

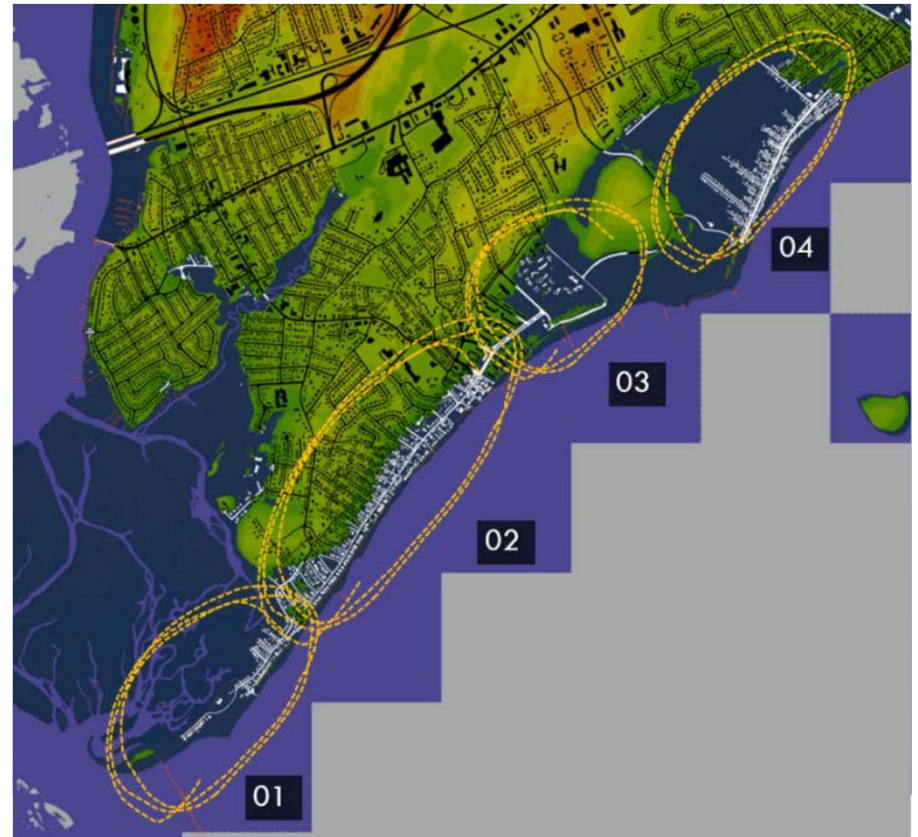
Resilient Connecticut Phase II

From Data to Resilient Adaptation Projects

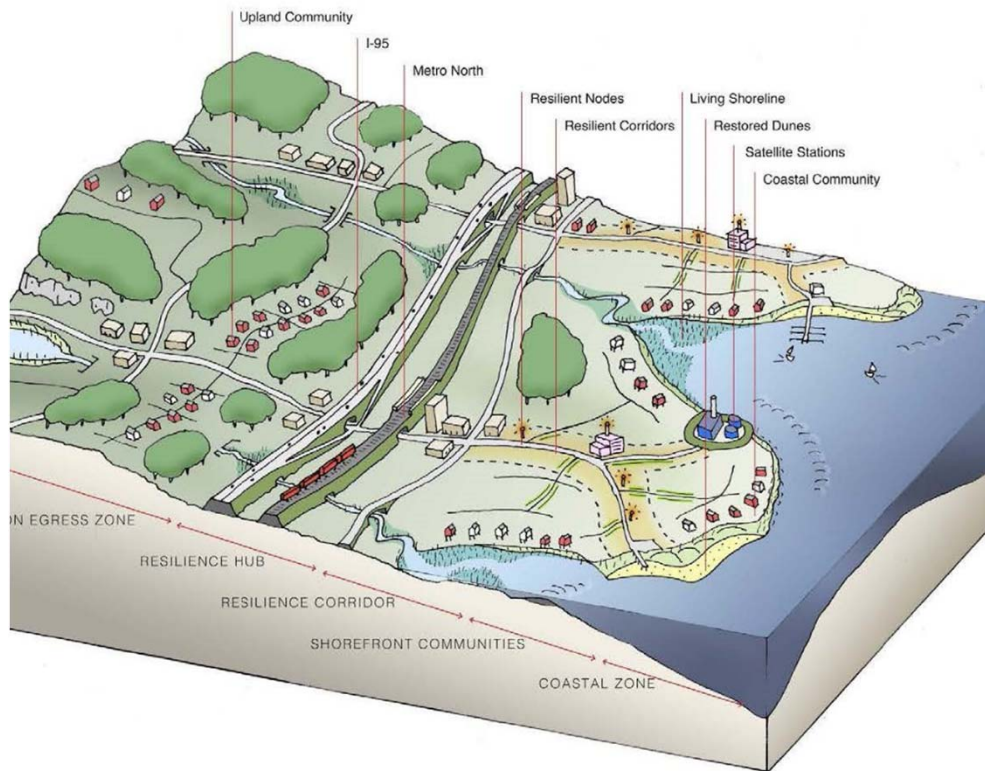


Key Terms

- What is a Zone of Shared Risk?
 - “Zones of shared risk are regions that face common challenges either in existence already or caused by climate change, and therefore risks are shared among or between groups of people that may have different perspectives and priorities for coastal resilience. A Zone of Shared Risk includes the houses, land, infrastructure, hydrological, ecological, social, and institutional elements that contribute to the functioning of a place.”

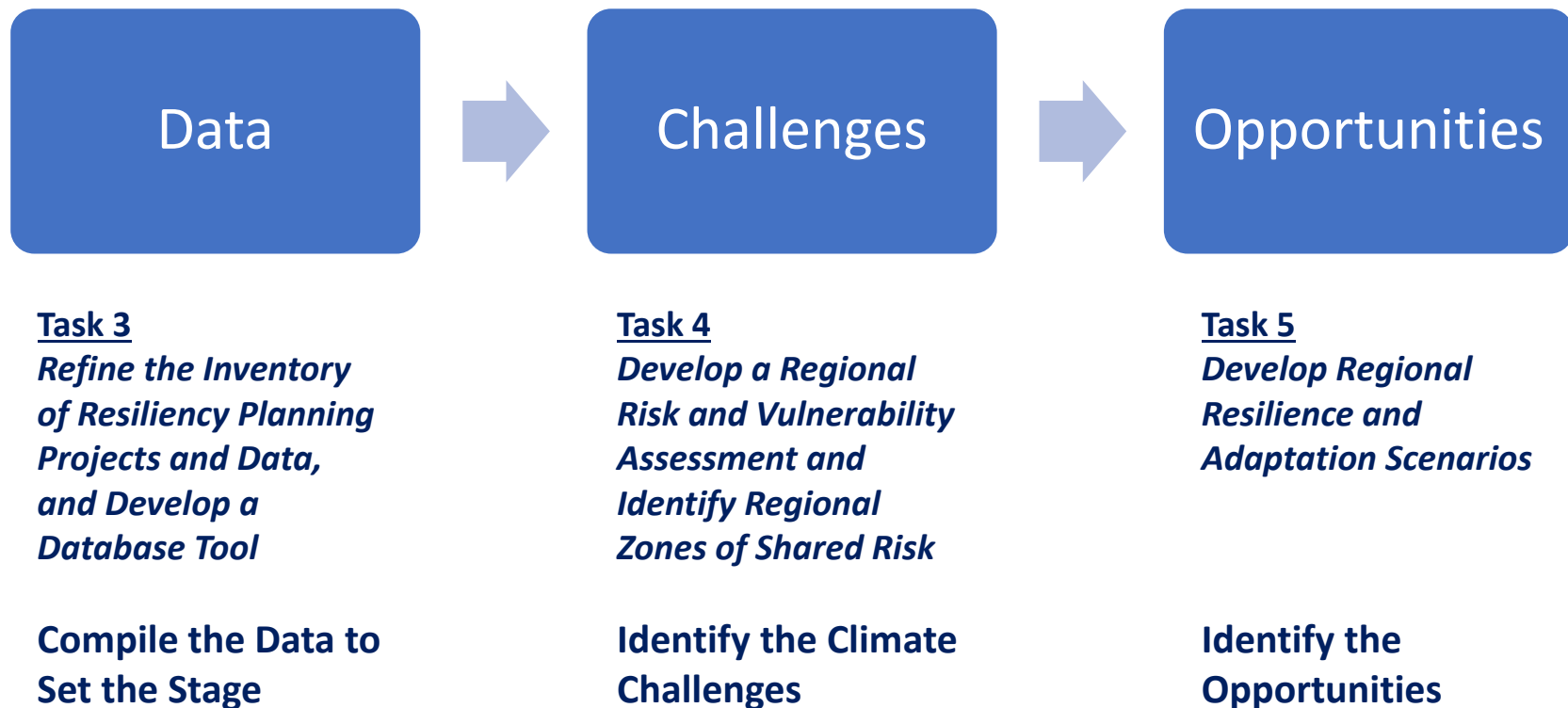


Key Terms



- What is a Resilience Corridor?
 - “Resilience corridor utilizes the concept of urban redevelopment corridors as a mechanism to adapt coastal urban areas at risk. The resilience corridor supports transportation, utilities, stormwater and habitats, and economic development that connect the upland areas of Connecticut where resources exist (resilience zones) down to shorefront communities.”

The Path to Resilience in Three Steps



Compile the Data to Set the Stage

- *Refine the Inventory of Resiliency Planning Projects and Data, and Develop a Database Tool*
- Whose Data?
 - CIRCA's data
 - COG-provided data
 - Town-provided data
 - Utility-provided data
 - CDC data
 - Census data
 - Your data
 - Our data

Identify the Climate Challenges

Coastal Vulnerability Index

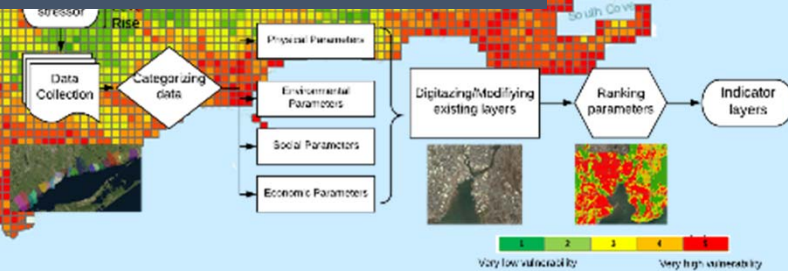
Erosion Vulnerability
Natural Habitat Vulnerability
Salt-Water Intrusion
Social Vulnerability
Structural Vulnerability

COG Input

Climate Vulnerability Index

Flood-Related Vulnerabilities
Wind-Related Vulnerabilities
Heat-Related Vulnerabilities

Parked:
Drought-Related Vulnerabilities
Wildfire-Related Vulnerabilities



Identify the Climate Challenges – Flood

- *Develop a Regional Risk and Vulnerability Assessment and Identify Regional Zones of Shared Risk*
 1. Develop Indicators
 2. Map Social Vulnerabilities
 3. Develop Climate Vulnerability Index from CIRCA's Coastal Vulnerability Index
 4. Identify Zones of Shared Risk

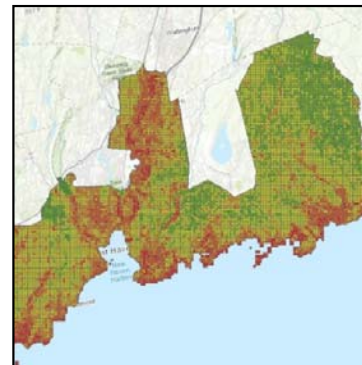
INDICATORS



SOCIAL VULNERABILITIES



CLIMATE VULNERABILITY INDEX



ZONES OF SHARED RISK

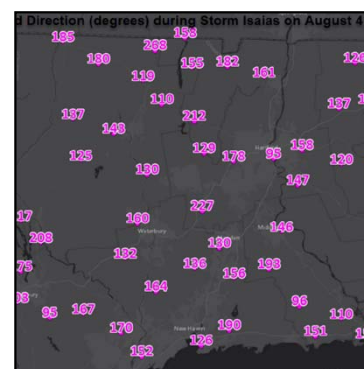


Identify the Climate Challenges – Wind

- *Develop a Regional Risk and Vulnerability Assessment and Identify Regional Zones of Shared Risk*

1. Develop Indicators
2. Map Social Vulnerabilities
3. Develop Climate Vulnerability Index from CIRCA's Coastal Vulnerability Index
4. Identify Zones of Shared Risk

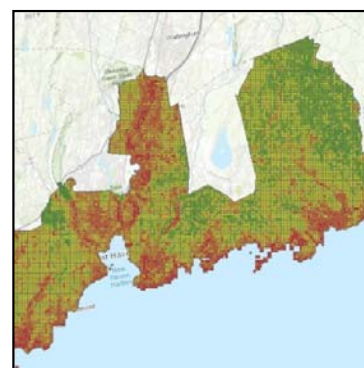
INDICATORS



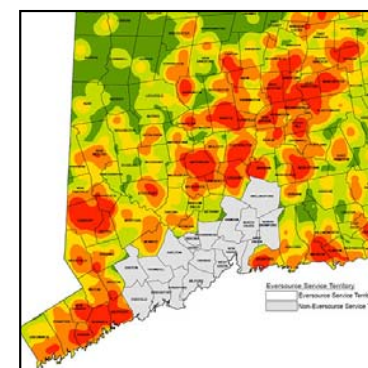
SOCIAL VULNERABILITIES



CLIMATE VULNERABILITY INDEX



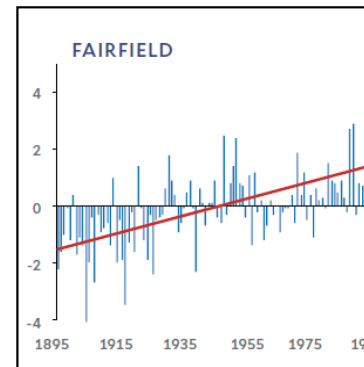
ZONES OF SHARED RISK



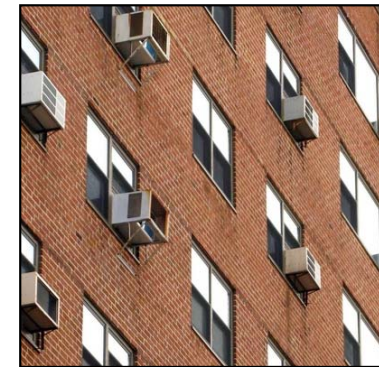
Identify the Climate Challenges – Heat

- *Develop a Regional Risk and Vulnerability Assessment and Identify Regional Zones of Shared Risk*
 1. Develop Indicators
 2. Map Social Vulnerabilities
 3. Develop Climate Vulnerability Index from CIRCA's Coastal Vulnerability Index
 4. Identify Zones of Shared Risk

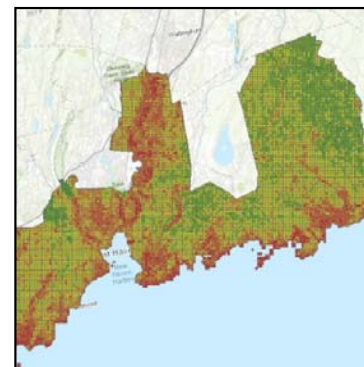
INDICATORS



SOCIAL VULNERABILITIES



CLIMATE VULNERABILITY INDEX



ZONES OF SHARED RISK



Identify the Opportunities

- *Develop Regional Resilience and Adaptation Scenarios*
 - Develop some of the Zones of Shared Risk into regional adaptation scenarios and project areas.
 - These scenarios should address interdependencies and cascading climate hazards between critical systems and lifelines.
- How does a challenge become an opportunity?
 - Is TOD potential nearby?
 - Is a potential resilient corridor nearby?
 - Can we adapt structures and critical infrastructure to withstand occasional flooding?
 - Can we protect communities through healthy buffering ecosystems where critical services and hubs are on higher ground and where strong connections exist between the two?
 - Can we identify affordable housing?
 - Can we promote energy, economic, and social resilience?

Identify the Opportunities

- Other Considerations
 - Planned conservation and development areas identified in local and/or regional POCDs
 - Regional employment centers and economic assets as identified by COGs and the municipalities
 - Transit Oriented Development areas (designated or future proposed)
 - Critical infrastructure (with “critical” defined by statute [such as the state flood management statutes] or as designated in local hazard mitigation plans)
 - Rail and bus service assets and infrastructure
 - Egress and evacuation routes as identified by COGs and the municipalities
 - Affordable housing assets as identified by COGs and the municipalities
 - Areas of concern for socially vulnerable populations and environmental justice communities
 - Sanitary sewer systems
 - Septic fields (areas of sewer avoidance or areas of known existing septic systems) and potential wastewater issues resulting from saltwater intrusion and increased tidal flooding
 - Drinking water systems
 - Areas with private wells
 - Critical ecological assets identified by CT DEEP

EXAMPLES OF ZONES OF SHARED RISK AND ADAPTATION OPPORTUNITIES

Adapted

- Planning and execution complete
- *Can you visualize a zone of shared risk that existed in the past?*

Progress Underway

- Community has made progress with opportunities to become resilient
- *Can you visualize patches of risk that remain?*

Identified and Waiting for Action

- Some planning work has been done
- *What kinds of opportunities can be identified for these zones of shared risk?*

Meriden Green

Adapted



Meriden Green

Adapted



Meriden Green

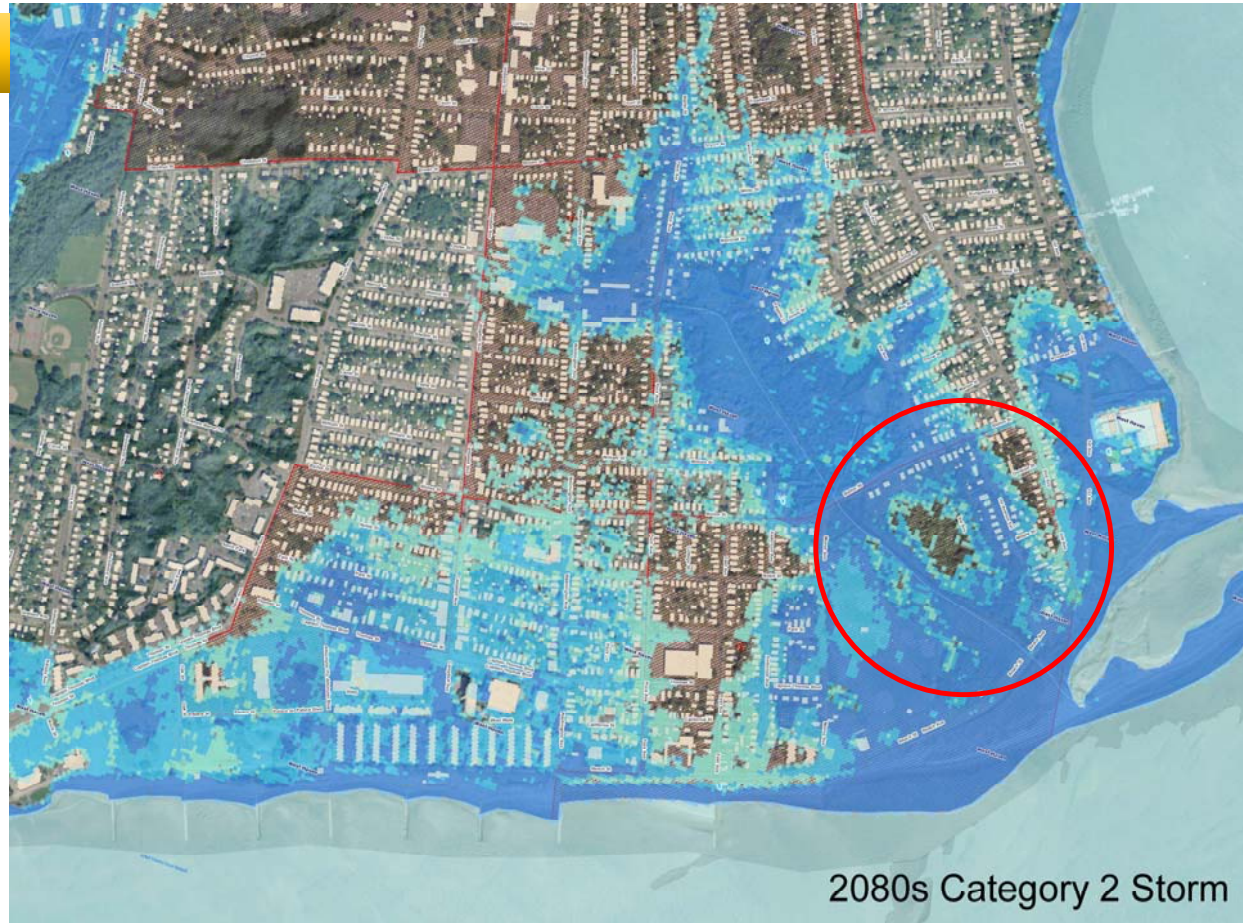
Adapted



West Haven Beach Area

Progress Underway

Home acquisitions



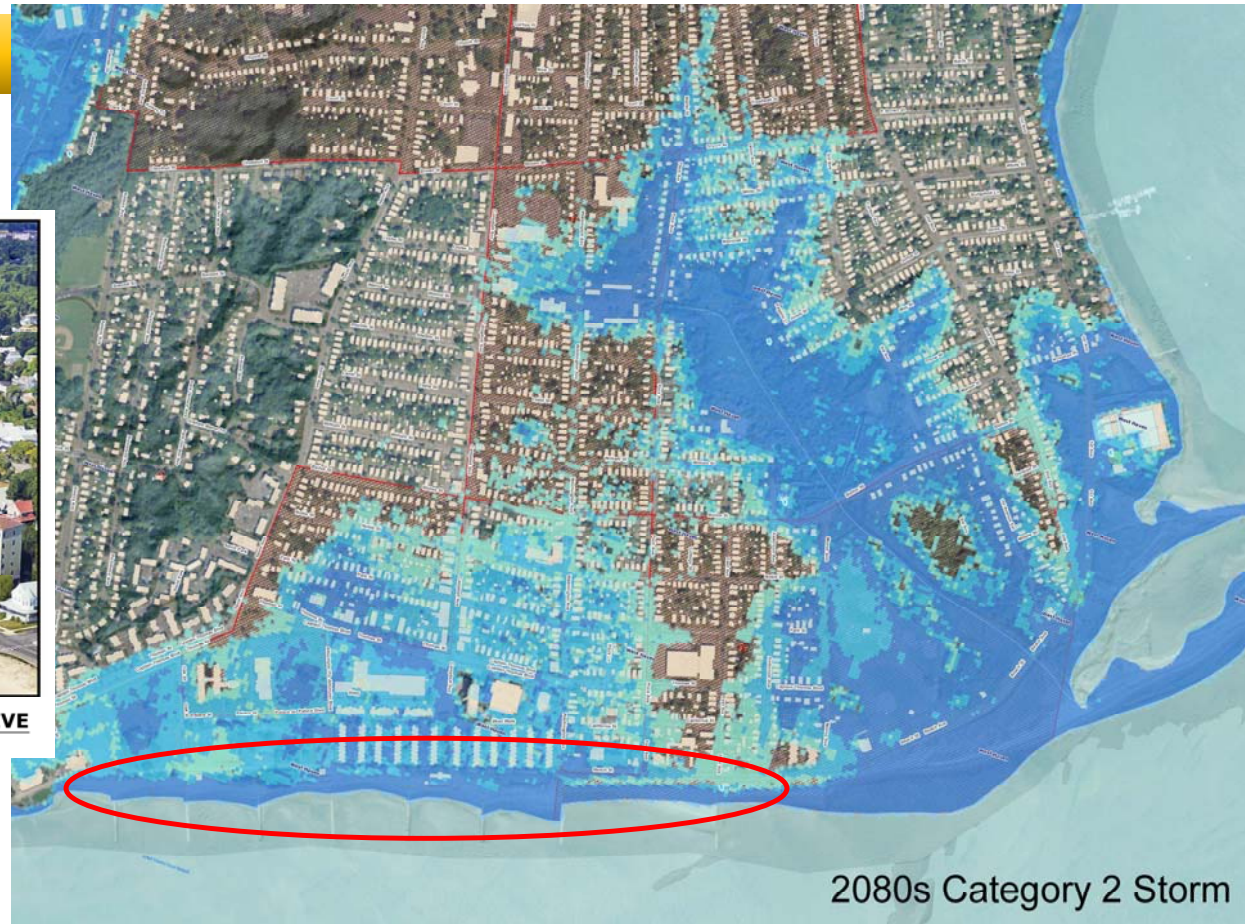
West Haven Beach Area

Progress Underway

Dune ridge for flood protection



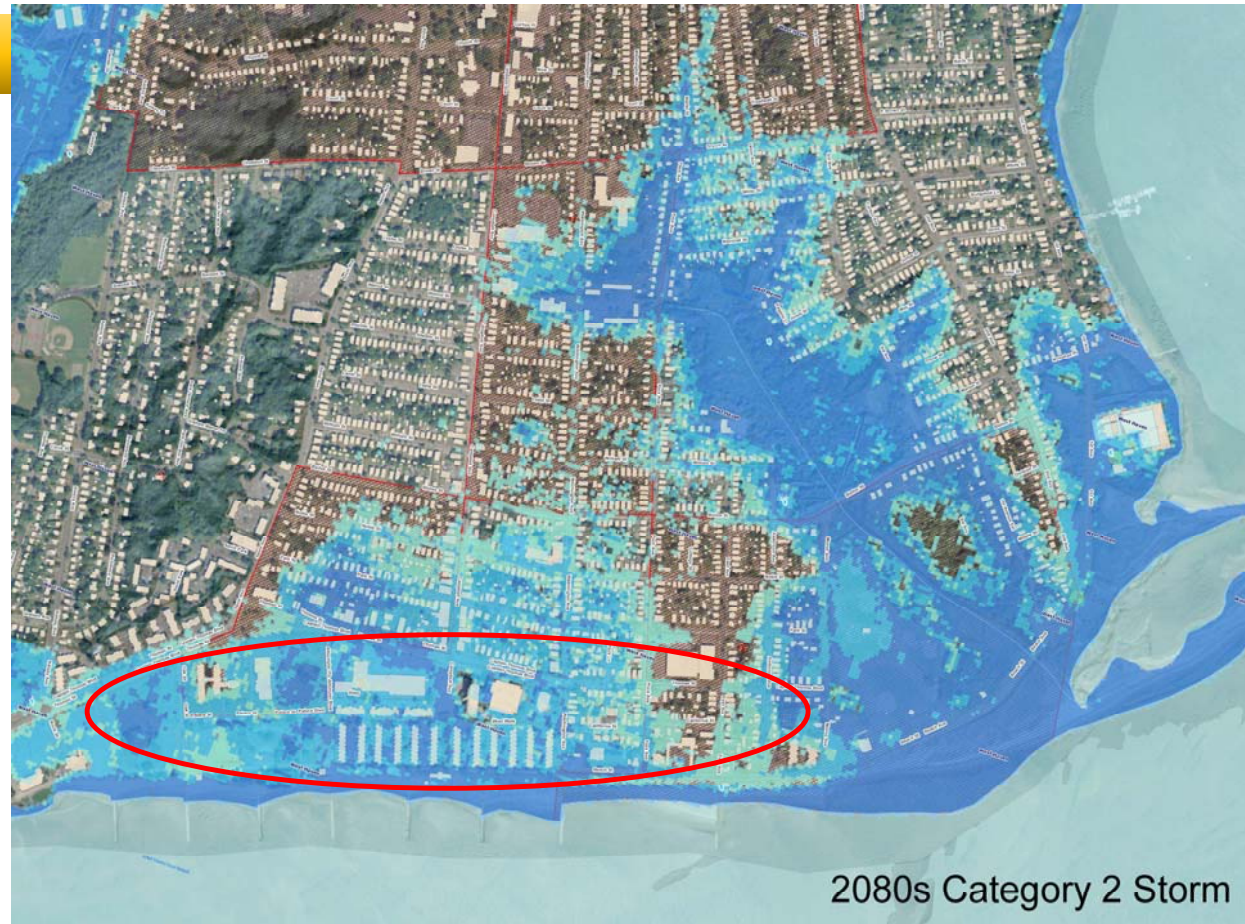
1 PROPOSED BEACH NOURISHMENT/ DUNE CREATION PERSPECTIVE
(NOT TO SCALE)



West Haven Beach Area

Progress Underway

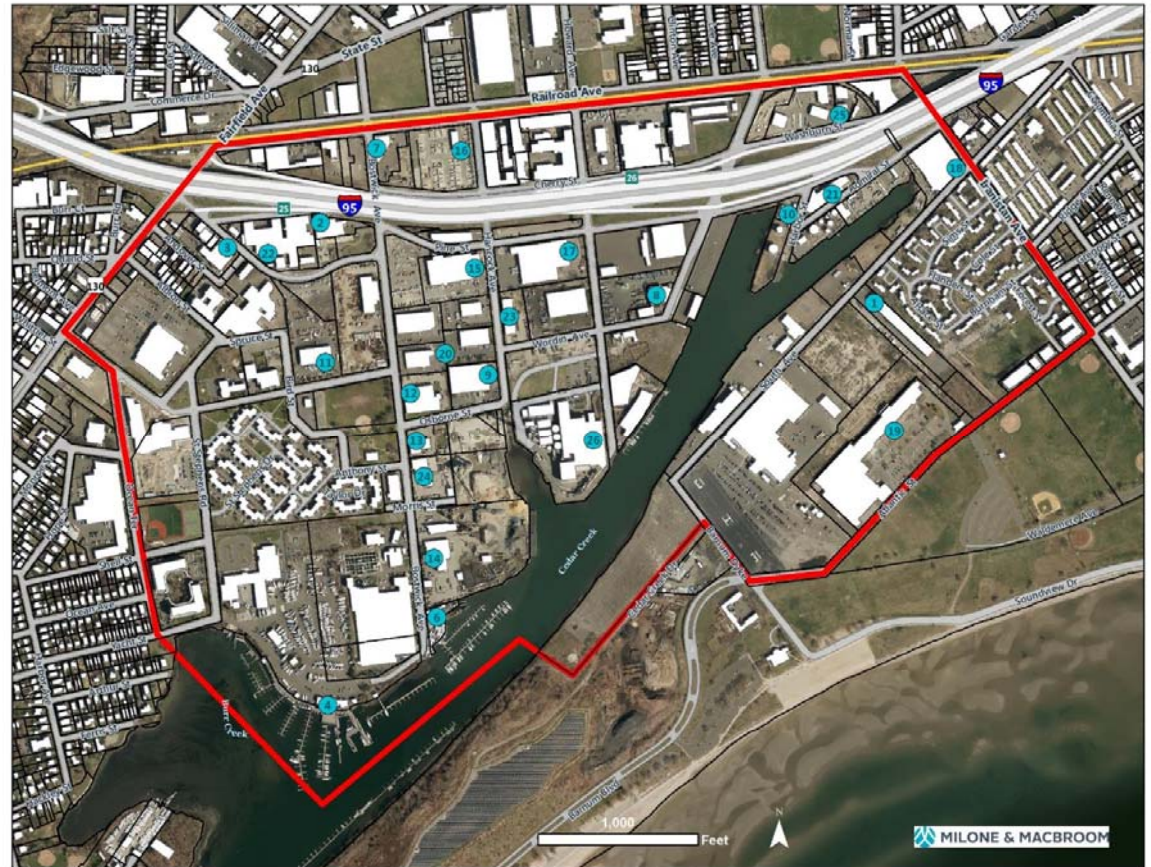
Ideas for adapting buildings



Bridgeport West End

Progress Underway

Business Name	Reference Number
ABC Supply Co. Inc.	1
Blue Sky Bar Ice Cream	2
Bridgeport Biodiesel	3
Captain's Cove Seaport	4
Cedar Marina Inc	6
Devar Inc.	7
Enviro Express Inc	8
Gesswein	9
Hi-Ho Petroleum	10
Hines Bros International	11
Markal	12
Merrit Contractors Inc	13
O&G Asphalt Plant	14
O&G Earth Products Showcase	15
O&G Stone Splitter Yard	16
P.C. Richard & Son	17
Park City Green	18
Row America	19
Safety Marking Inc	20
Santa Energy Corporation	21
U-Haul	22
Wagner Pools	23
Waters Construction Co.	24
West End Lumber Co	25
Wheelabrator	26



Bridgeport West End

Progress Underway



Bridgeport West End

Progress Underway



Ideas for Individual Properties to be More Resilient!

Options

Elevate
Raise structures above flood levels

Floodproof
Retrofit or construct structure to prevent flood water entry

Floodwall
Construct permanent or temporary barrier around structure

Floodable
Allow water to flow through a building or site with specific techniques

Institutional



Industrial



Commercial

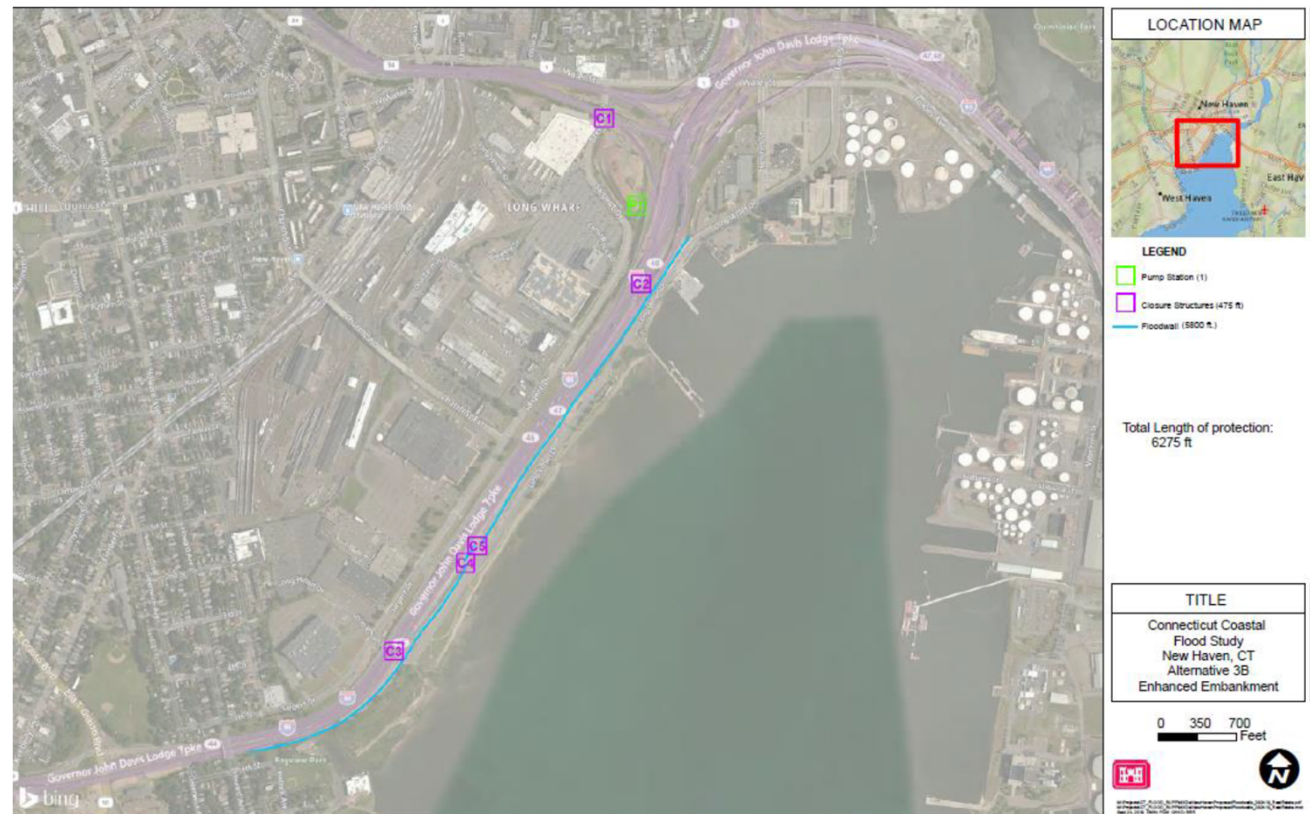
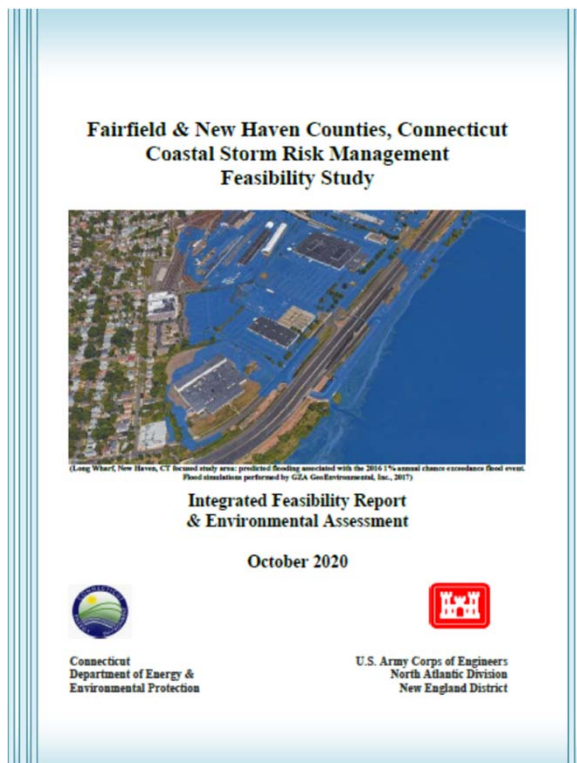


Residential



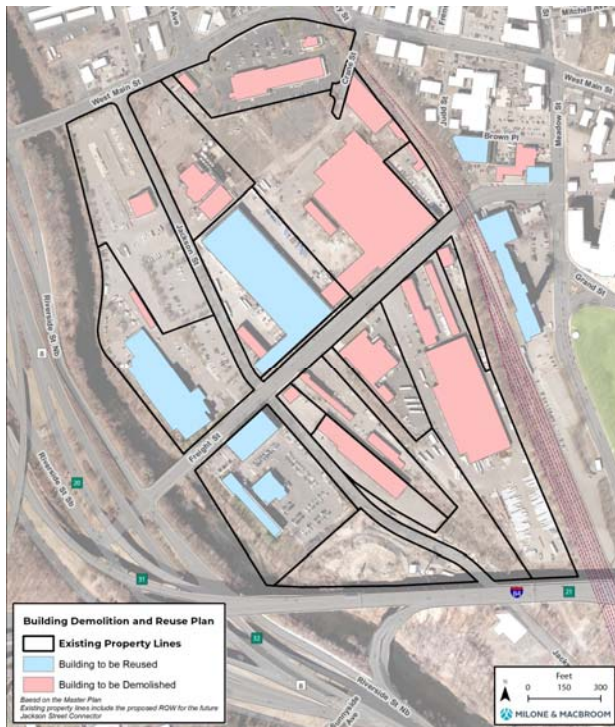
New Haven Long Wharf

Identified and Waiting for Action



Waterbury Freight Street

Identified and Waiting for Action



Branchville Train Station

Identified and Waiting for Action



Linking Opportunities

Opportunities We Know About

Meriden Green

Freight Street

Branchville

West End

Long Wharf

West Haven Beach

Opportunities On the Horizon

Danbury TOD near Still River

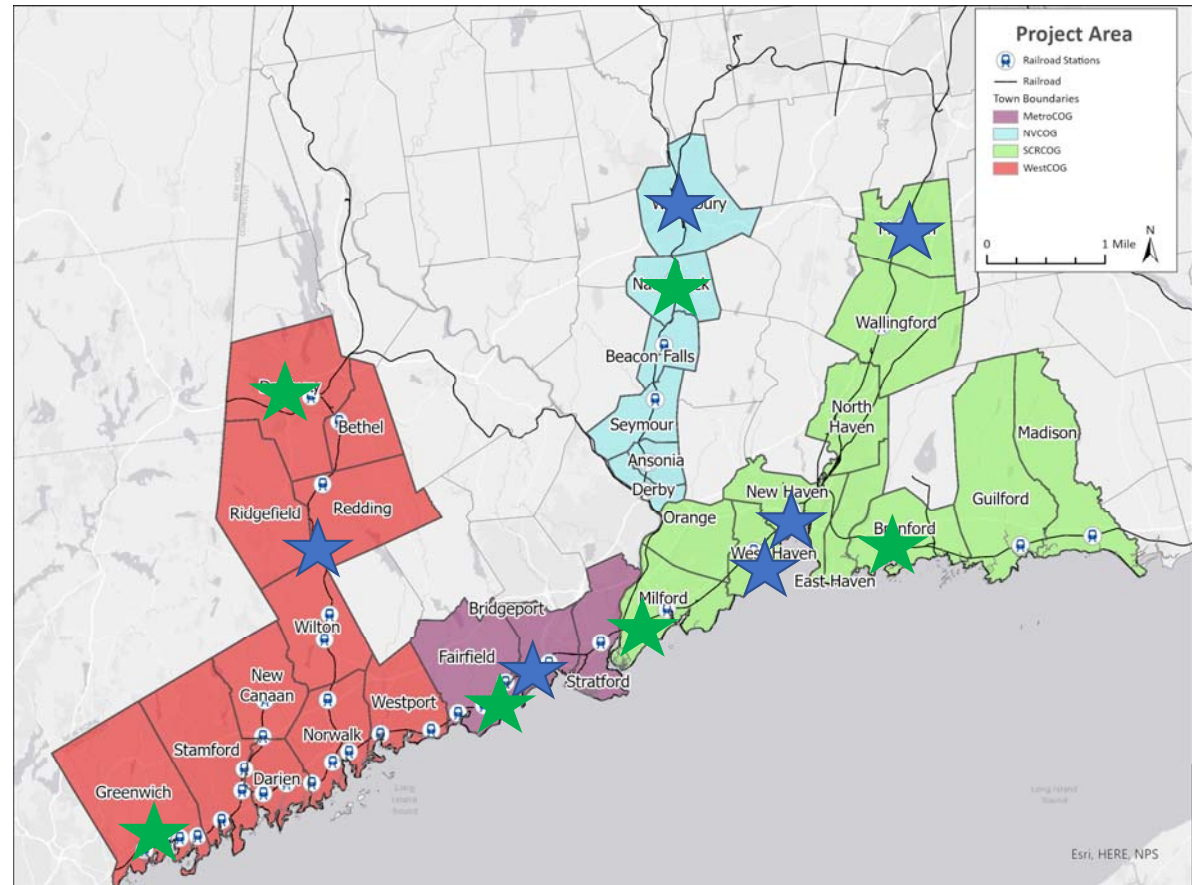
Results of Greenwich Resiliency Plan

A Solution for Fairfield

Naugatuck TOD near Naugatuck River

Wildemere Beach / Devon TOD

Branford TOD near Branford River



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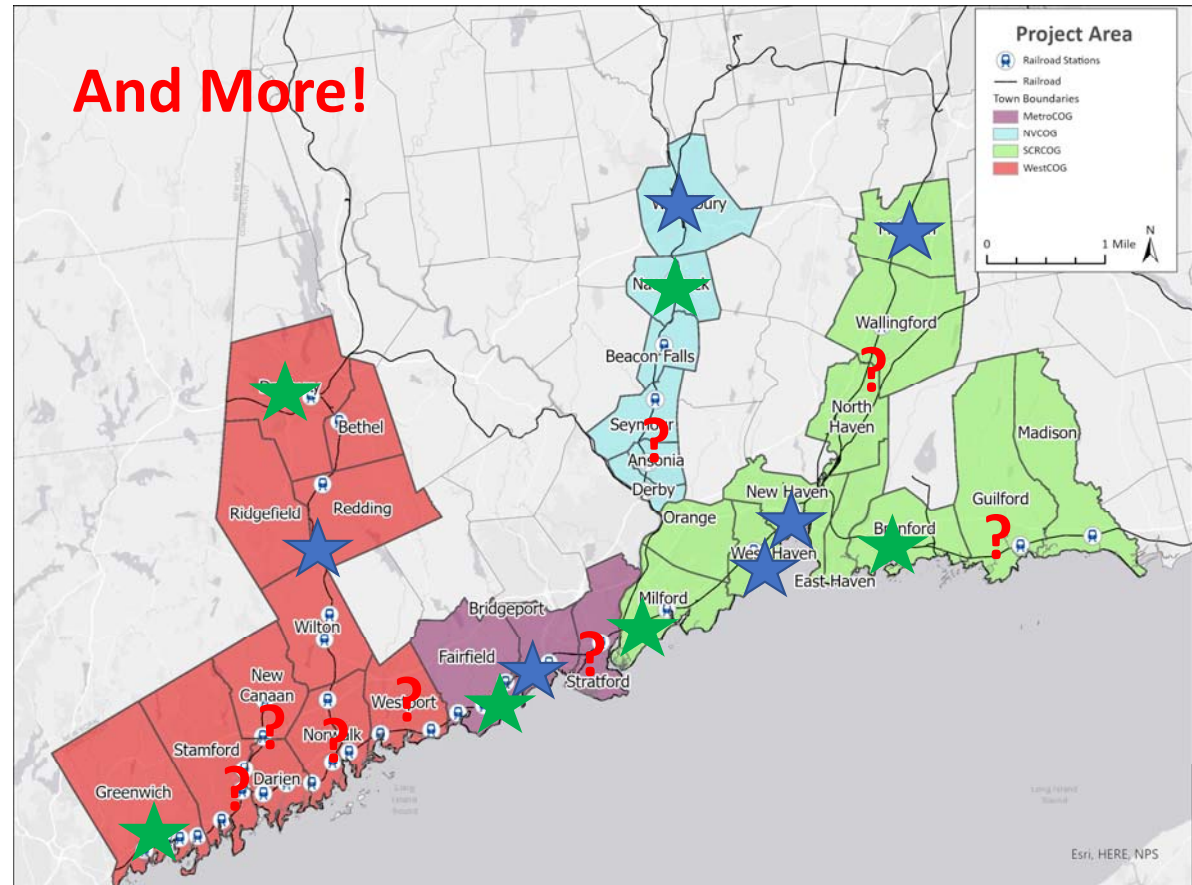
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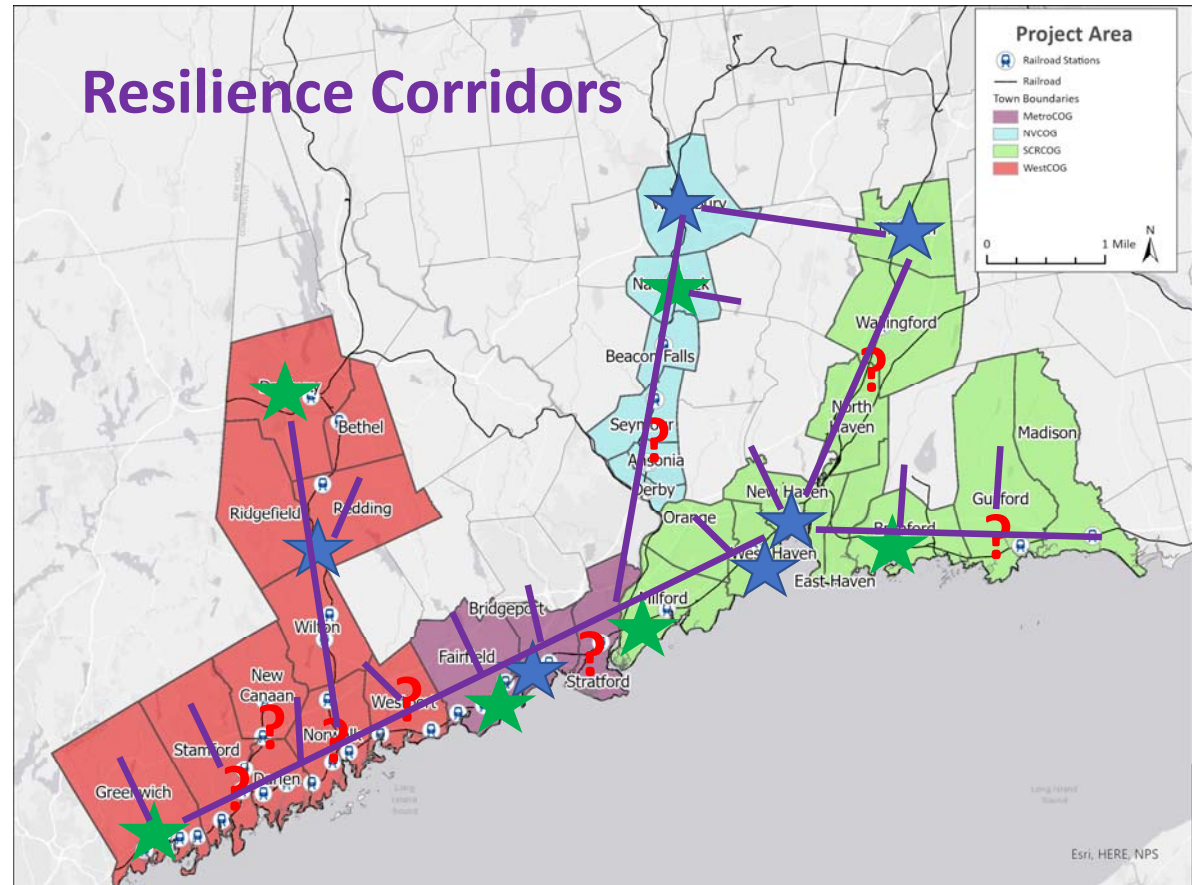
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Branford TOD near Branford River



Next Steps

- Workshop #1
 - January or February 2021
 - Review Data Inventory
 - Review Climate Vulnerability Assessment Progress
 - Help Assign Weights to the Exposure, Sensitivity, and Capacity Variables
 - Help Ground-Truth the Climate Vulnerability Indices
 - Review Zones of Shared Risk Progress
- Workshop #2
 - April or May 2021
 - Review Zones of Shared Risk
 - Help Identify Other Zones of Shared Risk
 - Help Screen Zones of Shared Risk to Identify Resilient Adaptation Opportunities
 - Brainstorm Ideas for the Adaptation Opportunities
 - Tee Up Thoughts about Pilot Projects

Resilient Connecticut Phase II

THANK YOU!

