RESILIENT CONNECTICUT 2.0



Overview for Town of Cromwell May 9, 2022







- 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





• Climate Change Vulnerability Index (CCVI)









• Zones of Shared Risk

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Pa source Lo	and the second s	ZSR Classific Secondary Notes Zoom to	cation Location	





• 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







• Identification of Challenges that are Opportunities

Name: Downtow .ocation: Meride	n Meriden n
Considerations	Characteristics of Area
lood Vulnerability	$\bigcirc \bigcirc $
leat Vulnerability	$\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$
ocial Vulnerability	$\bigcirc \bigcirc $
ritical facilities, historicr nd TOD intersect in dow one of shared risk. The C	esources, major transportation routes, ntown Meriden within the Harbor Brook City of Meriden has already undertaken







- 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





• A recognition of the *Resilience Project Pipeline*



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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



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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

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ZSR Viewer

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







- The planning process was in 2019-2020
- DEMHS and FEMA review was 2020-2021
- Plan approved in spring 2021
- Cromwell listed 10 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





Activity #	al/Objective	Activity Description	ead Agency	Est. Cost*	Potential Funding Sources	Timeframe	Hazard (s) Addressed	STAPLEE ore/Priority	Status	Potential for Climate Adaptation/ Resilience
1	9 1-1	Maintaining Shelter Supplies: Maintain an inventory of cots, blankets, food supplies, and other supplies for emergency shelters and provide additional supplies where necessary.	EMO	\$0-\$10,000	ОР	Annually through 2025	All	3 4/H		Characteristics Low
2	1- 1, 2-1	Reduce and Manage Debris: Update and implement the debris management plan, including the Tree Management Plan. Ensure budget allocates appropriate money necessary to maintain and remove dead, dying, dangerous, and diseased trees in rights-of-way and other town-owned land, especially along the CT River.	PW	\$1,000-\$10,000 for Tree Management Plan. \$5,000- 10,000 for DMP. \$25,000+ annually for maintenance and removal	CIP, DEMH S, OP	Annually through 2025	SW, TW, WS, TI	4/H		Low
3	2- 1, 3-1	Promote Private Property Mitigation: Support residents search for funding for elevation and flood proofing their property by disseminating HMA grant information, educating real estate agents, and making HMA informational brochures and pamphlets available at public places such as town halls and libraries. Maintain a public webpage with relevant links and necessary contact information for floodplain managers and town officials. Support home/business owners with benefit cost analysis. (new)	Admi nistra tion /Plan ning	\$0-\$1,000	FEMA HMAP Grants	Annually through 2025	SW, TW, WS, F	3/M		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
4	2-1	Implement mitigation strategies identified for South Street near railroad overpass and at Nooks Hill Road near the railroad overpass to prevent street and property flooding in those areas.	PW, BOF, FM, EMO	\$25,000- \$50,000	FEMA HMGP or other HMA Grants, State Funding	2025	F, CC	7/H		High
5	2-1	Mitigate Riverside Drive Bank Erosion Perform an engineering study on the river bank adjacent to Riverside Drive. Install heavy rain drains to limit rainfall erosion and investigate bank stabilization projects. Assist homeowners in finding solutions to protecting property near the area of erosion, including grant funding.	BOS, PW, DEEP, LUO, PZC	\$25,000- \$50,000	FEMA HMGP or other HMA Grants, State Funding	2025	F	7/H		High; increased precipitation should be considered
6	2- 1, 3-1	Inventory Generators at Essential Facilities Some non-critical facilities are essential for public function during an emergency, such as grocery stores, Walmart, and gas stations. For these essential facilities, inventory which have functional generators. Encourage gas stations and grocery stores without generators to identify funding for them and provide technical assistance. (new)	Plann ing, Buildi ng, PW	\$0-\$1,000 + staff costs	OP	2022	All	5/H		Medium; depends if these facilities can be used as shelters and/or cooling centers

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
7	2-1	Dam Inundation Study: Perform dam inundation studies or identify dam inundation mapping to identify the flood risk posed by the loss of the Northern Pond Dam and the two additional dams on Shadow Lane, and any potential future dam failure.	LUO, PW, DEEP	\$10,000- \$25,000	FEMA HMGP or other HMA Grants, State Funding	2025	F	5/H		Medium
8	2-1	Support Repetitive Loss Properties Provide information, support, and financial advice to homeowners of Repetitive Loss properties regarding possible mitigation activities. Assist with grant applications and associated benefit cost analysis.	LUO, Plan ning	\$1,000- \$10,000	FEMA HMGP, PDM or other HMA Grants, State Funding	Annually through 2025	F	8/H		High
9	2-1	Replace Culverts prone to Flooding: Identify and replace culverts along the Connecticut River that contribute to flooding and water quality issues.	PW	\$100,000 +	HMPG, PDM, FMA, CIP, STIP, TIP, RTP	2023- 2025	F	11/H		High
10	2-1, 3-1	Protect Historic and Cultural Resources: Use recently published GIS inventory or historic and cultural resources, along with published best management practices to inform owners of methods and resources to make at risk resources more resilient	Plan ning, HDC	\$5000	SHPO Funding, OP, Staff Time	2022	All	4/M		Medium; depends on specific needs

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 Cromwell 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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