

RESILIENT CONNECTICUT 2.0



Overview for Town of Clinton

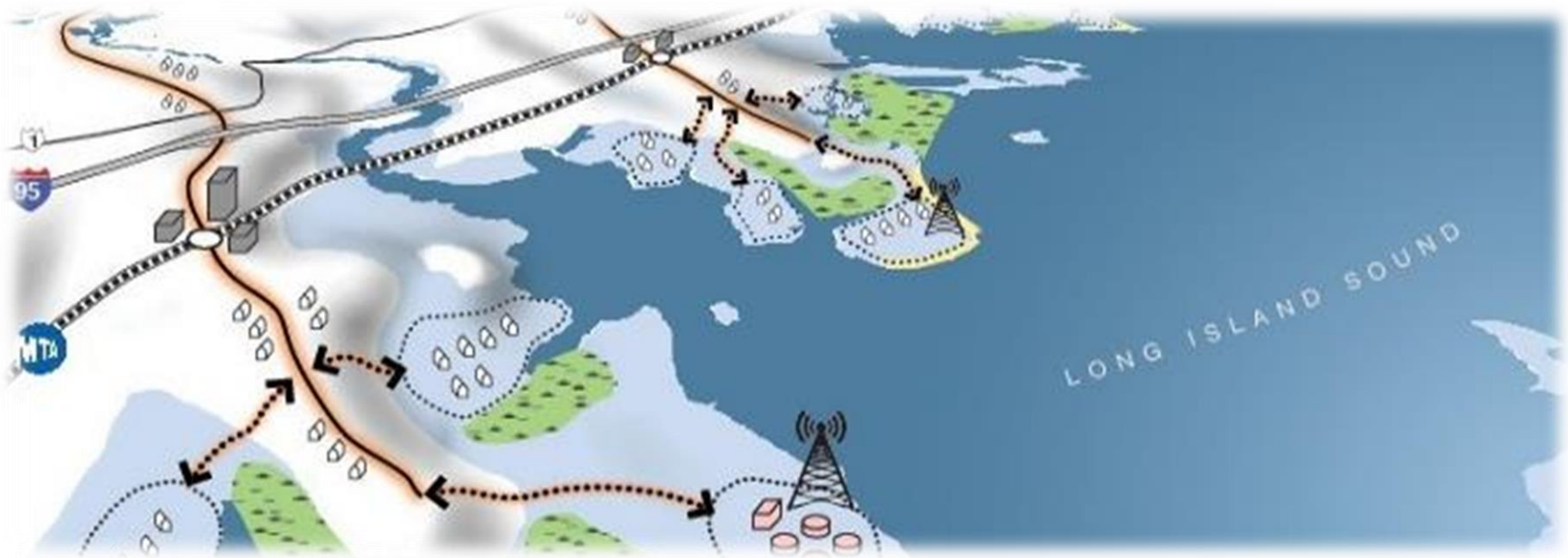
May 5, 2022

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

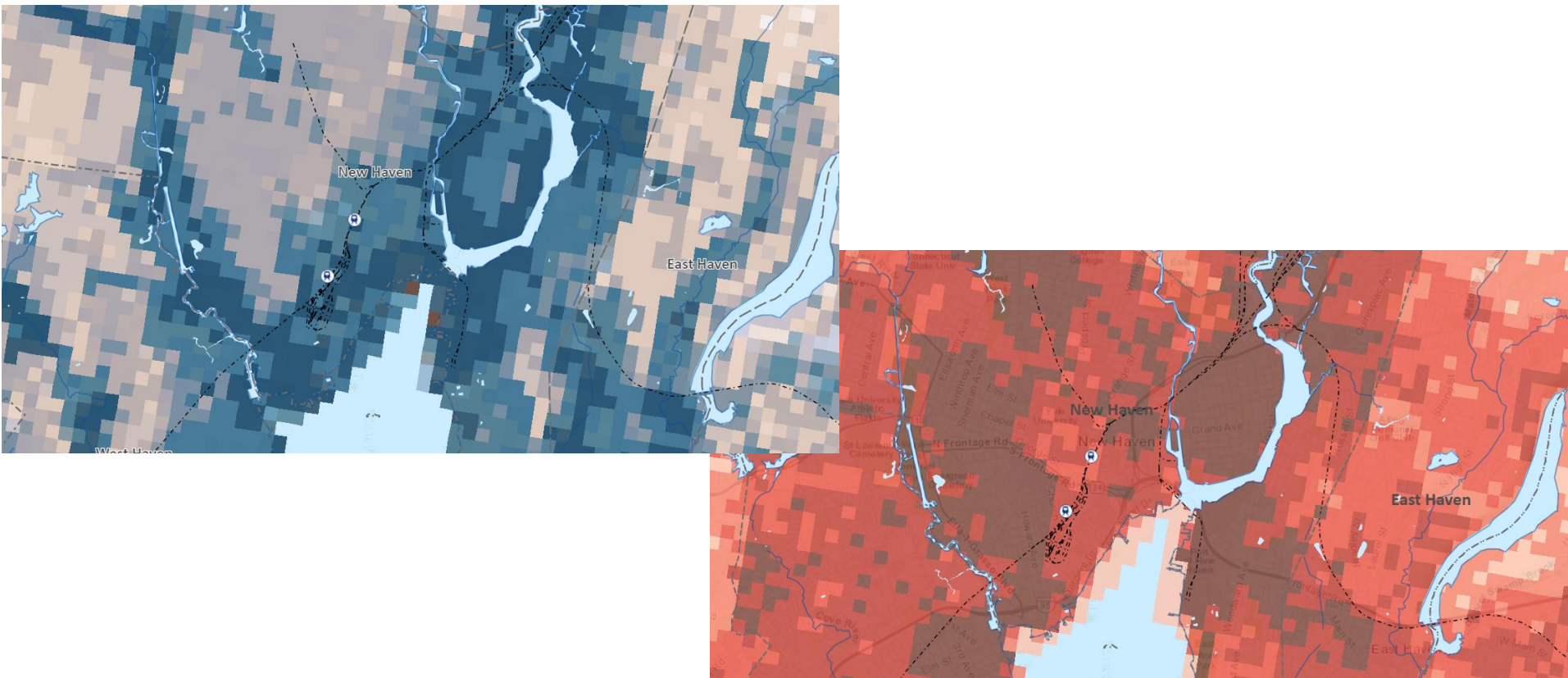


Review of Resilient Connecticut 1.0

- 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

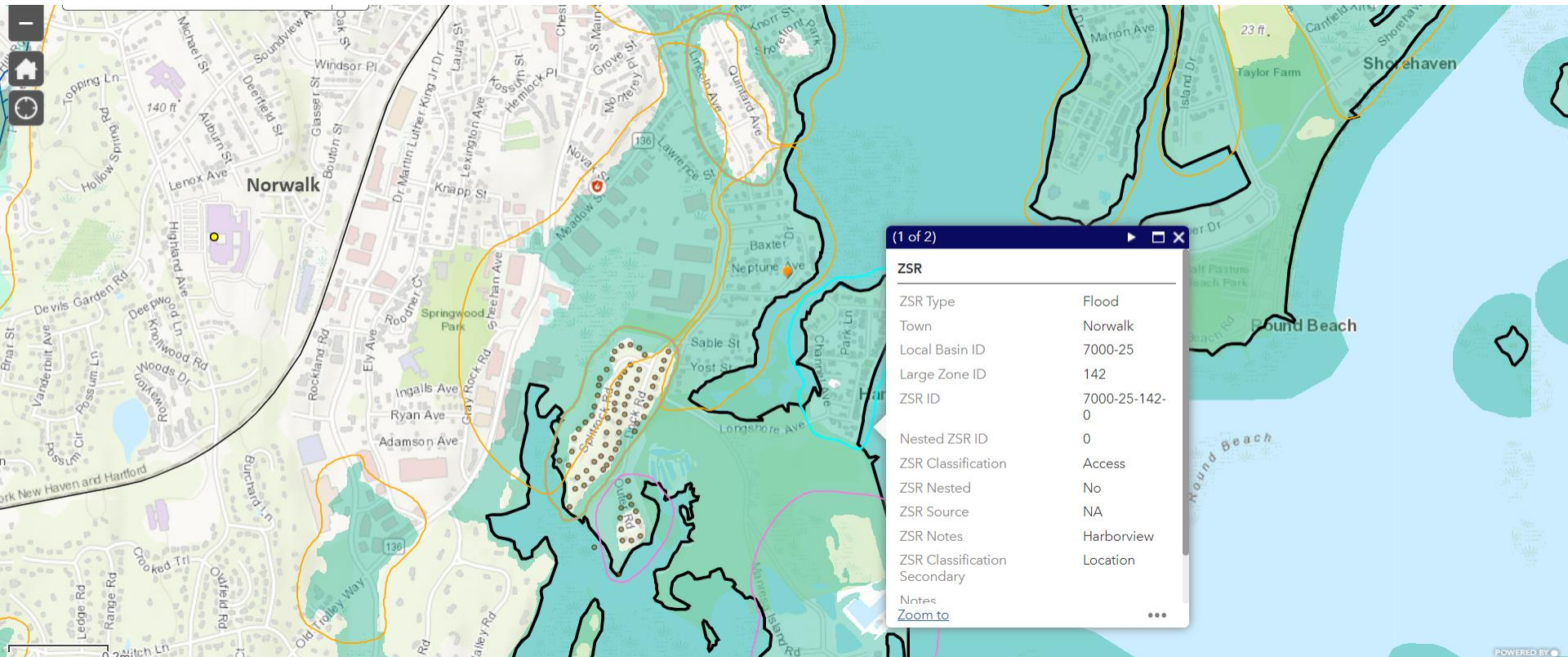
What Resulted from Resilient CT 1.0?

- Climate Change Vulnerability Index (CCVI)



What Resulted from Resilient CT 1.0?

- Zones of Shared Risk



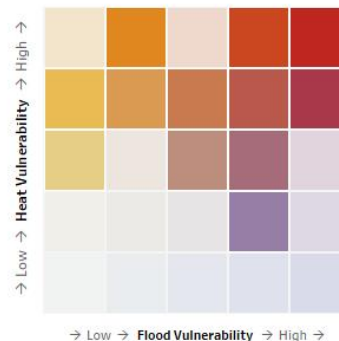
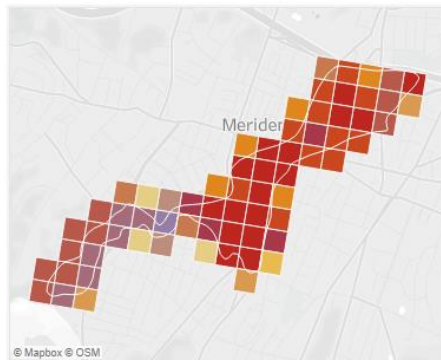
What Resulted from Resilient CT 1.0?

- Identification of Challenges that are Opportunities

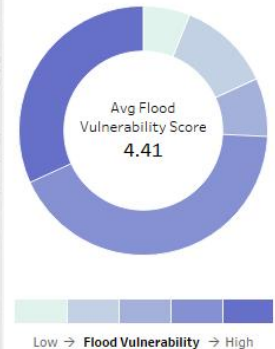
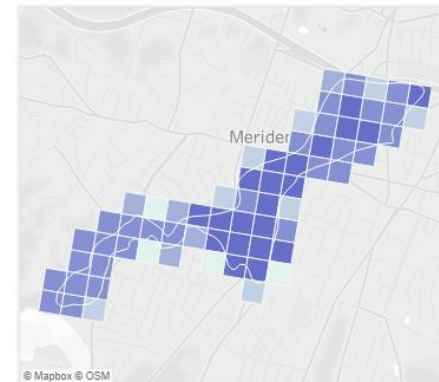
Zone of Shared Risk:
5206-00-249-0
Town: **Meriden**
Type: **Flood,**
Proximity



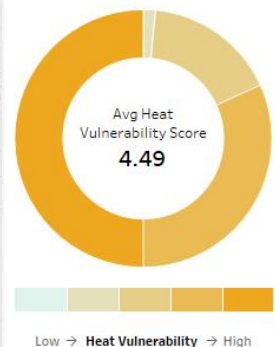
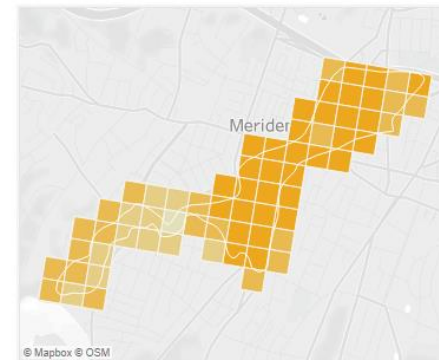
Combined Vulnerability



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

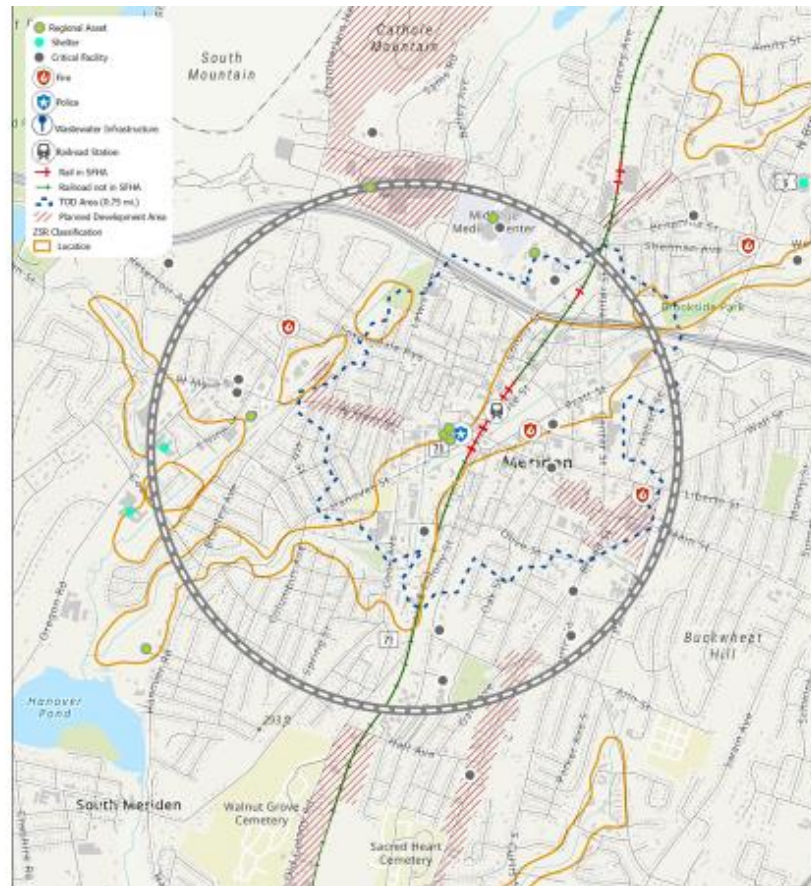
Considerations	Characteristics of Area
Flood Vulnerability	<div><div></div><div></div><div></div><div></div><div></div></div>
Heat Vulnerability	<div><div></div><div></div><div></div><div></div><div></div></div>
Social Vulnerability	<div><div></div><div></div><div></div><div></div><div></div></div>

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

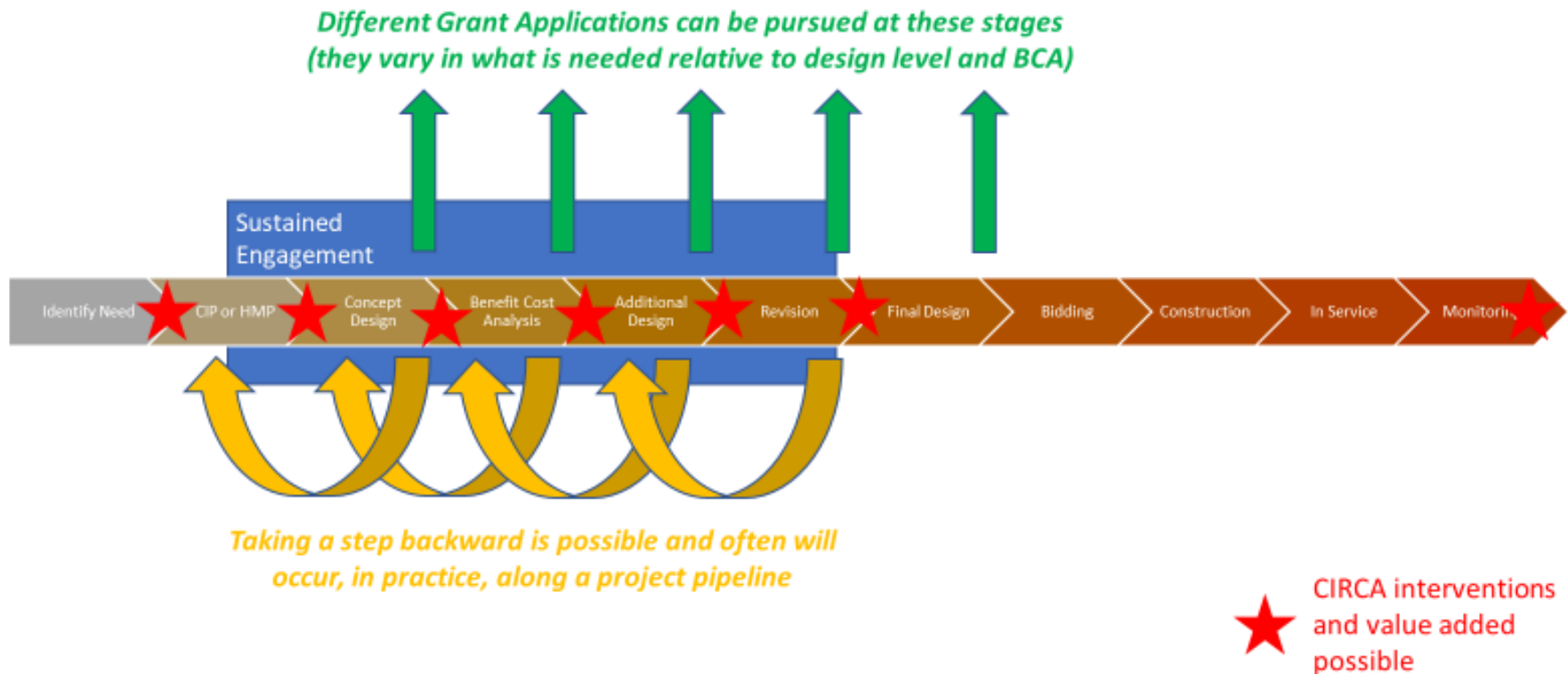


What Resulted from Resilient CT 1.0?

- 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

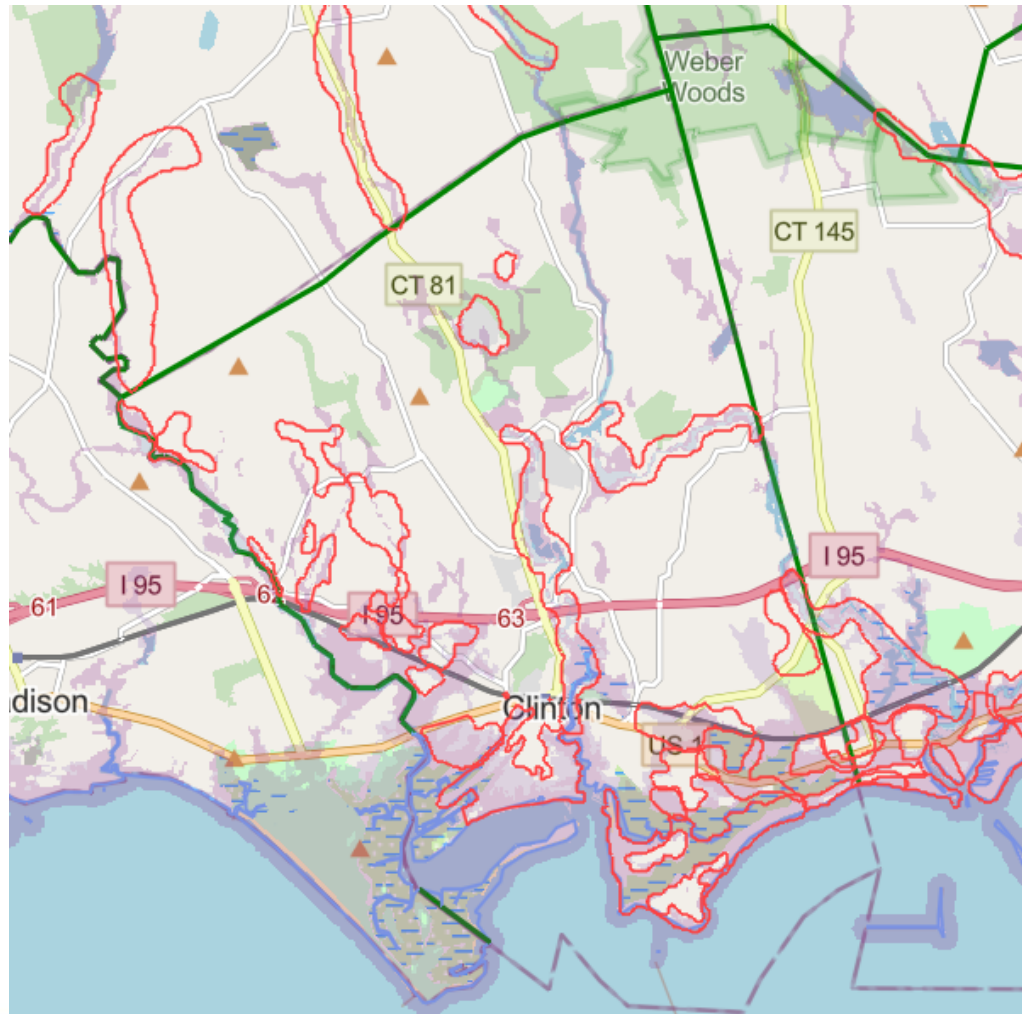


Review of Zones of Shared Risk

- 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
- Clinton listed 18 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/Obj	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	HMP Plan Integration - Incorporate additional natural hazard mitigation concerns into Zoning Regulations and Subdivision Regulations. Incorporate additional natural hazard mitigation concerns into the Inland Wetland Regulations, including prevention of runoff near waterways (carried over and modified).	Planning	\$0-\$10,000	CIP, OP	2021	SW, TW, WS, F, WF, E, CC	7/H		Medium
2	2-1	Design Standards - Implement the results of the SHPO historic and cultural resources resilience project to develop guidelines for historic buildings in Flood Hazard Zones to minimize loss of life and property as well as preserve our historic neighborhoods. (new)	Building and PW	\$0-\$10,000	CIP, OP	Annually through 2025	F, CC	7/H		High; historic buildings are difficult to make resilient
3	1-1, 3-1	Flood Zone and Sea Level Rise Study – Town Council (TC) should establish an ad-hoc committee to research medium and long-range impacts to coastal areas from SLR, to investigate possible mitigation actions and to assess legal, financial and policy implications. Work with The Nature Conservancy (TNC), DEEP, educational institutions, and state federal agencies to study impacts of sea level rise on (SLR) coastal flooding in Clinton. Update flood zone study for the town to incorporate SLR mapping study to evaluate coastal flooding. (carried over and modified)	TC, PW, BO	\$25,000-\$50,000	OP	2023	F, CC	11/H		High
4	3-1	Infrastructure Improvements - Develop a priority list for road reconstruction and elevation for routes which experience frequent flooding or are integral to evacuation. Make a consideration for ongoing PW road evaluations. (Carried forward but modified)	CC, PW	\$50,000-\$100,000	CIP, OP	2021-2022	F, CC	8/H		High
5	2-1	Inventory Generators at Essential Facilities. Some non-critical facilities are essential for public function during an emergency, such as grocery stores and gas stations. For these essential facilities, inventory which have functional generators. Encourage gas stations and grocery stores without generators to add them. Provide technical assistance and support identifying funding. (New)	Building and PW	\$0-\$10,000		Annually	SW, TW, WS	6/H		Medium; depends if facilities can be used as shelters/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	1-1	Business Recovery Plan. Regional level to develop business recovery plan cooperatively with other region towns and distribute to town businesses. Clinton will support a regional effort, not carry out this task on its own. (Carried over but modified)	TC	\$0-\$10,000	OP	2021 - 2022	SW, TW, ET, WS, F, TI, WF, D, E, CC	5/M		Low
7	2-1	Retrofit and expand or construct new Fire Station: Clinton is evaluating the future feasibility of its fire station. It needs resilience improvements and expansion. Evaluate the cost effectiveness and feasibility of enhancing the existing facility vs. replacing with a new facility in a safer location. (replacement action)	TC, PW, BO, Fire	\$25,000 - \$50,000	OP, CIP, Grants	2022	All	8/H		High
8	3-1	Local Social Resources: Coordinate with Town Human Services, Estuary Council of Seniors, and Shoreline Basic Needs Task Force to assist with those populations (i.e. elderly, disabled, non-English speakers, who may frequent, reside, or work) in Clinton. (Carried forward but modified)	TC, EMD	\$0-\$10,000	OP	2021 - 2025	SW, TW, ET, WS, F, E	3/M		Medium; depends on specific needs
9	1-1	Possible Open Space Criteria. The Conservation Commission should include possible inundation by future sea level rises to its considerations for preserving open space. Review and update open space plan developed in 2013. Modify to create contiguous space with acquisitions informed by TNC and CIRCA SLR reports. (Carried forward but modified)	PZC, LUO	\$0-\$10,000	HMPG, PDM, CIP	2022 - 2023	F, CC	8/M		High; open space can provide natural protection areas
10	1-1	Update Recovery & Reconstruction Plan. Develop a post-disaster recovery and reconstruction plan to re-establish infrastructure and public services, etc. damaged or destroyed by any NH event, including establishment of a "rainy day" fund in case Federal assistance is insufficient or delayed.	TC, PW	\$25,000 - \$50,000	CIP, HMPG	Annually through 2025	SW, TW, WS, F, E	6/M		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 and Resilience Characteristics
11	3-1	Evacuation Routes. Identify and sign evacuation routes throughout town to aid public in evacuating. Evacuation routes should follow roads which will not flood during storms. Upgrade current evacuation routes for adequacy. (Carried Forward)	TC, PW	\$0-\$10,000	OP	2023-2025	SW, TW, WS, F	3/M		High
12	2-1	RL and SRL Properties. Encourage property owners of repetitive loss and several repetitive loss properties to obtain assistance for hazard mitigation funding from DEEP/FEMA for elevation of structures and repairs where applicable. Provide assistance as needed. (Carried forward but modified)	LUO	\$1,000-\$5,000	HMGP, FMA, RLP, SRL	Annually	F	6/H		High
13	2-1	Road Reconstruction. Develop a priority list for road reconstruction and elevation for routes which experience frequent flooding or are integral to evacuation. Build into PW evaluation criteria. (Carried over and modified)	PW	\$100,000+	HMPG, FMA, CIP, STIP, TIP, RTP	Annually through 2025	F, CC	7/H		High
14	2-1	Upgrade Culverts. Evaluate and reconstruct culverts in town to meet 100-year storm standards where feasible (carried over and modified)	PW	\$25,000-\$50,000	HMPG, FMA, CIP, STIP, TIP, RTP	2023-2024	F	7/H		High

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 and Resilience Characteristics
15	2-1	Elevate Road and Bridge. Evaluate and reconstruct Beach Park Road in several spots to be above Base Flood Elevation (BFE). Reconstruct Causeway in several locations to elevate above BFE Evaluate and reconstruct Route 1 (Boston Post Road) in several spots to be above Base Flood Elevation (BFE). Evaluate and reconstruct Nod and River Roads in several spots to be above Base Flood Elevation (BFE). (Carried forward but modified – strategies merged)	PW	\$100,000+	HMPG, FMA, CIP, STIP, TIP, RTP	2022-2025	F	7/H		High
16	2-1	Dune Restoration. Implement dune restoration and marshland protection techniques for flood storage and surge protection. (Carried Over)	PW, BOF, TC	\$50,000-\$100,000	FMA, HMPG	2021-2022	SW, F, CC	3/L		High
17	3-1	Circulate Existing Literature. Access existing literature prepared by regional groups and the chamber of commerce and FEMA and display for public distribution in the Town Hall and Library.(Carried Over)	TC, LUO	\$0-\$1,000	HMPG, PDM	Annually through 2025	SW, TW, ET, WS, F, TI, WF, D, E, CC	4/M		Low; this is a current need
18	3-1	Preparedness and Recovery Webpage. Keep up-to-date Town website with NH preparedness information, including hazard areas, evacuation routes deemed appropriate per NH event and locations of shelters. Include information about recovery assistance following NH events.	EMD	\$0-\$1,000	OP	Annually through 2025	SW, TW, WS, F	4/M		Low; this is a current need

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 Clinton 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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