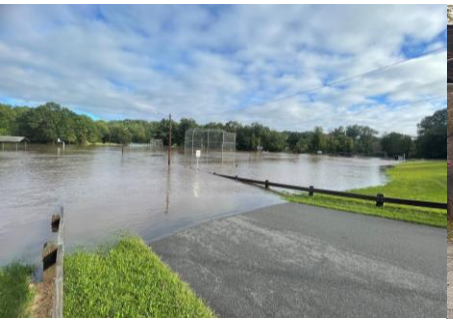
RESILIENT CONNECTICUT 2.0




Overview for Town of Essex

May 3, 2022

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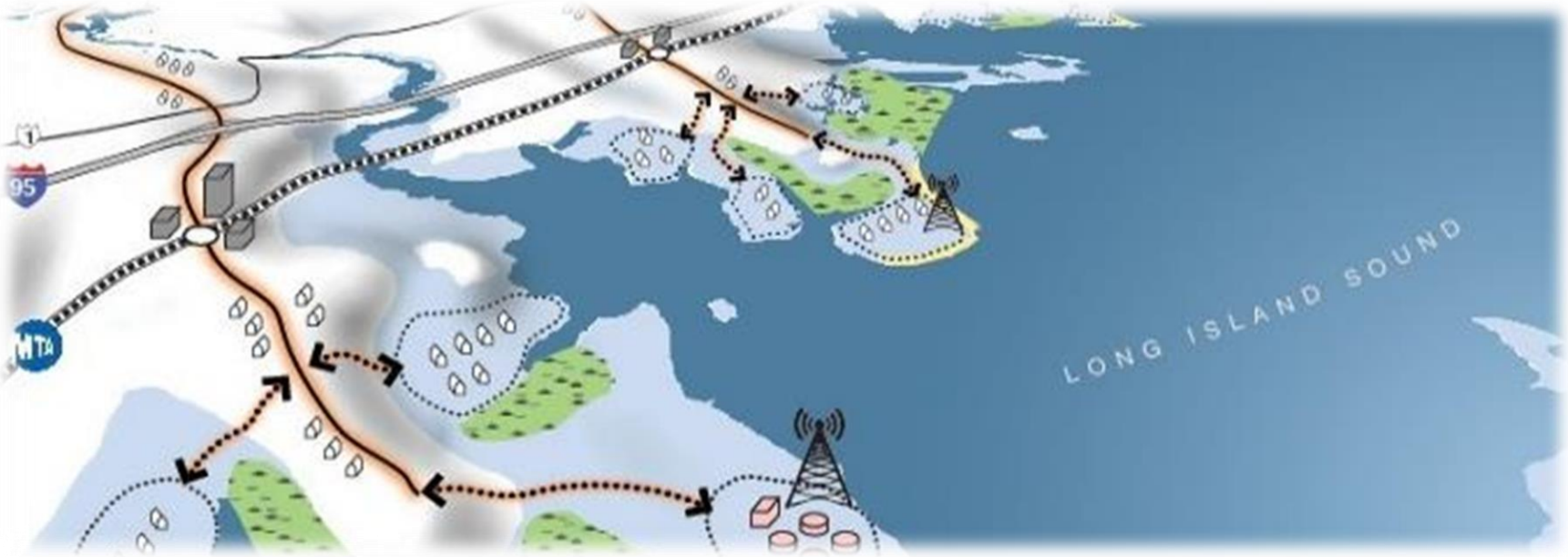
Connecticut Institute for Resilience and Climate Adaptation

Agenda

- Review of Resilient Connecticut 1.0
- Introduction to Resilient Connecticut 2.0
- Review of Zones of Shared Risk
- Review of Hazard Mitigation Plan Actions
- Open Discussion
- Wrap-Up

Review of Resilient Connecticut 1.0

- ***Resilient Connecticut 1.0*** originated from a successful State application to the National Disaster Resilience Competition (NDRC) several years ago

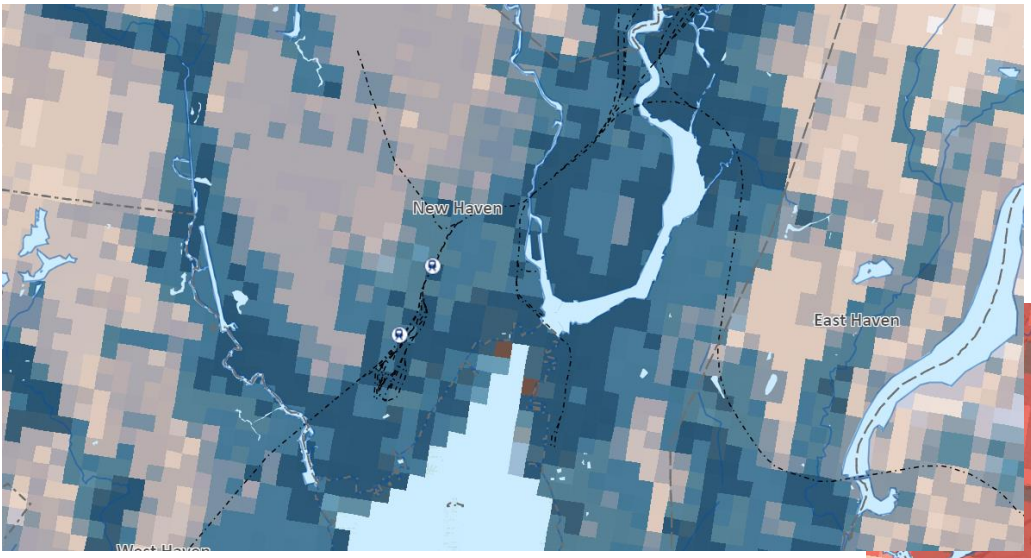


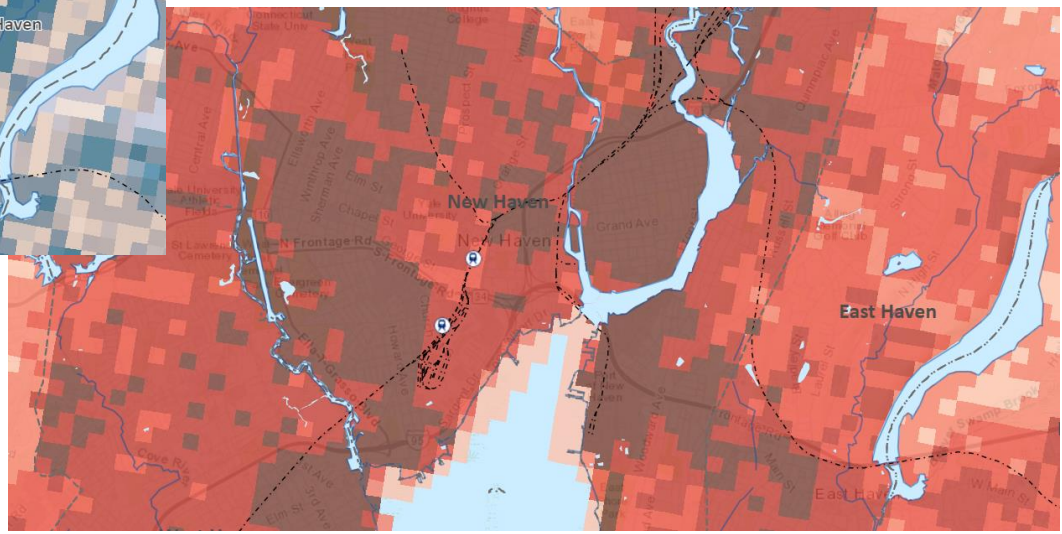
Review of Resilient Connecticut 1.0

- Originally called the "Connecticut Connections Coastal Resilience Plan," the planning effort evolved to focus on climate drivers of **flood** and **extreme heat** hazards throughout Fairfield County and New Haven County
- Transit oriented development (TOD), affordable housing, critical infrastructure, and key assets were emphasized in the planning process
- The planning phase is ending, and CIRCA is shifting into the study and concept design phase for Fairfield County and New Haven County

What Resulted from Resilient CT 1.0?

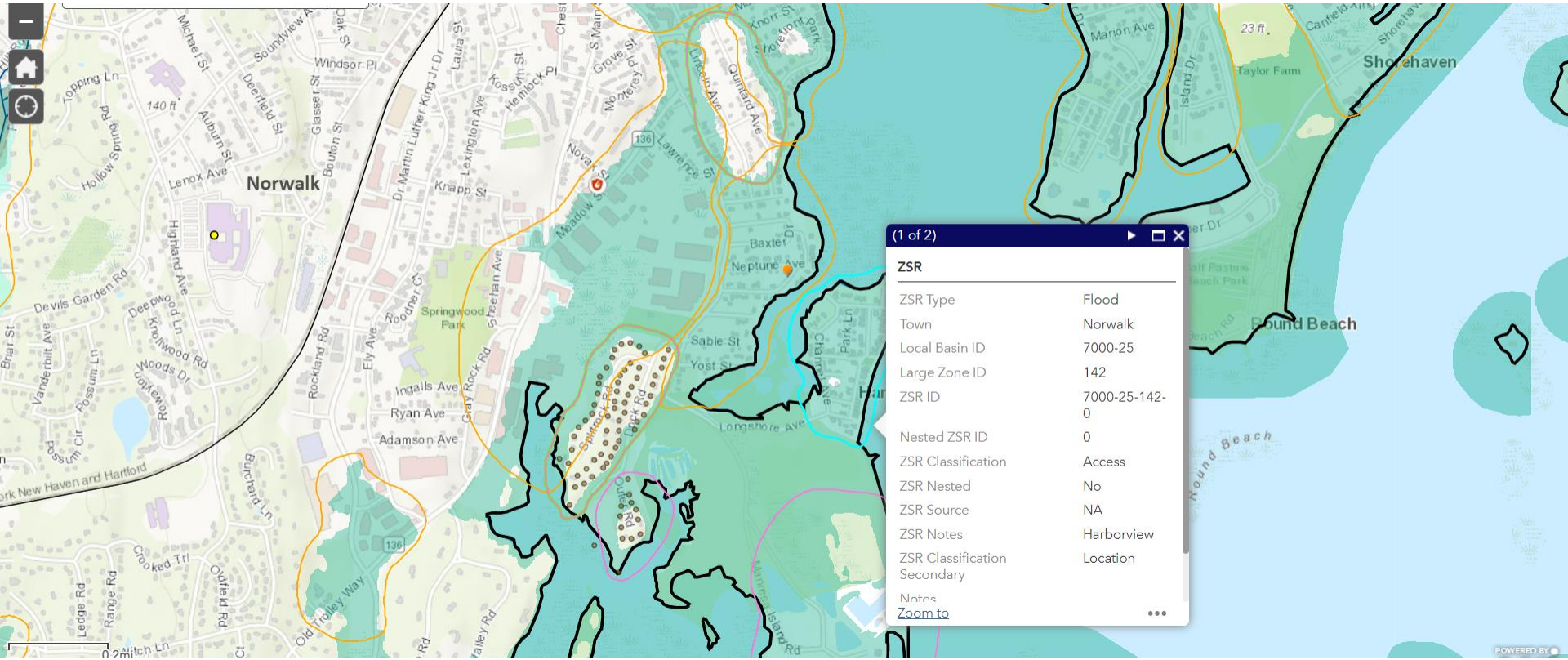
- Climate Change Vulnerability Index (CCVI)





What Resulted from Resilient CT 1.0?

- Zones of Shared Risk



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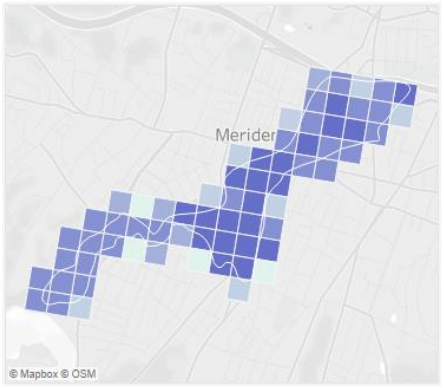
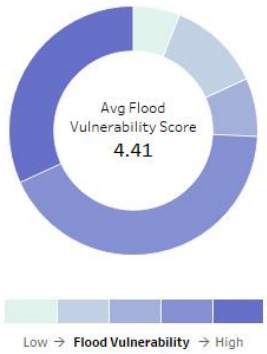
What Resulted from Resilient CT 1.0?

- Identification of Challenges that are Opportunities

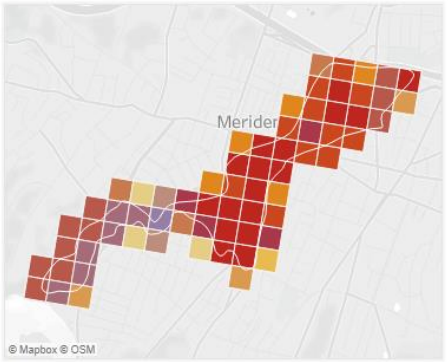
Zone of Shared Risk:
5206-00-249-0
Town: **Meriden**
Type: **Flood, Proximity**

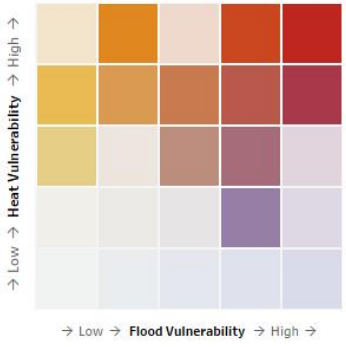
Flood Vulnerability



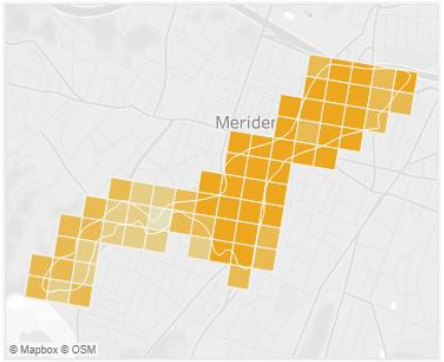


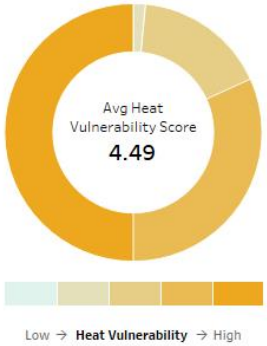
Combined Vulnerability





Heat Vulnerability





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What Resulted from Resilient CT 1.0?

- Identification of Challenges that are Opportunities

Resilient Connecticut Phase II

Regional Adaptation/Resilience Opportunity Areas

Name: Downtown Meriden
Location: Meriden

Considerations	Characteristics of Area
Flood Vulnerability	○ ○ ○ ● ○
Heat Vulnerability	○ ○ ○ ● ○
Social Vulnerability	○ ○ ○ ● ○

Critical facilities, historic resources, major transportation routes, and TOD intersect in downtown Meriden within the Harbor Brook zone of shared risk. The City of Meriden has already undertaken major flood risk reduction projects in this area, including the Meriden Green – a significant greenspace that doubles as a restored floodplain and provides a major public amenity to the city and the region. The City has additional opportunities to incorporate resilience into many redevelopment projects. There is strong heat related social sensitivity in the Meriden area, in addition to dense development, high amounts of impervious, an only few areas to provide ample shade.

City Hall
Eversource gas facility
Engine co. 1, 2, and 3
Hunters Ambulance
Police Department

Mid State Medical center
Muravnik senior Center
Lincoln Middle School
Museums

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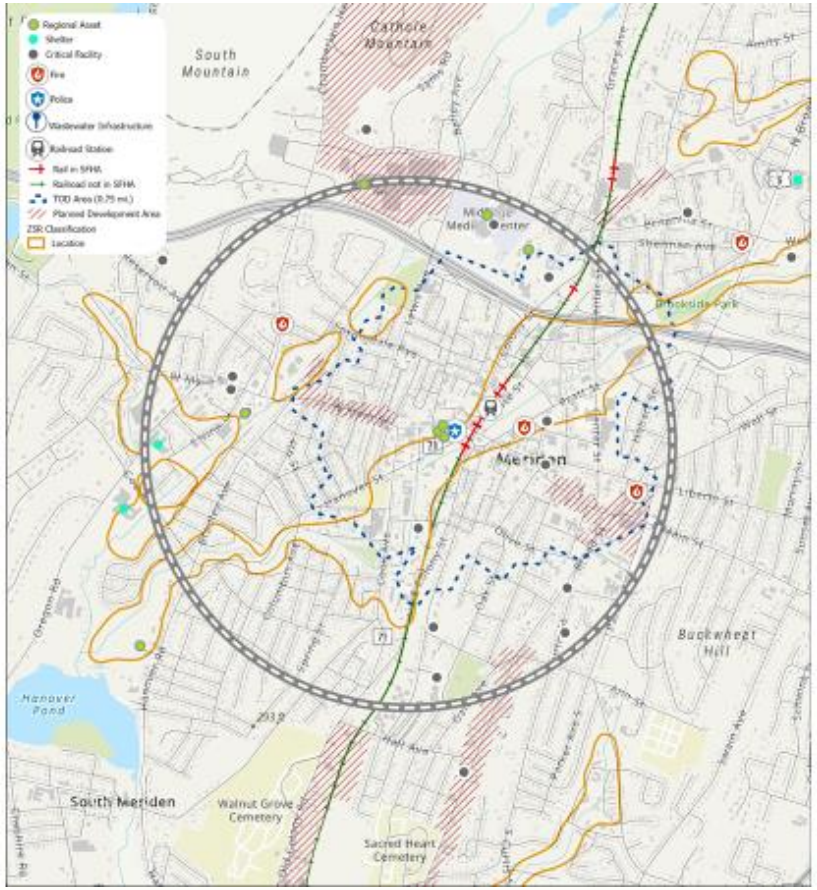
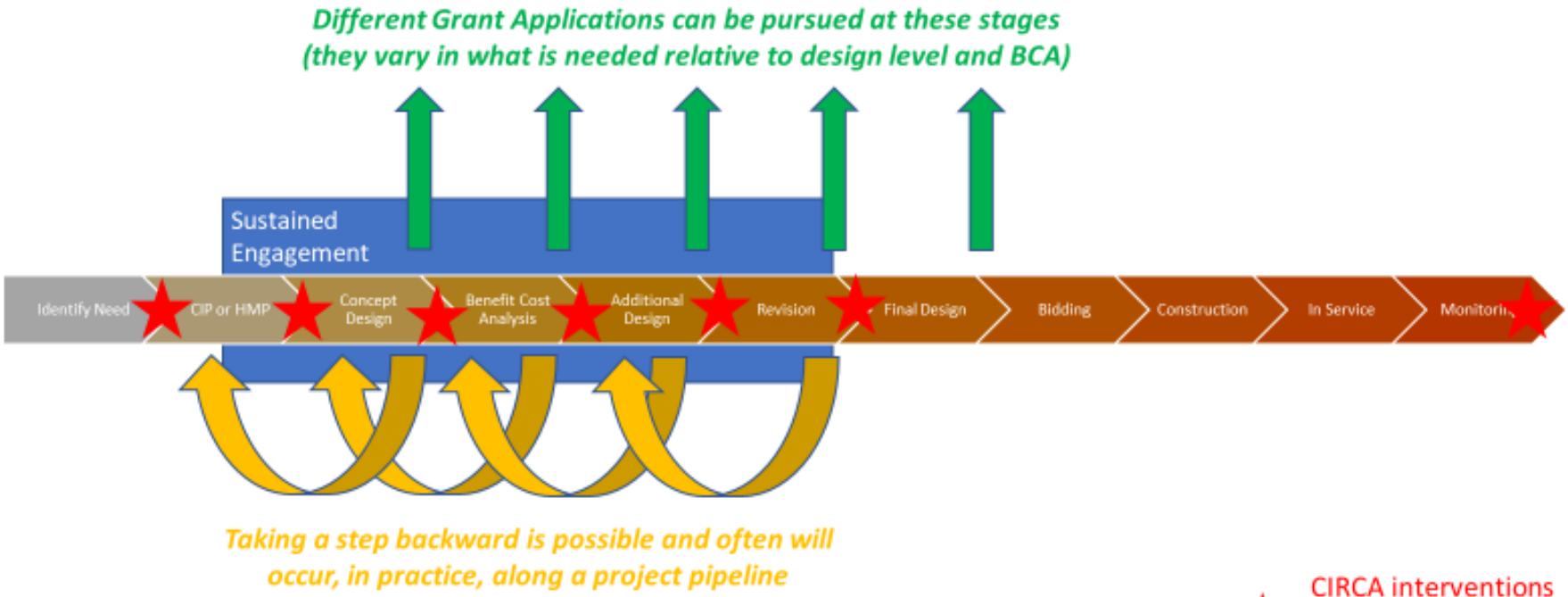


What Resulted from Resilient CT 1.0?

- Recommended Climate Adaptation & Resilience Projects
  - Danbury – Flood mitigation through stream daylighting and identification of cooling center
  - Norwalk – Resilient corridors and heat mitigation in South Norwalk
  - Fairfield – Addressing flooding railroad underpasses and advancing green infrastructure
  - Stratford – Re-envisioning flood solutions for the South End
  - Ansonia – TOD connectivity across river and heat mitigation
  - Branford – Using railroad grade for flood protection
  - New Haven – Egress through areas of flood risk and heat mitigation for Fair Haven

What Resulted from Resilient CT 1.0?

- A recognition of the *Resilience Project Pipeline*



Introduction to Resilient Connecticut 2.0

- ***Resilient Connecticut 2.0*** is being deployed using State funds
- Timeframe is 2022-2023
- The CCVI will be expanded statewide
- Focused planning will include the RiverCOG, CRCOG, and SCCOG regions for:
  - Technical assistance for various challenges
  - Delineation of Zones of Shared Risk
  - Review of Flood Vulnerability Study and Hazard Mitigation Plan to help with identification of resilience opportunity areas

Resilient Connecticut 2.0

- Leverage Your Hazard Mitigation Plan
  - What can we pick up, advance, or re-cast?
- Find Complex Climate Adaptation and Resilience Projects
  - Flood mitigation
  - Erosion mitigation
  - Extreme heat
  - Combinations
- Be Flexible
  - We are no longer tied to TOD, affordable housing, and critical infrastructure ideas
  - What is important in the Lower Connecticut River region?

Resilient Connecticut 2.0

- ***What do we mean by technical assistance for various challenges?***
  - Essex: Ferry Street Flood Frequency Analysis
  - Old Saybrook: Fenwick Living Shoreline

Review of Zones of Shared Risk

- Seven Types of Flood and Erosion-Based ZSRs
  - Location
  - Proximity
  - Access
  - Natural Systems
  - Underpasses
  - Single Point
  - Sewershed

Original types piloted in Guilford Resilience Plan

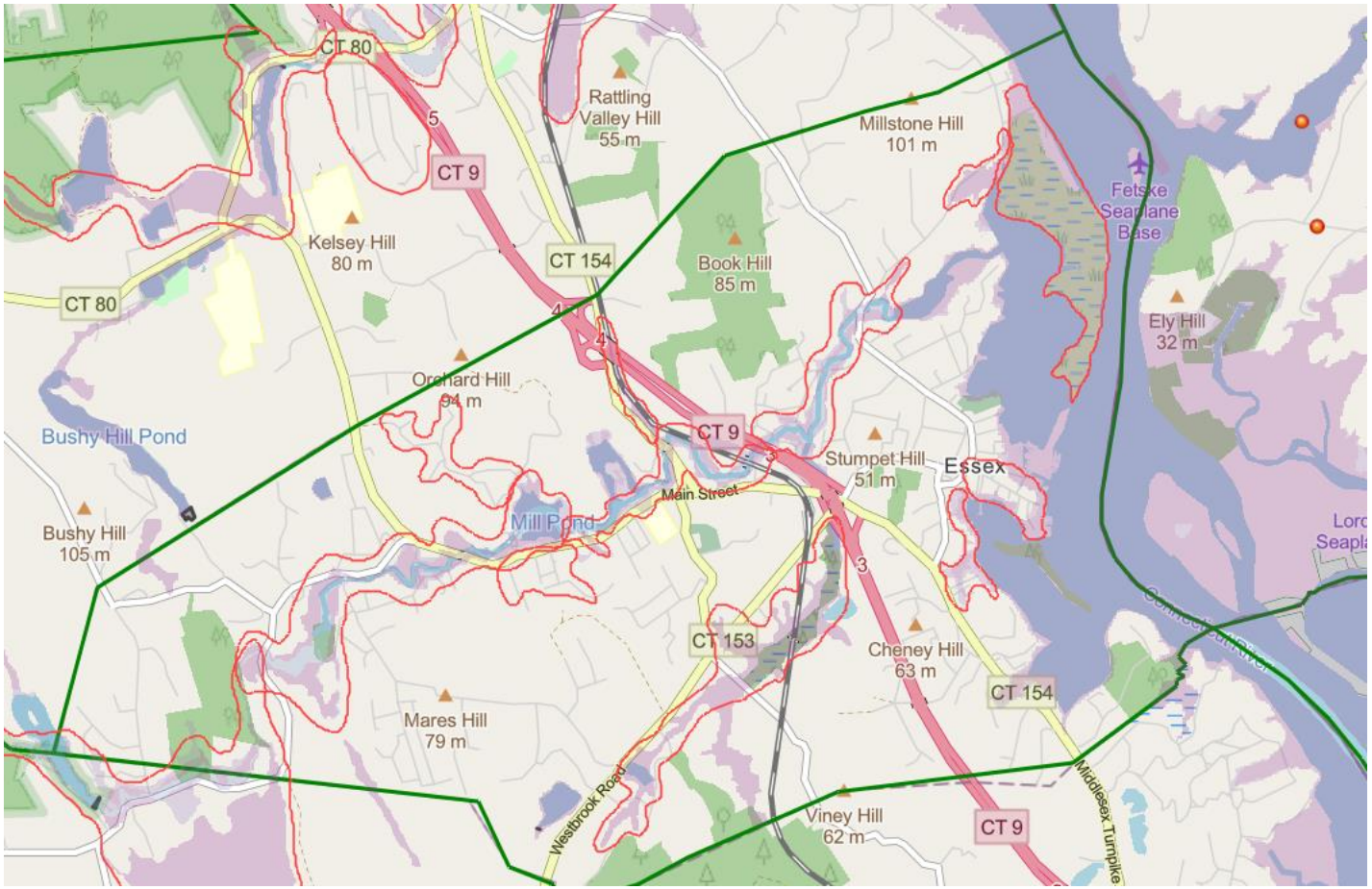
Added in Resilient Connecticut 1.0

Additional Potential Typologies for 2.0

- Resources for Mapping
  - FEMA maps **(new work maps to be issued late 2022)**
  - RiverCOG Flood Vulnerability Assessment
  - RiverCOG Hazard Mitigation Plan

ZSR Viewer

https://experience.arcgis.com/experience/9a4f68dd99f44dc58b93fd85bcfe1255/



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Review of Hazard Mitigation Plan Actions

- The planning process was in 2019-2020
- DEMHS and FEMA review was 2020-2021
- Plan approved in spring 2021
- Essex listed 17 actions
- We will review each to comment on the status and note:
  - Applicability to address climate drivers of flooding and extreme heat
  - Applicability for the State's resilient project pipeline

Review of Hazard Mitigation Plan Actions

Activity #	Goal/Objective	Activity Description	Lead Agency	Est. Cost*	Potential Funding Sources	Timeframe	Hazard (s) Addressed	STAPLEE Score/Priority	Status	Potential for Climate Adaptation/ Resilience Characteristics
1	2-1	Create a secondary, emergency access route from Route 9 to the Cedar Grove Terrace, Cedar Grove Extension, and Hunters Trail neighborhood.	P&Z	$50,000-$100,000	OB, Grant	7/2023-6/2024	SW, TW, WS, F	5/H		High
2	2-1	Create a secondary, emergency access route to Woodland Drive	P&Z	$50,000-$100,000	OB, Grant	7/2023-6/2024	SW, TW, WS, F	5/H		High
3	2-1	Collaborate with residents of Architect Hill to identify an acceptable method of improving the neighborhood's supply of firefighting water (such as installation of underground water tanks). Implement the identified solution.	FD, EM	$10,000-$20,000	OB	7/2021-6/2022	WF, D	8/H		Medium; changes in wildfire risk are uncertain at this time.
4	1-1	Develop a technical assistance and incentive program to help Essex residents with private drinking water wells improve the quality and reliability of those wells, especially under drought conditions.	DPW	$1,000-$5,000	Ob, Staff time	2021	WF, D	8/H		Medium
5	1-1	Develop a plan for improving the emergency sheltering capabilities of Essex. Factors to consider include capacity, access, and pet sheltering. Plan may include establishing a backup emergency shelter located within Essex, which can support residents if the John Winthrop Middle School Regional Shelter in Deep River is inaccessible. Possible options for local sheltering include the Town Hall, Public Library, or Essex Elementary School	EM	$5,000-$10,000	Staff time	2021	SW, TW, ET, WS, F, TI, WF, D, E, CC	5/H		High, especially if these shelters are also cooling centers

Review of Hazard Mitigation Plan Actions

Activity #	Goal/Objective	Activity Description	Lead Agency	Est. Cost*	Potential Funding Sources	Timeframe	Hazard (s) Addressed	STAPLEE Score/Priority	Status	Potential for Climate Adaptation/ Resilience Characteristics
6	2-1	Perform an assessment and alternatives analysis of the (Old) Deep River Road, River Road, Dennison Road, and Pond Meadow Road bridges over the Falls River to determine what work needs to be done to mitigate the risk of flooding or washout at those sites and maintain traffic flow for access and egress during and following disasters.	DPW	$10,000 - $20,000	OB, Grant	7/2022-6/2024	F	6/M		High
7	2-1	Acquire a portable generator to be stationed at the Essex Public Works Facility.	DPW BOS BOF	$1,000-$10,000	OB, Grant	2021	SW, TW, WS, F	7/H		Medium
8	2-1	Increase the amount of emergency fuel available in Essex by either increasing long-term storage or arranging for emergency supplies to be placed on standby prior to forecast storms.	DPW BOF	$1,000-$10,000	OB	7/2021-6/2022	SW, TW, WS, F	7/H		Medium
9	3-1	Conduct a coastal risk and vulnerability analysis or study to identify potential impacts of shoreline change (and the effects of sea level rise on those dynamics) along the tidal Connecticut River in Essex	P&Z	$5,000-$15,000	OB, Grant	7/2022-6/2025	F, CC	8/H		High
10	2-1	Perform drainage improvements on roads known to become icy due to water seepage during the winter season	DPW	$25,000-$50,000	OB, Grant	7/2023-6/2025	F	7/H		High
11	1-1	Work with private owners of Class B and C dams to complete Emergency Action Plans for their dams. Ensure that EAPs are on file with pertinent town departments.	BOS	$1,000-$5,000	Staff time	7/2021-6/2022	F	5/H		Low
12	1-1	Incorporate hazard mitigation standards and considerations into the ongoing overhaul of the Town's Zoning Regulations.	P&Z, EM	$1,000-$5,000	Staff time	7/2021-6/2022	SW, TW, WS, F, WF, E, CC	7/H		Low

Review of Hazard Mitigation Plan Actions

Activity #	Goal/Objective	Activity Description	Lead Agency	Est. Cost*	Potential Funding Sources	Timeframe	Hazard (s) Addressed	STAPLEE Score/Priority	Status	Potential for Climate Adaptation/ Resilience Characteristics
13	3-1	Conduct a direct outreach campaign to owners of Repetitive Loss and Severe Repetitive Loss properties informing them of mitigation options including elevation, relocation, and acquisition. Include information about funding and technical assistance from municipal, state, and federal sources.	BOS	$1,000-$5,000	OB, Staff time	7/2021-6/2022	F, CC	9/H		High
14	3-1	Complete creation of back-ups of existing electronic records, including geographic information system (GIS) data, and establish a protocol or process for continual data back-up. Digitize all paper records as back up for their preservation.	IT	$5,000-$10,000	OB	7/2021-6/2023	SW, TW, ET, WS, F, TI, WF, D, E, CC	5/M		Low
15	3-1	Develop a written annual schedule for natural hazard public education and outreach efforts through the Town website, social media outlets, mailers, in-person outlets, neighborhood associations, and other media, to ensure consistent and long-term public education programs. Education should include information on sheltering locations, private property owner mitigation action options, techniques for homeowner self-inspection, hazard insurance, and geographic distributions of natural hazard risk zones in Town.	EM	$0-$1,000	Staff time	7/2021-6/2022	SW, TW, WS, F	4/M		Medium
16	1-1	Develop an emergency plan for private boat owners to relocate and store boats during flood and hurricane events.	HMC	$0-$1,000	Staff time, OB	7/2023-6/2024	SW, F	2/L		High
17	2-1	Implement mapping and monitoring of catch basins, storm water outfalls and related infrastructure.	DPW	$5,000-$10,000	Staff time, OB, Grant	7/2022-6/2025	F	6/H		High

Open Discussion

- Where do you see intersections of community assets and flood-related challenges?
- Where do you see intersections of community assets and extreme heat-related challenges?
- Does Essex have examples of unique climate driver typologies and challenges?
- If so, could they lead to either:
  - Limited technical assistance (i.e., Essex Ferry Street)
  - The State's Resilience Project Pipeline

Wrap-Up

- Designate someone
  - To be the primary contact for coordination and meetings
- Maintain a local planning team
  - Planning/Land Use
  - Public Works
  - Emergency Management (if interested)
- Let us know what else is going on
  - Engagement with Sea Grant, DEEP/GC3, Sustainable CT, etc.
  - Applications for funding from FEMA, NFWF, LISS



QUESTIONS?

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