RESILIENT RHODY

AN ACTIONABLE VISION FOR ADDRESSING THE IMPACTS OF CLIMATE CHANGE IN RHODE ISLAND
Resilient Rhody by the Numbers

• 61 actions with 1,3,5-year goals
  o 50 of 61 actions achieved year 1 goals

• Accelerate funding and financing
  o Resilient Rhody has been a catalyst for $13mm in new climate resilience funding
  o $7mm for Municipal Resilience Program proposed in 2021 budget

• Establishing a process for building a pipeline of climate resilience projects
Implementation Barriers

Staff capacity:
• Ensure all major drinking water suppliers have contingency contracts
• Strengthen storm resilience and recovery at all statewide ports
• Prioritize protection of local fuel supply along evacuation routes
• Develop a petroleum set-aside program
• Create standard impacts and response procedures for critical facilities

Local challenges:
• Work with local governments to establish sustainable revenue streams
• Establish a notification system for dam safety
• Develop Emergency Action Plans for all statewide high hazard and significant hazard dams

Funding:
• Provide additional fuel-storage at major wastewater treatment facilities
• Expand flood modeling and mapping within inland areas
• Conduct statewide reassessment of evacuation routes and signage
Resilient Rhody Success Stories

Urban Forests for Climate and Health Initiative

• Collaboration with the Resilient Rhody Leadership Team, U.S Climate Alliance, and American Forests.

• Establish a statewide urban tree planting goal, create an online decision support tool for optimizing tree planting and public health, and enable a support system that gives each municipality the opportunity to deploy local tree planting.

Health Equity Zone Resiliency Project – Department of Health

• Three Health Equity Zones were funded to assess their strengths and vulnerabilities associated with the effects of climate change on human health, identify strategies to reduce climate hazards, and implement a local resiliency project.

Small Business Resilience – Statewide Planning

• Provides actionable recommendations for reducing risk to extreme weather events across eight small business sectors: Restaurant/Food • Retail • Lodging & Accommodations Water-Dependent • Manufacturing • Service Provider • Construction • Real Estate / Property Management
Resilient Rhody: Municipal Resilience Program

• Partnership between Rhode Island Infrastructure Bank and The Nature Conservancy

• The MRP is open to all 39 municipalities in Rhode Island
  o 5 participated in 2019
  o 9 selected for 2020

• Provides technical assistance to complete the “Community Resilience Building” process to identify projects

• Action grant funding is available to implement priority projects
2019 Cohort Workshops

Top Hazards

1. Major storm events
   Hurricanes, Nor’easters, Winter (snow/ice) storms

2. Coastal Flooding
   Storm surge

3. Extreme heat
   Heatwaves
2019 Cohort Workshops
Top Municipal Concerns / Vulnerabilities
Resilient Rhody: Municipal Resilience Program

2019 Cohort Workshops
Top Priority Actions

[Bar chart showing priority actions]
Resilient Rhody: Municipal Resilience Program

- MRP is building a project pipeline and accelerating implementation
  - 2019 Cohort: Identified 48 Projects totaling ~$14mm
  - 2019 Cohort: $1mm in Action Grants allocated from Rhode Island Infrastructure Bank

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Project Type</th>
<th>Action Grant Award</th>
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</thead>
<tbody>
<tr>
<td>Barrington</td>
<td>Coastal restoration and green stormwater infrastructure projects</td>
<td>$201,000</td>
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<tr>
<td>Portsmouth</td>
<td>Dam rehabilitation and green stormwater infrastructure for flood mitigation and water quality benefit</td>
<td>$339,000</td>
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<tr>
<td>Warren</td>
<td>Green stormwater infrastructure at public access points</td>
<td>$156,000</td>
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<tr>
<td>Westerly</td>
<td>Flood protection at wastewater treatment facility pump station</td>
<td>$304,000</td>
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Total: $1,000,000

4/24/2020
<table>
<thead>
<tr>
<th>Do</th>
<th>Support</th>
<th>Inspire</th>
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</thead>
<tbody>
<tr>
<td>Implement High Impact Resilience Projects</td>
<td>Build a centralized resource for funding and financing opportunities</td>
<td>Update on Resilient Rhody progress and project case studies</td>
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<tr>
<td>• All MRP funded projects</td>
<td>• Resource to be updated regularly and includes timelines, project applicability, and key contacts</td>
<td>• Publish an update to Resilient Rhody with progress made to identified actions and new climate science available.</td>
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www.climatechange.ri.gov
RHODE ISLAND
URBAN FORESTS
FOR
CLIMATE & HEALTH

Goal:
Create Technical, Finance and Policy Tools that optimize Urban Forests to Slow Climate Change and Improve Public Health.

RI EC4 Update – April 2020
ABOUT AMERICAN FORESTS

- Founded in 1875
- Oldest national non-profit conservation organization
- Mission: To **Inspire** and **Advance** the **conservation** of forests, which are essential to life
Why focus on urban trees to address climate and health issues?

Climate:

- Urban forests contribute significantly to reducing the rate of global temperature increases.
- Urban forests in the U.S. currently sequester 1.8 percent of U.S. emissions and reduce residential energy use for heating and cooling by 7.2 percent.
- A major goal of this project is to define how much more U.S. urban forests can contribute to reducing global temperatures and create tools to achieve that goal in Rhode Island and then nationwide.

Public Health:

- Heat has caused more deaths in the US than any other type of extreme weather event, including tornadoes, hurricanes, floods, earthquakes, and lightning. By 2070, Rhode Island could have up to 50 days over 90°F per year. (RIDOH Climate Change and Heat Resiliency Report, 2015).
- Research from the Rollins School of Public Health projects a ten-fold increase in heat related deaths in eastern U.S. cities by 2050.
- This project will strategically target tree canopy growth in the most health-vulnerable populations like low-income families with no air conditioning, and neighborhoods with high concentrations of youth and elderly.
Project Components

1. Climate & Health Forestry Action Tool
2. Climate & Health Action Guide
3. City Forest Credits
4. Policy & Financing
5. Public Engagement & Training
Where does need overlap with opportunity?

What is the climate & health impact of our work?

Where do we want to be in X years?

Where are we now and what can we expect?

Where does need overlap with opportunity?

1. Assess

2. Set Goals

3. Select

4. Measure Impact

CLIMATE & HEALTH FORESTRY ACTION TOOLS

Right Tree(s), Right Place(s)
TREE EQUITY SCORE: DEFINED

**TREE EQUITY SCORE** is a way to measure how well a neighborhood, municipality or region is ensuring the benefits of urban tree canopy are reaching populations that are particularly susceptible to extreme heat and other conditions.
TREE EQUITY SCORE

Tree Equity Score = Canopy Gap* priority index
Prioritizes tree planting across neighborhoods with canopy gaps.

Priority index: - Five equally weighted characteristics:

- Income: % population below 200% of poverty
- Employment: Unemployment rate
- Race: % NOT white non-Hispanic
- Climate: Urban Heat Island severity
- Dependency ratio (Seniors & Children, coming soon)

Notes:

Lower numbers (darker colors on map) mean greater priority
The greater the need (canopy gap) and the greater the priority, the lower the score
NEXT STEPS

- **Spring 2020**: RESEARCH & COLLECT DATA, DRAFT TOOLS TO ASSESS NEED
- **Summer 2020**: PUBLISH NEW TOOLS & RESOURCES, SELECT HEZ KICK-OFF TREE PLANTING PROJECTS
- **Fall 2020**: REFINING TOOLS AND RESOURCES FOR CLIMATE & HEALTH INFORMED URBAN FORESTRY PRACTICES
- **Winter 2021**: HOST WORKSHOPS AND TRAININGS FOR RHODE ISLAND PRACTITIONERS TO ADOPT NEW TOOLS & RESOURCES
- **Spring 2021**: HEZ KICK-OFF TREE PLANTING EVENT!