Resilient Connecticut Case Studies

Helen Zincavage, SECOG
Alex Roper, GZA
David Burgy, Stantec
Beth Kirmmse, Fuss & O'Neill
Ian Concannon, Fuss & O'Neill
Mary Buchanan, CIRCA
Nicole Govert. CIRCA

UCONN

CIRCA
Connecticut Institute for Resilience and Climate Adaptation

Agenda

Resilient Connecticut Overview

Nicole Govert and Mary Buchanan, CIRCA (5 minutes)

Resilient Yantic Project

Helen Zincavage, SECOG and Alex Roper, GZA (25 minutes)

Resilient Mystic Project

Beth Kirmmse and Ian Concannon, Fuss & O'Neill (25 minutes)

Question and Answer *(5 minutes)*

CIRCA's Mission and Goals

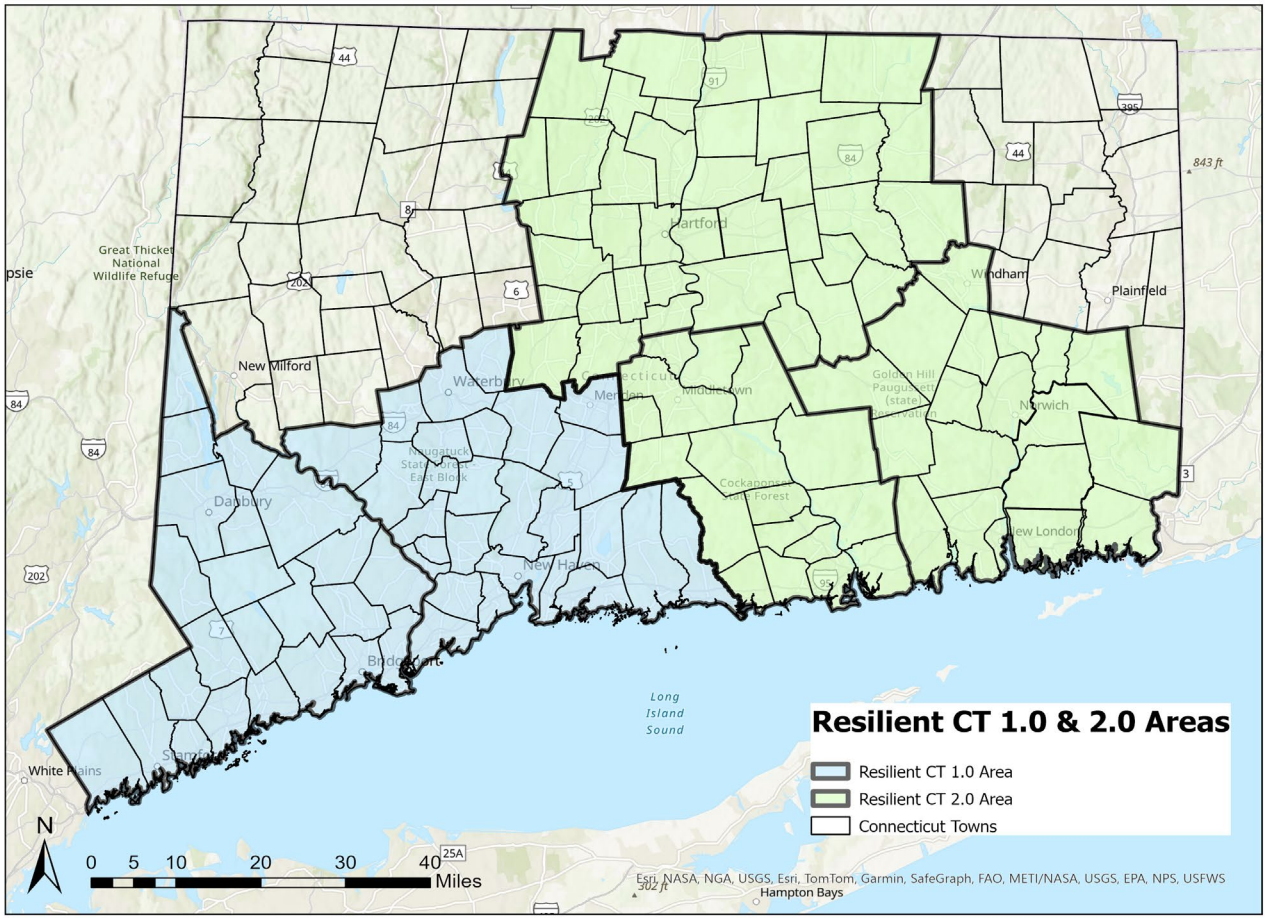
Increase the resilience and sustainability of vulnerable communities in the state's coastal and inland areas to severe storms and the growing impacts of climate change on natural, built, and human environments.

Research Focus Areas

- Flooding
- Extreme Heat
- Sea Level Rise
- Green Infrastructure
- Environmental Justice
- Emergency Management
- Policy

Resilient Connecticut Program

- CIRCA initiated Resilient CT in Fairfield & New Haven Counties in 2018
- The program expanded to the RiverCOG, SECOG, & CRCOG regions (New London, Middlesex, Hartford, Tolland Counties) in 2021-2024.

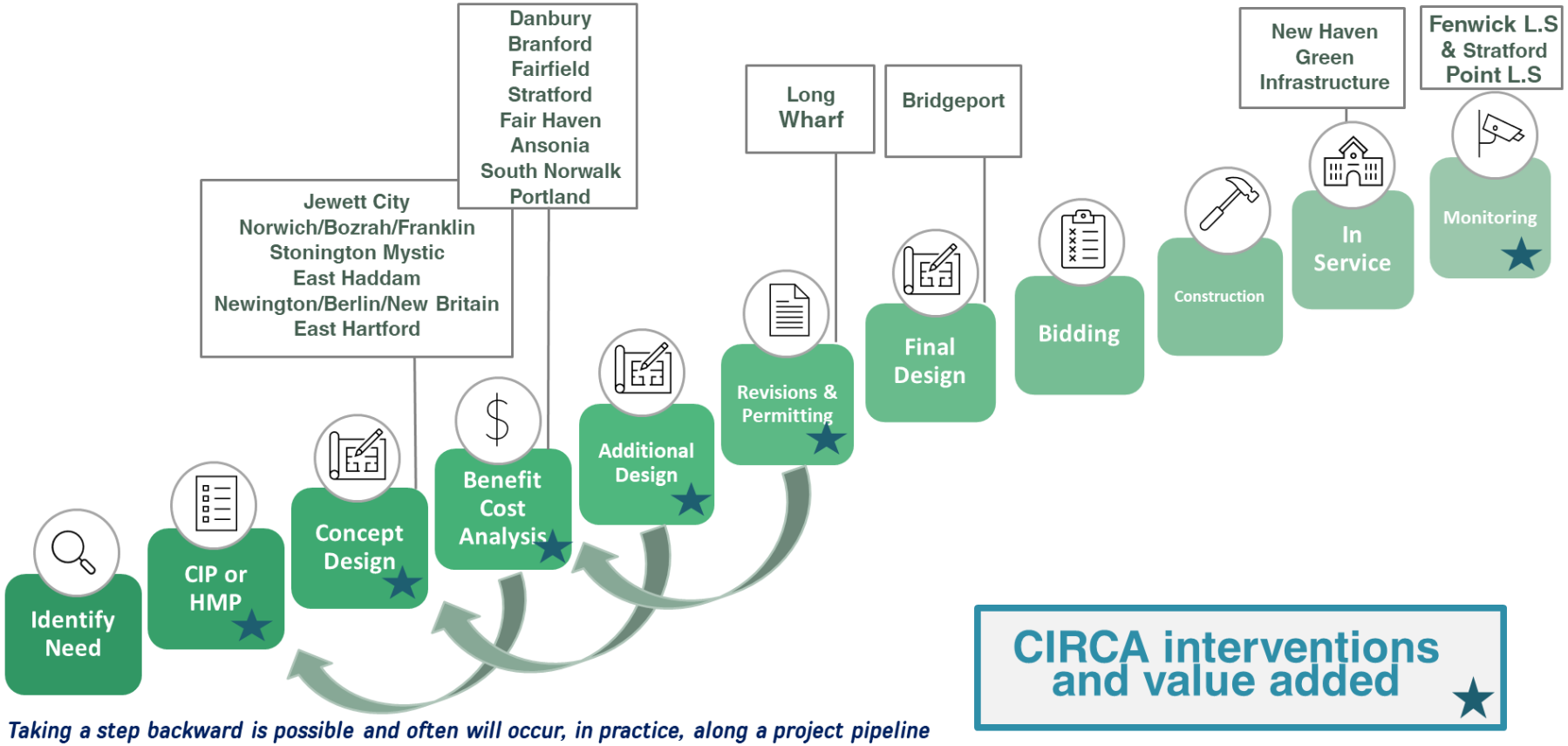


UCONN

CIRCA
Connecticut Institute for Resilience and Climate Adaptation

The goal of the program:

- Assist Municipalities in developing implementable resilience projects.
- Support development of a statewide resilience project pipeline.
- Increase coordination across municipal, regional, and state planning.



Taking a step backward is possible and often will occur, in practice, along a project pipeline

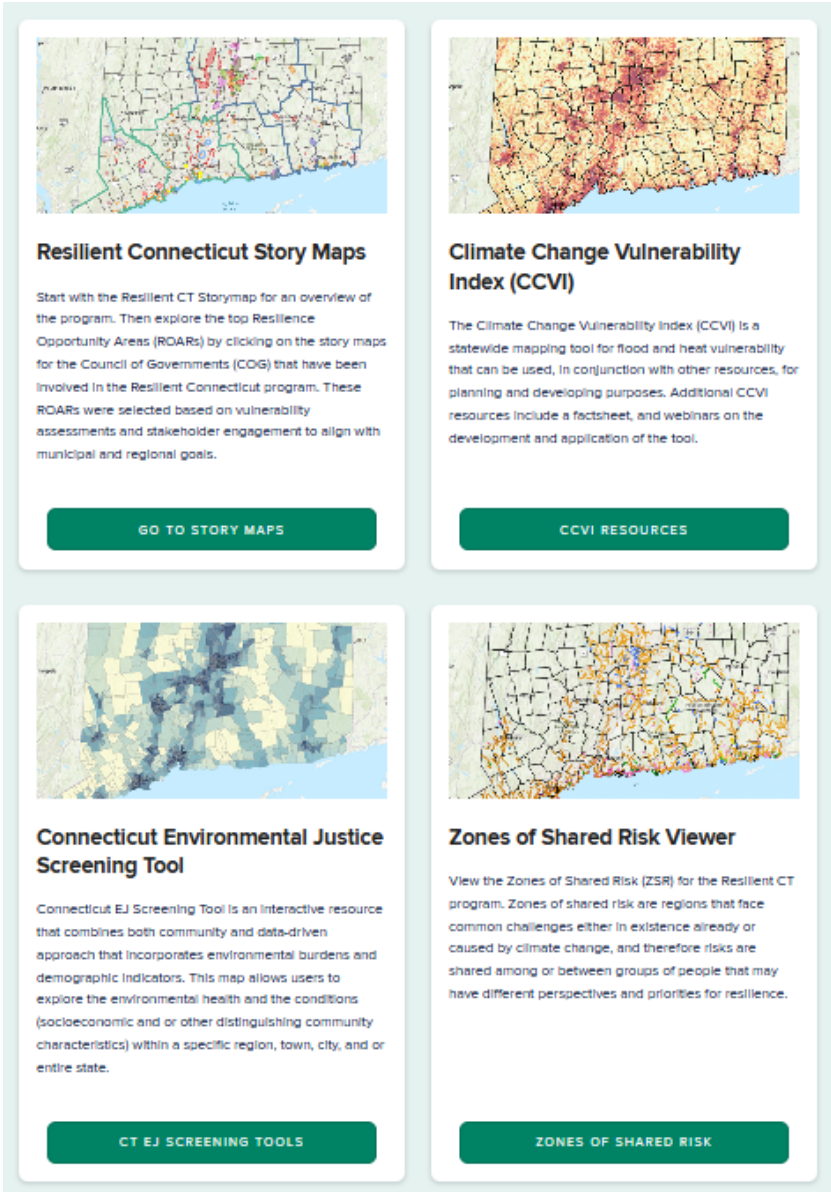
UCONN

CIRCA
Connecticut Institute for Resilience and Climate Adaptation

Resilient Connecticut Tools

CIRCA has created several data & mapping tools to support project development including:

- Climate Change Vulnerability Index (CCVI)
- Zones of shared risk
- CT Environmental Justice Screening Tool
- Resilience Opportunity Areas (ROARs)



How does CIRCA use these tools for the RCT Program?

Overlapping:

- Social vulnerability
- Flood vulnerability
- Heat vulnerability
- Zones of Shared Risk

- Regional assets
- Infrastructure
- Critical facilities
- Historic resources
- TOD potential

= Resilience Opportunity Area (ROAR)

Resilient Connecticut 2.0 Phase II

Regional Adaptation/Resilience Opportunity Areas

Name: Goodspeed / Succor Brook
Location: East Haddam

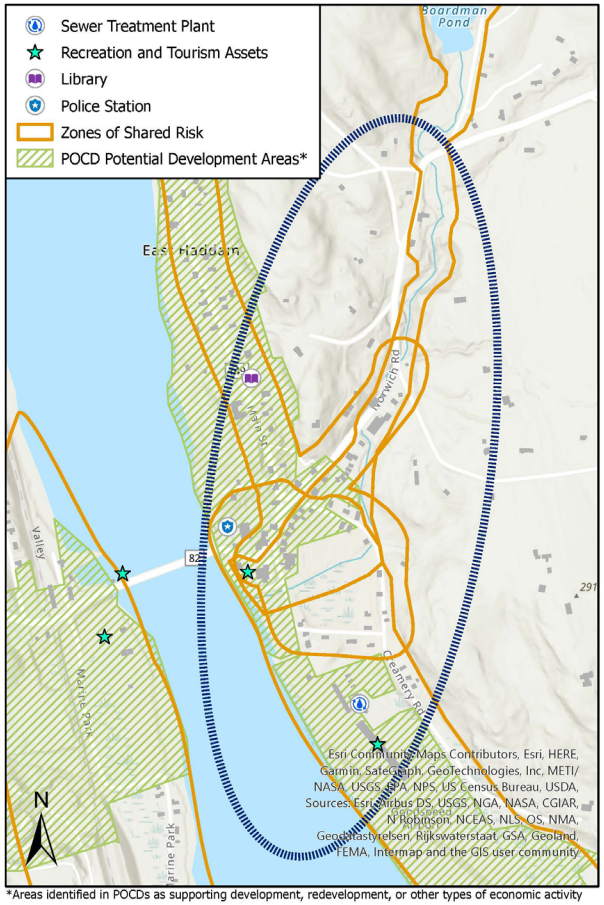
Consideration	Characteristics of Area
Flood Vulnerability	● ● ● ○ ○
Heat Vulnerability	● ● ○ ○ ○
Social Vulnerability	● ○ ○ ○ ○

East Haddam residents have identified flooding from Succor Brook as a persistent concern for the center of town. This brook periodically overtops its banks, and past flash floods have impacted structures associated with the Goodspeed Opera House, including the actor housing, library of musical theater, and rehearsal studio. The Goodspeed is a regional asset that brings 80,000 - 100,000 visitors to East Haddam every year. Additional community assets in this area include the town's police department, sewer treatment plant, and public library, the latter of which can be used as a cooling center when needed.

Goodspeed Opera House Goodspeed Airport East Haddam Police Department	Rathbun Free Memorial Library East Haddam Sewer Treatment Plant

UCONN UNIVERSITY OF CONNECTICUT

CIRCA



*Areas identified in POCDs as supporting development, redevelopment, or other types of economic activity

UCONN

CIRCA
Connecticut Institute for Resilience and Climate Adaptation

Number of ROARs Identified

177 total ROARs were identified

64 were identified in Resilient CT 1.0.

114 ROARs were identified in Resilient CT 2.0

20 within WestCOG,

13 within MetroCOG

6 within NVCOG

24 within SCRCOG

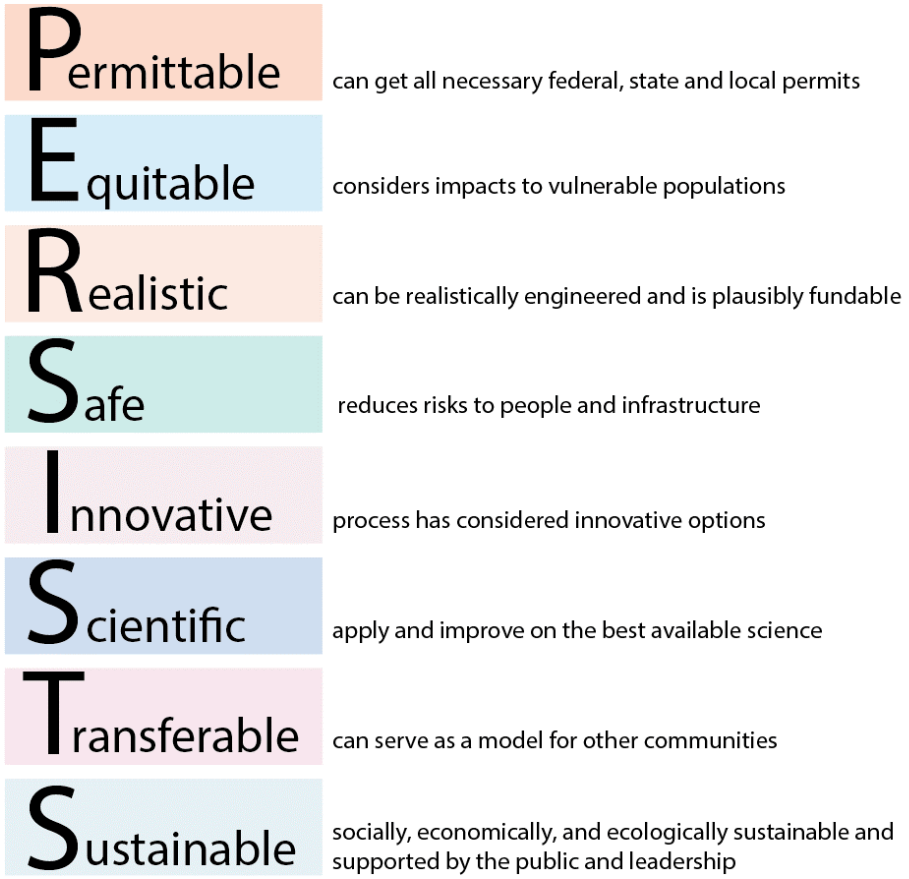
20 within RiverCOG

31 within SCCOG

63 within CRCOG

How ROARs become Projects

- CIRCA ranks the ROARs based on PERSISTS framework
- CIRCA meets with local stakeholders
- CIRCA develops a Scope of Work
  - What type of modeling needs to be done?
  - What type of stakeholder engagement needs to be completed?
  - What are the deliverables?
- CIRCA hires a consulting firm on behalf of the town

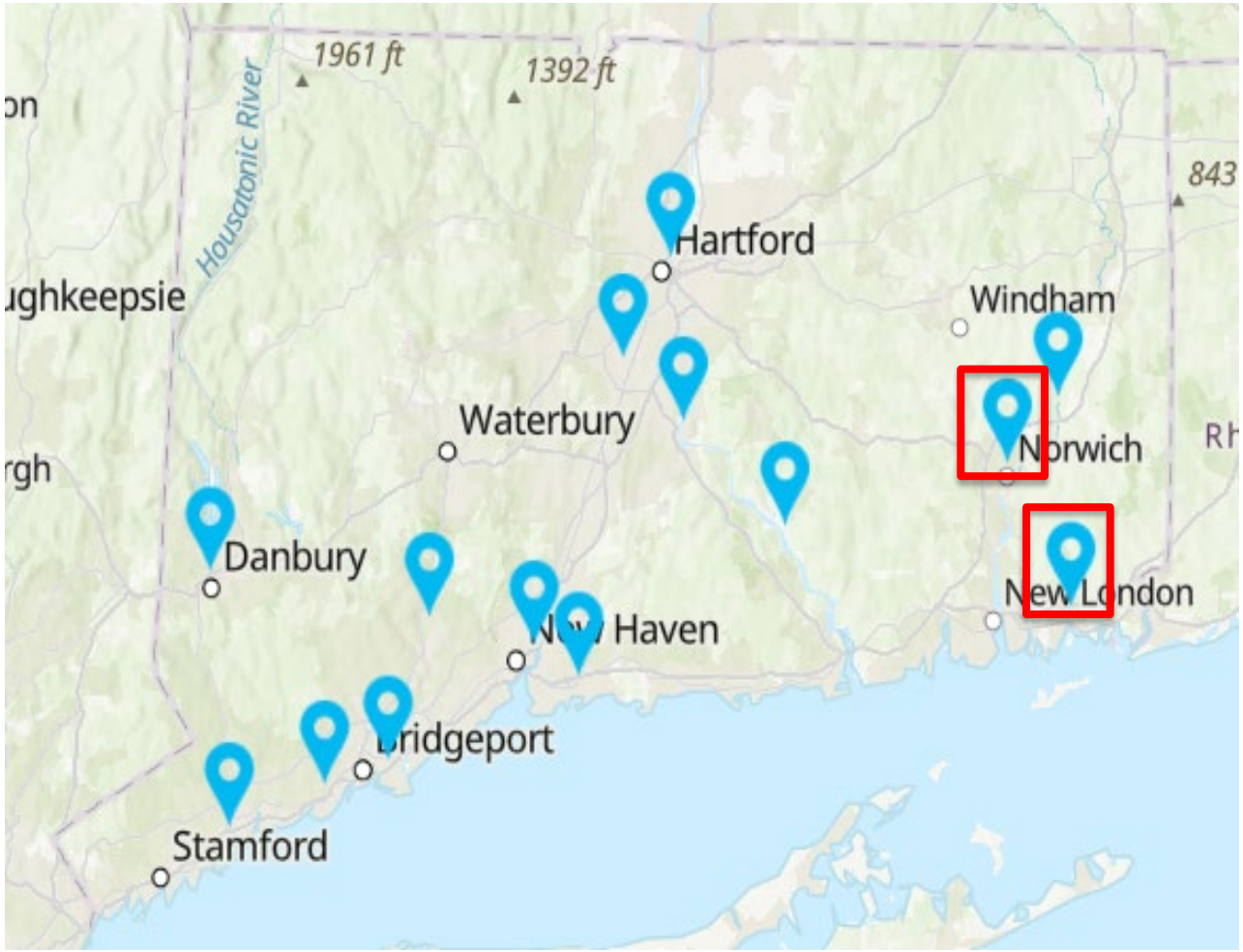


What do the consultants do for these projects?

- **Future and Existing Conditions Report**
  - What is the flooding like now? What will it be like in the future?
  - What is heat exposure like now? What will it be in the future?
- **Concept Designs for Mitigation**
  - Green Infrastructure
  - Resilient Corridors
  - Cooling alternatives (cooling centers, resilience hubs..)
  - Drainage system improvements
- **Benefit Cost Analysis**
  - Will FEMA fund the project?
  - Will the project cost less than the expected damages if an area floods?

Goal: The products from the projects set the town up to apply for state advancement or federal implementation grants

Phase III Project Areas



7 Projects from RCT 1.0

Ansonia
Branford
Danbury
New Haven (Fair Haven)
Fairfield
South Norwalk
Stratford

7 Projects from RCT 2.0

East Haddam
Jewett City
Yantic River
Portland
Stonington Mystic
East Hartford
Piper and Webster Brook

Contact Us:

Nicole Govert: nicole.govert@uconn.edu

Mary Buchanan: mary.buchanan@uconn.edu