

Update of Hazard Mitigation Plan for the Naugatuck Valley Region



Workshop: Mitigation Strategies and Actions
February 3, 2021



Victoria Brudz, CFM
David Murphy, PE, CFM
Noah Slovin, CFM



Agenda

- Risk Assessment Update
- Public Comments Received to Date
- Hazard Mitigation Goals, Objectives, and Strategies
- Guest Presentation
 - *Sustainable CT*
- Regional and Statewide Initiatives
- Wrap Up and Next Steps

Workshop Logistics

- Breakout Sessions at 9:50 AM:

Groups will be Hazard Mitigation Actions for:

- 1. Riverine flood risks, repetitive loss properties, and dams***
- 2. Actions for other hazards such as wind events and winter storms***
- 3. Resilient Connecticut program***

- Please comment in the chat back box which group you would like to be placed in.



Risk Assessment Update

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Risk Assessment Update

- Hazards were profiled and losses were described in our workshop of November 18, 2020
- Public meeting on November 18, 2020 and survey responses did not result in changes to loss estimates or the risk assessment in general
- HAZUS-estimated losses for floods, hurricanes, and earthquakes have been completed

Public Comments

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Public Input Opportunities

- **Public Survey:** 11 Responses
- **Public Outreach:** Planning Commission and Planning & Zoning Commission Meetings
- **Story Map:** Approximately 40 views

Priority Actions



RESILIENT POWER GRID



UPGRADE INFRASTRUCTURE



IDENTIFY RISK AREAS



ASSIST VULNERABLE RESIDENTS



COORDINATE STATE & LOCAL RESPONSE



EDUCATION & OUTREACH

Hazard Mitigation Goals, Objectives, and Strategies

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What are We Talking About?



Goal

Broad, intangible, abstract: what do you want to achieve to reduce losses from hazards?



Objective

Specific, tangible, measurable targets that reduce losses from hazards



Strategy/Action

Steps toward achieving the objective to reduce losses from hazards; a Strategy could be a set of similar actions that help reduce losses from hazards

What are We Talking About?



Goal

Broad, intangible, abstract: what do you want to achieve to reduce losses from hazards?

Create a reliable utility system



Objective

Specific, tangible, measurable targets that reduce losses from hazards

Reduce the frequency of power outages caused by severe storms



Strategy/Action

Steps toward achieving the objective to reduce losses from hazards; a Strategy could be a set of similar actions that help reduce losses from hazards

- **Trim trees near power lines**
- **Install backup power**
- **Build microgrids**
- **Coordinate with utility provider**





- Sheltering
- Evacuation Planning
- Increase Culvert Capacity
- Standby Power
- Critical Facility Hardening
- Community Rating System
- Community Emergency Response Team
- Emergency Alerts
- Acquisition and Open Space
- Firefighting Water

NEW ACTIONS IDENTIFIED TO DATE

PREVENTION

- Flood study
- Stormwater regulations
- Repetitive loss property buyouts
- Riverbank stabilization
- Dam safety upgrades
- Road and drainage repairs
- Culvert upgrades
- Expand public water service

PROPERTY PROTECTION

STRUCTURAL PROJECTS

- Stream daylighting & restoration
- Increased tree management budget
- EOC & Shelter improvements
- Flood warning system
- Critical facility generators
- Evacuation Planning
- “We’re good”

NATURAL RESOURCE PROTECTION

EMERGENCY SERVICES

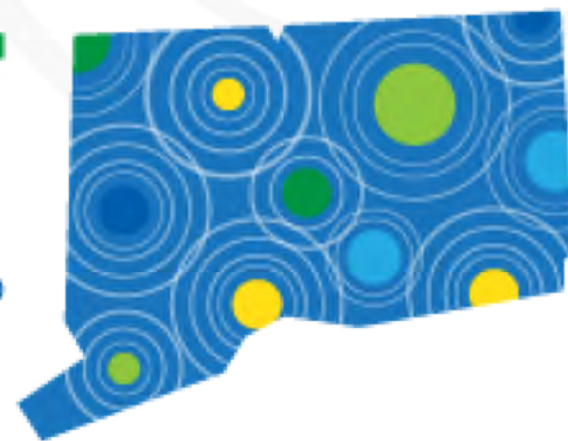
PUBLIC EDUCATION

Guest Presentation: Sustainable CT

A program that promotes sustainability and may provide credit for some hazard mitigation actions

Sustainable CT

Local Actions. Statewide Impact.®



Agenda

- **Sustainable CT Overview**
- Certification Process
- Funding and Resources

Why Become a Sustainable CT Community?



Road Map

A menu of coordinated, voluntary actions to promote sustainability



Resources

Support – including technical and financial – to help communities implement actions



Certification

Recognizing communities for their sustainability achievements



Flexibility

Meeting the needs of *all* communities – urban and rural, big and small



Livability

More sustainable, efficient, healthy, safe, resilient, thriving communities

Menu of Voluntary Actions

1. Inclusive and Equitable Community Impacts
2. Thriving Local Economies
3. Well-Stewarded Land and Natural Resources
4. Vibrant and Creative Cultural Ecosystems
5. Dynamic and Resilient Planning
6. Clean and Diverse Transportation Systems & Choices
7. Renewable and Efficient Energy Infrastructure & Operations
8. Inclusive Engagement, Communication, & Education
9. Strategic Materials Management
10. Optimal Health and Wellness Opportunities
11. Healthy, Efficient, & Diverse Housing
12. Effective, Compassionate Homelessness Prevention

One Program – Many Benefits



Environmental Impacts



Greenhouse Gas Reduction



Health and Wellness



Cost Savings



Economic Well-Being



Climate Resilience



Community Building



Equity

Why Participate?

- **Recognition**
- **Funding & resources**
- **Build community**
- **Inspiration**
- **Cost savings**
- **Partnerships**
- **Peer learning**

Sustainable CT Community Certification Report

[DOWNLOAD PDF VERSION](#)

This is the Sustainable CT Certification Report of Wethersfield, a Sustainable CT silver certified applicant.

Wethersfield was certified on October 27, 2020 with 520 points. Listed below is information regarding Wethersfield's Sustainable CT efforts and materials associated with the applicant's certified actions.

Contact Information

The designated Sustainable CT contact for Wethersfield is:

Community Impact

2. Thriving Local Economies



NVCOG – Participating Communities

- **Bristol – SILVER 2020**
- Bethlehem
- Cheshire
- Naugatuck
- Oxford
- Prospect
- Seymour
- Thomaston
- **Waterbury – BRONZE 2020**
- **Woodbury – BRONZE 2019**

Relation to NHMP

- Sustainable CT awards points for actions that are well-aligned with hazard mitigation actions that can reduce risks associated with severe storms and natural hazards
 - Develop an Open Space Plan
 - Plan for Long-Term Recovery
 - Assess Climate Vulnerability
 - Implement Low Impact Development
 - And more
- Sustainable CT is adding more actions, new categories, and more flexibility in 2021!

Agenda

- Sustainable CT Overview
- **Certification Process**
- Funding and Resources

Become a Sustainable CT Community

1

Pass a resolution, establish a Sustainability Team

2

Register your community at sustainablect.org

3

Review the list of actions to see what you have already completed

4

Optimize for Equity – Start working on your equity action submission

5

Complete at least 1 action in each category. Use our tools and resources!

6

**Get
certified!**

Year 1:
22 Certified
Communities!



Year 2: 32 Certified Communities!



Year 3: 17 Towns
Certified: 12 Bronze,
5 Silver!



Agenda

- Sustainable CT Overview
- Certification Process
- **Funding and Resources**

Support for Towns

One-on-One Support

- Phone calls with Sustainable CT staff
- Meetings with towns

Free Consulting Services on Many Actions, Ex:

- Equity: 4 hours of coaching
- Resilience: Community Resilience Building Workshops
- Energy: Energy benchmarking with the utilities

Funding from Sustainable CT

- Community Match Fund

Multiple Events Every Month

- Webinars
- Workshops and Trainings

Sustainable CT Fellows

- Full-time for 10 weeks
- Direct support to towns from regional Council of Governments

Community Match Fund



Community Match Fund

Funding & support for **anyone** in a registered Sustainable CT town with a great idea for a **public sustainability project**

❖ How the funding works

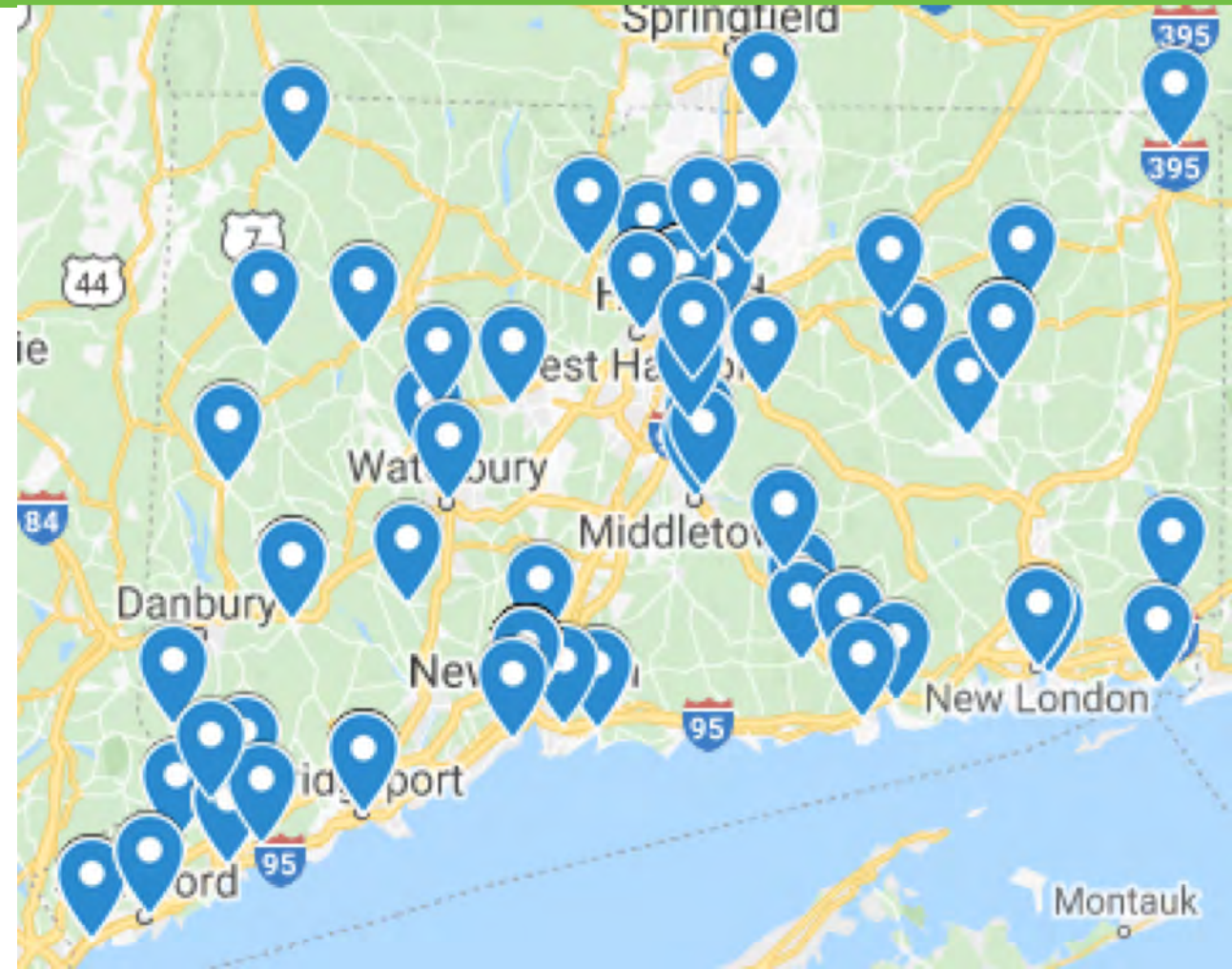
- Dollar-for-dollar matching funds up to **\$7,500 per project**, for **any** eligible project
- 50% of costs covered by Sustainable CT, with the other 50% raised through online **crowdfunding**
 - Challenge grant: raise half from local community, SCT matches half.
- Our crowdfunding partner, Patronicity, provides fundraising coaching & support



Impact & Utilization

- 90+ projects supported since program launch in September 2019
- Average budget of ~\$15,000
- 3100+ donors
- More than \$1,000,000 raised

Projects



Projects: towns participating

- All 8 counties represented:

53 towns represented: Bloomfield, Branford (2) Bridgeport (5), Bristol, Canaan (2), Chaplin, Chester, Columbia, Coventry, Cromwell, Deep River, East Hartford, East Haven, Enfield, Essex (2), Glastonbury, Greenwich (3), Groton, Haddam, Hamden, Hartford (12), Lebanon, Litchfield (3), Middletown, New Canaan (2), Portland, New Haven (17), New London (2), New Milford (2), Newtown (4), North Stonington, Norwalk (3), Old Lyme, Old Saybrook, Oxford, Portland, Ridgefield, Rocky Hill, Simsbury, South Windsor, Stamford (2), Thomaston, Thompson, Waterbury, West Hartford (4), West Haven, Weston (2), Westport, Wethersfield, Wilton, Windham Windsor.



What it looks like:



BRANFORD, CT

Branford Clean Energy Campaign

To educate Branford residents about Home Energy Solutions, Heat Pumps and Solar

\$150

of \$5,330

48

days left

★ Matching Grant: **Sustainable CT**

[VIEW](#)

[⚡ SUPPORT](#)

supported by



Branford Clean Energy Campaign

To educate Branford residents about Home Energy Solutions, Heat Pumps and Solar

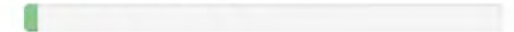


[✉ Need Help? Contact us!](#)

📍 Branford, CT 📚 Education

\$150

funded of \$5,330 goal



2

patrons

48

days left

[Support](#)



This campaign is eligible for a grant from **Sustainable CT**

[Story](#)

[Updates](#)

[Donors](#)

Community Match Fund Supporters



Tremaine Foundation



Sustainable CT Supporters



Tremaine Foundation



Community Foundation
of Eastern Connecticut



CONNECTICUT
GREEN BANK

COMMONSENSEFUND

Find Out More

www.sustainablect.org

info@sustainablect.org

860.465.0258



@sustainablect

Regional and State Mitigation Initiatives

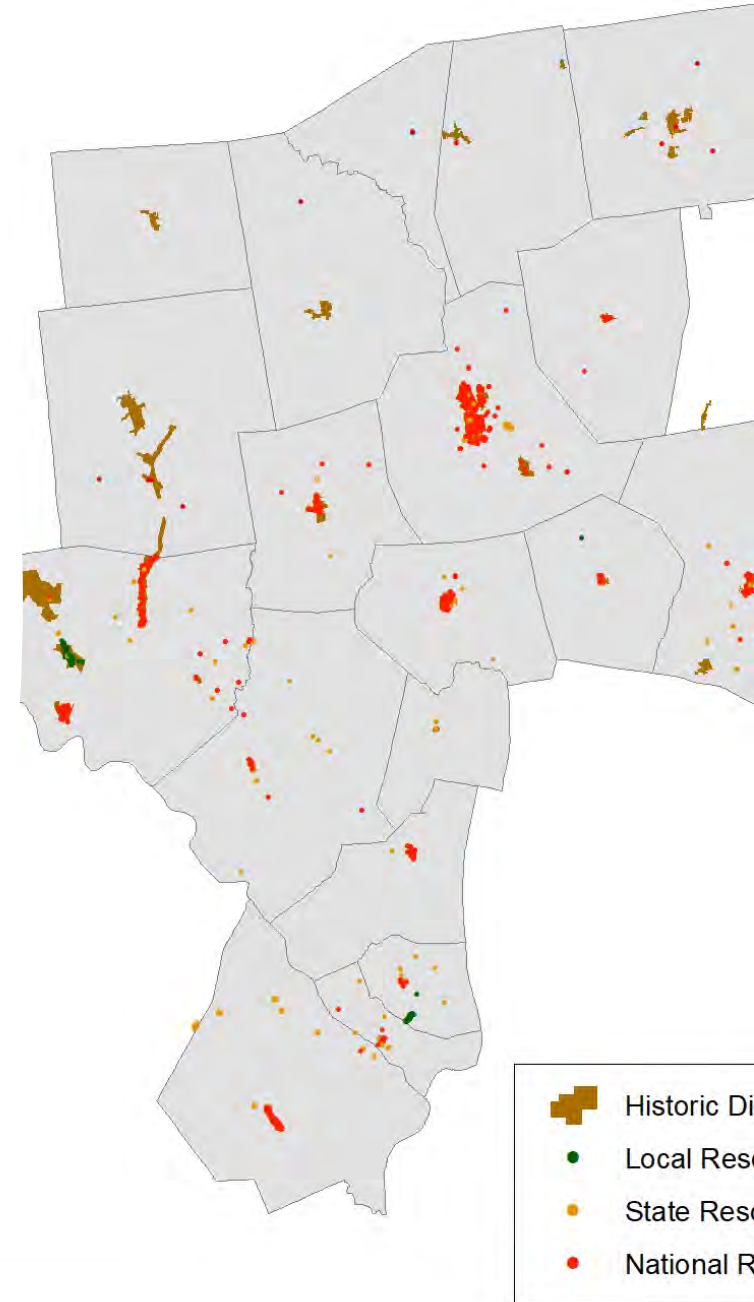
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REGIONAL AND STATE INITIATIVES

- Historic & Cultural Resources
- Repetitive Loss Properties
- State Building Code & Flood Regulations
- Small Businesses Chemical Management
- “Sustainable CT”
- Resilient Connecticut
- Low Impact Development (LID) Handbook for Rural Communities

STATE INITIATIVE

Historic & Cultural Resources



REGIONAL AND STATE INITIATIVES

Historic & Cultural Resources

Historic & Cultural Resources Action 1

Coordinate with CT SHPO to conduct historic resource surveys, focusing on areas within natural hazard risk zones (flood zones, wildfire hazard zones, steep slopes) to support the preparation of resiliency plans across the state.



All towns

Historic & Cultural Resources Action 2

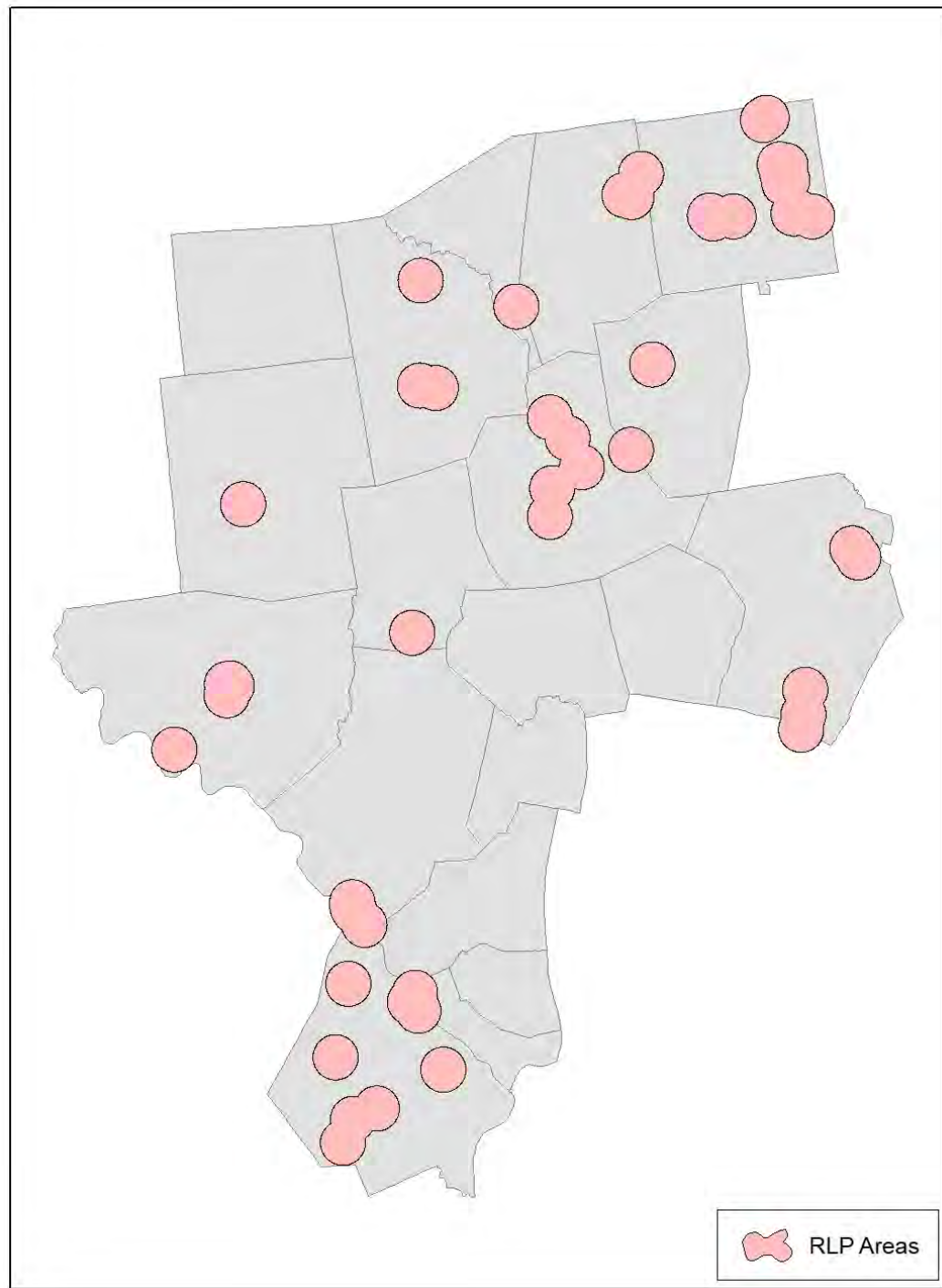
Coordinate with CT SHPO to conduct outreach to owners of historic properties to educate them on methods of retrofitting historic properties to be more hazard-resilient while maintaining historic character.



Towns with known, listed historic resources in flood zones

STATE INITIATIVE

Repetitive Loss Properties



REGIONAL AND STATE INITIATIVES

Repetitive Loss Properties

Repetitive Loss Properties Action 1

Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.



Any Municipality with at least 1 RL property

Repetitive Loss Properties Action 2

Contact the owners of Repetitive Loss Properties and nearby properties at risk to inquire about mitigation undertaken and suggest options for mitigating flooding in those areas. This should be accomplished with a letter directly mailed to each property owner.



Towns with 2 or more RL properties

STATE INITIATIVE

State Building Code & Flood Regulations

CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

MODEL FLOODPLAIN MANAGEMENT REGULATIONS NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

Inland/Riverine Community (AE and A Zones only) Level "D" Community

October 2018

Effective October 1, 2018, the Connecticut Office of the State Building Inspector ended the current state building code to adopt the 2015 International Residential Code (IRC). Please see the OSBI website for more information on this change, which can be found at <https://portal.ct.gov/DAS/Office-of-State-Building-Inspector/Building-and-Fire-Code-Process> and the 2015 IRC, Chapter 3, Section R322, "Flood-Resistant Construction" at <https://codes.iccsafe.org/public/document/toc/553/>.

The adoption of the 2015 IRC has made significant changes to the elevation and construction requirements for new construction and substantially improved structures in both coastal and inland floodplains. Section R322.2 contains the elevation requirements for A and AE Zones. Section R322.3 contains the elevation requirements for VE Zones and Coastal AE Zones. A summary of these new requirements:

AE and A Zone – Lowest floor elevated to Base Flood Elevation (BFE) plus 1 foot.

AO and AH Zones – Lowest floor elevated to Highest Adjacent Grade (HAG) as the depth number specified on the flood insurance rate map plus 1 foot or not less than 3 feet if no depth number is specified.

VE Zone and Coastal AE Zone – Bottom of the lowest horizontal member supporting the lowest floor elevated to the BFE plus one foot, with structure built on pier, post or pile foundation utilizing breakaway walls. Breakaway walls in Coastal AE zones must also contain hydraulic flood vents.

The adoption of the 2015 IRC will make significant changes to the elevation requirement for new construction and substantially improved structures in coastal floodplains that may be different than the standards currently contained in your local floodplain zoning regulations or ordinance. There are also other changes. **Bold red text** in this model highlights the changes that need to be made to floodplain zoning regulations or ordinances to match the new state building code standards.



REGIONAL AND STATE INITIATIVES

State Building Code & Flood Regulations

Revised State Building Code Action 1

Revise floodplain zoning regulations to reflect the new State Building Code requirements for one foot of freeboard for construction in the 1% annual-chance flood zone.

Towns with floodplain regulations that do not require freeboard.

Revised State Building Code Action 2

Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.

Towns with SD/SI lookback periods of 1 year or less.

Revised State Building Code Action 3

Compare local floodplain regulations with Revised State Model Flood Regulations to identify any remaining opportunities for improvement

All other Towns

STATE INITIATIVE

Small Business
Chemical
Management



REGIONAL AND STATE INITIATIVES

Small Business Chemical Management

Small Business Chemical Management Action 1

Provide information on the Town website about CT DEEP training and information around small business chemical management for hazard resilience.

Small Business Chemical Management Action 2

Use the CT Toxics Users and Climate Resilience Map to identify toxic users located in hazard zones within your community. Contact those users to inform them about the CT DEEP small business chemical management initiative.

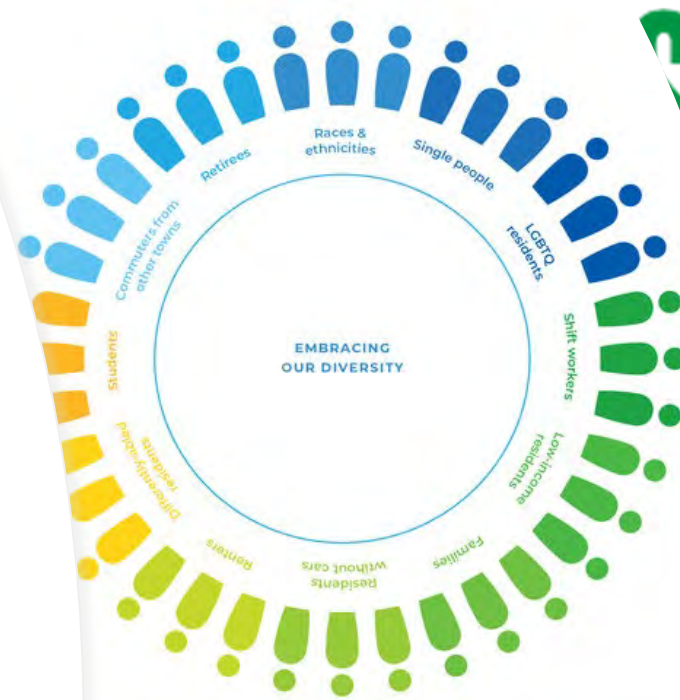
Small Business Chemical Management Action 3

Host a CT DEEP presentation for municipal staff and local businesses about business chemical management for hazard resilience.



STATE INITIATIVE

Sustainable CT



REGIONAL AND STATE INITIATIVES

Sustainable CT

Sustainable CT Action 1

Register as a Sustainable CT community and make progress with the hazard mitigation goals associated with registration.



Towns not currently in the program

Sustainable CT Action 2

Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives:

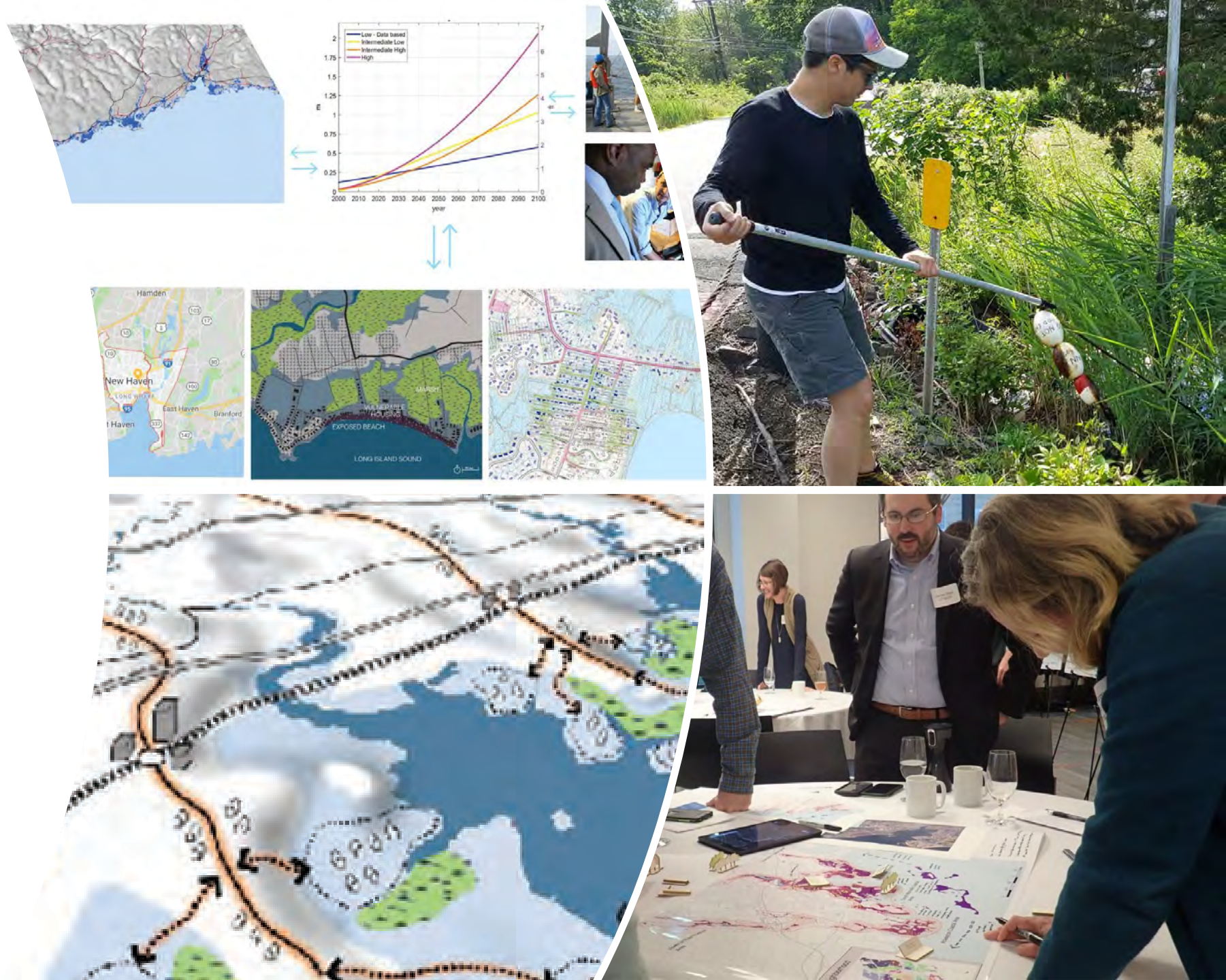
1. Disseminate a toolkit for pre-disaster business preparedness.
2. Revise regulations to promote Low Impact Development.
3. Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.



Registered and Certified Towns

REGIONAL INITIATIVE

*Resilient
Connecticut*



Resilient Connecticut Vision

- Adapt **structures and critical infrastructure in flood zones** to withstand flooding
- Protect communities through healthy buffering ecosystems where critical services, infrastructure, and transportation hubs are located on **safer high ground**
- Develop **energy, economic, and social resilience**
- Increase **transit connectivity**
- Create corridors resilient to climate change: **Resilient Corridors**
- Focus community development around transit: **Resilient Transit Oriented Development (TOD)**
- Create opportunities for affordable housing, preserving and enhancing the quality of life for existing **affordable communities**

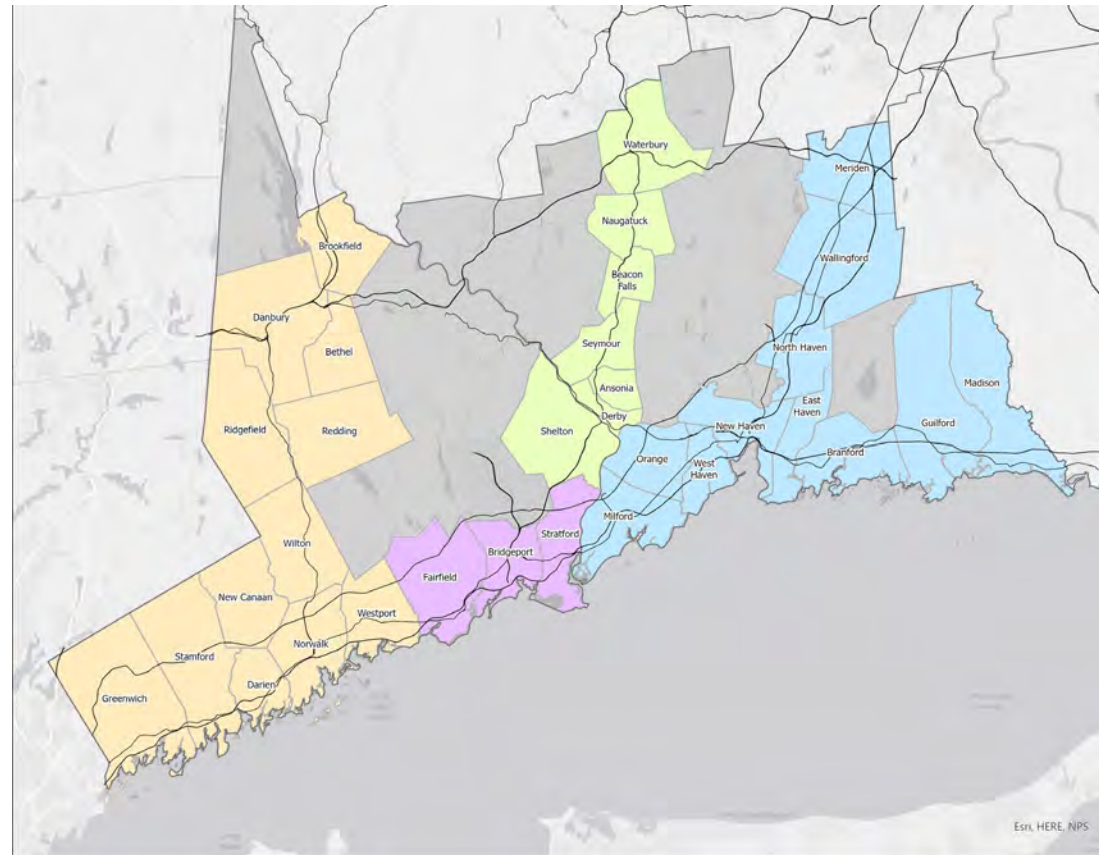
Resilient Connecticut Tasks



- Assess regional infrastructure challenges and opportunities
- Identify resilience corridors & resilient TOD opportunities
- Identify projects that towns can't address alone
- Develop implementable plans and pilot projects with broad co-benefits

Resilient Connecticut Target Communities

- Communities with major highways and passenger rail lines
- Communities with transit-oriented development (TOD) potential
- Therefore able to accommodate the resilient corridor concept linking “zones of shared risk” with resilient hubs



STATE INITIATIVE

Low Impact
Development

Effective Date: January 1, 2018

MORRIS

Low Impact Sustainable Development
and Stormwater Management
Design Manual



Trinkaus Engineering, LLC
114 Hunters Ridge Road
Southbury, Connecticut 06488
(203) 264-4558 (office/fax)
Email: strinkaus@earthlink.net
www.trinkausengineering.com

REGIONAL AND STATE INITIATIVES

Building Municipal Resilience and Climate Adaptation through Low Impact Development

LID Action 1

Refer to the manual in your guidance or regulations



Towns With LID Guidance or Requirements

LID Action 2

Evaluate whether LID should be incorporated into practices



Towns Without LID Guidance or Requirements

Breakout Rooms

- Riverine flood risks, repetitive loss properties, and dams
- Actions for other hazards such as wind events and winter storms
- *Resilient Connecticut* program

Wrap Up

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Next Steps

- Contact Noah and Victoria if you have any comments about mitigation actions
 - *What do you like? This will work for us...*
 - *What do you dislike? This won't work for us...*
- Individual annexes will be provided for review by the end of the winter
- Multi-jurisdiction document can be reviewed before or after your annex
- Post a link for public comments after the reviews (we will provide the link)