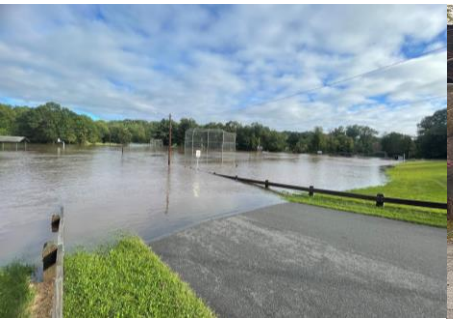
RESILIENT CONNECTICUT 2.0





Overview for Town of Portland

April 25, 2022

UCONN

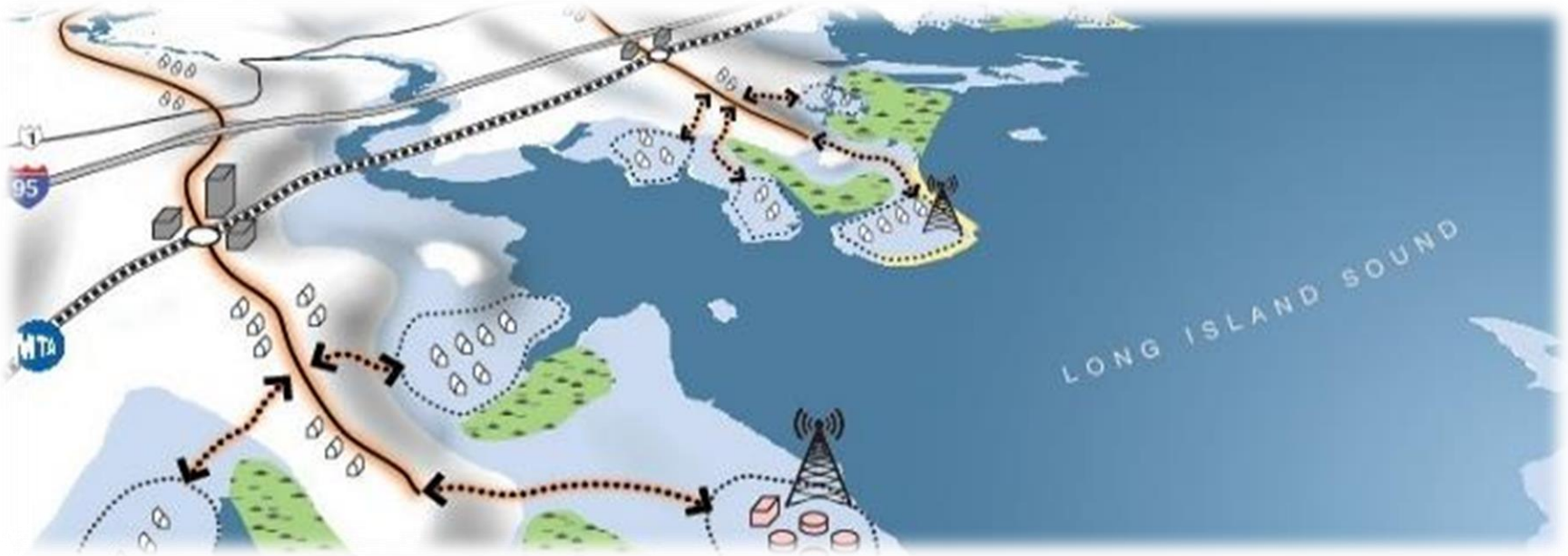
CIRCA
Connecticut Institute for Resilience and Climate Adaptation

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

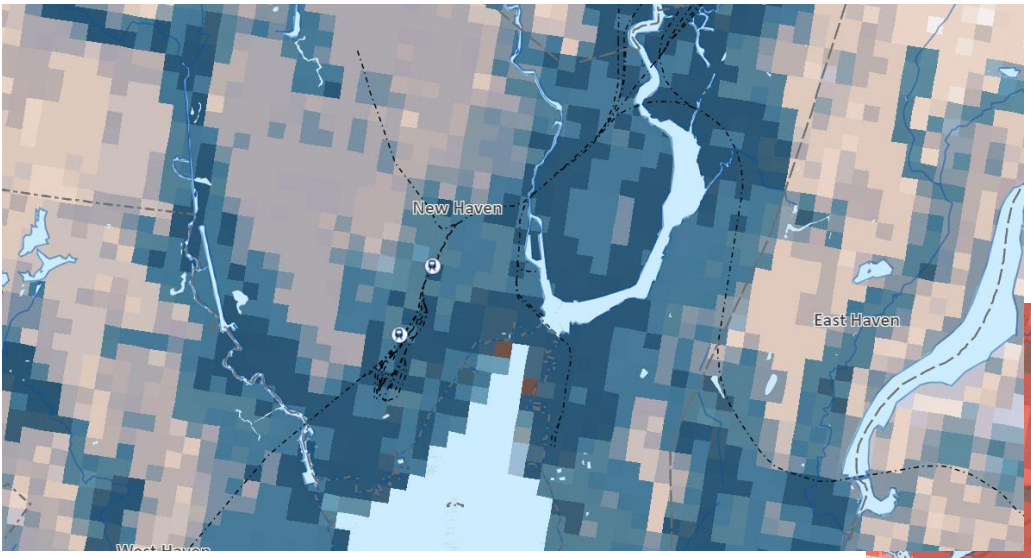


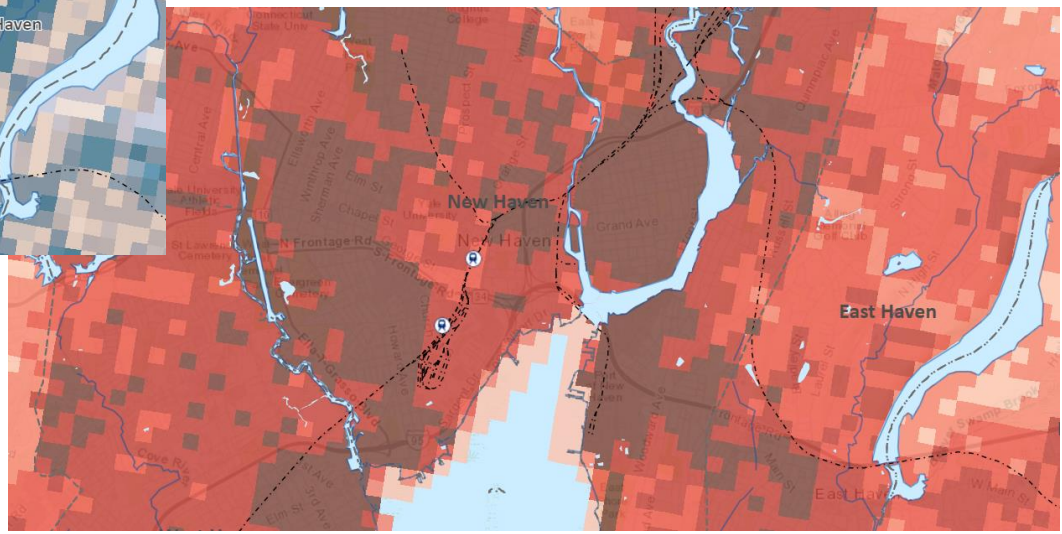
Review of Resilient Connecticut 1.0

- 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?

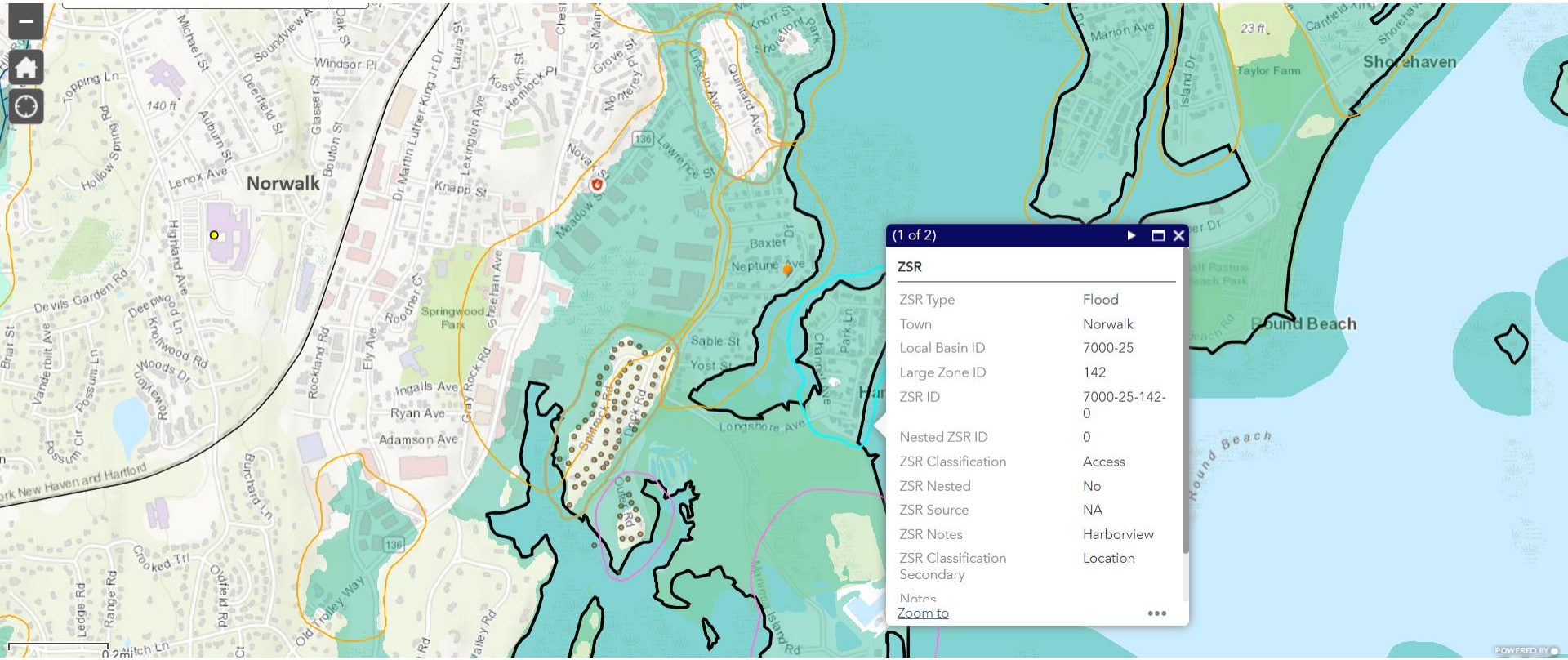
- Climate Change Vulnerability Index (CCVI)





What Resulted from Resilient CT 1.0?

- Zones of Shared Risk

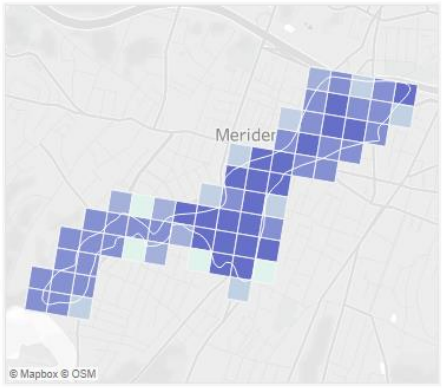


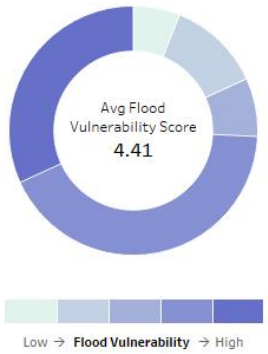
What Resulted from Resilient CT 1.0?

- Identification of Challenges that are Opportunities

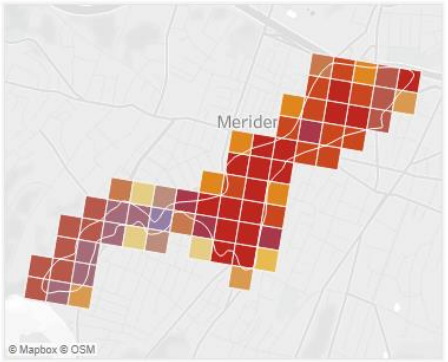
Zone of Shared Risk:
5206-00-249-0
Town: **Meriden**
Type: **Flood, Proximity**

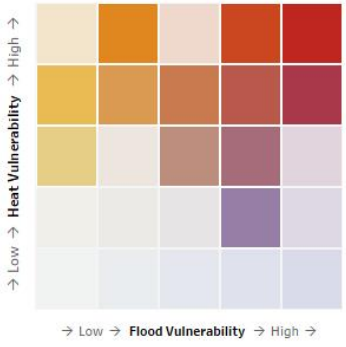
Flood Vulnerability



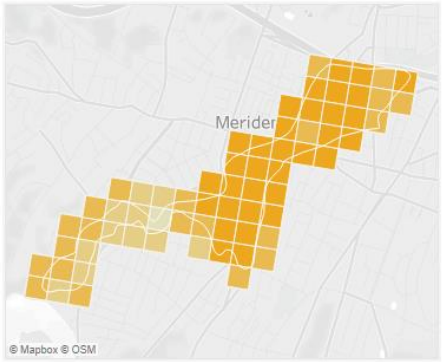


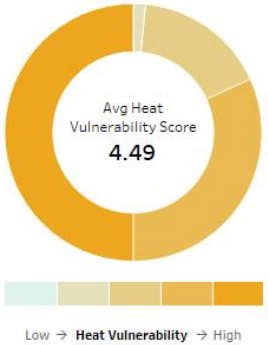
Combined Vulnerability





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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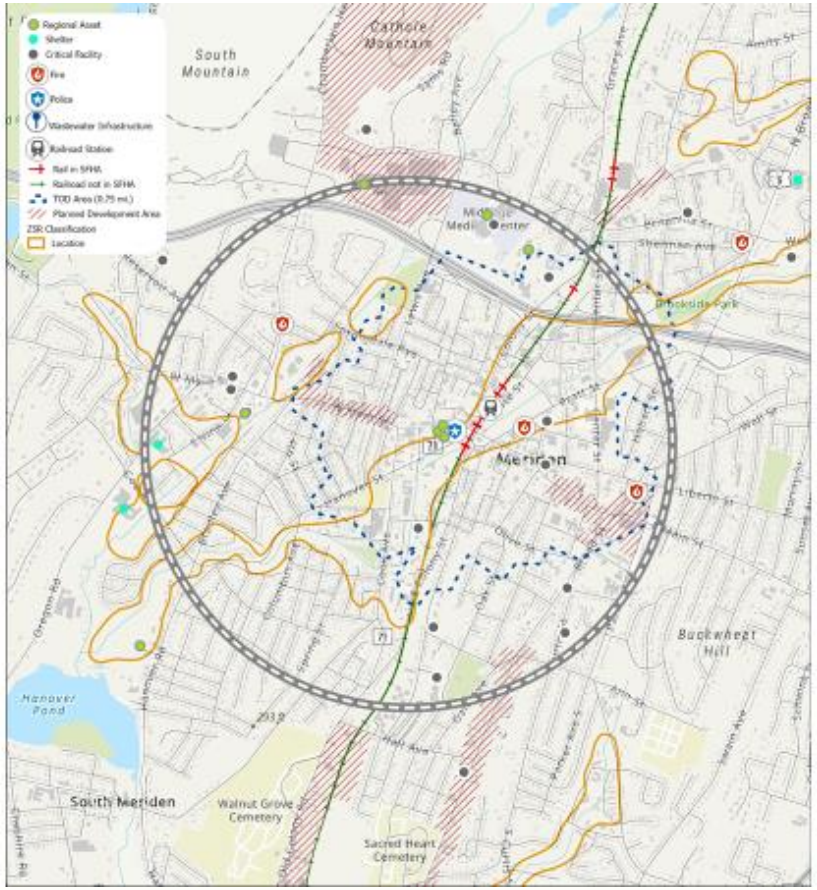

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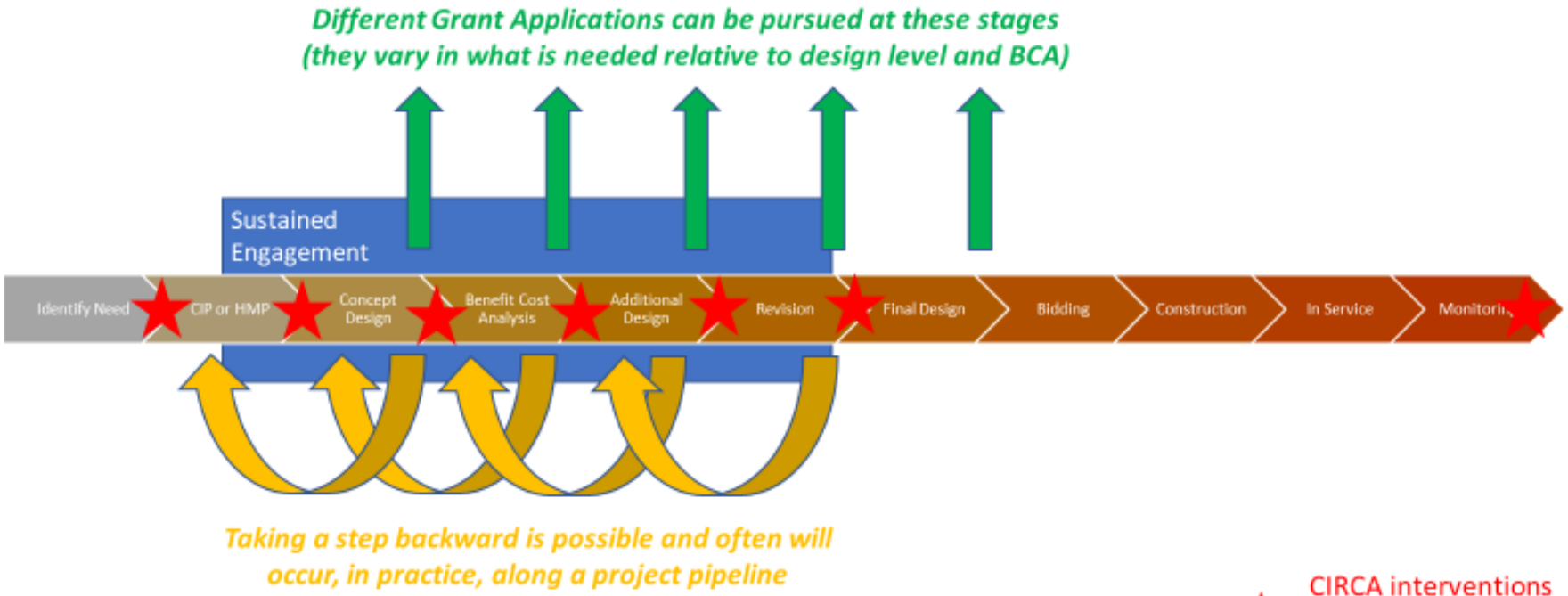
What Resulted from Resilient CT 1.0?

- 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

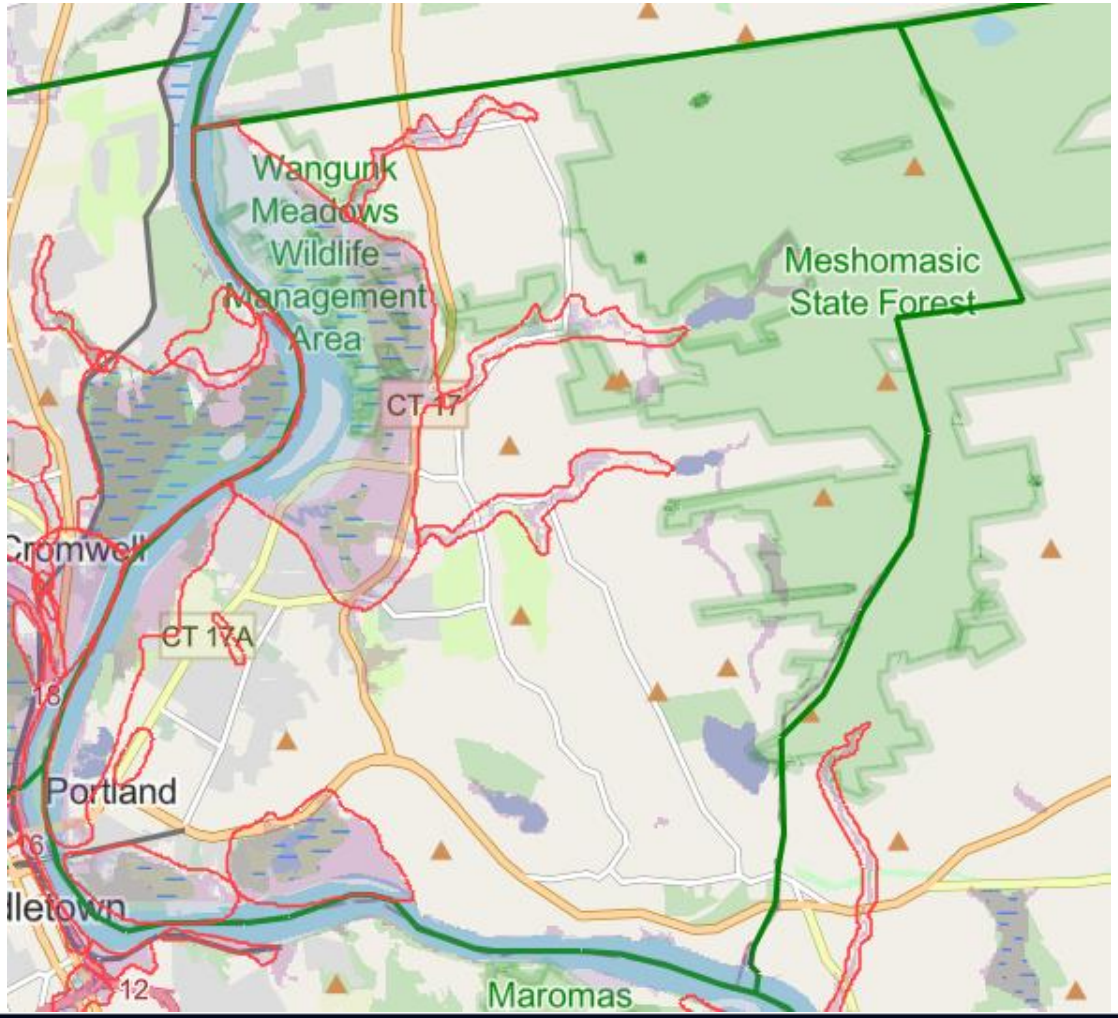
Added in Resilient Connecticut 1.0

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/



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
- Portland listed 8 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 for Completion	Hazard(s) Addressed	Total STAPLE E Score/Priority	Status	Potential for Climate Adaptation and Resilience Characteristics
1	1-1	Install Emergency Generators Install emergency generators for all critical facilities and essential town facilities including: Glastonbury Turnpike Water Supply Well Bartlett Street Water Pumping Station Portland Library Portland Senior Center Portland Transfer Station Brownstone Intermediate School Valley View School Gildersleeve School	PW EM	$50,000-$100,000	PDM, HMPG, CIP	Evaluate Annually and prioritize through 2025 Sr. Center and Library are first priority.	All	7/H		Medium; depends if these facilities will be used as shelters and cooling centers
2	3-1	Develop GIS Application Acquire asset management technology and develop a GIS application to assist personnel to capture damages during a disaster for future public assistance or mitigation grant applications.	GIS	$10,000-$20,000	CIP, HMGP	2022	SW, TW, ET, WS, F, TI, WF, D, E, CC	5/H		Medium

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
3	2-1	Engineering study needed to determine mitigation options and costs to accomplish drainage improvement throughout Portland, as follows: • Culvert east of Thompson Hill Road • Portland Police Department • Portland Senior Center • Old Marlborough Turnpike culverts • Rose Hill Road • Collins Hill Road • Sage Hollow Road • Cox Road, east section • Main Street near intersection with Williams Street • Drainage system at YMCA Camp Ingersoll • 4 Freestone Avenue • 5 Edwards Road • Watercourse between Williams Street and Main Street • Watercourse between High School detention basin and Redberry Lane • 314 Main Street- Brown Intermediate School • Watercourse between Scenic Drive and Main Street • Main Street from Middlesex Avenue to bridge approach • Strongs Avenue near Route 17A • Isinglass Hill Road Bridge on Hales Brook • Old Marlborough Turnpike/East Cotton Hill Road on Reservoir Brook • Culverts on Cox Road • Cox Road Bridge by Kelsey Pond • Penfield Hill Road by Cox Road • Rose Hill Bridge on Carr Brook • Riverview Street near Yankee Boat Yard • Riverview Street at Grove Street • Bartlett Street at Route 17 • Strickland Street at Route 17 • Indian Hill Avenue at FC#2 picnic grounds • Tryon Street on the Connecticut River • Access Road to Coe Ave Sewer Pump Station • Route 17A between Indian Hill Avenue and Route 17 • Riverview Street • Extension Street	PW, BOS, BOF	$100,000+	HMGP, CIP, OP	Evaluate Annually and prioritize through 2025	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
4	1-1	Ice Jam Planning Develop and implement a plan to prevent roads flooding throughout the town due to ice jams	PW, BOS, EMD, OF	$5,000-$10,000	CIP, OP	2022	WS	3/L		High
5	1-1, 3-1	Earthquake Planning Develop an Earthquake Recovery Plan to repair broken water and sewer lines, and building or road damage in the event of a large earthquake	PW, BOS, EMD, OF	$5,000-$10,000	CIP, OP	2025	E	3/L		Low
6	1-1, 3-1	Wildfire Planning Develop and implement a wildfire protection plan	FM, Fire Dept., BOS	$5,000-$10,000	CIP, OP	2023	WF	3/L		Medium
7	2-1	Install Water Storage Tanks Install water storage tanks adjacent to state forest to ensure ample water supply during a large fire	FM, Fire Dept., BOS	$20,000-$50,000	HMGP, CIP, OP	2025	WF, D	7/H		Medium
8	2-1	Mitigate Severe Repetitive Loss/Repetitive Loss Properties Research grant options to acquire Severe Repetitive Loss and Repetitive Loss properties and convert to open space and implement if possible.	EMD	$100,000-$200,000	FEMA HMA, HMGP, HUD-CDBG-DR, CIP	Annually through 2025	F, CC	9/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 Portland 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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