

# Town of Hamden



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## Community Resilience Building Workshop

### Summary of Findings

September 2018

# **Town of Hamden**

## **Community Resilience Building Workshop**

### **Summary of Findings**

#### **Overview**

The need for municipalities, academic institutions, regional planning organizations, states and federal agencies to increase resilience and adapt to extreme weather events and a changing climate is strikingly evident amongst the communities of the State of Connecticut. Recent events such as Tropical Storm Irene and Sandy have reinforced this urgency and compelled leading communities like the Town of Hamden to proactively collaborate on planning and mitigating risks. Ultimately, this type of leadership is to be commended because it will reduce the vulnerability of municipal residents, infrastructure, and ecosystems and serve as a model for other communities in Connecticut, New England, and the nation.

In the spring of 2018, the Town of Hamden registered with the municipal sustainability program Sustainable CT. As part of that program, Sustainable CT and the Nature Conservancy provided the Town with a voluntary process to conduct an assessment of climate change impacts. In September 2018, a municipal-based core team convened a Community Resilience Building Workshop facilitated by the Nature Conservancy in partnership with Sustainable CT. The core directive of this effort was the engagement among community stakeholders to identify climate vulnerabilities and plan for education, strategy, and implementation of priority adaptation actions for Hamden. The Workshop's central objectives were to:

- Define top local natural and climate-related hazards of concern;
- Identify existing and future vulnerabilities and strengths;
- Develop prioritized actions for the Town of Hamden;
- Identify opportunities for collaborative actions to increase resilience.



For the Workshop, the Town of Hamden employed a unique “anywhere at any scale”, community-driven process known as the Community Resilience Building (CRB) Workshop ([www.CommunityResilienceBuilding.org](http://www.CommunityResilienceBuilding.org)). The CRB’s Risk Matrix and various data and maps were integrated into the Workshop process to provide both decision-support and risk visualization around shared values and priorities across Hamden. Using this CRB process, rich with information, experience and dialogue, the participants produced findings which are outlined in this summary report. The following report provides an overview of the top hazards, current concerns and challenges, current strengths, and proposed actions to improve Hamden’s resilience to natural and climate-related hazards today, and in the future.

The summary of findings transcribed in this report, like any that concern the evolving nature of risk assessment and associated action, are proffered for comments, corrections and updates from workshop attendees and additional stakeholders alike. The leadership displayed by the Town of Hamden on community resilience building will benefit from the continuous and expanding participation of all those concerned.

## **Summary of Findings**

### **Top Hazards and Vulnerable Areas for the Community**

During the CRB Workshop, community members were asked to identify the top hazards for the Town of Hamden. The hazards of greatest concern to the participants were hurricanes and snowstorms (i.e. blizzards) associated with Nor’easters. The other hazards of greatest concern were precipitation-driven flooding from rivers and streams, extreme temperatures or heatwaves, and more recently a tornado. These hazards have direct and increasing impacts on Hamden residents and resources such as its neighborhoods, natural areas (river corridors, wetlands, watersheds, parks), farms, roads, public and private drinking and wastewater systems, health care facilities, social support service to vulnerable populations, and other critical infrastructure and community assets.



# Top Hazards and Areas of Concern for the Community

## *Top Hazards*

- Hurricanes
- Winter Storms & Blizzards
- Flooding (precipitation-driven inland and river)
- Extreme Temperatures or Heatwaves
- Tornados

## *Areas of Concern in Hamden\**

**Neighborhoods:** State Street (mostly industrial), Meadowbrook (300 housing units).

**Ecosystems:** Dead and standing trees - travel corridors and near buildings, Sleeping Giant State Park, Mill River, Quinnipiac River, Naugatuck State Park, Lake Wintergreen, West Rock, Shepard Brook, Pardee Brook, Beldon Brook, Invasive species (impacts on trees), Brooksvale Recreation Park, SCCRWA watershed lands.

**Transportation:** Paradise Avenue, Franklin Road, State Street, CT Transit bus terminal in State Street Neighborhood, New Haven Railroad line, Skiff Street, East - West road connections across town, Dixwell Avenue (at Farmington Canal overpass), Waite Street, Worth Avenue, Centerbrook Road, South of Woodin Street, Thorpe Drive, 66 bridges owned/maintained by town, Farmington Canal Heritage Trail.

**Infrastructure:** Waite Street Bridge, Multiple dams on Quinnipiac River system, Lake Whitney Dame, High School (sheltering limitations, proximate to SPFA area), Vehicles to transport residents to shelters, Cell towers, Super market (south end of town), Electricity supply and distribution system, Parking lot - 2200 Whitney Avenue, Fire Station #2 & #5 (no emergency power supply), Stormwater Flood Control System, Storm Water Pump Station, Hamden Mart.

**Vulnerable Populations:** **Low and Moderate-Income** Renters, Elderly, Mobility Challenged, Developmentally Disabled, Non-English Speaking, Low Income, Farmers, Volunteers (decline over time).

\* Information above is from workshop participants as well as from the SCRCOG Multi-Jurisdictional NHMP Update (2018).





## Current Concerns and Challenges Presented by Hazards

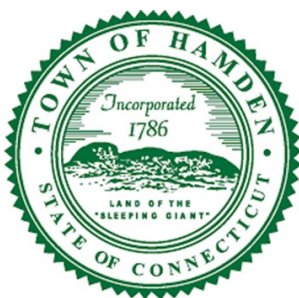
The Town of Hamden has several concerns and faces multiple challenges related to the impacts of natural hazards and climate change. In recent years, Hamden has experienced a series of highly disruptive and damaging weather events including Tropical Storm Irene (August 2011), Tropical Storm Sandy, (October 2012), and winter Nor'easter Nemo (February 2013). Impacts from Irene included heavy rain-induced inland flooding and wind damage. Sandy caused extended power outages across large portions of Hamden. Winter storms drop excessive snow on the Town knocking out power and isolating residents and neighborhoods. The magnitude and intensity of these events and others across Connecticut has increased awareness of natural hazards and climatic change, while motivating communities like Hamden to comprehensively improve resilience.

This series of extreme weather events highlights that for Hamden the impacts from hazards are diverse; they range from flooding of roads and low-lying areas near rivers and wetlands during intense storms, tornados, and heavy precipitation events to property damage from trees, wind, snow, and ice. Longer heatwaves, particularly in July and August, have raised concerns about vulnerable segments of the population including the elderly and disabled. The combination of these issues presents a challenge to preparedness, response and mitigation priorities and requires comprehensive yet tailored actions for particular locations and/or areas across Hamden.

The workshop participants were generally in agreement that Hamden is experiencing more intense and frequent storm events and heat waves. The impacts have affected the daily activities of most residents. Additionally, there was a general concern about the challenges of being prepared with contingency plans for worst case scenarios during different times of the year (i.e. major disasters, storms, tornados, major hurricanes (Cat-3 or above)) particularly in the fall/winter due to more intense storms.



(Credit: Wikipedia)



(Credit: Town of Hamden)



(Credit: Hamden Public Schools)



## ***Specific Categories of Concerns and Challenges***

### **Electrical Supply and Distribution**

Power restoration across Hamden is a common and shared concern. The principal issue revolves around the pace or responsiveness of the utility during clean-up after events that interrupt power distribution and require “make safe” crews. This issue of restoration rates becomes particularly problematic for households dependent on electricity to run pumps for drinking water wells. This issue is also closely tied to the number of trees in proximity to power distribution and supply lines. Conflicts between tree removal operations and residents were noted as a source of strain on the interactions between the utility and the municipality. The workshop participants did note a increase in generators purchased and installed at homes across the community. These have their own risks if not installed and operated properly.

### **Cross - Community Transportation Connections (East & West)**

The workshop participants noted on several occasions that the connections via existing roadways from one side of the community to the other (principally running east and west) can become compromised due to flooding. While there was discussion regarding the need to strengthen corridors in various ways, there are several critical locations where bridges span waterways prone to flooding that create impassable “pinch-points” on occasion which force work arounds for residents, commercial trucks, and emergency vehicles. Two locations in particular were called out the Mather Street Bridge and the Waite Street Bridge. It was noted that the Engineering Department is currently investigating potential repairs at both bridge locations. An on going issue raised for these travel corridors is the persistent use by large trucks which are viewed by residents as oversized and dangerous. Options to reduce large truck traffic include seeking scenic road designation and traffic calming measures.

### **Community Communication and Collaboration**

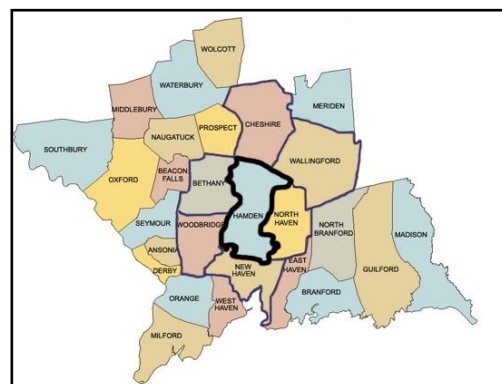
There was universal recognition amongst participants that there is an ongoing need to convene and coordinate a stakeholder effort to strengthen communications for Hamden. While there is a track record of collaboration between town and Board of Education, participants recommended identifying opportunities to strengthen ties in several meaningful ways recorded herein. The upcoming updates to the town website was viewed as an opportunity to strengthen the content and delivery of important emergency preparedness and hazard education information to residents. Additionally, residents signing up on Everbridge and other notification systems was highlighted.



## Current Strengths and Assets

Because of recent experiences with extreme weather, the Town of Hamden is well acquainted with existing and shared strengths. Reinforcing best practices and enhancing available assets will generate greater benefits to the Town and adjoining towns through increased resiliency to more frequent and intense storms, as well as to long term impacts from ongoing increases in air temperature, precipitation, and drought.

- Clearly, the responsive and committed leadership exhibited by officials and staff is a very appreciated strength within the Town of Hamden. Ongoing collaboration between the Town, adjoining municipalities, South Central Regional Council of Government, business community, faith-based organizations, and NGOs among others on the priorities identified below will help to advance comprehensive, cost-effective approaches to community resilience building.
- The Town has solid, highly experienced, staff with access to adequate, but limited, resources for most emergency situations. The overarching coordination amongst various departments including Police, Fire, EMS, and CERT was cited as an ongoing, and highly valued community strength despite the challenge of maintaining a flow of volunteers over time.
- The Town's recognition and emphasis on continuously improving emergency communications is to be commended. Workshop participants noted there are further opportunities for technological enhancement, as noted in the following sections, to ensure the greatest number of residents are reached during events.
- Relatively intact forested watershed surrounding ponds and wetlands across Hamden coupled with riparian corridors along waterways provide flood storage, enhance public amenities for recreation and gathering, and increase ecological function and biodiversity.
- Workshop participants called for additional opportunities to further cultivate partnership with Quinnipiac University and to enhance collective resiliency across Hamden.



(Credit: Education Studies)



## **Top Recommendations to Improve Resilience**

A common thread throughout the workshop discussions was the recognition that Hamden needs to be better prepared through longer term community-based, contingency planning across all areas of concern. This need and additional core highlights surfaced by workshop participants are addressed below.

### **Higher Priority**

- Define technological advances and conduct a feasibility assessment to improve and enhance the existing emergency communication system.
- Look to integrate emergency communications between emergency management professionals for the municipality and Board of Education processes and mechanisms used to reach families via schools.
- Seek additional ways to increase subscription by residents to the Everbridge emergency alert system including greater presence at Town events.
- Expand coordination between emergency management professionals and the Board of Education to develop and disseminate via students emergency preparedness checklists and/or best practices for families in Hamden.
- Explore and cost out the possibility of installing a microgrid in town to serve an area including the primary sheltering facility at the High School.
- Build on the recent investment in digital sign boards to alert residents to emergency management issues and critical information during major events.
- Look into opportunities to install radio, fiber, and T1 communications to reduce geographic isolation of residents during emergency outreach efforts.
- Continue to strength partnership between United Illuminating (UI)/Avangrid, Department of Public Works, and Fire Department to work on road clearing after major wind (downed trees) and winter storms (plowing). This will require ongoing coordination UI to “Make Safe” roads from wires post storm.
- Install back-up generator at the Keefe Community Center to increase the number of alternative shelters for residents. The Center is ideally situated within walking distance of a heavily populated area (Highwood Neighborhood) and could shelter up to 100 people.





# Community Resilience Building Workshop Recommendations

## Moderate Priority

- Continue to examine opportunities to reduce flooding risks within the Meadowbrook area.
- For the Meadowbrook area, work to fund the installation of a generator at the pump house to ensure continuity of service during flood/storm events resulting in the loss of electrical power.
- Establish and implement a debris management plan for the brook within Meadowbrook area to help minimize flooding.
- Advance further feasibility assessments and cost estimate for upgrade to pump house updates in the Meadowbrook area - Mill River.
- Look to strengthen collaborations involving community resilience building between the municipality and Quinnipiac University which is currently under new leadership. Opportunities to conduct workshops and table top planning exercises are potential starting points to coordinate resources, capacity, and expertise. Extend an offer for representative from Quinnipiac to join Hamden EOC team.
- Ensure Hamden's Junior Fire program remains active to help increase the flow of volunteers to the Fire Department over time.
- Continue to advance an Energy Performance Project (2020).
- Continue to conduct hazard preparedness table top exercises. Seek to broaden participation from various community representatives (university, inter-faith communities, etc.) in order to make the exercise responsive to more diverse situations in the town.
- Look to better understand and support social intervention programs such as Abraham's Tent to ensure vulnerable people in the community are provided a process and resources to recover, reenter, and/or contribute to the community longer term.
- Reexamine distribution and availability of food for low to moderate income and working poor families across Hamden - ensure focus on the southern part of town.



(Credit: Adam Whelchel/TNC)



## Community Resilience Building Workshop Recommendations

### Moderate Priority (cont'd)

- Examine ways to increase the tree canopy along streets in the downtown areas and development projects via the upcoming update of the Plan of Conservation and Development.
- Continue to fully support staff charged with clearing trees and debris after disruptive events that block roads.
- Consider developing a list of people in the community with special needs and requirements for outreach in advance of and after a major disasters.
- Re-examine the ownership, condition, and contingency plans for dams.
- Determine if buses from the Greater New Haven Transit District can be used to transport Hamden residents (particularly the elderly and disabled population) in advance of major weather events.

### Lower Priority

- Continue to monitor impacts of flooding and sea level rise in the State Street Neighborhood.
- Make sure zoning regulations continue to require new construction or renovations over 50% of value of building incorporate current standards—the lowest floor level must be two feet above the base flood elevation.
- Track the extent and duration of flooding at the Paradise Avenue road segment susceptible to routine flooding. Modify alternative route signage and alerts as needed to respond to changes to flooded segments in the future.
- Establish via survey the number/percentage of residential households with installed back-up generators, to better understand the current ability of residents to shelter in place, if required.
- Seek to provide opportunities for coordination between the three pharmacies in town and municipal staff connected to the elderly population to ensure vital prescriptions and other needs, such as oxygen, are secured prior to major events, if possible.
- Fill vacancies on various commissions in a timely manner to ensure continuity of leadership in critical roles.



## Community Resilience Building Workshop Recommendations

### Lower Priority (cont'd)

- Work to have seniors fill out emergency contact information cards to be managed by the appropriate people at senior care and living facilities in Hamden.
- Maintain and expand the open space trail system across Hamden with adjoining towns to help strengthen relationships between their residents.
- Maintain pandemic influenza clinic potential at Senior Center.
- Conduct maintenance of town-owned open space in Hamden to ensure access and use by residents to increase the resilience of community health—for example, the Brooksvale forest land (500 acres).
- Maintain zoning regulations encouraging onsite stormwater treatment in new developments via green infrastructure.
- Continue to plan for a rain garden at Town Center Park and develop educational materials to ensure the new rain garden is teaching tool for residents who may be interested in installing green infrastructure on their property.
- Consider conducting a green infrastructure assessment and prioritization planning effort across Hamden to help reduce routine and nuisance flooding on private and public property.
- Identify opportunities to work to minimize the mental health impacts from major events on youth and children (i.e. recent tornado and sense of security).
- While not a large concern, continue to increase awareness about minimizing wild-fires through outdoor campfires and other potentially careless behavior.
- Examine the potential to implement elements of the feasibility study for Masseli Farm, including agriculture, education, and passive recreation.
- Increase communications between the Town and Quinnipiac Valley Health District on planning for major events including infectious disease outbreaks.
- Foster deeper and more meaningful partnerships between the Town and faith-based community on issues related to resilience and risk reduction for residents.



## **CRB Workshop Participants: Department/Organization**

John Cappiello, Acting Police Chief

Dave Berardesca, Fire Chief (now retired)

Paul Coleman, Superintendent of Buildings, Public Works Dept.

Mark Austin, Town Engineer

Andrew Kinlock, GIS Specialist, Engineering Dept.

Chris Melillo, Assistant Superintendent of Schools

Julie Smith, Director of Arts and Recreation, Mayor's liaison

Dale Kroop, Director of Economic and Community Development

Kathleen Schomaker, Energy Efficiency Coordinator

## **CRB Workshop Project Team: Organization and Role**

### **Hamden Core Team**

Kathleen Schomaker - Energy Efficiency Coordinator

### **Workshop Team**

The Nature Conservancy – Adam Whelchel, Ph.D. (Lead Facilitator)

Sustainable CT - Jessica LeClair (Support Lead)

The Nature Conservancy - Cary White (Support/Scribe)

## **Recommended Citation**

Town of Hamden (2018). Community Resilience Building Workshop Summary of Findings. Town of Hamden, Sustainable CT, The Nature Conservancy. Hamden, Connecticut.

## **Acknowledgements**

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This project was made possible in part through the generous contribution of The Nature Conservancy team and Sustainable CT staff to conduct Hamden's Community Resilience Building Workshop in close partnership with the Town's Core Team.

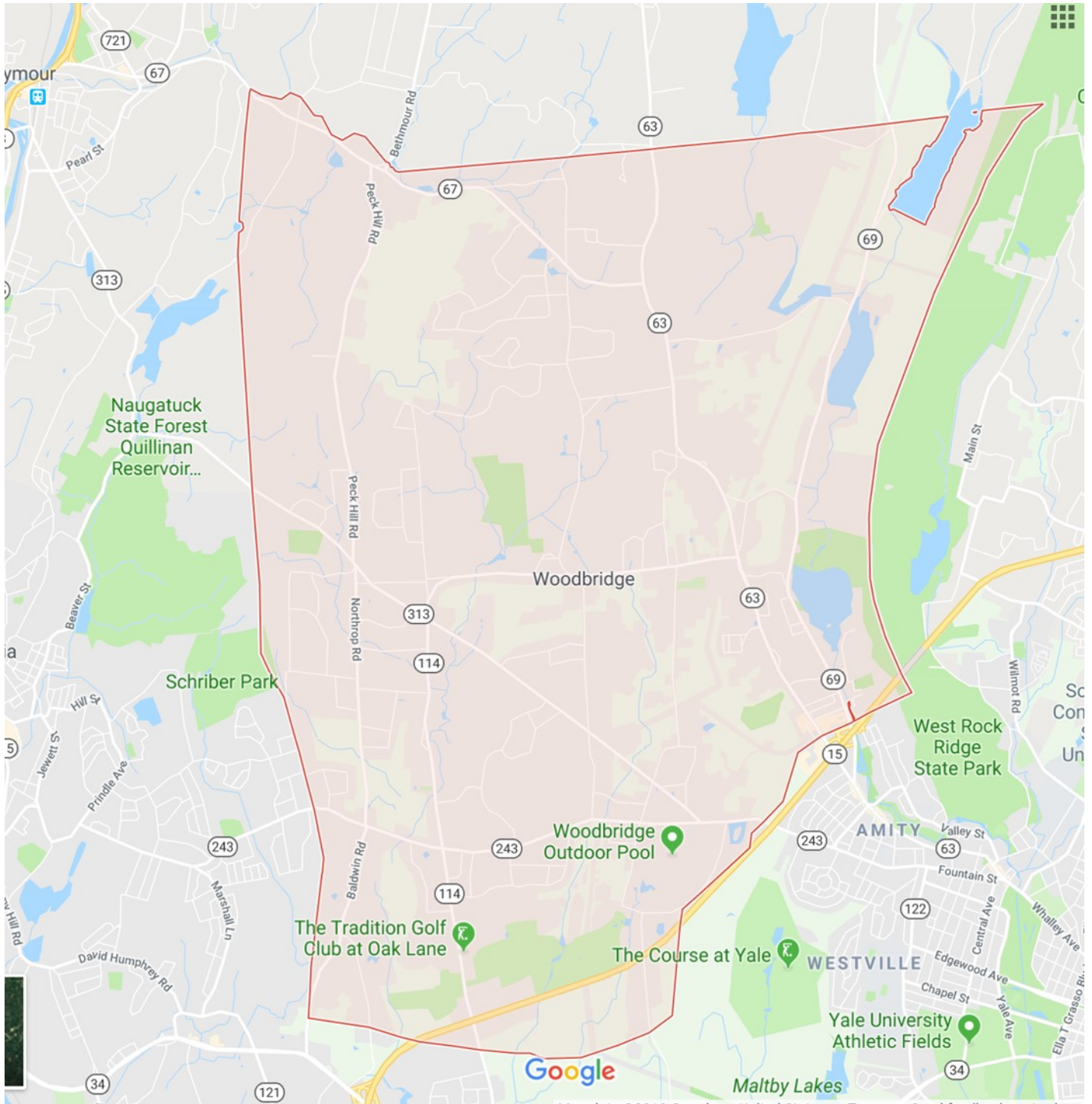




# Appendix

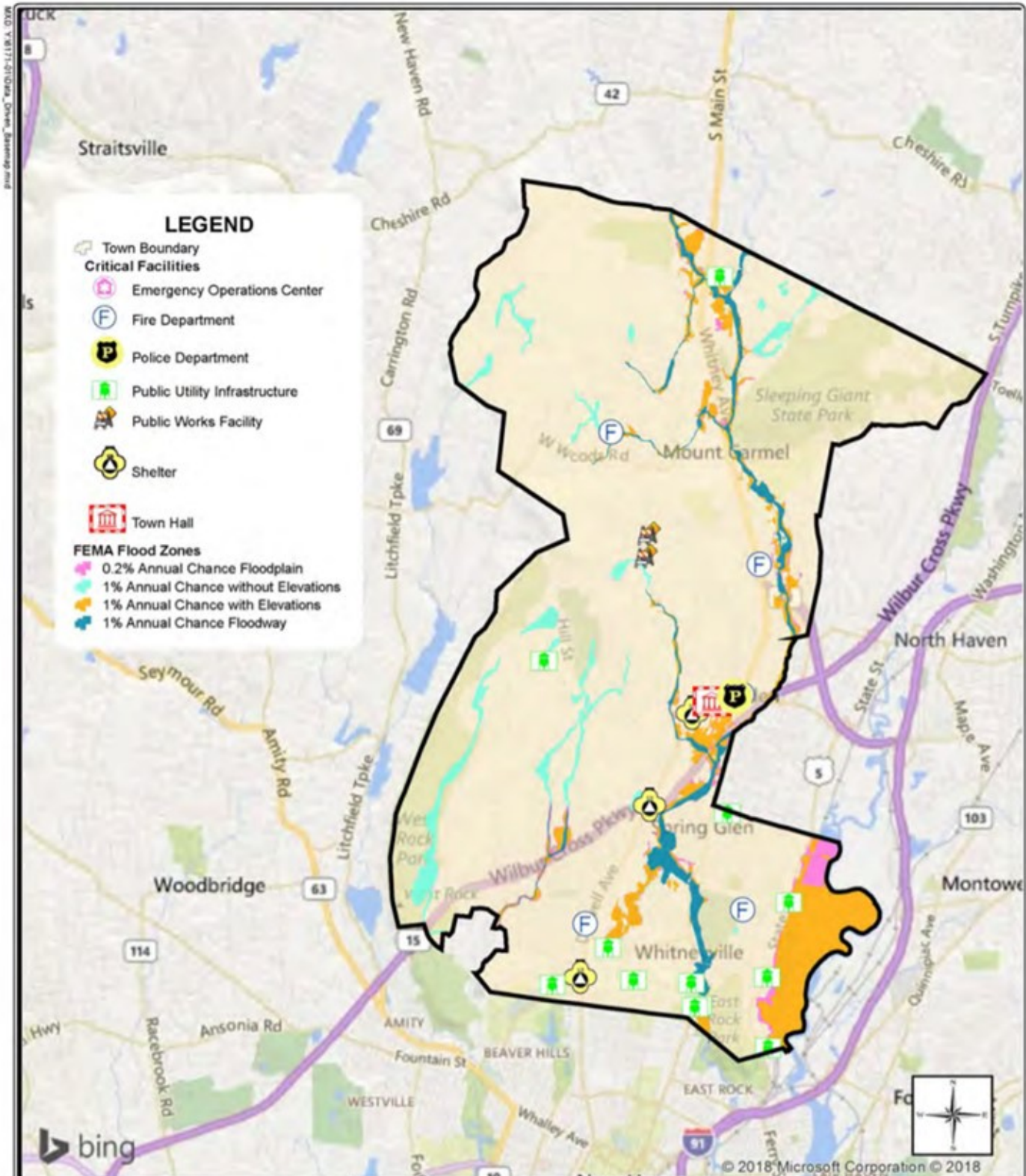
## Base Map





# **Resources and Maps Used During Workshop**





**MILONE & MACBROOM**  
 99 Realty Drive  
 Cheshire, Connecticut 06410  
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 www.miloneandmacbroom.com

**CRITICAL FACILITIES**

**SCRCOG HAZARD MITIGATION UPDATE  
 HAMDEN, CT**

SOUTH CENTRAL REGIONAL COUNCIL OF GOVERNMENTS

SOURCE: NATIONAL FLOOD HAZARD LAYER, FEMA, 2017

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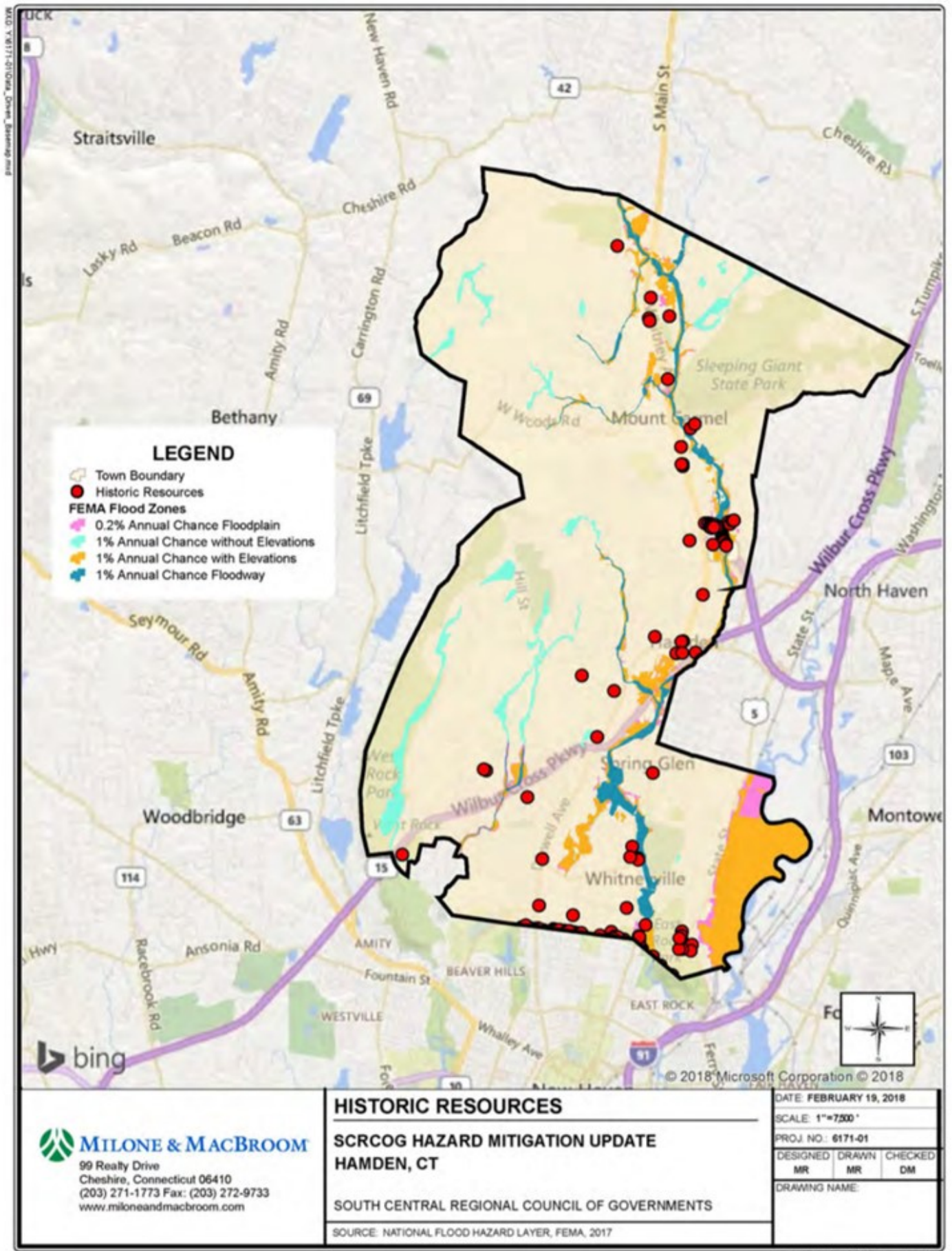
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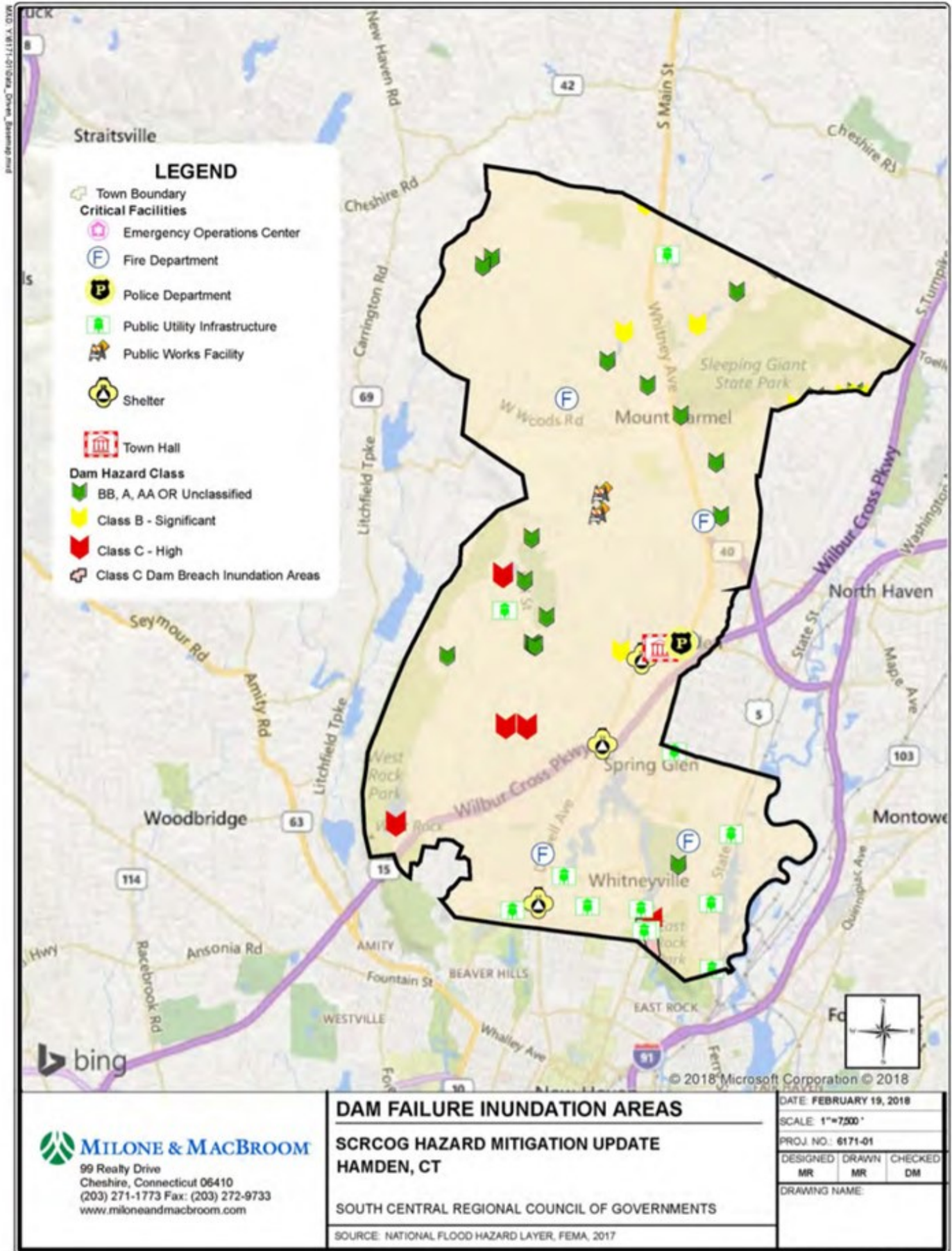
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MR	MR	DM

DRAWING NAME:







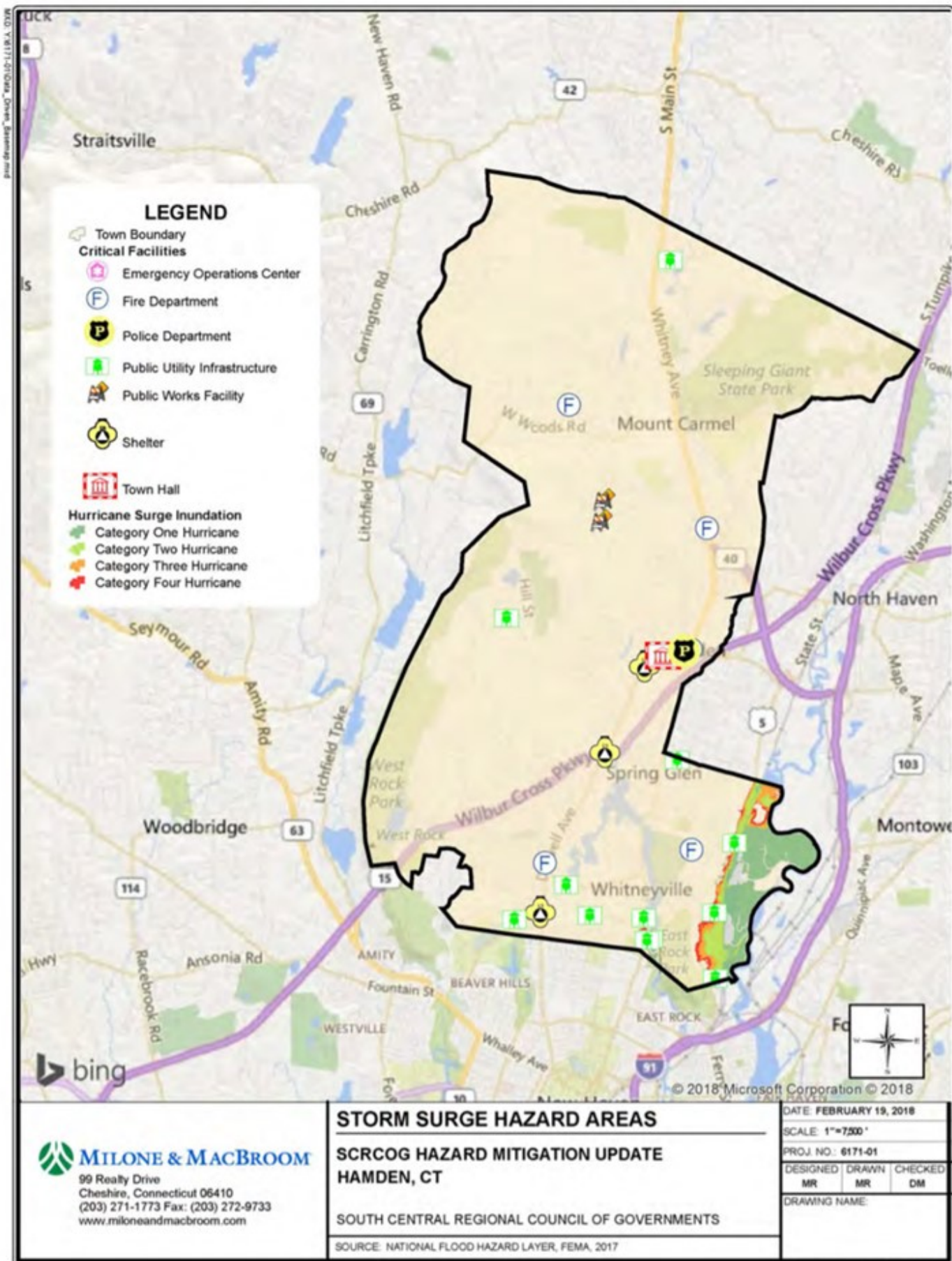


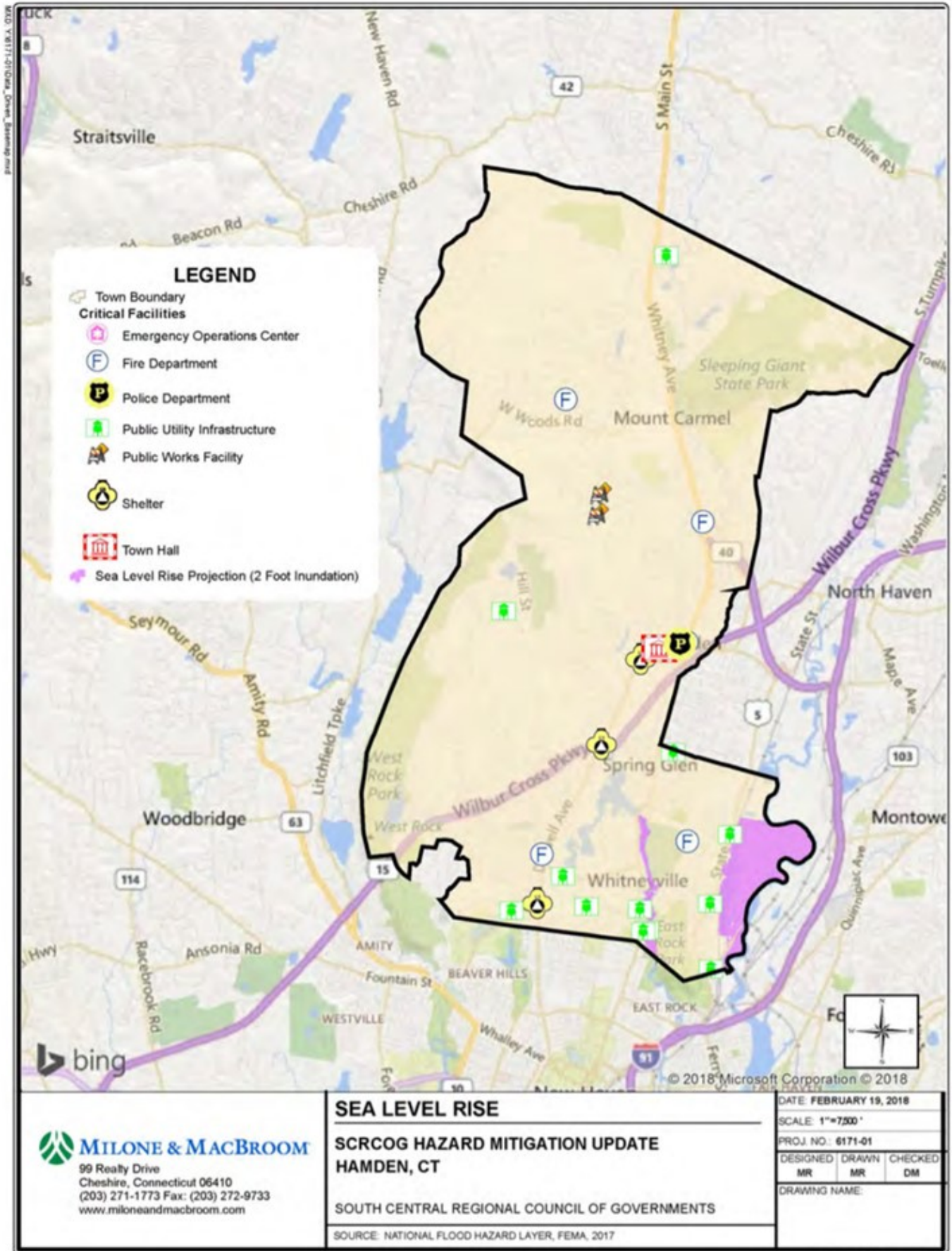
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**DAM FAILURE INUNDATION AREAS**  
**SCRCOG HAZARD MITIGATION UPDATE**  
**HAMDEN, CT**  
 SOUTH CENTRAL REGIONAL COUNCIL OF GOVERNMENTS  
 SOURCE: NATIONAL FLOOD HAZARD LAYER, FEMA, 2017

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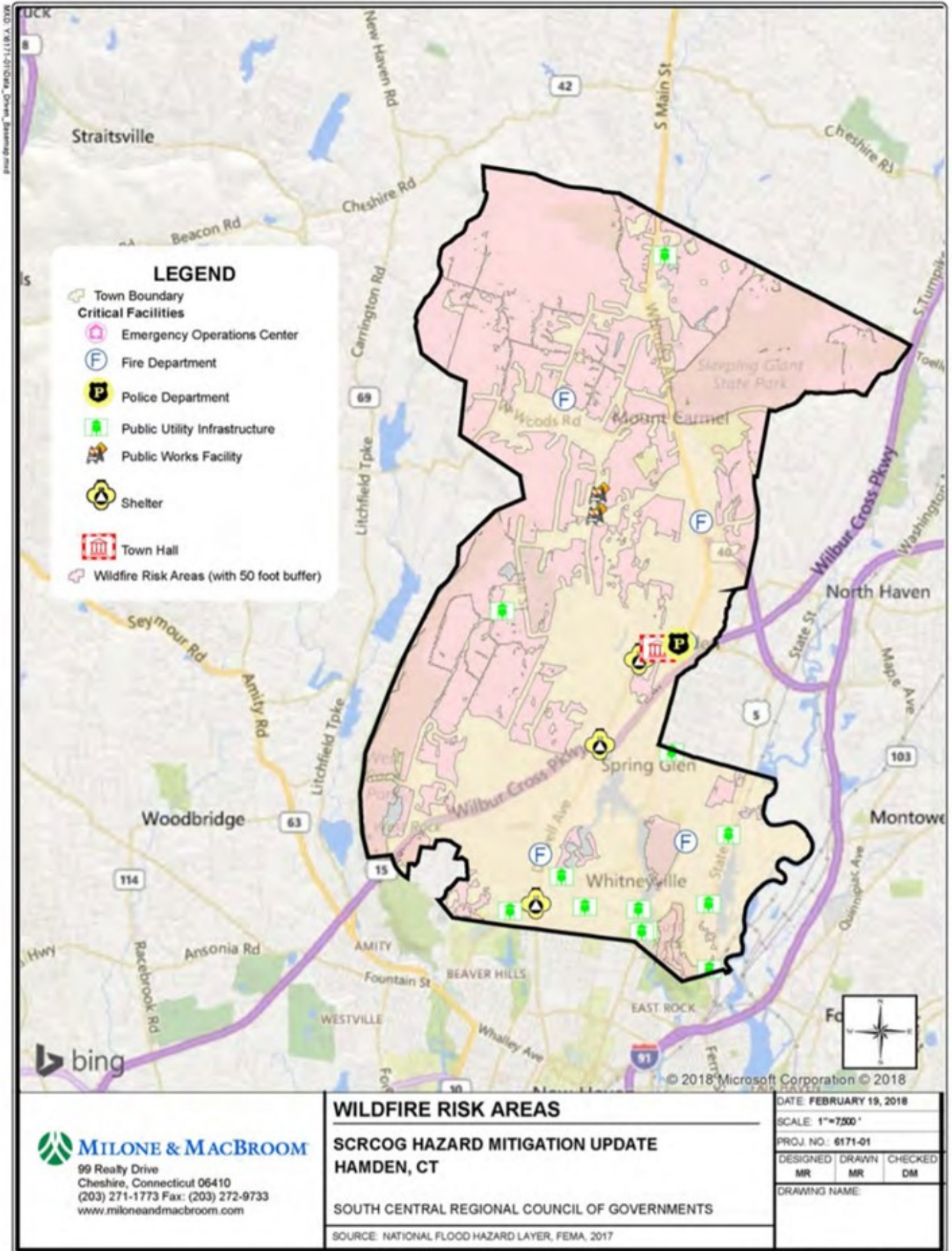




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Photo Credits: Reddit

