

# RESILIENT CONNECTICUT 2.0



Overview for Town of Lyme

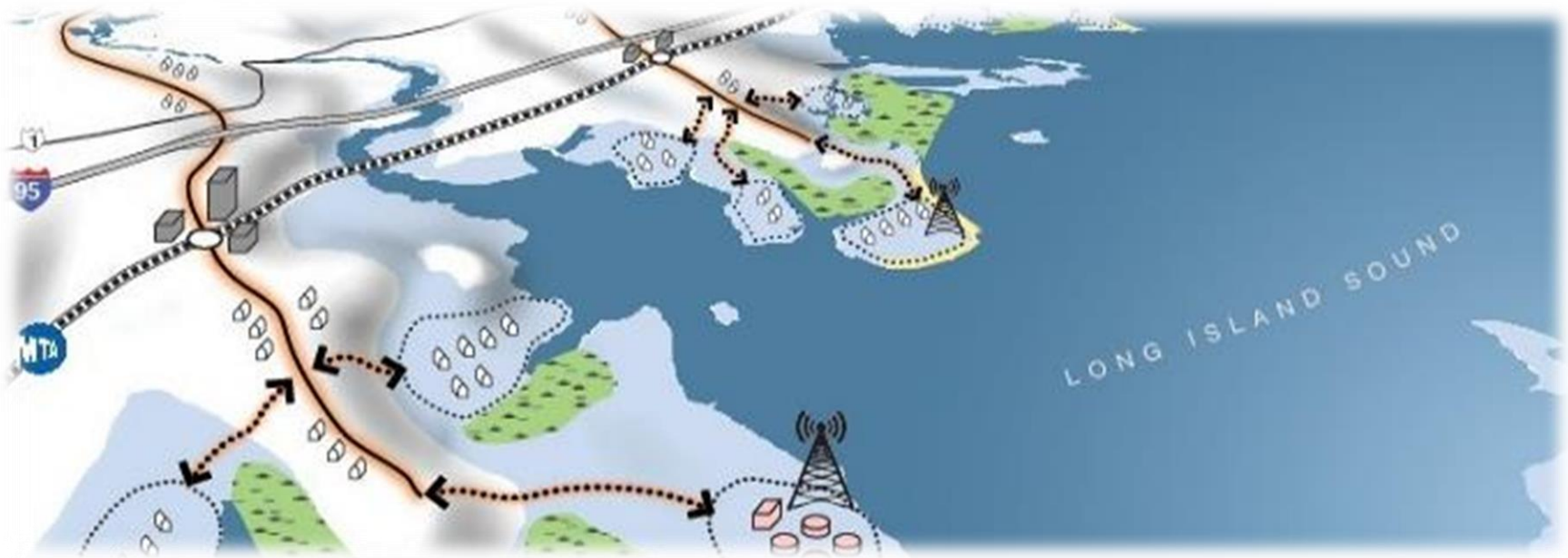
May 3, 2022

# 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



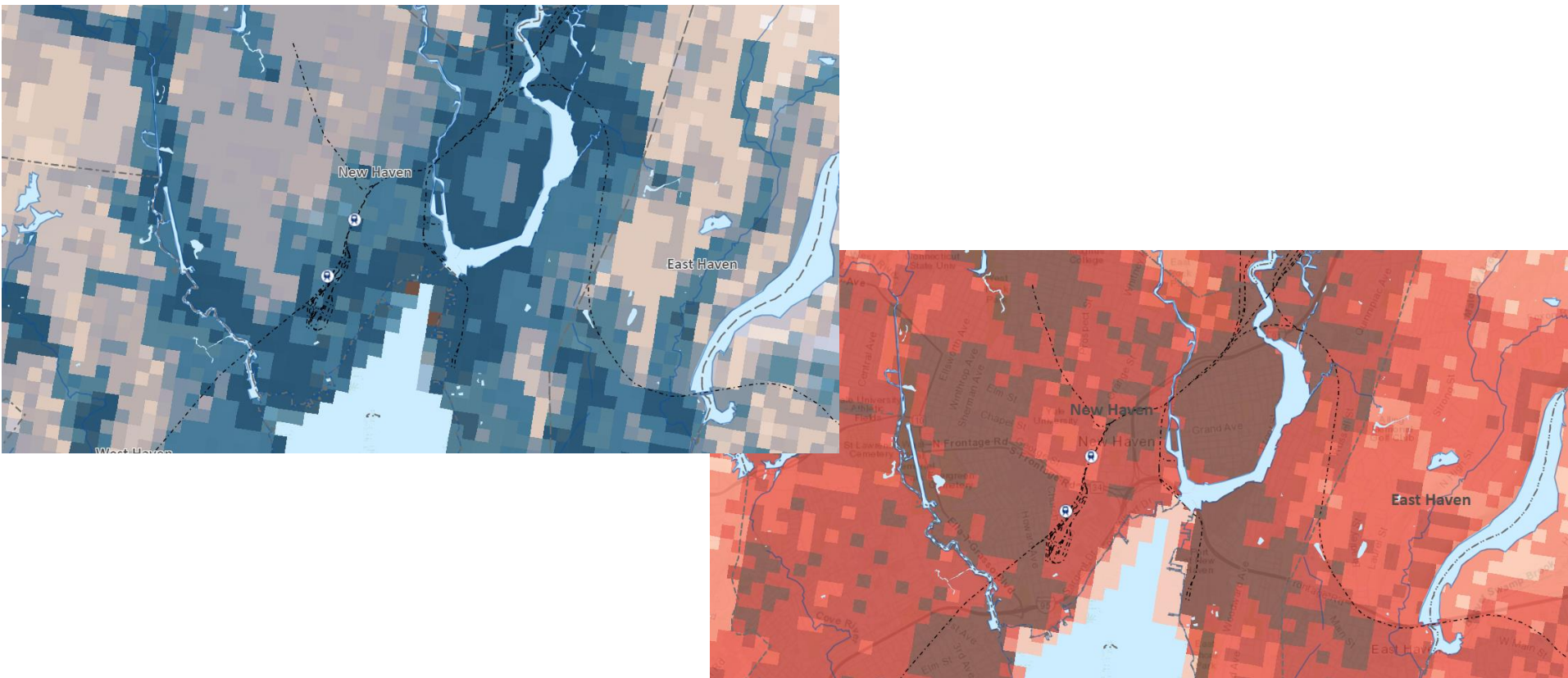
# Review of Resilient Connecticut 1.0

- 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



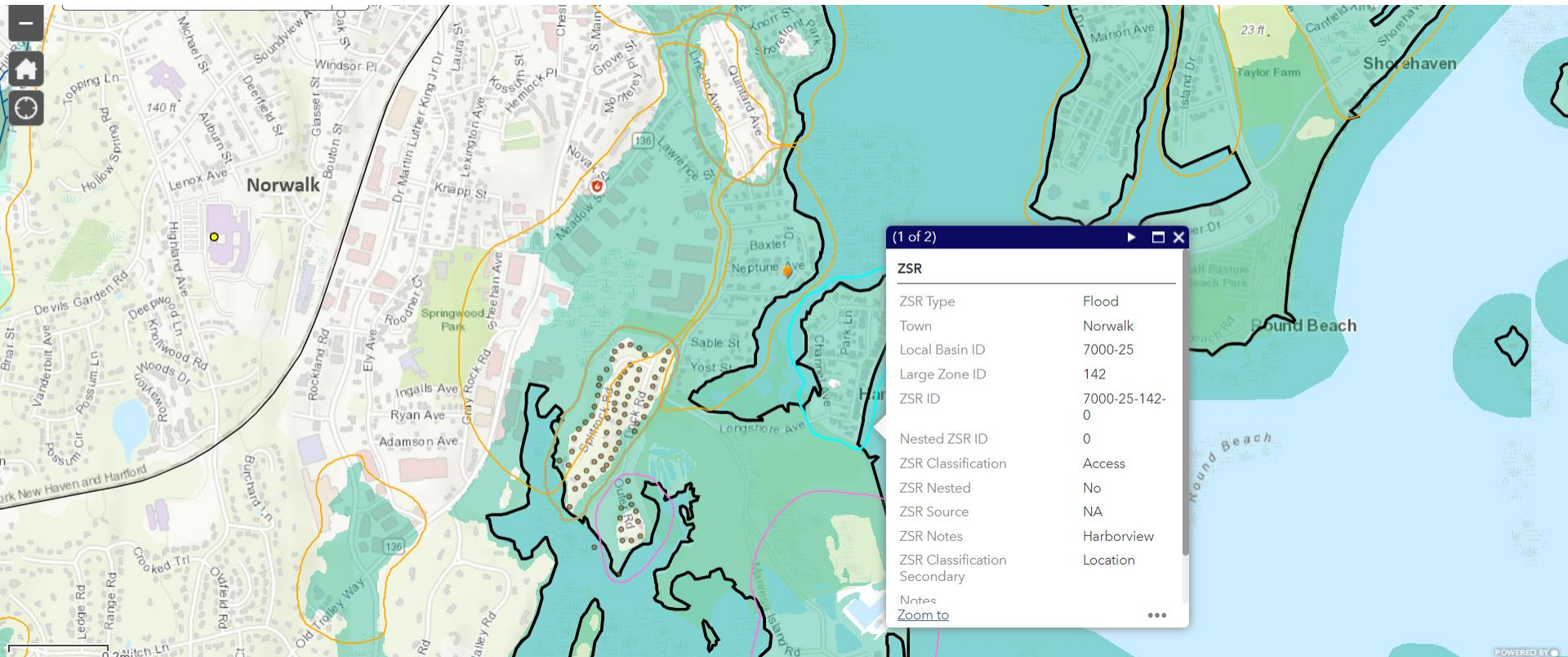
# What Resulted from Resilient CT 1.0?

- Climate Change Vulnerability Index (CCVI)



# What Resulted from Resilient CT 1.0?

- Zones of Shared Risk





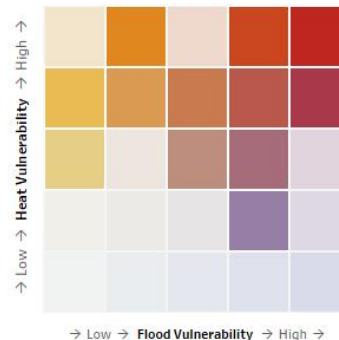
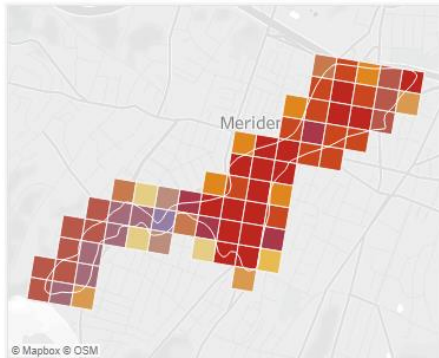
# What Resulted from Resilient CT 1.0?

- Identification of Challenges that are Opportunities

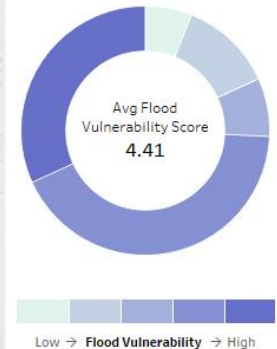
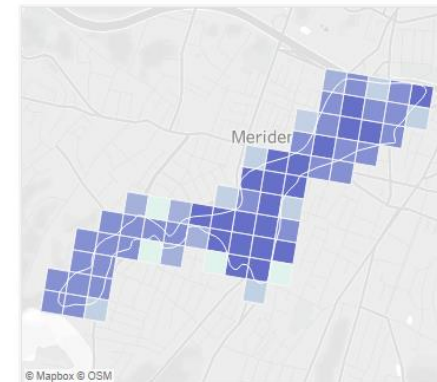
Zone of Shared Risk:  
5206-00-249-0  
Town: Meriden  
Type: Flood,  
Proximity



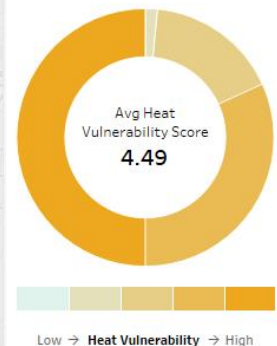
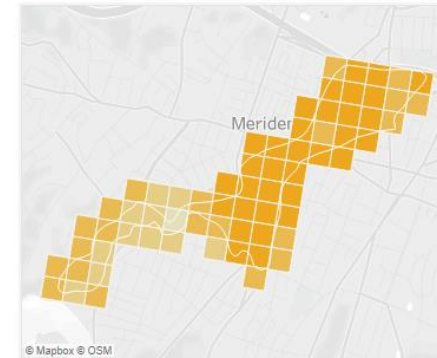
Combined Vulnerability



Flood Vulnerability



Heat Vulnerability



# 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

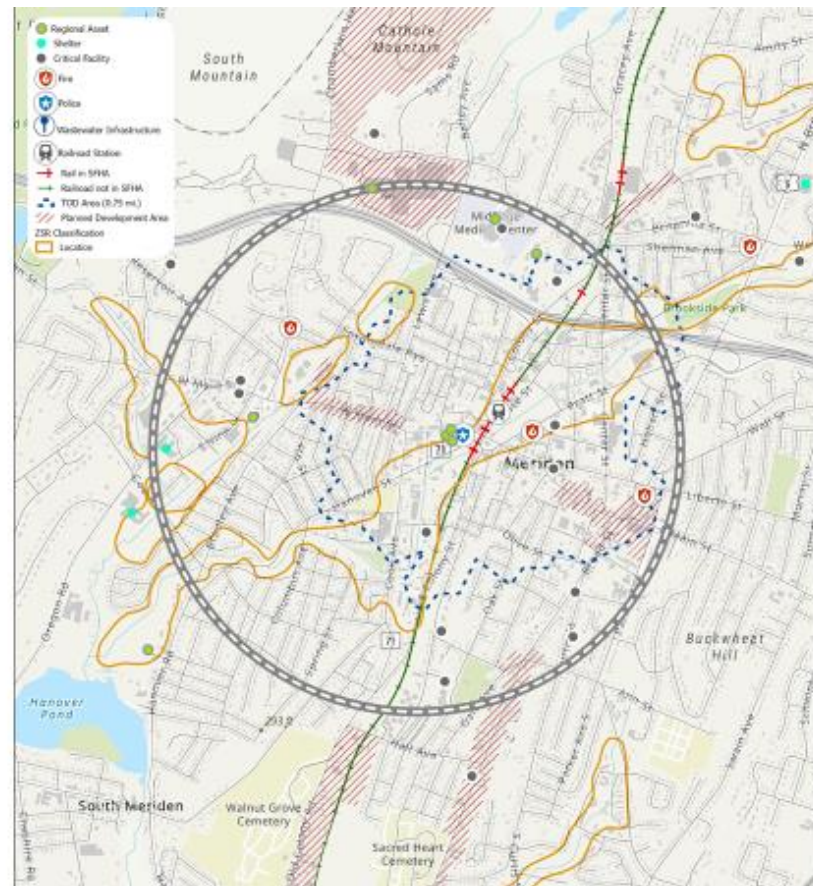
Considerations	Characteristics of Area
Flood Vulnerability	
Heat Vulnerability	
Social Vulnerability	

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, and 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

UConn  
UNIVERSITY OF CONNECTICUT



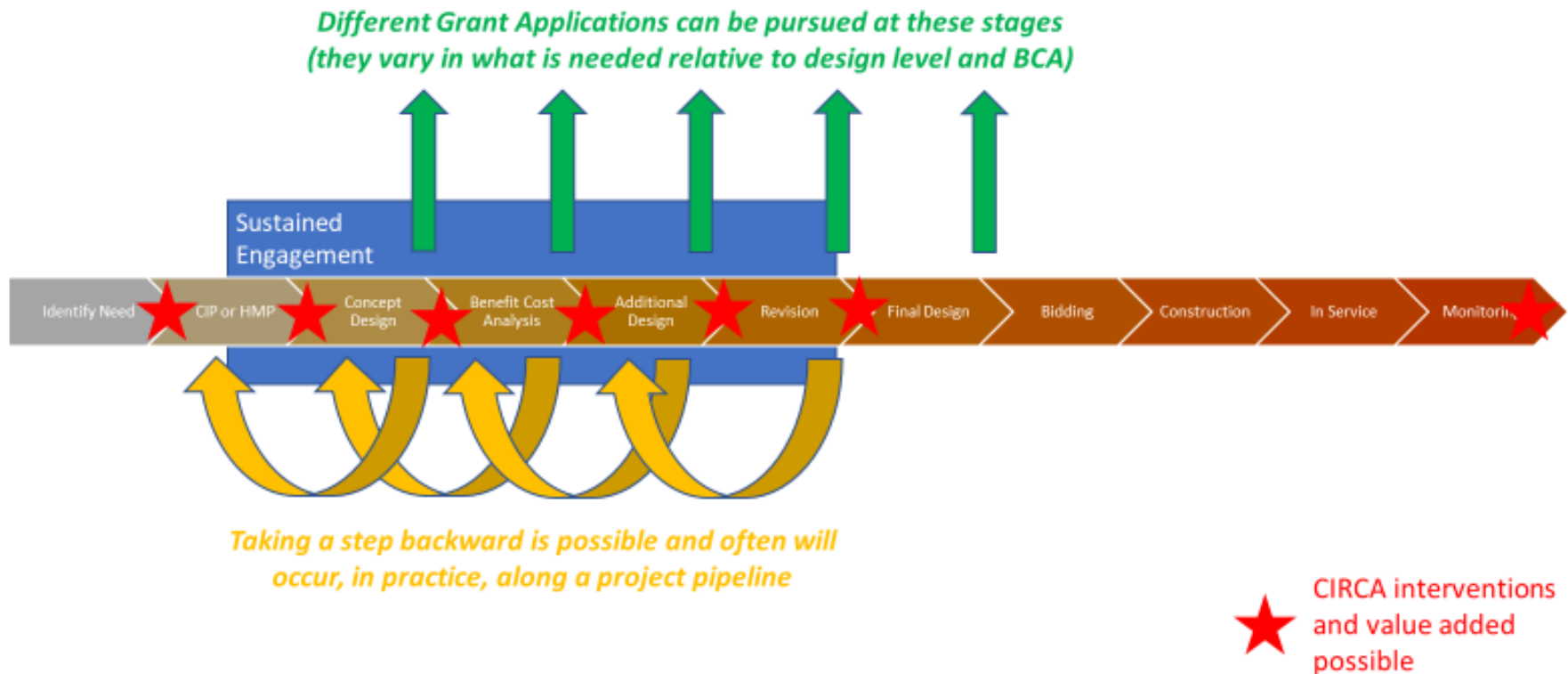


# What Resulted from Resilient CT 1.0?

- 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



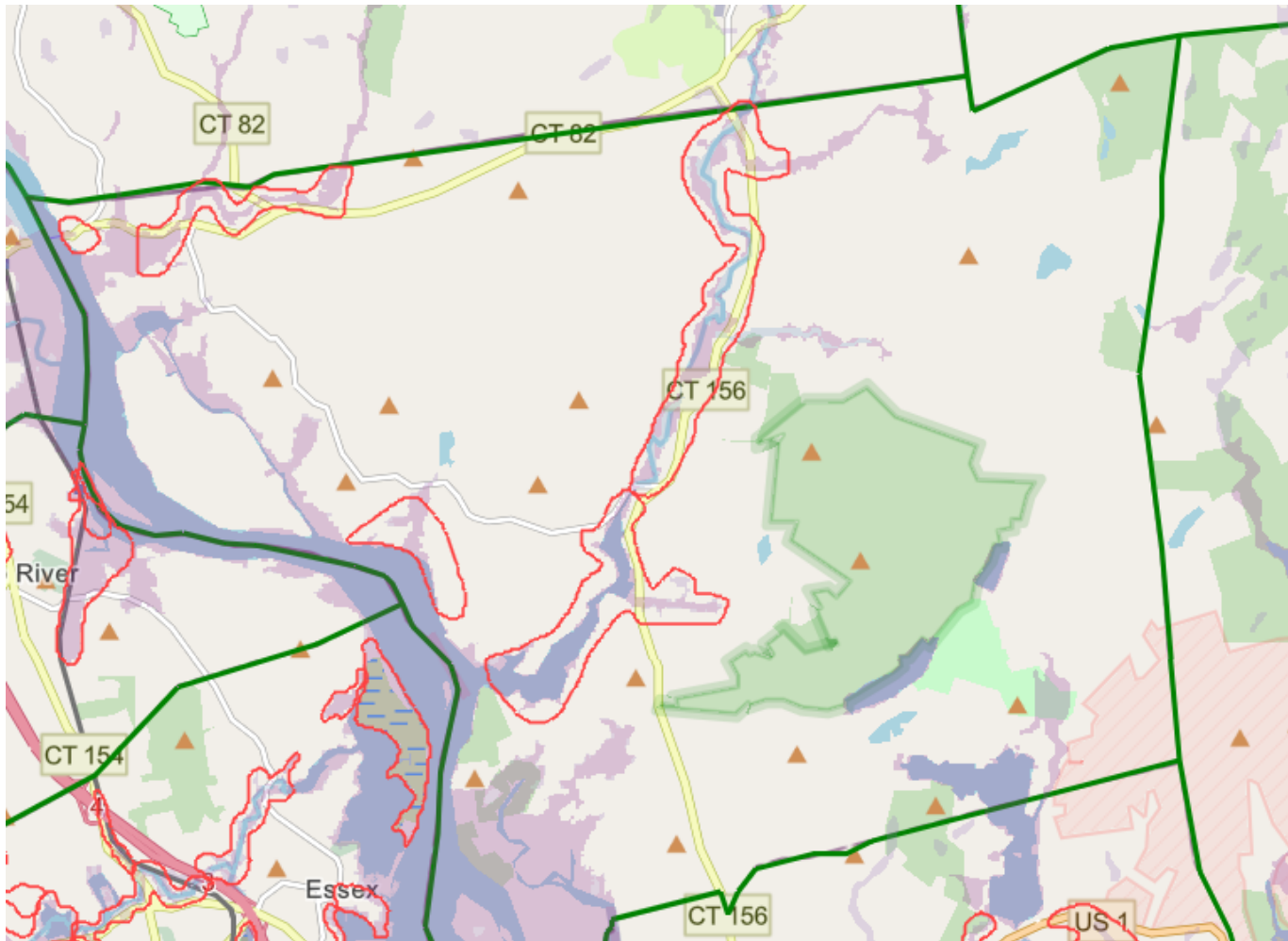
# Review of Zones of Shared Risk

- Seven Types of Flood and Erosion-Based ZSRs
    - Location
    - Proximity
    - Access
    - Natural Systems
    - Underpasses
    - Single Point
    - Sewershed
  - Resources for Mapping
    - FEMA maps (**new work maps to be issued late 2022**)
    - RiverCOG Flood Vulnerability Assessment
    - RiverCOG Hazard Mitigation Plan
- Original types piloted in Guilford Resilience Plan
- Added in Resilient Connecticut 1.0
- Additional Potential Typologies for 2.0



# ZSR Viewer

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



# 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
- Lyme listed 15 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	1-1	Add a freeboard requirement to the Town's flood ordinance, in line with state requirements.	P&Z	\$1,000-\$5,000	OB	7/2021 – 6/2023	F, CC	7/H		Low
2	3-1	Use Town website and social media accounts to educate the public about municipal hazard mitigation initiatives. Include maps of evacuation routes, storm surge areas, and shelters. Include options for mitigation of residential structures and business recovery and provide links to FEMA, NOAA, State OEM and RiverCOG websites for additional information.	Select Board	\$1,000-\$5,000	OB	7/2021 – 6/2022	SW, TW, ET, WS, F, TI, WF, D, E, CC	6/H		Medium
3	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.	EMD/FD	\$5,000-\$20,000	General Fund	7/2021 – 6/2022	SW, TW, ET, WS, F, TI, WF, D, E, CC	6/H		Medium
4	3-1	Perform a public outreach and education initiative to inform people of emergency shelter locations and access routes, and what to do with pets when in need of emergency sheltering. Initiative will include, at a minimum, annual postings on the Town website and social media accounts, as well as instructions prior to or during disaster events. Mailers and pamphlets placed in public hubs (such as the Town Hall or Library) may also be used.	EMD/FD	\$10,000-\$20,000	General Fund	7/2022 – 6/2024	SW, TW, ET, WS, F, TI, WF, D, E, CC	6/H		Medium
5	3-1	Visit schools and educate children about the risks of floods, hurricanes, and other natural hazards and how to prepare.	BOE	\$5,000-\$20,000	OB	7/2022 – 6/2023	SW, TW, WS, F, WF, D, E, CC	6/H		Medium



# 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	Review forest roads to identify those presenting firefighting access issues because they are undersized or otherwise present obstacles.	FD	\$5,000-\$20,000	General Fund	7/2021 – 6/2023	ET, WF, D, CC	7/H		Medium
7	1-1	Develop a fire access plan to direct Fire Department response in the event of a wildfire. The plan should address limited accessibility of some forest roads and identify which equipment, if any, are able to utilize limited-accessibility roads.	FD	\$5,000-\$20,000	Grant	7/2023 – 6/2025	ET, WF, D, CC	7/H		Medium
8	2-1	Identify a preferred process for maintaining culverts located on or adjacent to private property that affect public rights of way. This may include developing agreements with private property owners to access culverts for maintenance, establishing requirements for private property owners to maintain culverts on their property, implementing an “adopt a culvert” program to promote culvert maintenance by private property owners, and distributing educational material to help private property owners avoid activities that may exacerbate culvert blockages and deterioration.	Select Board / DPW	\$1,000-\$5,000	General Fund, OB	7/2021 – 6/2024	SW, F, CC	8/H		High; increased flooding should be considered
9	1-1	Include an express criterion in the Town’s open space acquisition process that encourages acquisition and preservation of areas within or adjacent to flood risk zones.	Open Space Coordinator	\$1,000-\$5,000	OB	7/2021 – 6/2023	F, CC	9/M		High
10	2-1	Acquire and install an emergency generator at the Town Library	EMD / Facilities	\$10,000 - \$25,000	Grant HMA	7/2023 – 6/2025	SW, TW, WS, TI, CC	7H		Medium; depends if used as a shelter or cooling center

# 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
11	1-1	Complete conversion of all paper records maintained by the municipality to an electronic format, consistent with any State recommendations, to ensure their survival. Establish protocols for practices going forward. Establish protected back-up of records and the ability to access them remotely, should municipal facilities be compromised during or following a disaster.	Select Board	\$5,000-\$10,000	General Fund	7/2024 – 6/2025	SW, TW, WS, F, WS, E	3/L		Low
12	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.	Select Board	\$5,000-\$10,000	General Fund, OB	7/2022 – 6/2025	SW, F, CC	5/M		High
13	1-1	Designate a municipal staff member to liaison with CT DOT, and communicate with CT DOT about roadways of concern, upgrade schedules, and municipal needs – especially with regards to flood mitigation and emergency vehicle accessibility.	Select Board / DPW	\$1,000-\$5,000	OB, Staff Time	7/2024 – 6/2025	SW, F, CC	5/M		High
14	2-1	Work with Eversource to accelerate utility repair work following storm events; specifically identify potential pathways to allow municipal officials to assist with repair work if Eversource cannot respond in a timely manner	Select Board / DPW	\$1,000-\$5,000	OB, Staff Time	7/2023 – 6/2025	SW, TW, WS, TI, CC	9/H		Medium
15	2-1	Install automated stream gauges on streams in or upstream of Lyme to help warn residents ahead of developing floods	DPW	\$10,000-\$25,000	General Fund, Grant (HMA)	7/2023 – 6/2025	SW, F, CC	8/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 Lyme 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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