER DAM
POMFRET	KELLY POND DAM #1
POMFRET	PROMFRET 4H UPPER DAM
POMFRET	POMFRET ROD & GUN CLUB POND DAM
POMFRET	BEAUPRES POND DAM
POMFRET	WEEKS DAM
POMFRET	VALENTINE DAM
POMFRET	BAKER POND DAM
POMFRET	WATERFOWL DAM
PUTNAM	PECK POND
PUTNAM	WHEATONS BROOK POND DAM
PUTNAM	PEACOCK POND DAM
PUTNAM	METALS SELLING DAM
PUTNAM	TAVERN BROOK DAM #2
PUTNAM	ROSENFELD DAM
PUTNAM	MANTUP POND DAM
PUTNAM	PARK POND DAM
PUTNAM	TAVERN BROOK POND DAM #1
PUTNAM	HAWKINS POND DAM
PUTNAM	CARGILL FALLS DAM
PUTNAM	MARY BROWN DAM
PUTNAM	CHAPMAN POND DAM
PUTNAM	CADY POND DAM
PUTNAM	ALDRICH POND DAM
PUTNAM	PERRY BROOK POND DAM
PUTNAM	MANTUP ROAD POND DAM
PUTNAM	CARPENTER POND DAM
SCOTLAND	KIMBALL POND DAM
SCOTLAND	ROBERT WELSH DAM
SCOTLAND	UPPER GAGER POND DAM
SCOTLAND	LOWER GAGER POND DAM
SCOTLAND	MURPHY POND DAM
STERLING	ROSS MANAGEMENT AREA POND
STERLING	SAWMILL HILL ROAD POND DAM
STERLING	SAWMILL HILL ROAD POND DAM #1
STERLING	FARM POND DAM
STERLING	RHODE ISLAND SCHOOL OF DESIGN DAM
STERLING	STERLING POND DAM
STERLING	ONECO POND DAM

STERLING	CARSON BROOK DAM
STERLING	PORTER POND
THOMPSON	LONG POND DAM
THOMPSON	WALKER DAM
THOMPSON	WHITKOWSKI POND DAM
THOMPSON	LITTLE POND DAM
THOMPSON	LANGERS POND DAM
THOMPSON	FABYAN POND DAM
THOMPSON	WELCH POND DAM
THOMPSON	MAVIS POND DAM #2
THOMPSON	MAVIS POND DAM #1
THOMPSON	NORTH GROSVENORDALE DAM
THOMPSON	AUGER POND DAM
THOMPSON	COMAN POND DAM
THOMPSON	PHELPS POND DAM
THOMPSON	WHITMANS POND DAM
THOMPSON	DOUGLAS ROAD POND DAM
THOMPSON	SPORTSMANS POND DAM
THOMPSON	BAPTIST BROOK POND DAM
THOMPSON	THOMPSON WATER DAM #2
THOMPSON	KRAWIEC POND DAM
THOMPSON	CODERRE POND DAM
THOMPSON	WARE POND DAM
THOMPSON	BELDEN DAM
THOMPSON	THOMPSON WATER COMPANY POND DAM
THOMPSON	WAKEFIELD POND DAM
THOMPSON	DUCK POND DAM
THOMPSON	WEST THOMPSON FLOOD CONTROL DAM
THOMPSON	QUADDICK RESERVOIR
THOMPSON	ACME POND DAM
THOMPSON	RAWSONS POND DAM
THOMPSON	REAMS POND DAM
THOMPSON	LOWER POND DAM
UNION	GOODHALL DAM
UNION	MASHAUG POND DAM #3
UNION	MASHAUG POND DAM #2
UNION	SESSIONS MEADOW MARSH
UNION	WELLS POND DAM
UNION	WELLS BROOK DAM
UNION	MOORE POND DAM
UNION	MASHAUG POND (SPILLWAY)
UNION	BUCKLEY POND DAM
UNION	BIGELOW POND

Dams in the region

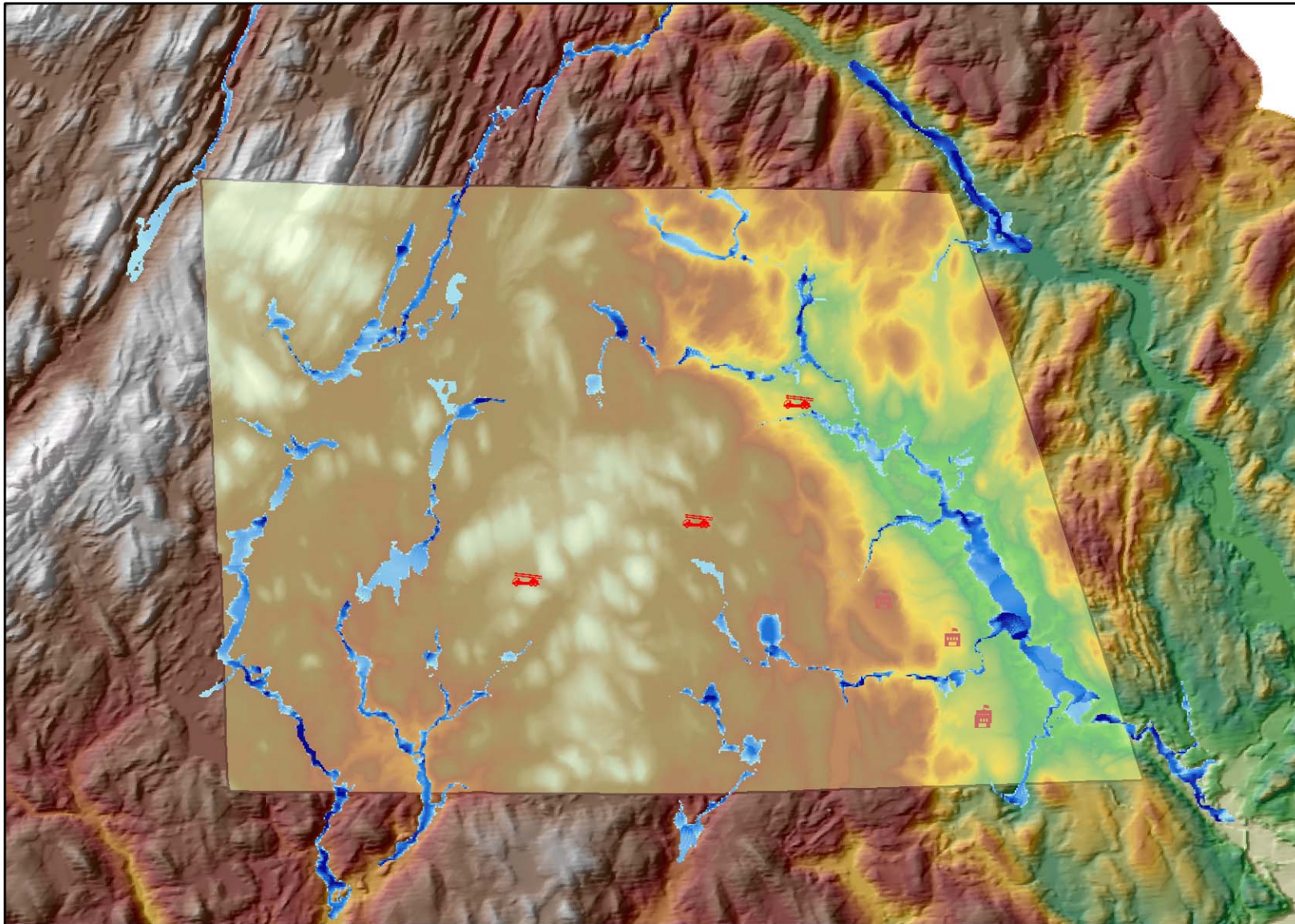
UNION	MATHEWS POND DAM
UNION	WALKER POND DAM
UNION	MYERS POND DAM
UNION	KINNEY POND DAM
UNION	LOST POND DAM
UNION	HARMON POND DAM
UNION	BALD POND DAM
UNION	MORSE MEADOW POND DAM
UNION	FOREST POND DAM
UNION	PINNEYS POND #2 DAM
UNION	PINNEYS POND #1 DAM
VOLUNTOWN	HELL HOLLOW POND DAM
VOLUNTOWN	BAILEY POND
VOLUNTOWN	GREAT MEADOW BROOK DAM
VOLUNTOWN	DOUGLAS POND DAM
VOLUNTOWN	GREAT MEADOW BROOK PD
VOLUNTOWN	DAWLEY POND
VOLUNTOWN	WICKABOXET MARSH DAM
VOLUNTOWN	GADLE POND DAM
VOLUNTOWN	GREAT MEADOW BROOK POND DAM
VOLUNTOWN	MASON GRAY POND DAM
VOLUNTOWN	FORGE POND DAM
VOLUNTOWN	KALERVO DAM
VOLUNTOWN	BEACH POND
VOLUNTOWN	LYBECKS POND DAM
VOLUNTOWN	BEACHDALE POND DAM
VOLUNTOWN	TEN ROD POND DAM
VOLUNTOWN	YELLOW MILL DAM
VOLUNTOWN	SAWMILL POND DAM
VOLUNTOWN	COLLINS POND DAM
VOLUNTOWN	DENISON BROOK DAM
VOLUNTOWN	PACHAUG WILDLIFE POND
VOLUNTOWN	HODGE POND
VOLUNTOWN	{unnamed dam}
VOLUNTOWN	GREEN FALLS RESERVOIR
VOLUNTOWN	GALLUP HOMESTEAD FARM POND DAM
VOLUNTOWN	DETENTION BASIN DAM
VOLUNTOWN	UNFINISHED POOL DAM
VOLUNTOWN	HOVIS POND DAM
VOLUNTOWN	{unnamed dam}
VOLUNTOWN	PALMER POND DAM
VOLUNTOWN	KOISTENEN BROOK POND DAM
VOLUNTOWN	KOISTINEN POND DAM
VOLUNTOWN	{unnamed dam}

VOLUNTOWN	KOISTINEN BROOK DAM
VOLUNTOWN	PRIVATE POND DAM
VOLUNTOWN	PALMER POND DAM
WOODSTOCK	HATCHET POND DAM
WOODSTOCK	MUDDY POND DAM
WOODSTOCK	OKESON POND DAM
WOODSTOCK	PROSPECT STREET POND DAM
WOODSTOCK	TURNPIKE ROAD DAM
WOODSTOCK	POTTER POND DAM
WOODSTOCK	POUT POND DAM
WOODSTOCK	CORBIN WILDLIFE MARSH
WOODSTOCK	AQUA POND DAM
WOODSTOCK	GRIGGS POND DAM
WOODSTOCK	HIGHEST POND DAM
WOODSTOCK	MUDDY POND DAM
WOODSTOCK	SAMPSON POND DAM
WOODSTOCK	CHAMBERLAIN POND DAM
WOODSTOCK	JOHNSTONE POND DAM
WOODSTOCK	CENTER ROAD POND DAM
WOODSTOCK	BLACK POND DAM
WOODSTOCK	KEACH POND DAM
WOODSTOCK	PRIOR FISH & WILDLIFE DAM
WOODSTOCK	BUNGEE DAM
WOODSTOCK	BUNGEE LAKE DAM
WOODSTOCK	ROSELAND LAKE DAM
WOODSTOCK	DICKENSON POND DAM
WOODSTOCK	PAINTER POND DAM
WOODSTOCK	DIBONAVENTURA POND DAM
WOODSTOCK	CEMETERY POND DAM
WOODSTOCK	NEW SWEDEN POND DAM
WOODSTOCK	KENYON POND DAM
WOODSTOCK	WAPPAQUASSET POND DAM
WOODSTOCK	LAST POND DAM
WOODSTOCK	SHEPERDS POND DAM
WOODSTOCK	CONOVER DAM

Appendix 14

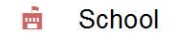
Study Region: Woodstock_Flooding

Scenario: 100-year flood in Woodstock, CT



Legend

School



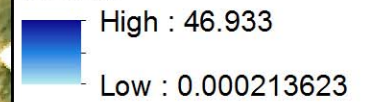
School

FireStation

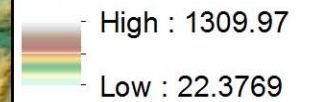


FireStation

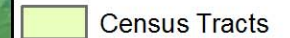
RPD100_r



RegionDEM



Census Tracts

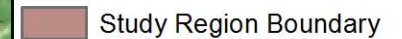


Census Tracts

Hillshade



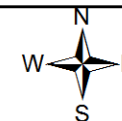
Study Region Boundary



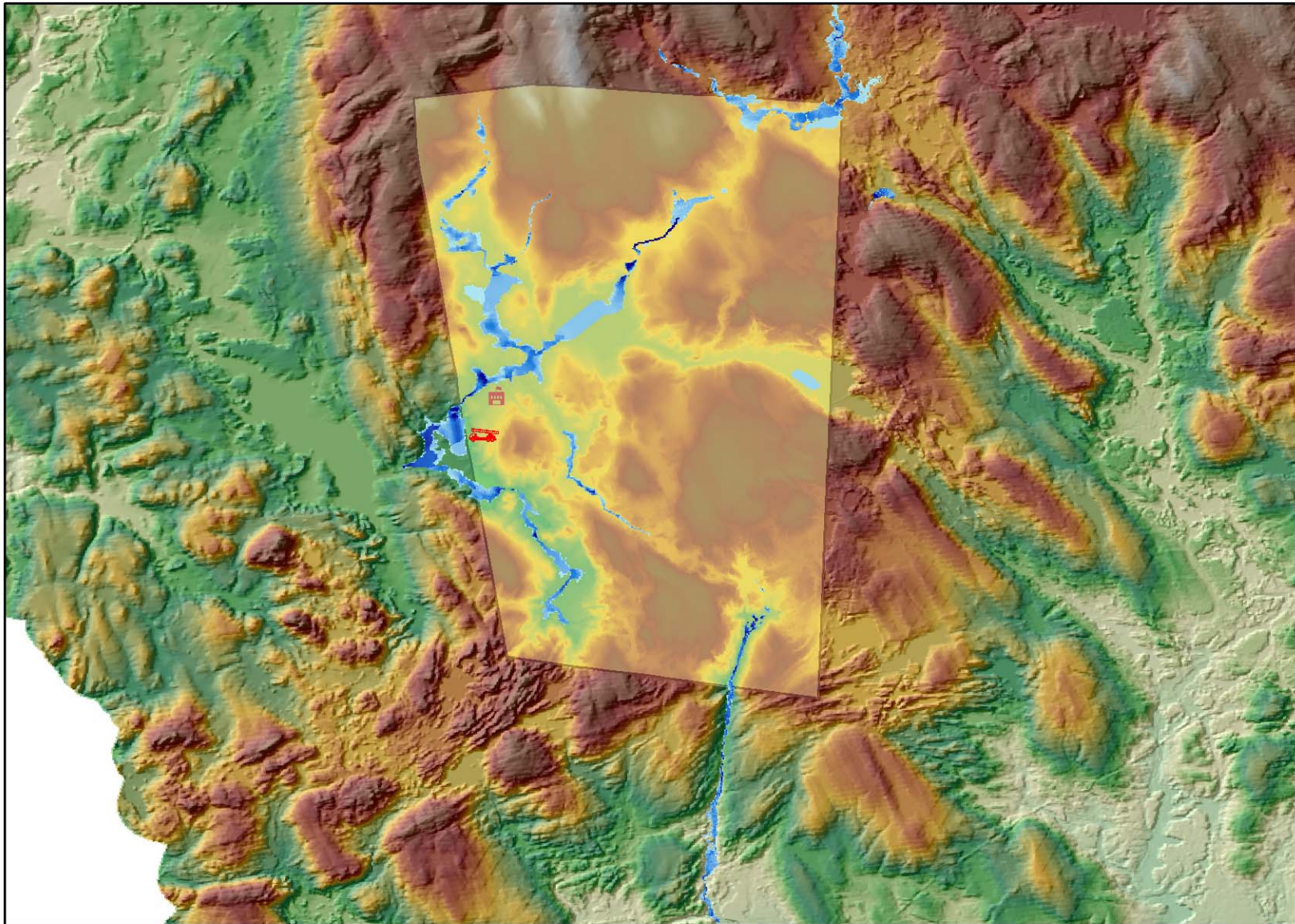
Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

6 3 0 6 Kilometers



Study Region: Voluntown_Flooding
Scenario: 100-year flood in Voluntown, CT

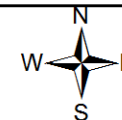


Legend

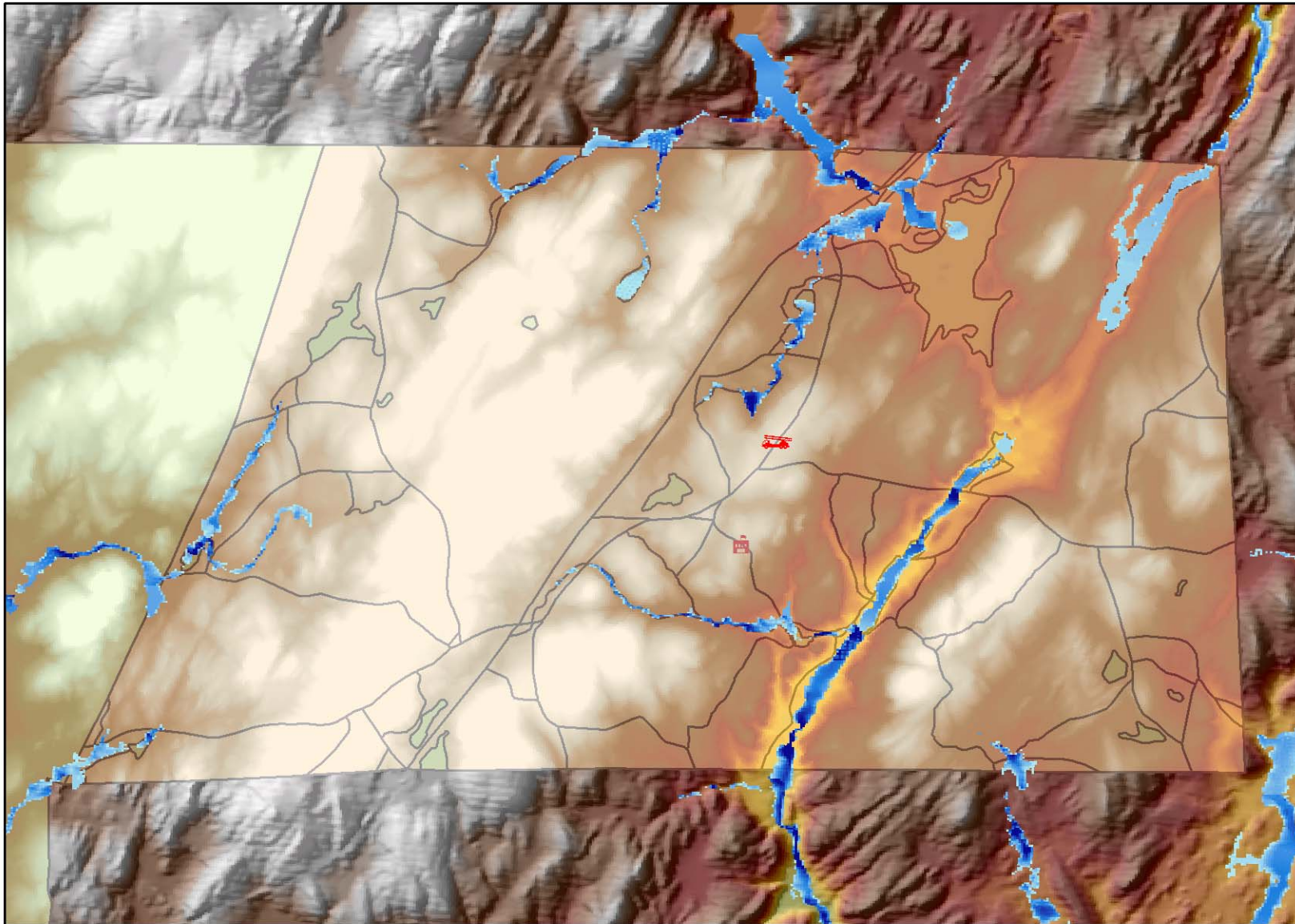
- School
 - School
- FireStation
 - FireStation
 - FireStation
 - FireStation
- RPD100_r
 - High : 49.4103
 - Low : 0.00300049
- RegionDEM
 - High : 924.681
 - Low : -1.18435
- Census Tracts
 - Census Tracts
- Hillshade
 - High : 254
 - Low : 0
- Study Region Boundary
 - Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

7.5 3.75 0 7.5 Kilometers



Study Region: Union_Flooding
Scenario: Union_Flooding



Legend

- School
 - School
- FireStation
 - FireStation
- RPD100_r
 - High : 29.6528
 - Low : 0.000854492
- RegionDEM
 - High : 1309.97
 - Low : 172.804
- Census Blocks
 - Census Blocks
- Census Tracts
 - Census Tracts
- Hillshade
 - High : 254
 - Low : 0
- Study Region Boundary
 - Study Region Boundary

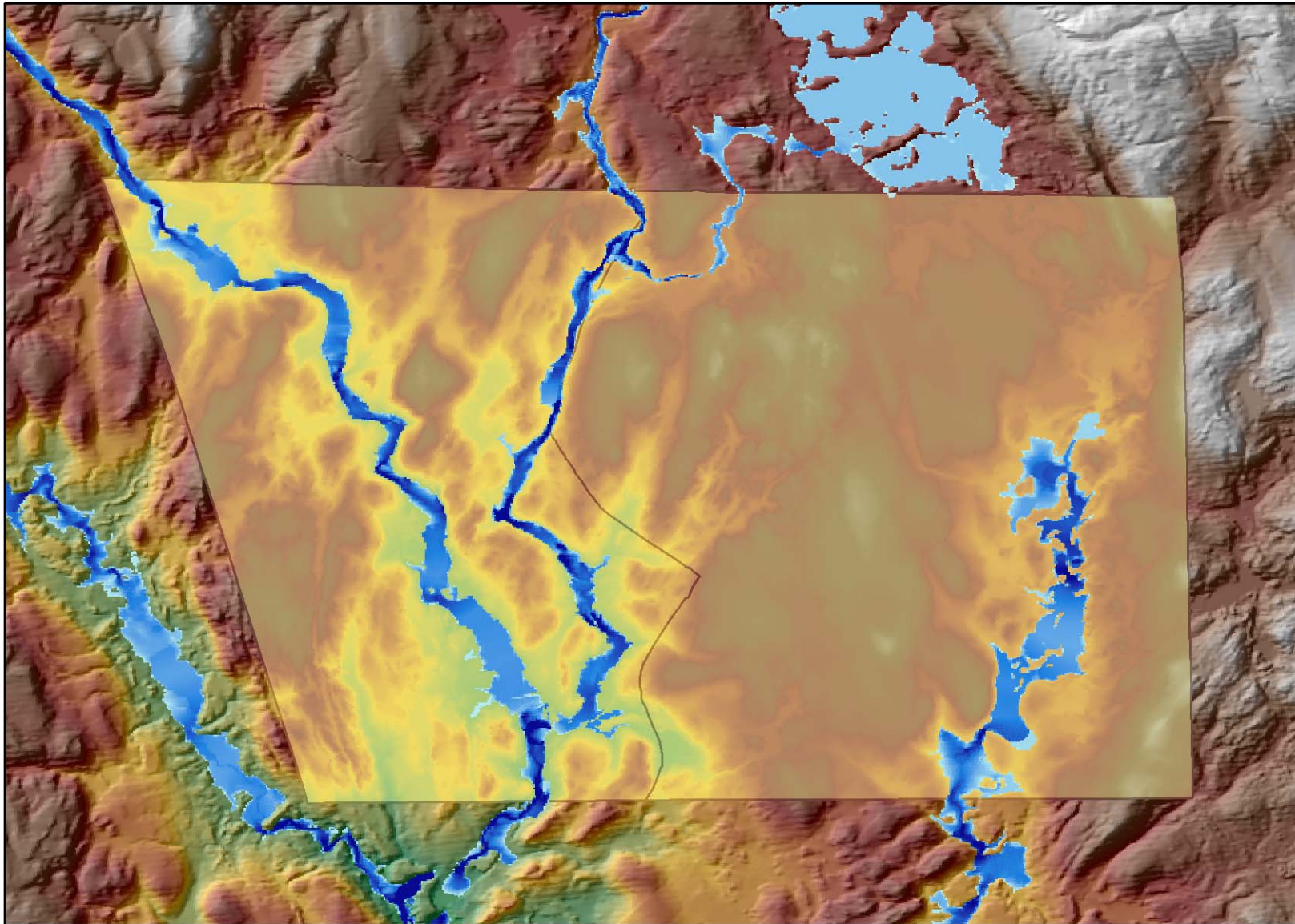
Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

4 2 0 4 Kilometers



Study Region: Thompson_Flood

Scenario: 100-year flood in Thompson, CT



Legend

RPD100_r
High : 26.284
Low : 0.000305176

RegionDEM
High : 1182.88
Low : 3.85661e-038

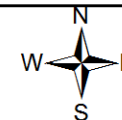
Census Tracts
Census Tracts

Hillshade
High : 254
Low : 0

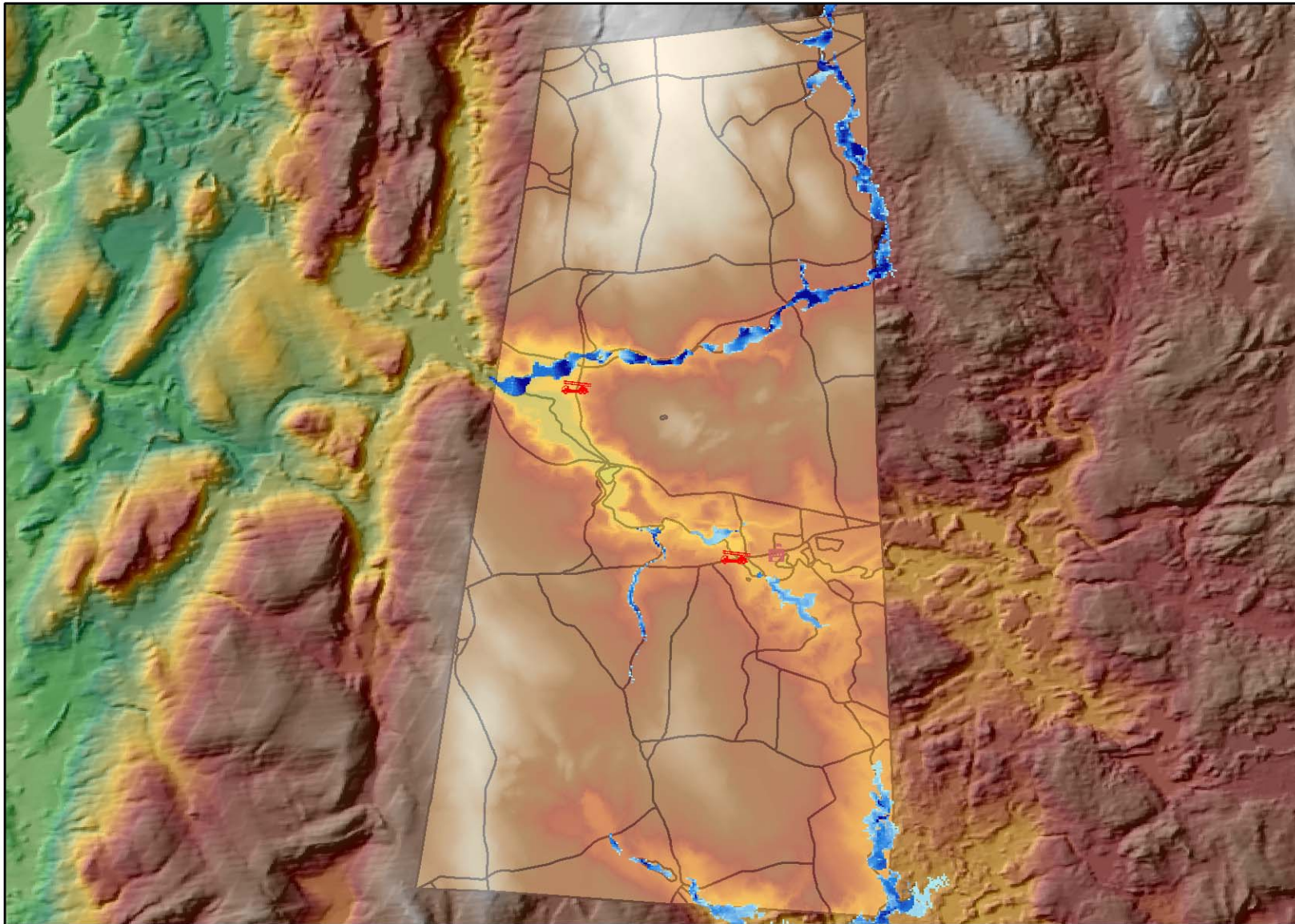
Study Region Boundary
Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.










5 2.5 0 5 Kilometers



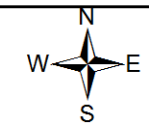
Study Region: Sterling_Flooding
Scenario: 100-year flood in Sterling, CT



Legend

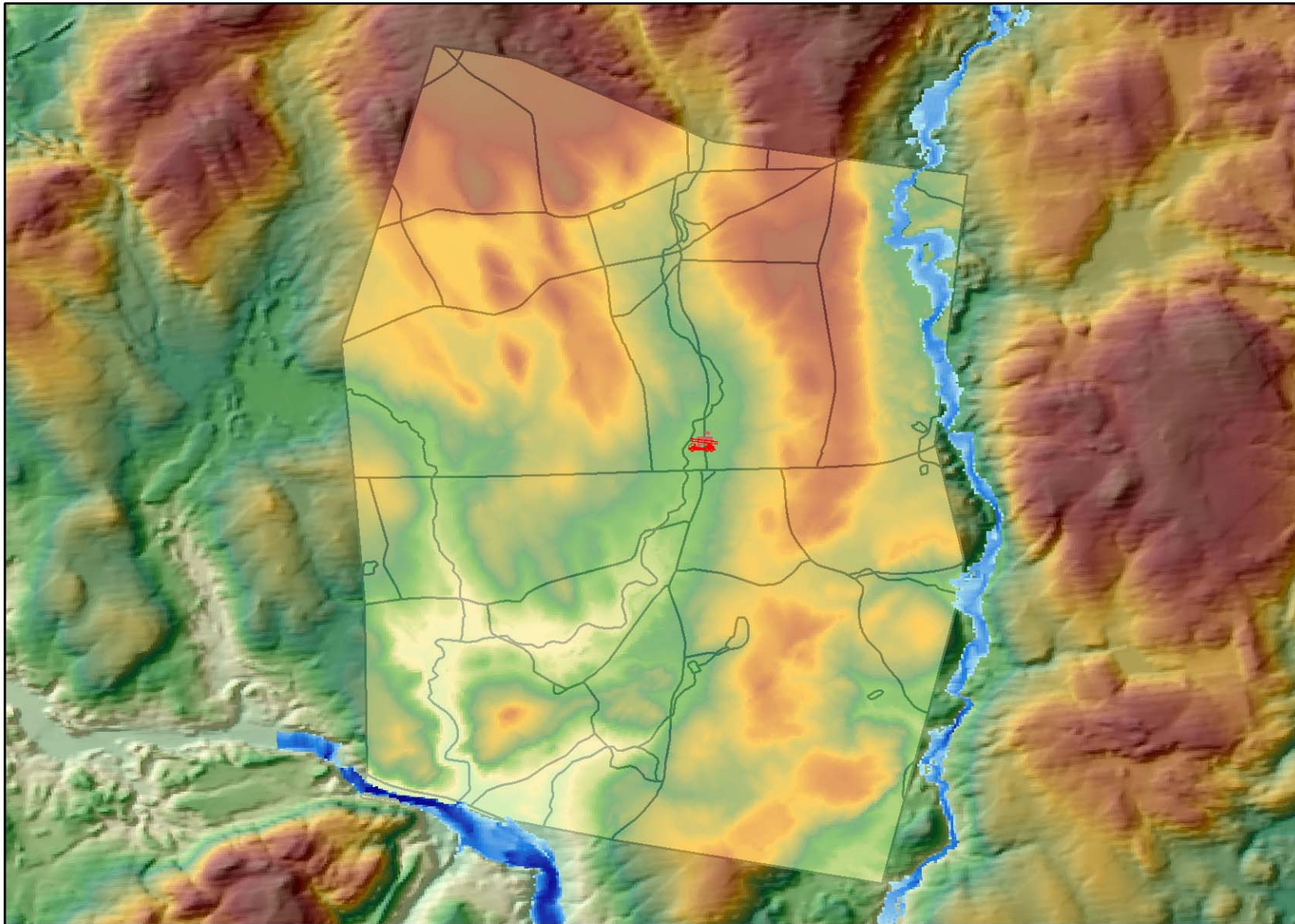
- School
 School
- School
 School
- FireStation
 FireStation
- RPD100_r
 High : 20.5143
Low : 0.000244141
- RegionDEM
 High : 924.681
Low : -1.18435
- Census Blocks
 Census Blocks
- Census Tracts
 Census Tracts
- Hillshade
 High : 254
Low : 0
- Study Region Boundary
 Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.




Study Region: Scotland_Flooding

Scenario: 100-year flood in Scotland, CT




Legend

FireStation

 FireStation

School

 School


RPD100_r

High : 29.2206
Low : 0.000742187


RegionDEM

High : 1309.97
Low : 20.5536

Census Blocks

 Census Blocks

Census Tracts

 Census Tracts

Hillshade

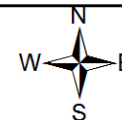
High : 254
Low : 0

Study Region Boundary

 Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

3 1.5 0 3 Kilometers




Study Region: Putnam_Flooding


Scenario: 100-year flood in Putnam, CT

Legend


CareFlyt

 CareFlyt

School

 School


PoliceStation

 PoliceStation


FireStation

 FireStation


RPD100_r

 High : 49.9102
Low : 0.000305176


RegionDEM

 High : 1078.56
Low : 22.3769

Census Blocks

 Census Blocks

Census Tracts

 Census Tracts

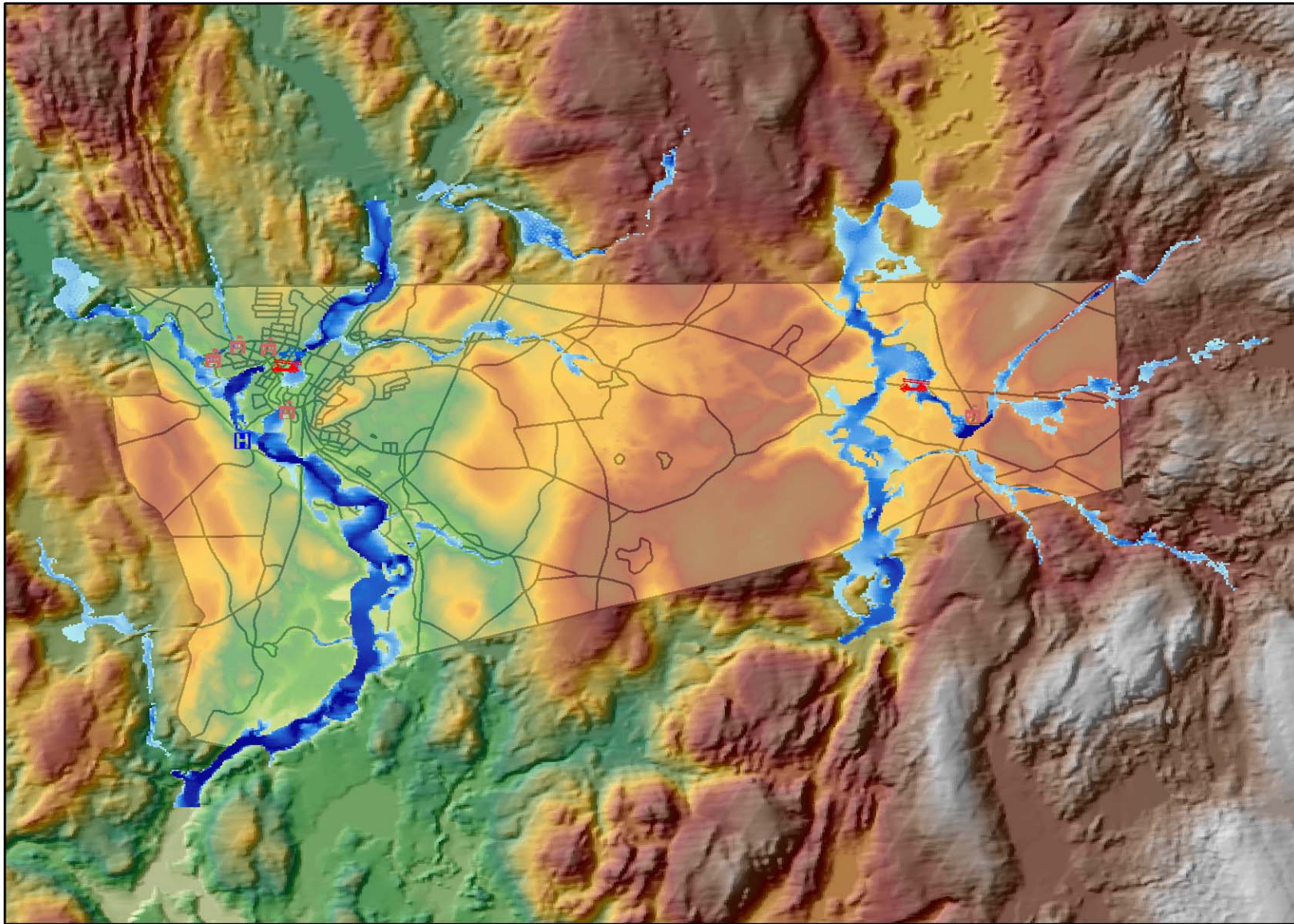
Hillshade

 High : 254
Low : 0

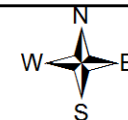
Study Region Boundary

 Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

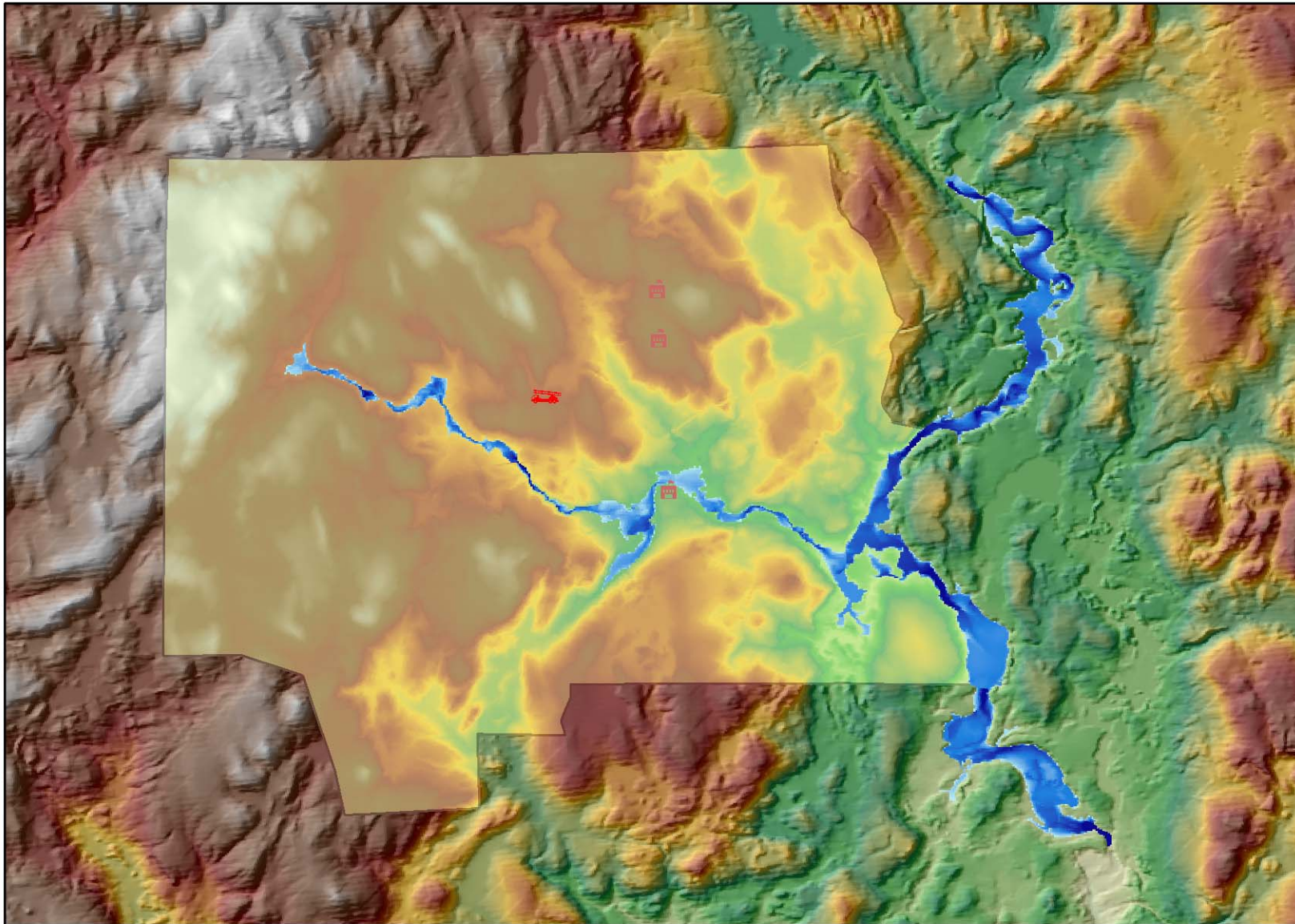


4 2 0 4 Kilometers




Study Region: Pomfret_Flooding

Scenario: 100-year flood in Pomfret, CT



Legend

FireStation

 FireStation

School

 School

RPD100_r

High : 30.3466


Low : 0.0011084

RegionDEM

High : 1309.97

Low : 20.5536

Census Tracts

 Census Tracts

Hillshade

High : 254

Low : 0

Study Region Boundary

 Study Region Boundary

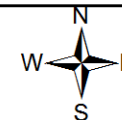
Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

6

3

0

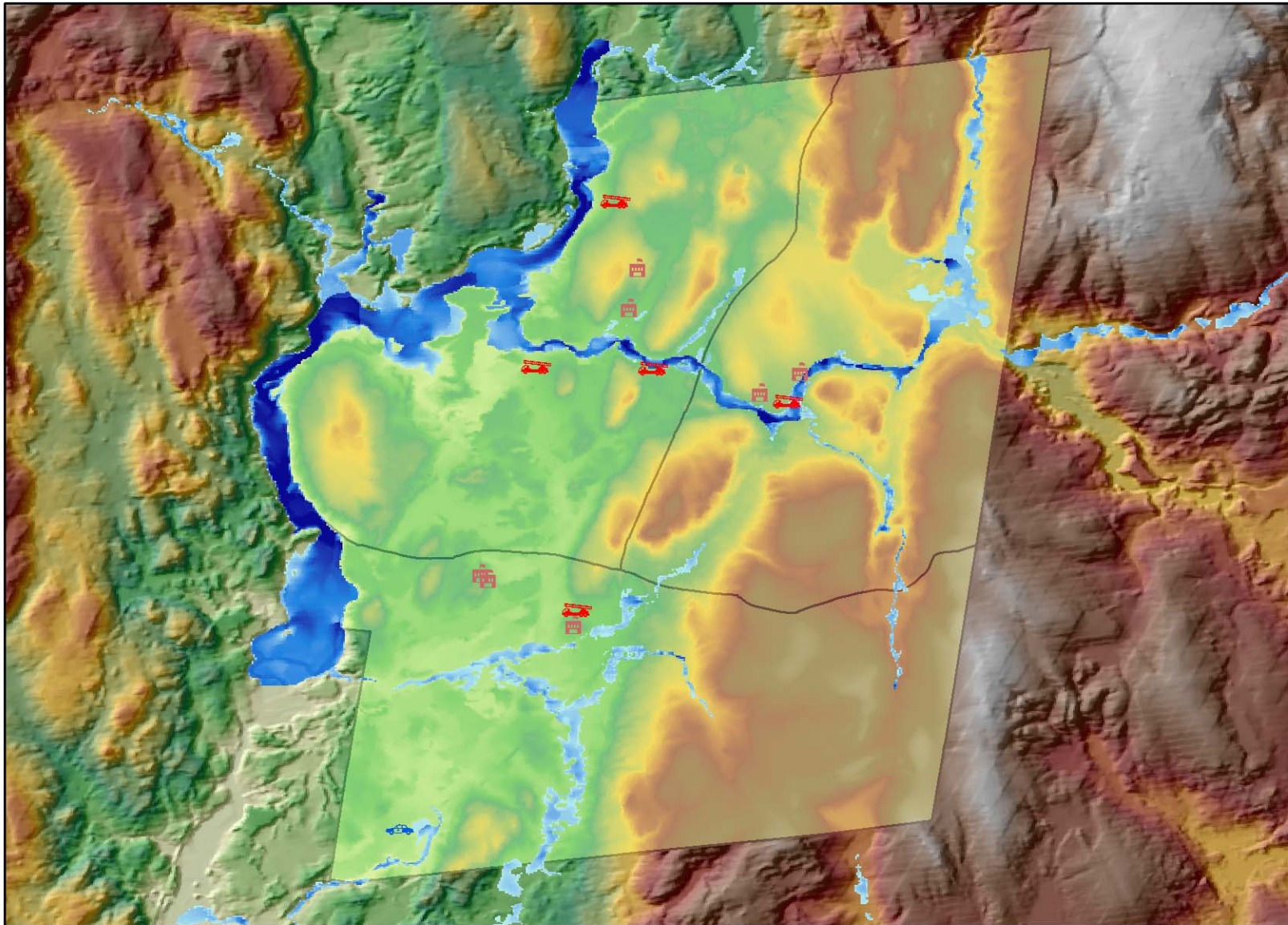
6 Kilometers



Study Region: Plainfield_Flooding

Scenario: 100-year flood in Plainfield, CT

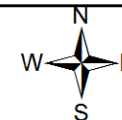
Legend



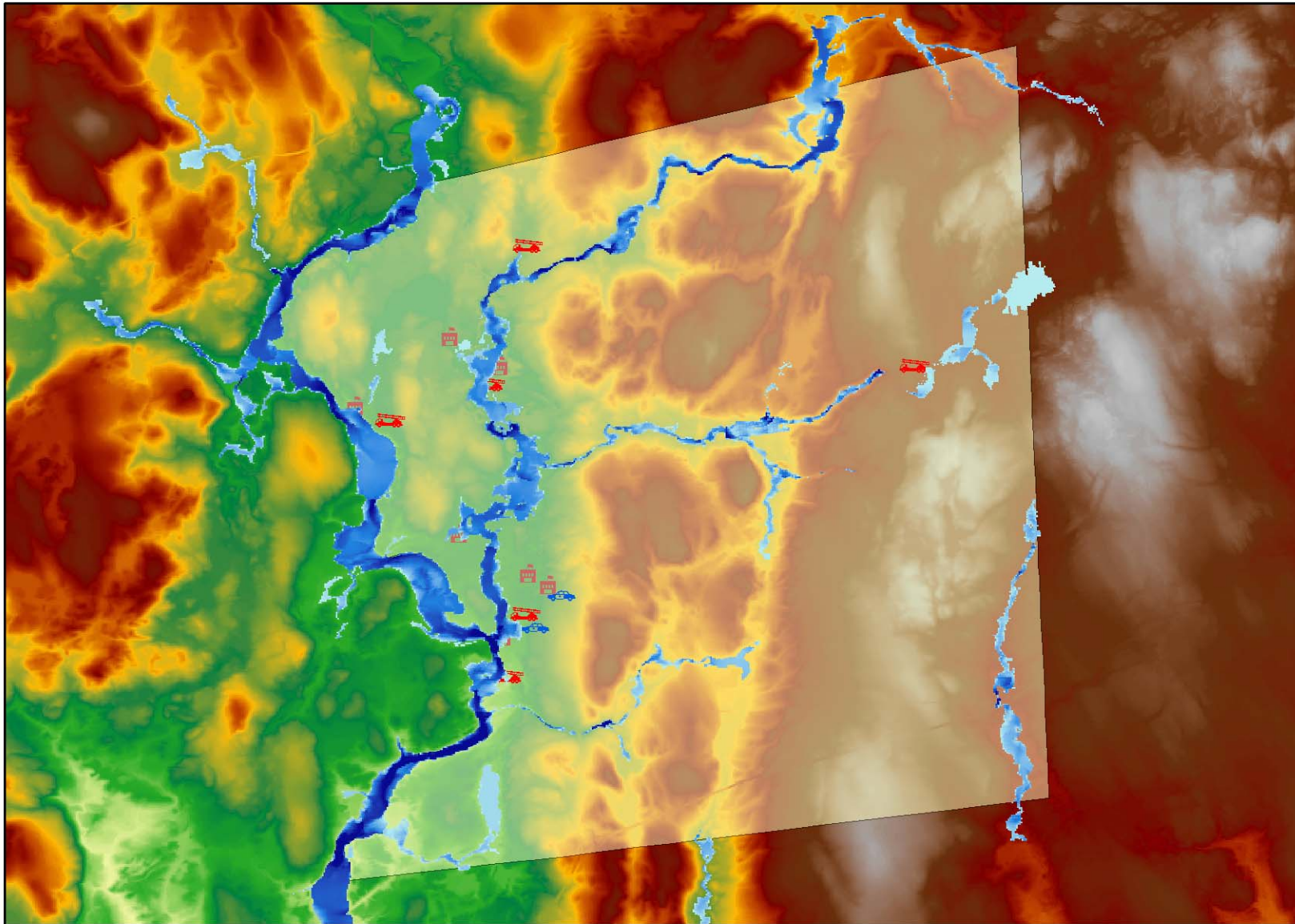
- School
 - School
- PoliceStation
 - PoliceStation
- FireStation
 - FireStation
 - FireStation
- RPD100_r
 - High : 30.7097
 - Low : 0.000162354
- RegionDEM
 - High : 924.681
 - Low : -1.18435
- Census Tracts
 - Census Tracts
- Hillshade
 - High : 254
 - Low : 0
- Study Region Boundary
 - Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

5 2.5 0 5 Kilometers



Study Region: Killingly_Flood
Scenario: 100-year flood in Killingly



Legend

rpdl100_r
High : 31.8256
Low : 0.000147095

School
School

PoliceStation
PoliceStation

FireStation
FireStation

Study Region Boundary
Study Region Boundary

ned_84308568
High : 423.008
Low : -2.46556

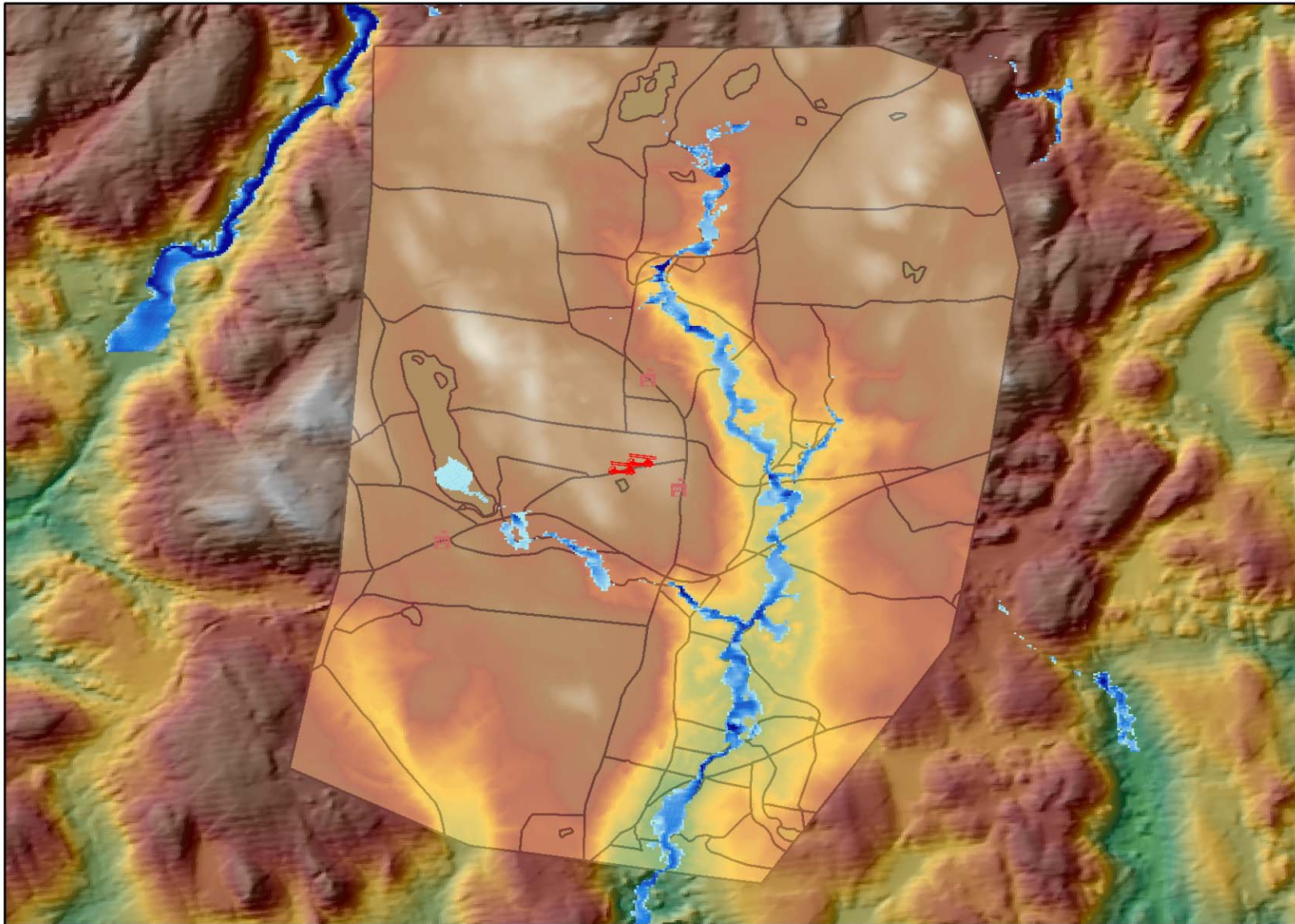
Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

6 3 0 6 Kilometers











Study Region: Hampton_Flooding

Scenario: 100-year flood in Hampton, CT

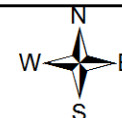


Legend

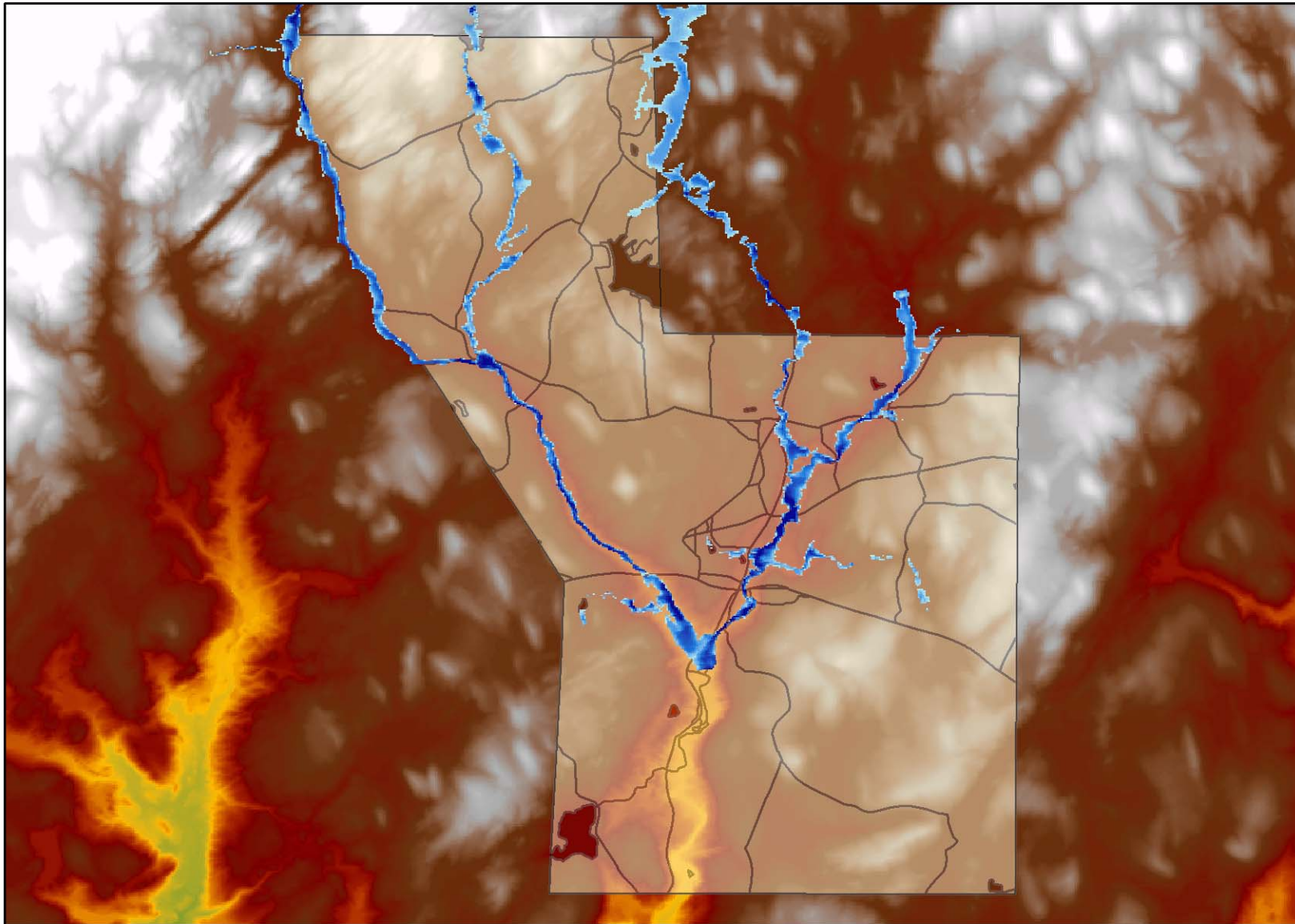
-  School
-  FireStation
- RPD100_r
 -  High : 25.5907
 - Low : 0.000305176
- RegionDEM
 -  High : 1309.97
 - Low : 20.5536
- Census Blocks
 -  Census Blocks
- Census Tracts
 -  Census Tracts
- Hillshade
 -  High : 254
 - Low : 0
- Study Region Boundary
 -  Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

4 2 0 4 Kilometers



Study Region: Eastford_Flooding
Scenario: 100-year flood in Eastford, CT



Legend

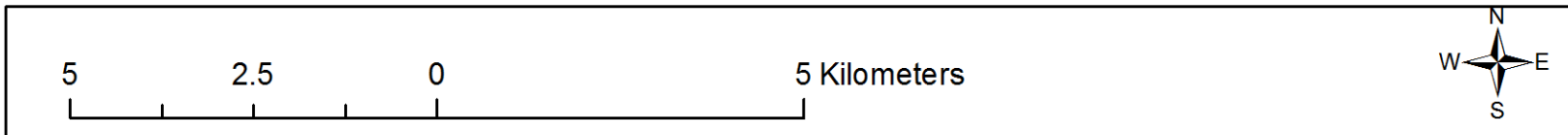
rpd100_r
High : 22.4504
Low : 0.00439453

Census Blocks
Census Blocks

Study Region Boundary
Study Region Boundary

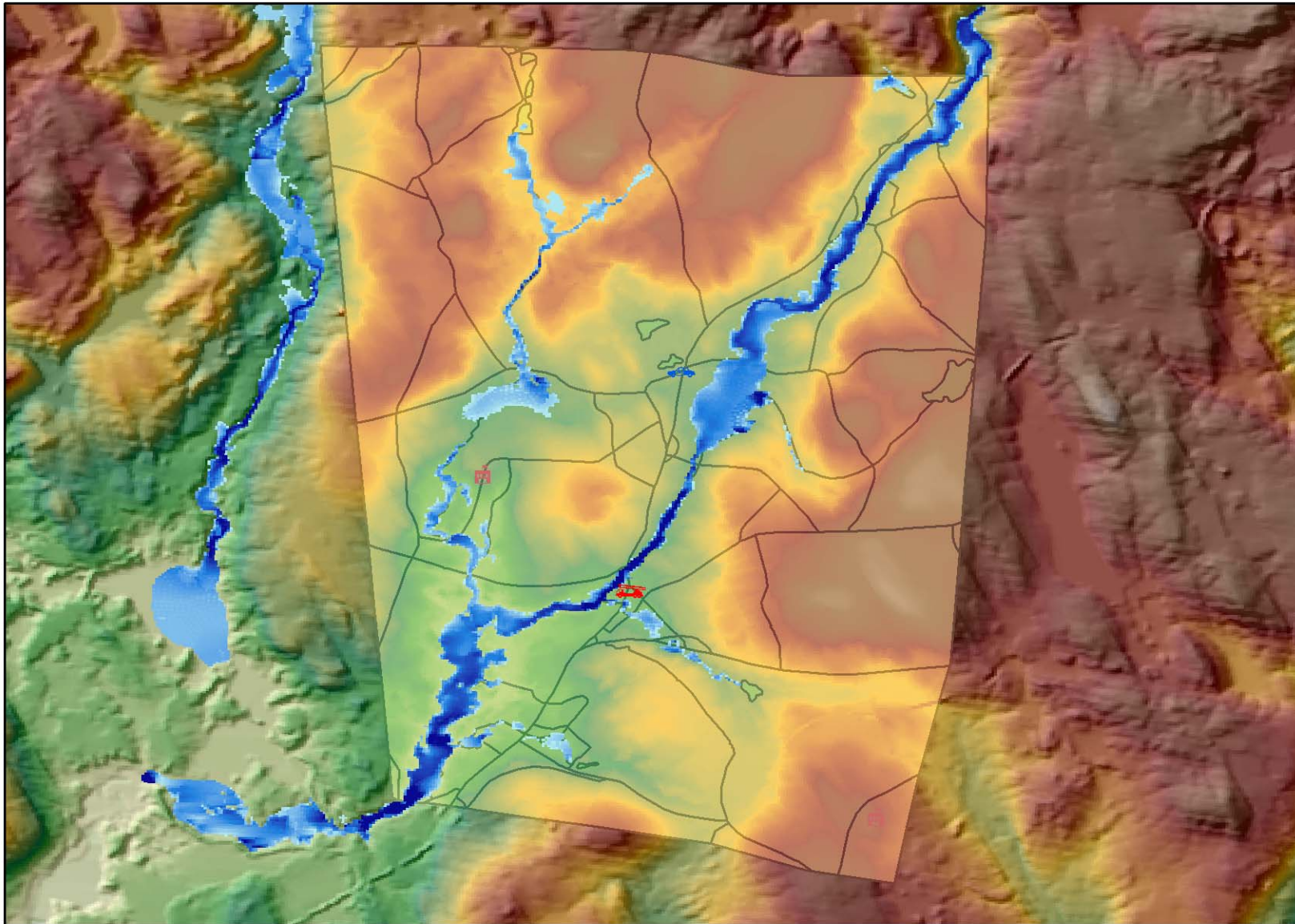
ned_84308568
Value
High : 423.008
Low : -2.46556










Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.



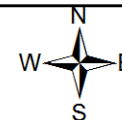
Study Region: Chaplin_Flooding
Scenario: 100-year flood in Chaplin, CT

Legend



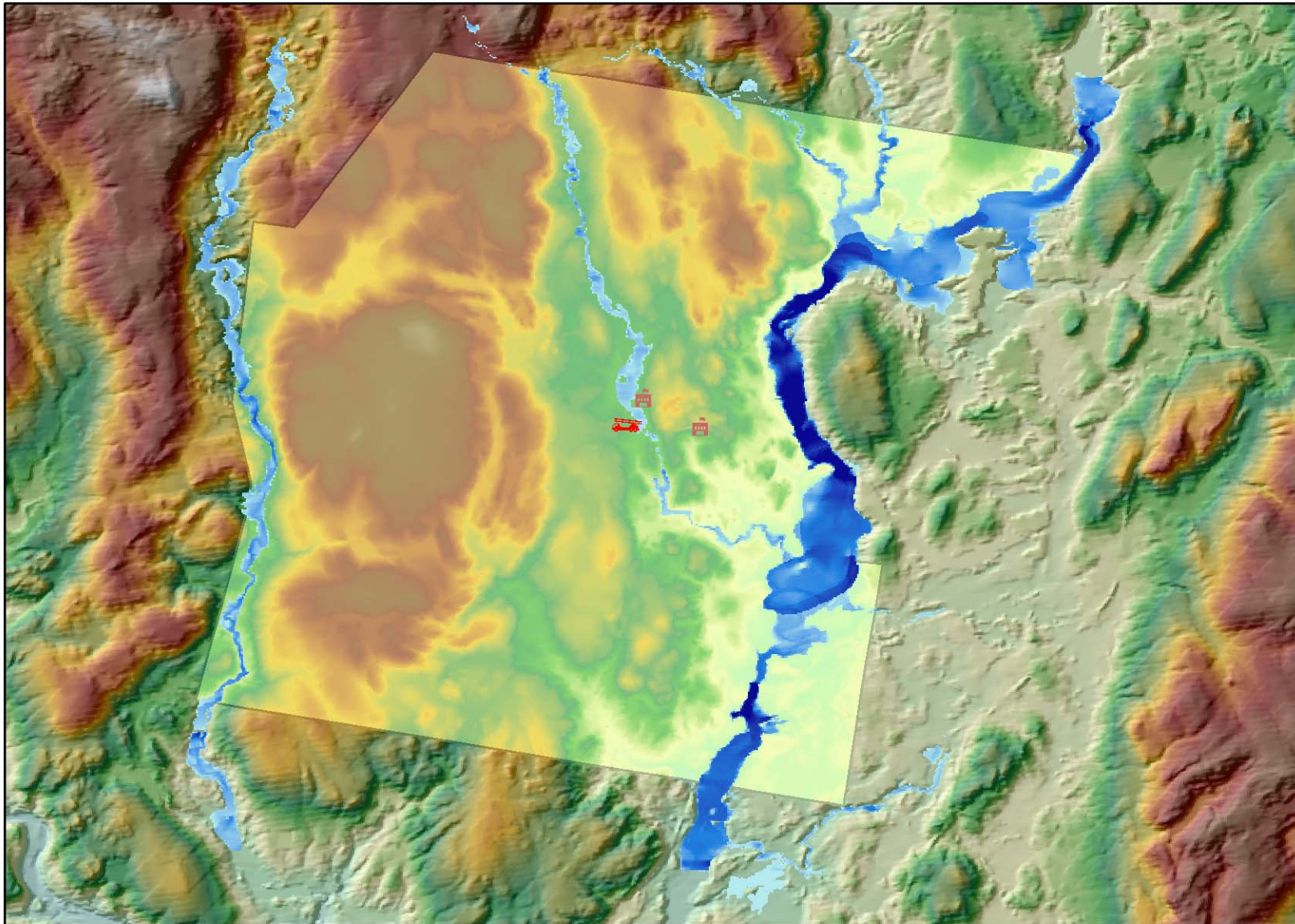
- School
 School
 - PoliceStation
 PoliceStation
 - FireStation
 FireStation
 - RPD100_r
 High : 29.2545
Low : 0.000152588
 - RegionDEM
 High : 1305.15
Low : 20.7421
 - Census Blocks
 Census Blocks
 - Census Tracts
 Census Tracts
 - Hillshade
 High : 254
Low : 0
 - Study Region Boundary
 Study Region Boundary
- Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

3 1.5 0 3 Kilometers




Study Region: Canterbury_Flooding

Scenario: 100-year flood in Canterbury, CT



Legend

FireStation

 FireStation

School

 School


RPD100_r

High : 44.2828
Low : 0.000131836

RegionDEM

High : 924.681
Low : 20.5536


Census Tracts

 Census Tracts

Hillshade

High : 254
Low : 0

Study Region Boundary

 Study Region Boundary

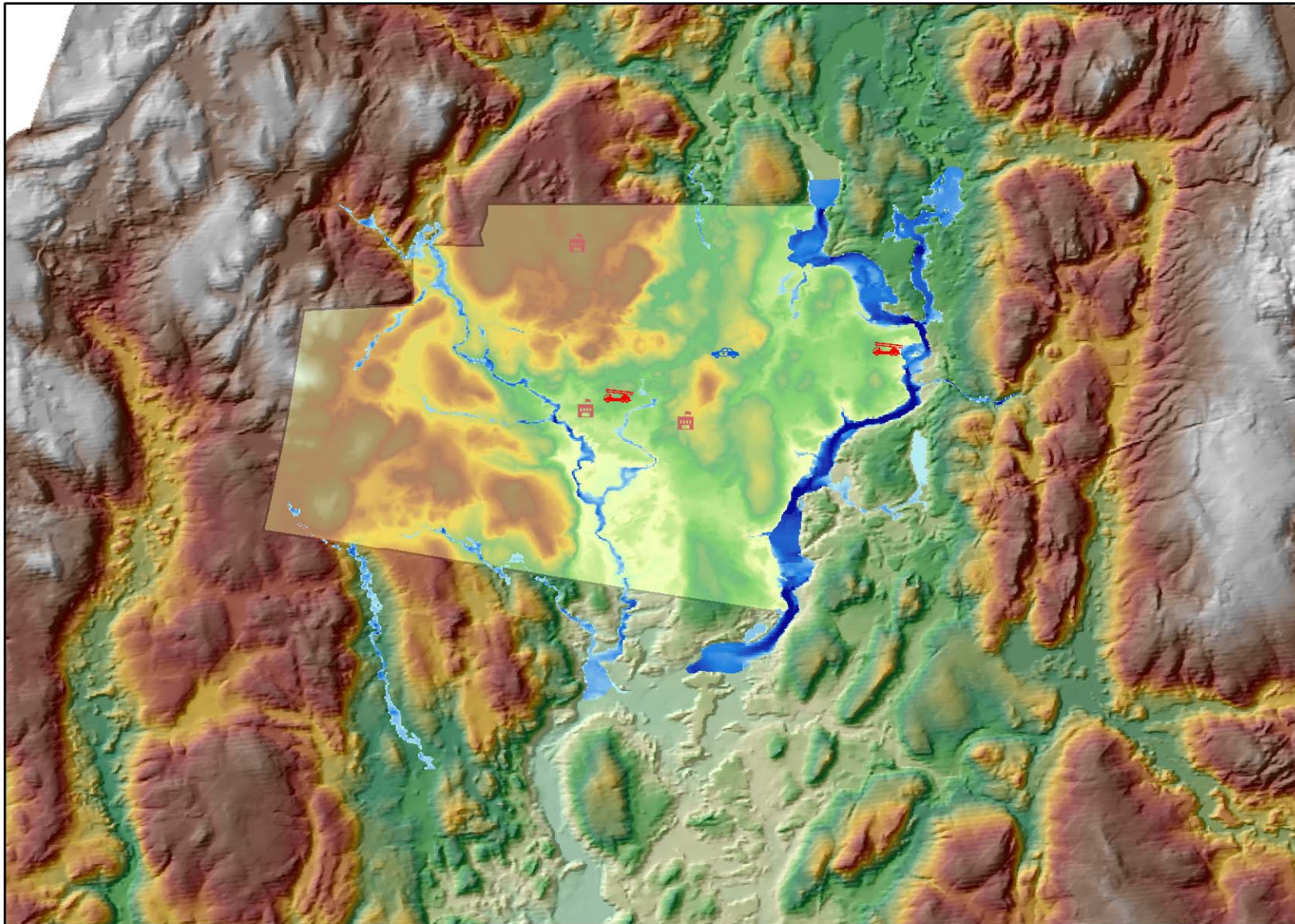
Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

6 3 0 6 Kilometers



Study Region: Brooklyn_Flooding

Scenario: 100-year flood in Brooklyn, CT



Legend

- PoliceStation
- School
- FireStation
- RPD100_r
 - High : 32.9908
 - Low : 5.5542e-005
- RegionDEM
 - High : 924.681
 - Low : 20.5536
- Census Tracts
 - Census Tracts
- Hillshade
 - High : 254
 - Low : 0
- Study Region Boundary
 - Study Region Boundary

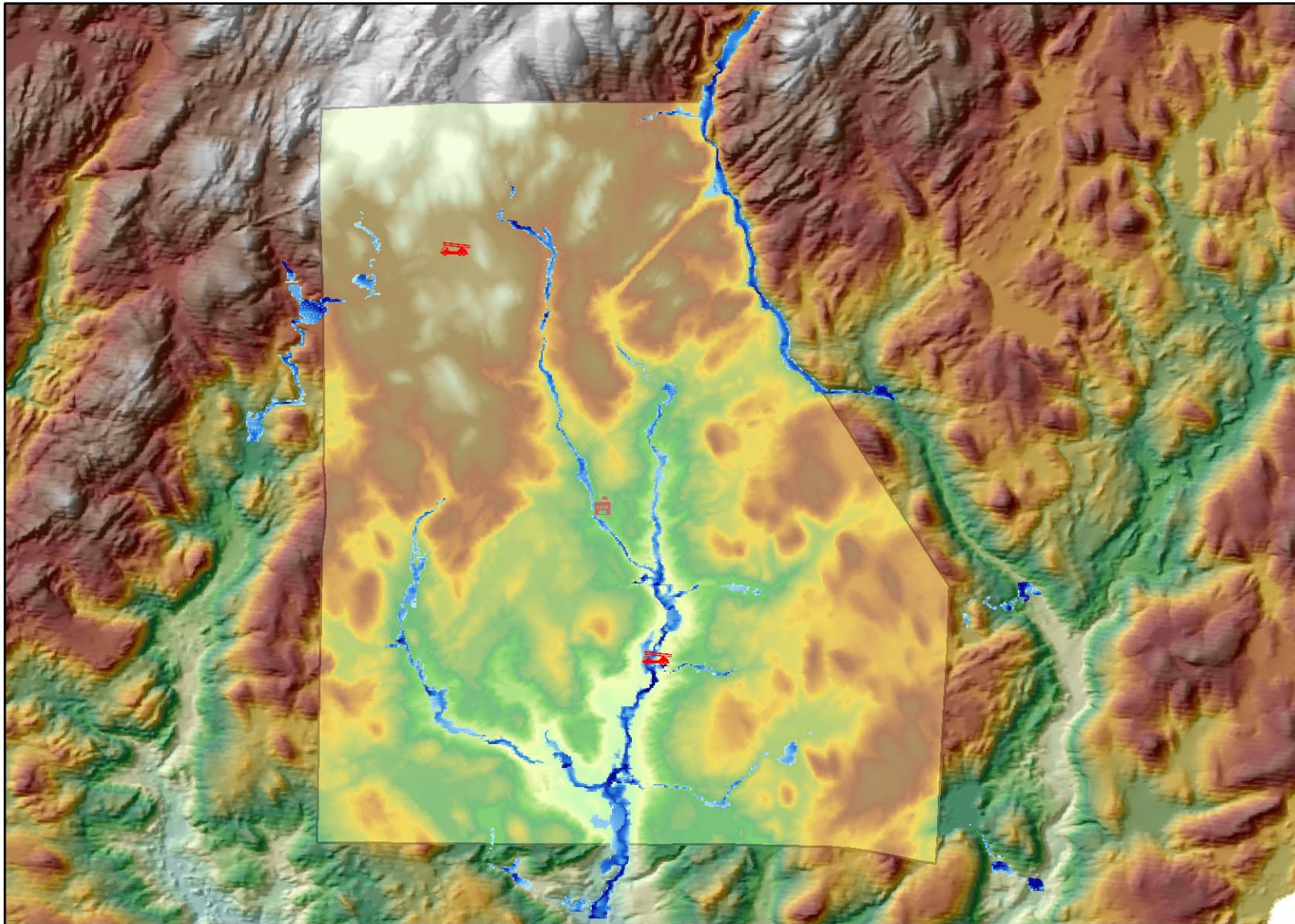
Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

7 3.5 0 7 Kilometers










Study Region: Ashford_Flooding

Scenario: 100-year flood in Ashford, CT

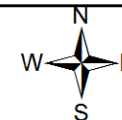


Legend

-  School
-  FireStation
- RPD100_r**
 -  High : 42.3874
 - Low : 0.000183105
- RegionDEM**
 -  High : 1309.97
 - Low : 172.804
- Census Tracts**
 -  Census Tracts
- Hillshade**
 -  High : 254
 - Low : 0
- Study Region Boundary**
 -  Study Region Boundary

Any coastal surge estimates produced by Hazus do not represent official NOAA forecasts or estimates.

6 3 0 6 Kilometers



Appendix 15

Actions from WINCOG Region Pre-Disaster Natural Hazards Mitigation Plan (2007) for the town of Scotland

Action Description	Status	Included in NECCOG Plan	Notes
Improve Route 97 just north of Gager Hill Road where drainage problems exist, due to a catch basin which doesn't function properly because of the grade of the road.	Deferred	Yes	
Examine Brooklyn Turnpike Bridge crossing Merrick Brook; this is a scour bridge and was rated as "fair" on ConnDOT's 2004 inspection report.	Completed	No	
Examine Station Road Bridge crossing the Merrick Brook; this bridge has some structural damage, if this bridge became impassable commuter traffic would be impeded.	Completed	No	
Improve Toleration Road where there are drainage problems.	Deferred	Yes	
Pass an ordinance requiring all future power lines be buried.	Deferred	Yes	
Add dry hydrants or underground cisterns near wildfire susceptible areas around town, based on finding from study already conducted.	Deferred	Yes	Wildfire is not an identified hazard; however, the action was carried over
Procure tree bucket to help maintain and remove dead, dying, dangerous or diseased trees.	Eliminated	No	Not financially feasible
Obtain new generator for Radio Communication Emergency Center (town hall).	Completed	No	
Equip town hall as new Radio Communication Emergency Center, including obtaining new generator and radio equipment.	Completed	No	
Acquire decontamination equipment for Hazmat containment areas, including showers, washers, and dryers.	Eliminated	No	No longer needed because of DEMHS Region IV

Actions from WINCOG Region Pre-Disaster Natural Hazards Mitigation Plan (2007) for the town of Hampton

Action Description	Status	Included in NECCOG Plan	Notes
Town-wide inspection and upgrade of faulty culverts and catch basins.	Completed	No	Will continue to implement
Procure giant vac-all or similar equipment to assist public works in keeping up to date with the removal of silt and leaves from the town's waterways along all town roads.	Eliminated	No	Not financially feasible
Improve South Brook Street where there are drainage problems.	Completed	No	
Improve North Bigelow Road where there are drainage problems.	Completed	No	
Improve North Brook Street where there are drainage problems.	Deferred	Yes	
Improve East Old Rout 6 Road where there are drainage problems.	Completed	No	
Improve South Bigelow Road where there are drainage problems.	Completed	No	
Acquire a large 2,000 gallon tanker fire apparatus to help contain yearly brush fires.	Eliminated	No	Not financially feasible
Examine Hammond Hill Road Bridge crossing Little River; this bridge is a scour bridge for 10-year river flow events and was rated as "fair" on ConnDOT's 2004 inspection report.	Deferred	Yes	
Examine Drain Street Bridge crossing the Little River; this is a scour bridge for 10-year river flow events and was rated as "good" on ConnDOT's 2004 inspection report.	Deferred	Yes	
Examine East Old Route 6 Bridge crossing the Little River; this structure is a scour bridge for 10-year river flow events and was rated as "fair" on ConnDOT's 2004 inspection report.	Deferred	Yes	
Repair or reconstruct Parker Road where culverts under the road are structurally weak; multiple homes would be stranded if these culverts were damaged in a natural disaster event.	Deferred	Yes	
Upgrade all three of the town's plows with liquid spreaders.	Eliminated	No	Not financially feasible
Procure tree bucket to help maintain and remove dead, dying, dangerous or diseased trees.	Completed	No	
Upgrade the horn on the fire department, or mount a new horn on another appropriate building in town, that sounds in an emergency.	Deferred	Yes	
Upgrade or obtain a new generator for the emergency shelter to provide adequate heat in an emergency.	Deferred	Yes	
Ensure that the emergency shelters have adequate supplies to respond to natural emergencies, especially first aid supplies.	Deferred	Yes	
Publish all town ordinances and regulations on the town's website including those that mitigate natural hazards.	Deferred	Yes	
Make available literature on natural disasters and preparedness at Hampton Town Hall and at the Fletcher Memorial Library.	Deferred	Yes	

Actions from WINCOG Region Pre-Disaster Natural Hazards Mitigation Plan (2007) for the town of Chaplin

Action Description	Status	Included in NECCOG Plan	Notes
Replace or reconstruct North Bear Hill Road Bridge crossing the Natchaug River, this bridge is not only a scour bridge, but is frequently closed during the year due to flooding; ConnDOT's 2004 inspection report rated this structure as "poor".	Completed	No	
Examine England Road Bridge crossing the Natchaug River, this is a scour bridge for 10-year river flow events.	Completed	No	
Raise or reconstruct low-lying North Bear Hill Road, drainage problems create standing water which freezes in low temperatures causing safety hazards. In addition, this road lies on the town's emergency evacuation route.	Merged with #2 and completed	No	
Repair or reconstruct Bujak Road, just north of Upson Lake at the crook in the road, where flooding occurs several times during the year stranding two homes.	Completed	No	
Upgrade all the town's plows with liquid spreaders.	Deferred	Yes	
Budget appropriate money necessary to maintain and remove dead, dying, dangerous or diseased trees.	Merged with action 7 and deferred	Yes	
Increase the amount of preventative tree maintenance.	Merged with action 6 and deferred	Yes	
Ensure that tree maintenance is being performed along private roads.	Deferred	Yes	
Implement a program that autodial emergency personnel.	Completed	No	
Mount a horn on the fire department that sounds in an emergency.	Eliminated	No	Not a hazard mitigation action
Implement a reverse 911 or similar system to alert residents of natural phenomenon and if necessary, evacuation procedures.	Completed	No	
Develop a strategy and obtain the necessary equipment to provide adequate heat at emergency shelters.	Deferred	Yes	
Obtain additional cots and bedding to adequately serve the emergency shelters in the event of an emergency or natural disaster.	Completed	No	
Ensure that the emergency shelters have adequate supplies to respond to natural emergencies.	Completed	No	
Develop a GIS application to assist town personnel in the event of an emergency or natural disaster.	Completed	No	

Actions from WINCOG Region Pre-Disaster Natural Hazards Mitigation Plan (2007) for the town of Chaplin

Use the Government Access Channel to inform the Chaplin public about how to prepare and respond to hazards and emergencies and to encourage residents to be prepared to help others in need.	Deferred	Yes	
Publish all town ordinances and regulations on the town's website including those that mitigate natural hazards.	Deferred	Yes	
Review plans that fulfill DEP Storm Water Management, Phase II requirements and identify projects that may be eligible for FEMA natural hazard mitigation grants.	Completed	No	
Visit schools and educate children about the risks of floods and other natural hazards and how to prepare for them.	Deferred	Yes	
Make available literature on natural disasters and preparedness at Chaplin Town Hall and at the William Ross Library.	Combined with #21 and deferred	Yes	
Make available information on natural disasters and preparedness on Chaplin's website with links to state and federal resources.	Combined with #20 and deferred	Yes	
Develop a long-term plan to bury power lines in existing development.	Deferred	Yes	

Appendix 16

Raw outputs from Hazus-MH modeling were not added to the Appendix in the interest of making The 2015 Plan a portable and usable document. The raw data, which will remain on-file at NECCOG, is considered a permanent supplement to The 2015 Plan.

The data may be obtained by contacting Samuel Alexander of NECCOG, using the below information:

Samuel Alexander Regional Project Analyst Phone: 860.774.1253 x22 E-mail: samuel.alexander@neccog.org

Over time, management of the data may fall under the responsibility of another staff member. Inquiries may be made to NECCOG offices:

Northeastern Connecticut Council of Governments Address: 125 Putnam Pike, Dayville, CT 06241 Phone: 860.774.1253 Fax: 860.779.2056 Website: http://www.neccog.org
