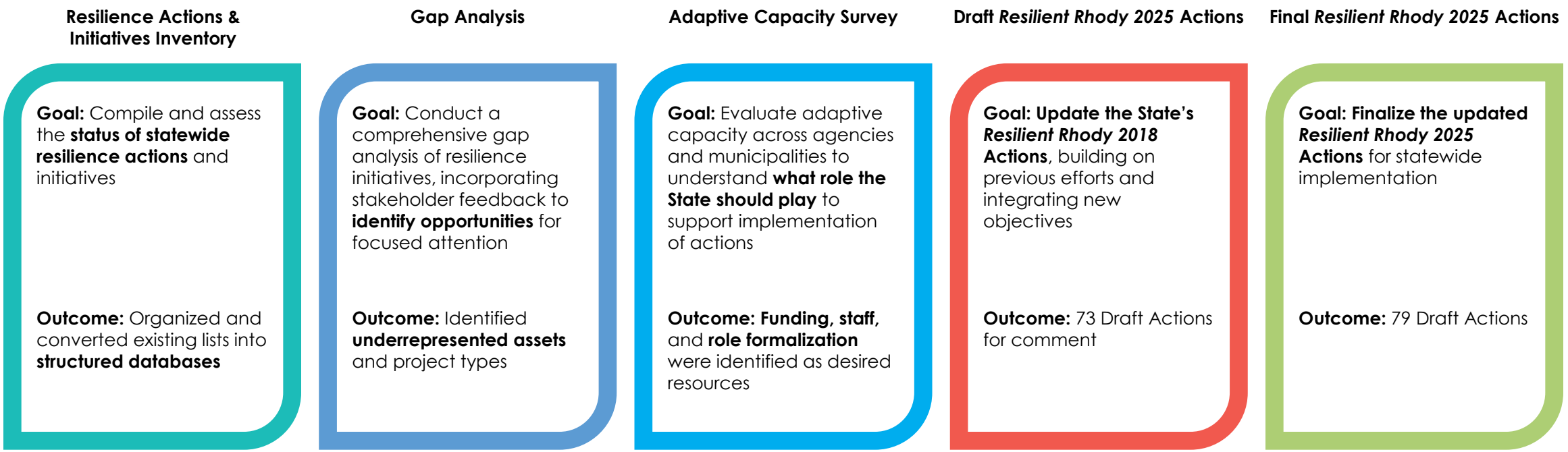
Chapter 2
Resilient Rhody 2025 Actions

Development of the *Resilient Rhody 2025* Actions

The final *Resilient Rhody 2025* Actions presented herein are the result of a multi-step process conducted from May through November 2025.

These Actions reflect findings from the subtasks outlined below and incorporate feedback from State, municipal, partner, and community stakeholders. Items from the previous *Resilient Rhody* reports and the 2024 Rhode Island State Hazard Mitigation Plan also informed the process.



Resilient Rhody 2025 Actions

Document Structure

The *Resilient Rhody 2025* Actions use an updated identification system as shown on the right.

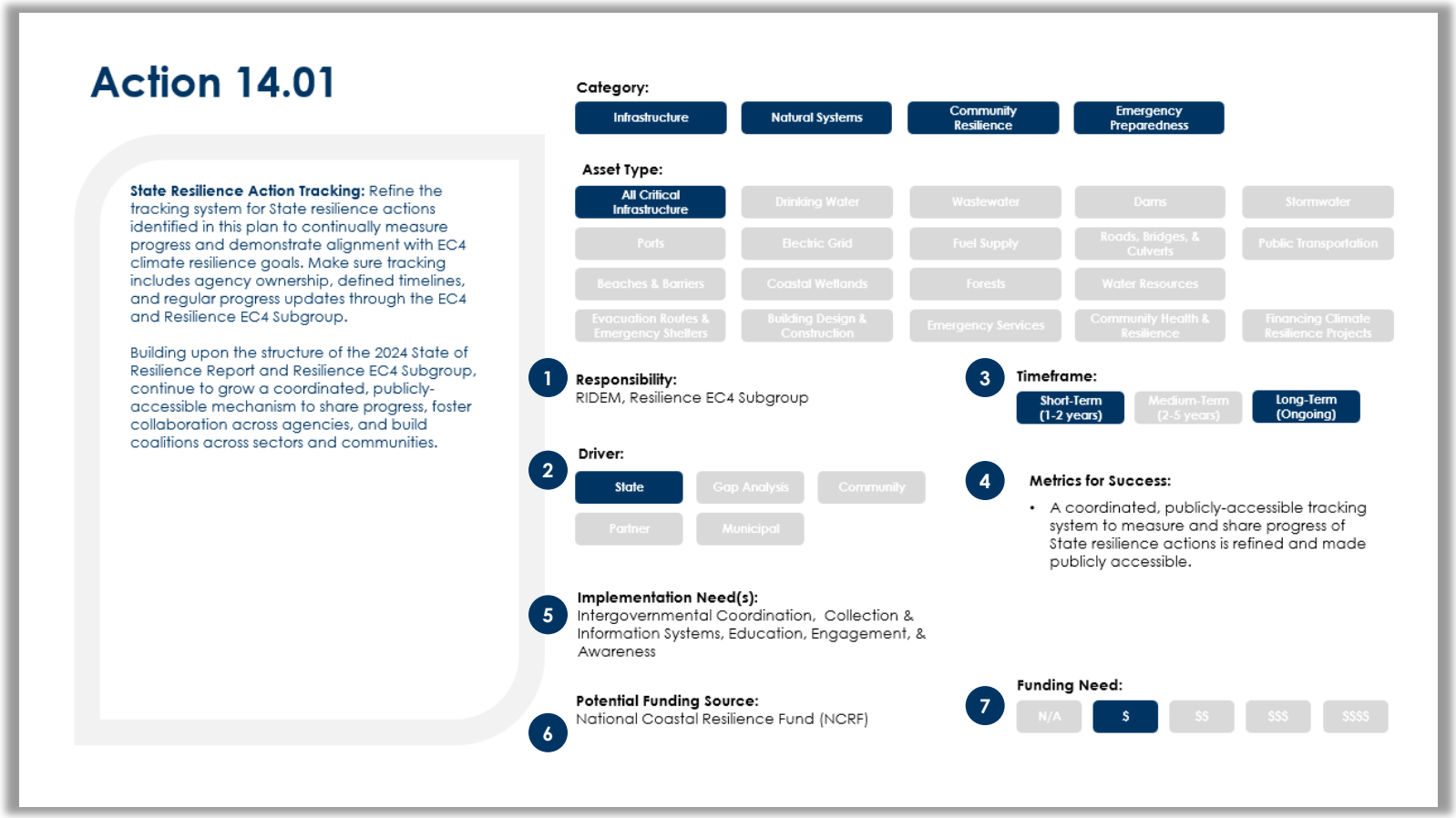
Each Action ID corresponds to the focus areas and asset categories established in the *Resilient Rhody 2018* framework.

The adjacent table includes hyperlinks to the relevant sections to support navigation.

ID	Action Focus
1	Drinking Water Systems
2	Wastewater Treatment Facilities
3	Dams
4	Stormwater Infrastructure
5	Ports
6	Electric Grid
7	Fuel Supply
8	Roads, Bridges and Culverts
9	Public Transportation
10	Beaches and Barriers
11	Coastal Wetlands
12	Forests
13	Water Resources
14	Statewide Resilience: All Critical Systems
15	Building Design & Construction
16	Evacuation Routes & Emergency Shelters
17	Emergency Services
18	Community Health & Resilience
19	Financing Climate Resilience Projects
20	Cross-Sector Coordination

Actions' Presentation

Each action is presented on its own page, detailing the action, category, and asset type, along with the following information:



1. Responsibility
Indicates the lead or partner entities responsible for the action.

2. Action Driver
Identifies the stakeholder group(s) that initiated, influenced, or recommended the action.

3. Timeframe
Indicates short-term, medium-term, or long-term/ongoing actions.

4. Metrics for Success
Indicators of success to measure progress towards the action against.

5. Implementation Need(s)
Indicates policy or legislative needs necessary to implement the action. These are categorized into four groups: Funding, Policy & Compliance, Tools & Training, & Coordination needs.

6. Potential Funding Source:
Indicates potential funding sources ranging from federal, state, local, and innovative mechanisms.

7. Funding Need
Indicates the relative funding amounts necessary to carry forward the action. N/A indicates actions focused on advocacy, efficiency, or priority setting.

Implementation Needs Tags

To guide the steps needed to implement these actions, each action is tagged with corresponding implementation requirements.

The framework on the right defines each of the possible implementation needs' tags. Actions may include multiple tags.

Category	Policy/Legislative Needs Tags	Description
Funding	Funding	Funding required to develop new programming or invest in resilience actions
	Community Incentives	Programs or policy tools that encourage voluntary resilience actions by residents, businesses, or property owners (e.g., tax abatements, rebate programs).
	Direct Government Investment & Procurement	Using government purchasing power and capital investments to drive resilient infrastructure, green procurement policies, or direct public works projects that model climate-resilient practices.
Policy & Compliance	Land Use Policy	Changes to zoning, building codes, or land use planning needed to support resilient development, open space preservation, or managed retreat.
	Rules & Regulations	Regulatory updates needed to remove barriers or mandate climate-resilient practices.
	Enforcement & Compliance Mechanisms	Creating oversight systems, inspection protocols, penalties, or compliance monitoring for existing or new climate resilience requirements.
Tools & Training	Collection & Information Systems	Creating requirements for gathering, standardized reporting, monitoring systems, or information sharing platforms that support resilience decision-making across sectors.
	Technical Assistance & Capacity Building	Establishing government programs to provide technical expertise, professional development, or direct support services to help communities, businesses, or other agencies implement resilience measures.
	Education, Engagement, & Awareness	Public education campaigns, data, and technical training, or stakeholder engagement efforts required to build support or understanding of climate resilience.
Coordination	Intergovernmental Coordination	Establishing formal mechanisms for collaboration between State, federal, and local governments, including interstate compacts, regional authorities, or mandated coordination protocols for climate resilience planning.
	Public-Private Partnership Frameworks	Establishing legal structures and policies that facilitate collaboration between government and private sector for resilience investments, risk-sharing arrangements, or innovative financing mechanisms.
	Emergency Preparedness & Response Authorities	Developing special governmental authorities for climate emergencies, including streamlined permitting during disasters, emergency procurement powers, or mandatory evacuation/relocation authorities.

Funding Need & Potential Funding Source

Understanding funding requirements is essential for advancing these actions.
Therefore, each action includes an estimated Funding Need, determined through targeted research and by adapting cost benchmarks from comparable resilience initiatives. The *Resilient Rhody 2025* Actions Funding Needs estimates reflect a range of implementation scales, from pilot initiatives to comprehensive, statewide programs. These estimates are preliminary and will require further refinement as actions advance through scoping, program design, and implementation planning.

These estimates do not represent full construction costs for large-scale capital or infrastructure projects. The costs for actions involving design and construction, or those establishing funding mechanisms for such projects, were not estimated because they require project-specific cost analysis. These actions indicate when significant investment is anticipated. Inflation adjustments have not been applied due to the preliminary nature of these actions and the lack of sufficient detail for accurate projections. Funding needs for actions tagged as ongoing will require recurring allocations to remain effective; however, timing and funding levels will vary based on the nature of the activity and Rhode Island's evolving priorities. Not all actions will receive the same level of funding or follow the same schedule in each cycle. Funding needs are assessed based on a single cycle. Actions focused on advocacy, efficiency, or priority setting are marked as "N/A." This does not imply that coordination actions require no funding; rather, coordination costs have not been calculated. The possible funding ranges are outlined below.

Funding Need Tags

$	$$	$$$	$$$$	Non-monetary
Less than $500k	$500k - $1M	$1 - $5M	> $5M	Advocacy, efficiency, or priority setting actions where a dollar amount is not applicable, warranted, or quantifiable

Each action highlights potential funding sources.
Each action lists potential funding sources, based on previous funding assignments and the Funding & Financing Mechanisms Inventory developed for this Plan. These assignments are indicative, not exhaustive. The Plan acknowledges that funding availability and continuity cannot be guaranteed, and other sources may apply beyond those listed.

Funding Sources

Based on mechanisms within the Chapter 7: Funding & Financing Mechanisms Inventory and previous assignments for the *Resilient Rhody 2018* Actions.

Drinking Water Systems

Action 1.01

Emergency Water Interconnections Strategy: Emergency Water System interconnections provide redundancy of supply and the ability to address water emergencies rapidly and efficiently across water supply districts. Assist both major and local water suppliers in developing Emergency Interconnection Programs to address supply vulnerability among systems throughout the state.

Conduct a technical review of Emergency Interconnection Strategies. Identify and prioritize, through statewide analysis, needed redundancies and interconnections to be implemented, drawing upon alternative supplies identified in local Water Supply System Management Plans, existing interconnections studies, and an update to the Emergency Water System Interconnection Study (Sep. 2000). Through this process, consider where merging of systems for regional collaboration could be of benefit. Create funded incentive programs to enact projects, building upon existing Emergency Water Systems Interconnections program (490-RICR-00-00-3).

In addition, assist water suppliers in identifying priority adaptation strategies that maximize co-benefits while evaluating potential trade-offs. Incorporate runoff regulation as a key consideration in the development and selection of these strategies.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- **Drinking Water**
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
WRB w/ RIDOH Support

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Implementation Need(s):
Rules & Regulations, Emergency Preparedness & Response Authorities, Funding Authorizations

Potential Funding Source:
RIIB - Drinking Water State Revolving Fund (DWSRF), DWSRF - Set Asides, Clean Water State Revolving Fund (CWSRF) (runoff regulation component), USDA Rural Development Water Programs, General Obligation bond funding

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Metrics for Success:

- The emergency water systems interconnections study (Sept. 2000) is updated to identify needs for the interconnections and opportunities for resolving regional water issues across the state.
- Necessary water supply redundancies and interconnections are identified and prioritized.
- Existing programs are funded, and additional incentive programs are identified and created.

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Establishing and implementing Emergency Interconnection Programs across the state will require significant investment. The funding required for resulting projects will require project-level cost estimation.

Action 1.02

Emergency Water Supply Management: Within Water Supply System Management Plans, ensure all major suppliers maintain up-to-date contingency contracts for emergency water supply purchases and have clearly defined interconnection and protocols for distributing alternative supply of safe drinking water. Establishment and mapping of emergency interconnections, mutual aid agreements, and distribution points for community resources. Establish mechanisms for bottled water purchase and distribution. Create a centralized coordination framework across drinking water utilities that allows for knowledge transfer and information sharing, as well as fosters partnerships for interconnection, merging, and mutual aid.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	**Drinking Water**	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA w/ RIDOH Support, WRB

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- All major water suppliers maintain and update contingency contracts for emergency water supply purchases.
- and mapping of emergency interconnections is completed.

Implementation Need(s):
Intergovernmental Coordination, Collection & Information Systems, Enforcement & Compliance Mechanisms, Emergency Preparedness & Response Authorities

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG), RIIB – Drinking Water State Revolving Fund (DWSRF), DWSRF - Set Asides

Funding Need:

N/A	$	$$	**$$$**	$$$$

Action 1.03

Spillway Management: Develop protocols and formal mechanisms to support proactive spillway management that mitigates downstream flooding without adverse impacts on water supply operations. Develop regional spillway management agreements between State government, local governments, and water suppliers, incorporating both upstream and downstream entities. Generate overview of best practices for resilient spillway management drawing from local, regional, and national examples.

Develop a formal interagency coordination framework for water utility climate preparedness, assigning lead roles and establishing shared platforms to advance common goal setting and communication between water suppliers that manage reservoirs and downstream municipalities.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- **Drinking Water**
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM w/ WRB Support

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Implementation Need(s):
Rules & Regulations, Intergovernmental Coordination, Collection & Information Systems, Technical Assistance & Capacity Building, Emergency Preparedness & Response Authorities

Potential Funding Source:
USDA Rural Development Water Programs, RIIB - Clean Water State Revolving Fund (CWSRF), National Estuary Program (Narragansett Bay Estuary)

Metrics for Success:

- Regional spillway management agreements are developed.
- Interagency water utility climate preparedness coordination framework is developed and implemented.
- A shared platform is established between water suppliers and municipalities.

Funding Need:

- N/A
- $
- $$
- **$$$**
- $$$$

Action 1.04

Drinking Water Studies & Program: Continue to assess the vulnerability of drinking water supplies, including wells, to projected coastal and inland flooding, groundwater impacts and drought utilizing scenario modeling to inform capital investment planning. Conduct tabletop exercises with RIEMA, municipal public works, and other relevant stakeholders.

Conduct specific saltwater intrusion studies along the coast, drawing upon the knowledge and existing work of state subject matter experts. Saltwater intrusion studies should incorporate geologic, hydrogeologic, and numerical modeling to effectively address storm surge, sea level rise and groundwater impacts. In scenarios of saltwater contamination, identify best practices for adaptation solutions drawing upon local, regional, and national examples (ex. abandoning brackish water supplies and securing backup water supplies and assessing the feasibility of desalination as a long-term drought and saltwater intrusion resilience strategy) and provide funding for these solutions.

Continue evaluating the health and social impacts of climate-related contamination and establish monitoring programs. Develop public education materials that communicate the climate-related risks to drinking water and groundwater aquifers, summarizing key findings from these assessments. Continue to assess the vulnerability of drinking water supplies to projected coastal and inland flooding, groundwater impacts and drought utilizing scenario modeling to inform capital investment planning. In this process, consider compounding impacts such as water quality, human health, and ecological considerations.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	**Drinking Water**	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
WRB w/ RIDOH and RIEMA

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- Saltwater Intrusion studies are completed in vulnerable coastal areas.
- Public education materials about climate-related risks to drinking water are developed.

Implementation Need(s):
Education, Engagement, & Awareness, Collection & Information Systems, Direct Government Investment & Procurement

Potential Funding Source:
RIIB - Drinking Water State Revolving Fund (DWSRF), Clean Water State Revolving Fund (CWSRF), FEMA Flood Mitigation Assistance Grant Program

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Estimate is based on a single implementation cycle.

Wastewater Treatment Facilities

Action 2.01

Wastewater Emergency Management: Ensure major wastewater systems have adequate backup power systems to sustain operations during long-term power outages through annual performance reporting and status updates to a statewide base.

After federally or state declared disaster events, conduct safety assessments for wastewater infrastructure (facilities and pump stations).

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- **Wastewater**
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM w/ support from RIEMA

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Annual performance reporting is completed.
- Number of wastewater infrastructure safety assessments increases after federally or State declared disaster events.

Implementation Need(s):
Collection & Information Systems

Potential Funding Source:
RIIB - Clean Water State Revolving Fund (CWSRF), RIDEM Climate Resilience Fund (CRF), RIDEM Wastewater Treatment Facility (WWTF) Resilience Fund, USACE Continuing Authorities Program

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

*Not inclusive of physical installation

Action 2.02

Wastewater System Adaptation: Accelerate actions to enhance the resiliency of wastewater infrastructure at the local level, including resilience projects identified in Implications of Climate Change for RI Wastewater Collection & Treatment Infrastructure. Proactively address projected coastal & inland flooding and saltwater backflow impacts in project planning and design phases, prioritizing infrastructure located within flood zones. All projects should align with local hazard mitigation, comprehensive, and municipal resilience plans, using shared risk (ex. STORMTOOLS) to ensure consistency. Convene stakeholders and research viable alternatives to centralized wastewater treatment including opportunities to recover heat, phosphorus, and other wastewater components, as well as opportunities to recharge groundwater and increase ecosystem resilience.

Following outcomes of the *Resilient Rhody 2025*, design adaptation strategies for identified flood vulnerable facilities (ex. interconnections and abandonment of highly vulnerable stations). Ensure continual analysis of vulnerable on-site septic systems following the 2025 Resilience Plan. Review and establish expanded funding for the Wastewater Treatment Facility Resilience Fund and Community Septic System Loan Program (CSSLP), and similar funds, to support resilience of wastewater facilities and upgrading of septic systems.

Throughout these initiatives, consider compounding impacts of wastewater facility flood hazards, such as interaction with known pollutants such as PFAS, and provide funding and technical support to minimize these concurrent water quality hazards.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	**Wastewater**	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Resilience projects identified by Implications of Climate Change for RI Wastewater Collection & Treatment infrastructure are completed.
- Adaptation strategies are implemented for flood vulnerable facilities identified in *Resilient Rhody 2025*.
- Funding for Wastewater Treatment Facility Resilience Fund and Community Septic System Loan Program is expanded.

Implementation Need(s):
Land Use Policy, Collection & Information Systems

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program, RIDEM Climate Resilience Fund (CRF), RIDEM Wastewater Treatment Facility (WWTF) Resilience Fund, RIIB - Clean Water State Revolving Fund (CWSRF), RIIB Municipal Resilience Program (MRP) Action Grant, RIIB Community Septic System Loan Program (CSSLP)

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Does not account for project-specific construction costs. Estimate for on-going elements is based on a single implementation cycle.

Action 2.03

Wastewater Workforce Development: Establish a workforce development program for resilient wastewater infrastructure planning, design, construction, and maintenance.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- **Wastewater**
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RI DLT, RIDEM

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- A wastewater resilience workforce development program is established.

Implementation Need(s):
Technical Assistance & Capacity Building

Potential Funding Source:
USDA Rural Development Training Programs, NOAA Environmental Literacy Program, RIIB Wastewater Treatment Facility Resilience Fund (WWTFRF), RIIB Municipal Resilience Fund (MRP), Resilient Rhody Infrastructure Fund (RRIF)

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Dams

Action 3.01

Dam Safety: Develop updated Emergency Action Plans (EAPs) for all statewide high hazard and significant hazard dams, including identifying evacuation routes. Coordinate the development of Emergency Action Plans (EAPs) for dams with municipal emergency management agencies and regional watershed resilience plans to ensure consistency and operational readiness.

Develop a robust and enforceable statewide program to ensure compliance with dam safety and resilience standards. Conduct a statewide, state-funded legal assessment of dam ownership, including a legal analysis of State and municipal rights regarding orphaned dams. Create procedures for those building downstream of dams to consider inundation area below the dam through the State Building Code Commission, as required by regulation. Continue to implement the Dam Failure Warning System.

Continue to prioritize remediation and removal investments as informed by the 2017 Dam Hazard Study, as well as through findings of this statewide resilience plan. Establish State funding program for dam resilience & removal, to benefit both community resilience and habitat connectivity.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- **Dams**
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM w/ support from RIEMA

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Emergency Action Plans are updated for all high and significant hazard dams.
- A dam safety compliance program is updated, including statewide legal assessment of dam ownership and downstream building procedures.

Implementation Need(s):
Rules & Regulations, Enforcement & Compliance Mechanisms, Emergency Preparedness & Response Authorities

Potential Funding Source:
FEMA Flood Mitigation Assistance Grant Program, FEMA National Dam Safety Program, USACE Section 206 & Section 14 (Planning Assistance to States), RIDEM Climate Resilience Fund (CRF), RIIB Municipal Resilience Program (MRP), RIIB Resilient Rhody Infrastructure Fund (RRIF), RI Green Bonds, RIDSP Resilience Technical Assistance Program

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

*Establishing a State funding program for dam resilience & removal will require significant investment. The funding required for this program and resulting projects will require project-level cost estimation.

Stormwater Infrastructure

Action 4.01

Stormwater Design Rules: Update the Stormwater Design and Installation Rules to reflect changing precipitation patterns, advances in available technology, and other policy developments. Reference regional, national, and international resources to develop these updates, including SNEP Stormwater Management Guide. Ensure alignment with most up-to-date standards laid out by the American Society of Civil Engineers and the International Building Code. Include guidance on conducting re-evaluations of stormwater system capacities in conjunction with regular maintenance and cleaning of stormwater system components.

Through these updates, establish a statewide accessible language standard around design storms, moving from yearly occurrence (100yr, 500yr) to % annual chance (1% chance, 0.2% chance).

Ensure all projects adhere to updated rules and clearly demonstrate how impact minimization measures have been integrated into their planning and design. Design trainings for State agencies on the new rule. Integrate requirements into the RI Pollutant Discharge Elimination System (RIPDES) stormwater permitting. The New England Stormwater Retrofit Manual should be used to inform and support initiation of the revision of the Rhode Island MS4 Permit.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- **Stormwater**
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Stormwater Design and Installation Rules are updated to reflect updated precipitation and alignment with ASCE and IBC standards, SNEP Stormwater Management Guide, and other resources.
- Language around design storms is changed from yearly occurrence to percentage annual chance statewide.

Implementation Need(s):
Rules & Regulations

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Potential Funding Source:
RIIB - Clean Water State Revolving Fund (CWSRF) CWSRF - Set Aside, RIDEM Climate Resilience Fund (CRF), RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, FEMA Flood Mitigation Assistance Grant Program

Action 4.02

Green Infrastructure & Water Quality: Use Total Maximum Daily Loads (TMDL) and watershed management plans to prioritize resilience projects that also provide water pollution control benefits to existing drainage systems and remove existing impervious cover.

Encourage the integration of green infrastructure to enhance the capacity of traditional stormwater systems while delivering co-benefits such as improved water quality, ecosystem health, and community resilience. Strengthen state-level commitments to tree retention, native plantings, and pollution reduction—including marine debris and plastics—to minimize damage and cleanup needs following heavy precipitation events. Expand the use of storage areas for combined sewer overflows (CSOs) to increase storage capacity and containment of polluted materials after extreme weather events. Integrate green infrastructure into the Sustainable SITES Initiative program.

Build incentives to utilize green infrastructure solutions into criteria for funding programs. Publicize successful examples of green infrastructure projects. Simplify the permitting process for these projects (eg. streamlining, certification, etc.) and ensure guidance is clear on requirements for retrofits versus new development. Ensure there is also guidance on the maintenance requirements for green infrastructure.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	**Stormwater**
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM, CRMC

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Green infrastructure is integrated into stormwater system projects, with projects documented and publicized.
- Water quality improves in watersheds that implement green infrastructure.
- Funding and permitting processes are updated to incentivize green infrastructure and streamline approvals.

Implementation Need(s):
Rules & Regulations, Community Incentives

Potential Funding Source:
RIIB - Clean Water State Revolving Fund, Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Funds, USACE Section 206 & Section 14(Planning Assistance to States)

Funding Need:

N/A	$	$$	$$$	**$$$$**

*Green infrastructure solutions will require significant investment. The total funding required for construction costs will require project-level cost estimation.

Action 4.03

Stormwater Management Funding: Work with local governments to establish sustainable revenue sources for the operation and maintenance of local stormwater management systems and investment in needed upgrades (ex. culvert upsizing, etc.) to address drainage issues, water quality, and other flooding concerns. Gather, develop, and convey information regarding model stormwater utility district approaches that municipalities can implement locally. In this process, highlight national approaches with local relevance that are successful, feasible, and equitable. Work with municipalities who are actively exploring these measures to convey lessons learned on the ground statewide.

Develop State-led funding streams for townwide stormwater vulnerability assessments and the purchase of stormwater maintenance equipment to be shared across regions, including vacuum trucks and excavators. Direct technical assistance services and additional funding support to small and rural municipalities.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- **Stormwater**
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIIB

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Metrics for Success:

- Water quality and stormwater drainage improves across the State.
- Assessment of model stormwater utility district approaches is completed, with findings shared with municipalities.
- Funding streams for townwide stormwater assessments, maintenance equipment purchasing, and direct technical assistance are established.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
RIIB - Clean Water State Revolving Fund (CWSRF), Drinking Water State Revolving Fund (DWSRF) Small Systems Technical Assistance Set Aside, RIIB Community Project Assistance Fund (CPAF), RIIB Municipal Resilience Program (MRP) Action Grant, RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, USDA Rural Development Water Programs, EPA Southeast New England Program Opportunity to Advance Resilience (SOAR) Fund

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Establishing a State funding program for stormwater assessments and equipment will require significant investment. The funding required for this program and resulting projects will require project-level cost estimation.

Ports

Action 5.01

Port Resilience: Strengthen storm resilience and post-storm recovery at RI ports through strategic partnerships and planning. Shipping lines will turn to ports that rapidly resume normal operations after Nor'easter's, tropical cyclones, hurricanes and other extreme weather events. Rhode Island and cities like Providence and East Providence should approach storm resilience and climate change as a business opportunity through the inclusion of resilience planning and port electrification.

Continue to support collaborative partnership between the State and port community (e.g. the State Port Manager position, the Port/Community Working Group, the Freight Advisory Committee, People's Port Authority, and Racial and Environmental Justice Committee), as well as the inclusion of resilience in port planning processes such as the ProvPort Master Plan.

Conduct a State Port Economic Vulnerability Study to demonstrate how climate change will impact maritime economic sectors including tourism, supply chains, and fisheries.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM, CRMC, RIEMA

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Climate resilience is integrated into the ProvPort Master Plan.
- A State Port Economic Vulnerability Study is completed.

Implementation Need(s):
Intergovernmental Coordination, Technical Assistance & Capacity Building, Public-Private Partnership Frameworks

Potential Funding Source:
USDOT Port Infrastructure Development Program (PIDP) RIIB - Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP), Clean Water State Revolving Fund (CWSRF), Efficient Building Fund (EBF)

Funding Need:

N/A	**$**	$$	$$$	$$$$

Action 5.02

Port Resilience Funding: Seek collaborative funding opportunities to construct storm protection systems along port infrastructure aimed at safeguarding neighboring and disadvantaged communities from storm surges while enhancing access to emergency and medical facilities. Provide State funding for port resilience improvements that implement bulkhead resilience standards. Develop pre-contracts for debris removal after hurricanes.

This initiative not only addresses critical flood protection needs but also fosters resilience in vulnerable neighborhoods, ensuring that residents can reach essential services during severe weather events. By investing in this infrastructure, Providence and Rhode Island can mitigate both immediate risks and the long-term impacts of climate change, ultimately promoting environmental equity and community safety.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- **Ports**
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- State
- Gap Analysis
- Community
- **Partner**
- Municipal

Metrics for Success:

- Storm protection systems supporting port infrastructure increases throughout the State.

Implementation Need(s):
Funding, Emergency Preparedness & Response Authorities

Potential Funding Source:
HUD Community Development Block Grant (CDBG) Program, USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Grant Program, USDOT Port Infrastructure Development Program (PIDP), RIIB - Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP), Municipal Road & Bridge Revolving Loan Fund (MRBRF)

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

*Not inclusive of physical installation. The funding required for these projects will require project-level cost estimation.

Electric Grid

Action 6.01

Grid Resilience & Modernization Reforms:
Advance grid modernization and complementary reforms, aligning with recommendations from the State energy plan and the House Energy Security Resolution Report. Reevaluate regulatory frameworks to better support innovation, transparency, and resilience—ensuring energy projects are clearly identified, appropriately funded, and effectively tracked through existing dockets and performance systems.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- **Electric Grid**
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
DPUC, PUC, OER, and Utilities

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Recommendations from State energy plan and the House Energy Security Resolution Report are implemented.
- Regulatory frameworks are reevaluated.

Implementation Need(s):
Rules & Regulations, Technical Assistance & Capacity Building

Potential Funding Source:
DOE 40101(d) Funding

Funding Need:

- **N/A**
- $
- $$
- $$$
- $$$$

Action 6.02

Energy Security Strategy & Solutions: Continue to implement the Energy Security Strategy and State Energy Security Plan (SESP), which addresses energy security vulnerabilities at the municipal or facility level and is based on findings of the Energy Assurance Plan.

Implemented measures should address risks specific to discrete critical infrastructure assets, including hospitals, police and fire stations, water and sewage treatment plants, senior centers and nursing homes, shelters, correctional facilities, fueling stations, and grocery stores.

Smart energy security investments at these locations and energy resilience solutions can alleviate the impacts of power outages in energy emergencies. Examples of such solutions are backup generation, resilience hubs, distributed generation, combined heat and power, energy storage, and microgrids. Prioritize outreach and support to under-resourced and rural towns, and offer tailored assistance for smaller municipalities lacking grant-writing capacity or staff support.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	**Electric Grid**	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
OER and RIEMA w/ support from DPUC

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Increase in the number of energy resilience solutions implemented at hospitals, police and fire stations, water and sewage treatment plants, nursing homes, shelters, correctional facilities, fueling stations, and grocery stores.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building, Emergency Preparedness & Response Authorities

Potential Funding Source:
Bond/Legislative Request

Funding Need:

N/A	$	$$	$$$	**$$$$**

*Energy security solutions will require significant investment. The funding required for these projects will require project-level cost estimation.

Action 6.03

Energy Resilience & Reduced Power Outages: Foster energy resilience and reduce the frequency and severity of power outages as outlined in Division Docket No. D-17-45 by enhancing storm forecasting tools, enabling real-time weather classification adjustments, enhancing vegetation management, strengthening communications, reducing energy demand, and refining mutual aid agreements for timely crew deployment.

Continue to implement actions proposed in the Electric Infrastructure, Safety, and Reliability Plan.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- **Electric Grid**
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
DPUC, PUC, Utilities

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- **Gap Analysis**
- Community
- Partner
- Municipal

Metrics for Success:

- Energy resilience actions outlined in Division Docket No. D-17-45, Docket 25-25-EL, and the Electric Infrastructure, Safety, and Reliability Plan are implemented.

Implementation Need(s):
Intergovernmental Coordination

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG), RI OER Clean Energy Programs & Power System Transformation Coordination, RIIB Municipal Resilience Program (MRP), RIDSP Resilience Technical Assistance Program

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Energy resilience solutions will require significant investment. The funding required for these projects will require project-level cost estimation.

Action 6.04

Microgrid Resilience: Use the Resilient Microgrid for Critical Services Report and Program, as well as the RI Public Utilities Commission's (PUC) microgrid report, to inform an updated statewide microgrid program and establish long term state budget funding mechanism to support the grid resiliency and microgrid deployment technical assistance programs, particularly in rural communities.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- **Electric Grid**
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
OER

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Metrics for Success:

- A long-term State budget funding mechanism is established for microgrid deployment technical assistance, with a particular focus on rural areas.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
DOE State Energy Program (SEP), Clean Energy Programs & Power System Transformation Coordination, RIIB - Efficient Building Fund (EBF), Municipal Resilience Program (MRP), Bond/Legislative Request

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Energy resilience solutions will require significant investment. The funding required for these projects will require project-level cost estimation.

Fuel Supply

Action 7.01

Energy Storage & Set-Aside: Develop an Energy Storage Program, including battery energy storage systems, in alignment with the revised Long-Term Contracting Standard for Renewable Energy (R.I. Gen. Laws § 39-26.1-10) to achieve the 600 MW target set for 2033 and that prioritizes non-fossil fuel solutions, to ensure essential public needs are met during a severe fuel shortage.

This program should specify best practices to ensure back-up solutions to priority end-users, such as hospitals, police and fire stations, water and sewage treatment plants, senior centers and nursing homes, shelters, correctional facilities, fueling stations, and grocery stores. This program should also define best practices, such as avoidance of using diesel, and prioritize critical infrastructure assets.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- **Fuel Supply**
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
OER, RIIB, PUC, DPUC, RIE

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Metrics for Success:

- An Energy Storage Program is established.
- Increased number of energy storage projects implemented at hospitals, police and fire stations, water and sewage treatment plants, senior centers and nursing homes, shelters, correctional facilities, fueling stations, and grocery stores.
- Continued tracking of installed energy storage projects.

Implementation Need(s):
Funding, Direct Government Investment & Procurement

Potential Funding Source:
US DOE State Energy Program (SEP), RIIB - Building Fund (EBF), Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP)

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Establishing an Energy Storage Program will require significant investment. The funding required for this program will require project-level cost estimation.

Action 7.02

Fuel Terminals: As part of the development of the State Energy Security Plan, a comprehensive climate vulnerability assessment of fuel terminals and above ground storage facilities was conducted. Continue implementation of the plan to ensure fuel terminals have undertaken all appropriate resilience measures to protect their facilities from future storms and have made provisions to restore operations after storms. This includes continuing strategic long-term planning for improving the resilience of marine terminals. Continue to incorporate this as an asset type into State resilience planning. Establish State flood design standards or guidance for above ground storage tanks and work with regional partners to develop coordination, monitoring, and response frameworks for critical energy supply infrastructure.

Category:

Infrastructure	Natural Systems	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	**Fuel Supply**	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
OER, RIEMA

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	Community
Partner	Municipal	

Metrics for Success:

- Continued compliance with the State Energy Security Plan (SESP) and expanded SESP activity with regional energy security coordination efforts.

Implementation Need(s):
Enforcement & Compliance Mechanisms, Rules and Regulations

Potential Funding Source:
USDOT Port Infrastructure Development Program (PIDP) RIIB - Commercial Property Assessed Clean Energy (C-PACE), Municipal Resilience Program (Strategic planning only), Municipal Infrastructure Grant Program (MIGP)

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Not inclusive of physical installation. The funding required for these projects will require project-level cost estimation.

Roads, Bridges, and Culverts

Action 8.01

Active Transportation Funding: Establish dedicated bond funding and a State budget line item to support climate-resilient active transportation projects, including adaptation and mitigation efforts aligned with the Bike Mobility Plan, State Transit Plan, and others. Ensure these projects also incorporate green infrastructure and nature-based solutions for flood control and heat reduction at these locations, with a focus on improving the resilience and safety of pedestrian, cycling, and transit bridges that serve as key connectors within active transportation networks.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- **Roads, Bridges, & Culverts**
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
Commerce

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Dedicated bond funding and State budget line item are established for active transportation resilience projects.
- The number of green infrastructure and nature-based solutions that are incorporated into active transportation projects increases.

Implementation Need(s):
Funding

Potential Funding Source:
Bond/Legislative Request

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

*The funding required for these projects will require project-level cost estimation.

Action 8.02

Wildlife Corridors: Establish a wildlife crossing initiative to study, identify, and prioritize target areas for restoring habitat connectivity, enhancing biodiversity corridors, and improving public safety through reduced wildlife-vehicle collisions. Identify undersized culverts and bridge crossings, and prioritize for upgrades and up-sizing to both improve aquatic connectivity and reduce flooding.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- **Roads, Bridges, & Culverts**
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDOT, RIDEM

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- A wildlife crossing initiative is established and target areas are identified.

Implementation Need(s):
Land Use Policy, Intergovernmental Coordination, Education, Engagement, & Awareness

Potential Funding Source:
US Fish and Wildlife Service State Wildlife Grants
Wildlife Crossing Pilot Program (FHWA),
RI Department of Transportation Capital Improvement Program (CIP)

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

*Not inclusive of physical installation. The funding required for these projects will require project-level cost estimation.

Action 8.03

Green & Complete Streets: Establish a Rhode Island Green & Complete Streets Program with focus on implementation of projects on the ground (dollars and advocacy) incorporating transparency with social and infrastructure information. Ensure proper maintenance after implementation. Build upon examples from neighboring states (ex., Massachusetts) and those already implemented in local municipalities (ex., Providence and Pawtucket). Integrate the program with ongoing projects for LEED for Neighborhood Development and The Sustainable SITES Initiative. Support Green & Complete Streets initiatives, which provide stormwater reduction benefit, through funding and technical assistance.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- **Roads, Bridges, & Culverts**
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDOT

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- State
- Gap Analysis
- Community
- **Partner**
- Municipal

Metrics for Success:

- A Rhode Island Green & Complete Streets Program is established.

Implementation Need(s):
Intergovernmental Coordination, Collection & Information Systems, Funding, Technical Assistance & Capacity Building

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

Potential Funding Source:
USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Grant Program, RIIB - Municipal Road & Bridge Revolving Loan Fund, Municipal Resilience Fund (MRP), Municipal Infrastructure Grant Program (MIGP), Clean Water State Revolving Fund (CWSRF), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Funds

Public Transportation

Action 9.01

Transportation Resilience: Update the Transit Asset Management Plan for the Rhode Island Public Transit Authority (RIPTA) assets that creates measurable benchmarks and communication approach to ensure a state of good repair and investments that consider future climate risks.

Update the RIPTA Transit Asset Management Plan in 2026. Address high priority sites identified through the Rhode Island Department of Transportation (RIDOT) Resilience Improvement Plan and ensure continued funding to implement resilience measures at these locations. Continue to incorporate resilience findings of the Resilience Improvement Plan into the State Transportation Improvement Program (STIP) and RIPTA Transit Asset Management Plan. Continue to support and fund environmental planning staff at DOT to support this work. Align with Act on Climate priorities and strategies.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- **Public Transportation**
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIPTA, RIDOT, RI Div. of Statewide Planning

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- State
- **Gap Analysis**
- Community
- Partner
- Municipal

Metrics for Success:

- The RIPTA Transit Asset Management Plan is updated to integrate priorities from the Resilience Improvement Plan.
- Findings from the RIDOT Resilience Improvement Plan are incorporated into the State Transportation Improvement Program.
- Resilience benchmarks are established.

Implementation Need(s):
Intergovernmental Coordination, Collection & Information Systems, Funding

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

Potential Funding Source:
USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Planning Grant, RI Department of Transportation Capital Improvement Program, RIPTA Capital Funds, Rhode Island Infrastructure Bank, Bus and Bus Facilities Grant Program

Action 9.02

Public Transportation Continuity: Ensure continuity of the Rhode Island Public Transit Authority (RIPTA) operations following extreme weather events through implementation of hardening projects and backup power generation at key facilities, prioritizing bus service continuity. Publicly communicate any alternative routes or schedules with passengers during events.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- **Public Transportation**
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIPTA

Timeframe:

- Short-Term (1-2 years)
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Metrics for Success:

- RIPTA downtime after extreme weather events decreases.
- The number of RIPTA facilities with backup power and hardened infrastructure increases.

Implementation Need(s):
Enforcement & Compliance Mechanisms

Potential Funding Source:
USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Grant Program, RIIB - Efficient Building Fund (EBF), Bus and Bus Facilities Grant Program

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

*Hardening and back-up power solutions will require significant investment. The funding required for these projects will require project-level cost estimation.

Beaches and Barriers

Action 10.01

Coastal Resilience & Restoration Partnership: Increase the State's ability to advance coastal resilience and habitat restoration by dedicating staff capacity and resources to planning, prioritizing and implementing coastal ecological and community resilience projects.

Through existing and newly created programs, prioritize preserving the dynamic nature of beaches and barriers by advancing strategies such as land acquisition and the placement of conservation easements to protect these critical natural resources. All projects and initiatives will ensure consistency with RI Coastal Resources Management Council (CRMC) regulation as defined in the Coastal Resources Management Program. Partner with local, regional, and national subject matter experts to inform initiatives.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	**Coastal Wetlands**	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM (NBNERR), CRMC

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Additional FTEs allow for creation of an Ecological and Community Resilience team within RIDEM.
- State coastal land acquisition program is created.
- Increased State funding support for coastal conservation and habitat restoration projects.

Implementation Need(s):
Rules & Regulations, Intergovernmental Coordination, Technical Assistance & Capacity Building

Potential Funding Source:
N/A

Funding Need:

N/A	$	$$	$$$	$$$$

Action 10.02

Beach Renourishment: Strategically support renourishment programs, ensuring structurally effective implementation, cost-benefit analyses of projects, and equitable distribution of beach replenishment and planning resources.

Integrate green stabilization techniques such as dune restoration, coir products, and revegetation into renourishment projects. Bring United States Army Corps of Engineers (USACE) beneficial use into RIGIS and collaborate with the Chief Resilience Officer (CRO) on Beach Erosion Commission's recommendations to prioritize State beaches for renourishment.

Create accessible guidance for the beneficial use of dredged sediment material, incorporating innovative placement strategies that enhance coastal habitats. Expand the use of dredged material for multiple uses including salt marsh creation and public access area enhancement.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
CRMC

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- The number of beach renourishment projects using green stabilization techniques increases throughout the State.
- Priority beaches for renourishment are identified using recommendations of the Beach Erosion Commission.
- A plan for beneficial sediment use is initiated.

Implementation Need(s):
Community Incentives, Technical Assistance & Capacity Building, Collection & Information Systems

Potential Funding Source:
USACE Continuing Authorities Program, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, National Coastal Resilience Fund (NCRF), RIDEM Climate Resilience Fund

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Estimate is based on a single implementation cycle.

Action 10.03

Nature-Based Shoreline Solutions: Develop a map of existing hardened shoreline structures and utilize to identify areas for nature-based solutions with Save The Bay's existing map. Identify areas where future hardening would impact adjacent habitats and public access. Support the enforcement of state coastal regulations that encourage nature-based shoreline solutions and prohibit structural shoreline protection and increase resources and capacity for enforcement.

Ensure that state funding programs include dedicated funds and incentives for nature-based solutions. Support identification of opportunities for less utilized offshore nature-based solutions, such as reefs and sills, through funding and assistance. Identify areas where future hardening would impact adjacent habitats and public access and assess public use of existing hardened spaces to ensure future nature-based solutions are designed to maintain cultural uses.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
CRMC

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Existing hardened shoreline structures are mapped.
- Priority areas for nature-based solutions are identified.
- Coastal regulatory programs that prevent shoreline hardening and their enforcement are supported.
- State funding sources include dedicated funds and incentives for nature-based solutions.

Implementation Need(s):
Rules & Regulations, Collection & Information Systems

Funding Need:

N/A	$	**$$**	$$$	$$$$

Potential Funding Source:
USACE Section 206 & Section 14 (Planning Assistance to States), National Coastal Resilience Fund (NCRF), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund

Action 10.04

Resilience of Coastal Features: Continue initiatives for coastal resilience activities, such as scoping & designing shoreline resilience projects with a focus on nature-based solutions; monitoring existing pilot projects; developing offshore sand sources suitable for beach replenishment; prioritizing beaches to be re-nourished, where demonstrated to be feasible; and identifying & funding the establishment of beach, barrier, and marsh migration pathways through property acquisition and relocation of structures.

Prioritize protection of existing beaches in Type 2 waters and prevention of further shoreline hardening. Reference State and federal mapping resources and the findings of the 2025 Beach Erosion Commission as a part of this work. In particular, continue to fund and update State SLAMM maps as a part of this work.

Assess the specific vulnerability of coastal parks and public beaches to sea level rise and coastal storms. Develop new models for resilient visitor facility construction, parking, and access. Create a long-term schedule for the financing and construction of modifications to parks and beaches to adapt to climate change.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	**Coastal Wetlands**	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
CRMC, RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Existing beaches are preserved and shoreline hardening does not increase.
- State SLAMM maps are updated.

Implementation Need(s):
Intergovernmental Coordination, Direct Government Investment & Procurement, Funding, Collection & Information Systems

Potential Funding Source:
USACE Continuing Authorities Program, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, National Coastal Resilience Fund (NCRF), NOAA Coastal Zone Management (CZM) Program/Grants

Funding Need:

N/A	$	$$	$$$	**$$$$**

*Acquisitions and relocation of properties will require significant investment. The funding required for these initiatives will require project-level cost estimation.

Action 10.05

Coastal Resources Planning: Update the Coastal and Estuarine Land Conservation Plan (CELCP) plan to incorporate State resilience objectives and create public education materials for this plan and for the need to protect coastal lands.

Revisit and revise Special Area Management Plans for Greenwich Bay, Narrow River, Metro Bay, and the Salt Pond Region. Update Shoreline Change SAMP to incorporate most recent climate and coastal hazard.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- **Beaches & Barriers**
- **Coastal Wetlands**
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
DEM, CRMC

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Implementation Need(s):
Intergovernmental Coordination, Education, Engagement, & Awareness

Metrics for Success:

- State resilience objectives are incorporated into the Coastal and Estuarine Land Conservation Plan (CELCP).
- Public education materials are created for the CELCP plan.
- Special Area Management Plans for Greenwich Bay, Narrow River, Metro Bay, and the Salt Pond Region are updated.

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program/Grants, RIDEM Ocean State Climate Adaptation and Resilience(OSCAR) Fund, RIDEM Climate Resilience Fund (CRF), RIDSP Resilience Technical Assistance Program

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

Coastal Wetlands

Action 11.01

Coastal Wetland Restoration & Migration:
Continue monitoring and assessment of coastal wetland habitats and management practices to evaluate and prioritize future actions. Statewide models, such as the Sea Level Affecting Marshes Model (SLAMM) and the Statewide Coastal Rapid Assessment Method (MarshRAM) should be expanded and updated to identify opportunities for conservation and restoration to assist in planning for future marsh migration. Expand wetland and riparian protection.

Establish habitat restoration standards that incorporate climate resilience and develop incentives for these standards to be implemented locally. Increase resources and technical assistance for coastal habitat restoration and protection.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	**Coastal Wetlands**	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
CRMC, RIDEM

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Implementation Need(s):
Rules & Regulations, Community Incentives, Technical Assistance & Capacity Building, Collection & Information Systems, Enforcement & Compliance Mechanisms

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program/Grants, National Estuary Program (Narragansett Bay Estuary), National Coastal Resilience Fund (NCRF), US DOD Readiness and Environmental Protection Integration (REPI), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, PL566, Emergency Watershed Protection Program

Metrics for Success:

- Habitat restoration standards that incorporate climate resilience principles are adopted.
- Existing wetland and riparian area is preserved, and marsh migration corridors are identified.
- Incentives are developed to encourage local implementation of standards.
- The number of municipalities accessing state-provided technical assistance increases.

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Estimate is based on a single implementation cycle.

Action 11.02

Coastal Resource Emergency Response: Establish coastal resources hurricane response procedures between the Coastal Resources Management Council (CRMC), RI Department of Environmental Management (RIDEM), RI Emergency Management Agency (RIEMA), and coastal municipalities to ensure natural resources are protected during emergency response. Utilize the Comprehensive Emergency Management Plan (CEMP) to develop procedures.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	**Coastal Wetlands**	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
CRMC, RIEMA, RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Emergency hurricane response procedures to protect natural systems are established and coordinated by CRMC, RIDEM, RIEMA, and coastal municipalities.
- Establish the Debris Management Team and with members from CRMC, RIDEM and RIEMA.

Implementation Need(s):
Rules & Regulations, Intergovernmental Coordination, Emergency Preparedness & Response Authorities

Funding Need:

N/A	**$**	$$	$$$	$$$$

Potential Funding Source:
RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, NOAA Coastal Zone Management (CZM) Program/Grants, FEMA Emergency Management Performance Grant (EMPG)

Action 11.03

Retreat & Voluntary Buyouts: Identify opportunities for retreat, infrastructure removal, and restoration on state-owned and municipally-owned properties, which can serve as demonstration sites for shoreline adaptation. Identify priority areas for voluntary buyouts and potential coastal retreat, such as marsh migration corridors and areas vulnerable to coastal flooding. In this process, consider how CRMC buffer and setback regulations, as well as water classifications, can support. Where possible, retreat rather than fortification should be considered as a coastal adaptation strategy. State agencies and their partners should continue to work with municipalities to identify opportunities for retreat, removal of derelict infrastructure, and enhancement of natural shoreline areas. Implemented restoration projects should continue to be monitored to evaluate the effectiveness of different restoration practices.

Establish a State grant funding program to support voluntary acquisition of flood prone and repetitive loss properties.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	**Coastal Wetlands**	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
CRMC, RIDEM

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- Opportunities for retreat and infrastructure removal at state-owned sites are identified.
- Priority areas for voluntary buyout and potential coastal retreat programs are identified.
- State grant funding program for voluntary buyout programs is established.

Implementation Need(s):
Funding, Collection & Information Systems, Intergovernmental Coordination, Community Incentives

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program/Grants, HUD Community Development Block Grant (CDBG), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, PL566, Emergency Watershed Protection Program

Funding Need:

N/A	$	$$	$$$	**$$$$**

Establishing a grant program for voluntary acquisitions will require significant investment. The funding required for this initiative will require further cost estimation.

Forests

Action 12.01

Forest Preservation: Encourage the protection and restoration of remaining intact forest cover and migration corridors between them, conserving the landscape values of larger, unbroken tracts of land. Consider wildfire and drought risk in planning efforts. This will require considerable collaboration, outreach, and communication with private landowners, who own about 72% of forested land area in the State, as well as creative sustainable investment ideas.

To accomplish this, support coordination among forestry plans (such as The Value of Rhode Island Forests and the State Forest Action Plan), stakeholders, and agencies. Support implementation and enforcement of solar siting legislation to ensure that clean energy solutions do not conflict with the resilience benefits of forested lands (ex. flood and heat reduction). In addition, continue to provide State funding for the preservation of open space, and study and reduce the regulatory and financial barriers between State and local resources.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	**Forests**	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Coordination among forestry plans and stakeholders is established.
- Implementation and enforcement of solar siting legislation is improved.
- State funding is maintained or expanded for open space preservation.

Implementation Need(s):
Community Incentives, Intergovernmental Coordination, Technical Assistance & Capacity Building, Public-Private Partnership Frameworks

Potential Funding Source:
USDA Urban and Community Forestry Grant Program, American Forests Tree Equity Catalyst Fund, RIDEM Open Space Grants

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Estimate is based on a single implementation cycle.

Action 12.02

Forest Stewardship: Encourage the creation and utilization of Forest Stewardship Plans that helps protect soil and water quality, fish and wildlife habitat, timber and other forest products, and outdoor recreation. Support landowners in adopting climate-smart forestry practices to build resilient forest landscapes in response to climate change and optimize carbon storage and sequestration. Promote the permanent conservation of RI's most important forests through the Forest Service's Forest Legacy Program and Natural Resources Conservation Service (NRCS) incentives. Landowners with RIDEM approved Forest Stewardship Plans can take advantage of the Farm, Forest, and Open Space Act, which can provide significant reductions in property taxes, as well as other State and federal grant programs.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	**Forests**	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Adoption of Forest Stewardship Plans by private landowners increases.
- Participation in forest conservation programs increases.
- Implementation of climate-smart forestry practices increases.

Implementation Need(s):
Community Incentives

Potential Funding Source:
Department of Environmental Management Forest Stewardship Program,
Natural Resources Conservation Service (NRCS) incentives (such as Environmental Quality Incentives Program (EQIP))

Funding Need:

N/A	$	$$	**$$$**	$$$$

Action 12.03

Urban Forestry: Support municipalities in developing and regularly updating their urban tree inventories and implementing community forest plans, including strategic tree canopy plans. These efforts should establish a municipal tree canopy goal and outline strategies to improve air quality, reduce urban heat, improve stormwater management, and promote biodiversity. Continue to utilize and build upon the Tree Equity Score Analyzer tool and other resources to assist in these efforts.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	**Forests**	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Number of municipalities with up-to-date urban tree inventories and community forest plans, including strategic tree canopy plans, increases.
- Utilization of Tree Equity Score Analyzer tool and other resources, such as the RI Habitat Resilience Hub, increases.

Implementation Need(s):
Community Incentives, Education, Engagement, & Awareness, Collection & Information Systems, Technical Assistance & Capacity Building

Potential Funding Source:
American Forests Tree Equity Catalyst Fund, RIIB Municipal Resilience Program (MRP), RIDEM Urban and Community Forestry Grant Program, USF & USDA Landscape Scale Restoration (LSR) Grant Program, Climate Smart Communities Initiative (CSCI)

Funding Need:

N/A	$	$$	**$$$**	$$$$

Action 12.04

Forestry Data: Establish funding for needed natural resource mapping (including but not limited to LIDAR for timer typing and conservation planning tools) to support planning and management at the private, municipal, and State levels.

In this work, utilize existing & developing efforts such as the landscape scale forest plan, dirt to trees to wildlife, and wildfire risk mapping.

Ensure that forest resilience vulnerability is assessed at the State level.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	**Forests**	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	Long-Term (Ongoing)

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Funding for natural resource mapping is established.
- Forest resilience vulnerability is assessed.

Implementation Need(s):
Collection & Information Systems

Potential Funding Source:
USGS 3D Elevation Program (3DEP),
State Bond Funding (RI Green Bond / Resilience Bonds)

Funding Need:

N/A	$	$$	$$$	**$$$$**

Establishing funding for robust forestry efforts will require significant investment.

Water Resources

Action 13.01

Water Resources Coordination & Monitoring: Develop a comprehensive, updated water resources monitoring strategy that aligns with regional climate change, aquatic ecosystem, and water quality collection efforts.

Strengthen coordination between freshwater and saltwater systems by advancing holistic watershed management across eco-geophysical boundaries and integrating this approach into existing regulatory and funding frameworks. Specifically, align planning and monitoring efforts with existing Watershed Plans and Special Area Management Plans (ex. Salt Pond Region and Narrow River SAMPs) which address critical environmental concerns in poorly flushed estuaries and other vulnerable coastal areas.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	**Water Resources**	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM, CRMC

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- A comprehensive, updated water resources monitoring strategy is developed.
- Monitoring strategies are aligned with existing Watershed Plans and SAMPs, particularly for vulnerable coastal and estuarine areas.

Implementation Need(s):
Rules & Regulations, Collection & Information Systems, Intergovernmental Coordination

Funding Need:

N/A	$	**$$**	$$$	$$$$

Potential Funding Source:
RIIB - Clean Water State Revolving Fund (CWSRF), CWSRF - Set Asides, EPA Southeast New England Program (SNEP) Watershed Implementation Grant, NOAA Coastal Zone Management (CZM) Program/Grants Implementation Grants, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund

Action 13.02

Riparian Buffers: Identify, map, and assess inland riparian buffer conditions statewide (e.g., using aerial photos and field reconnaissance). The assessment should seek to develop priority areas (ex. headwater streams) for buffer restoration and protection, thereby preventing further loss and restoring vegetated riparian buffers. Coordinate the identification of priority areas with existing Watershed Plans, and support riparian buffer restoration through State funding and incentives.

Support health of riparian habitats through prioritizing statewide dams for removal and culvert upgrades needed, which will also increase flood resilience and improve aquatic connectivity.

Category:

Infrastructure	**Natural Systems**	Community Resilience	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	**Water Resources**	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	Long-Term (Ongoing)

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Riparian buffer conditions are identified and mapped statewide.
- Priority riparian buffer restoration areas are identified in coordination with existing Watershed Plans.

Implementation Need(s):
Collection & Information Systems

Potential Funding Source:
USACE Section 206 & Section 14 (Planning Assistance to States), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Not inclusive of physical installation. The funding required for these projects will require project-level cost estimation.

Statewide Resilience: All Critical Systems

Action 14.01

State Resilience Action Tracking: Refine the tracking system for State resilience actions identified in this plan to continually measure progress and demonstrate alignment with EC4 climate resilience goals. Make sure tracking includes agency ownership, defined timelines, and regular progress updates through the EC4 and Resilience EC4 Subgroup.

Building upon the structure of the 2024 State of Resilience Report and Resilience EC4 Subgroup, continue to grow a coordinated, publicly-accessible mechanism to share progress, foster collaboration across agencies, and build coalitions across sectors and communities.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM, Resilience EC4 Subgroup

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- A coordinated, publicly-accessible tracking system to measure and share progress of State resilience actions is refined and made publicly accessible.

Implementation Need(s):
Intergovernmental Coordination, Collection & Information Systems, Education, Engagement, & Awareness

Potential Funding Source:
National Coastal Resilience Fund (NCRF)

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Action 14.02

State Resilience Partnerships: Continue to research, learn from, and establish collaborative and supportive partnerships with neighboring states, national resilience organizations, and outside professional organizations to inform Rhode Island's resilience efforts.

In particular, Rhode Island should continue to look to successful regional examples, such as Massachusetts' Municipal Vulnerability Preparedness program and New Jersey's Blue Acres program, to continue to model municipal and non-profit partnerships that move from planning to project assistance and funding.

Continue to host the RI Resilience Partner Group, as a point of collaboration between statewide non-profits, universities, and resilience subject matter experts.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM, Resilience EC4 Subgroup

Timeframe:

- Short-Term (1-2 years)
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- **Community**
- **Partner**
- Municipal

Metrics for Success:

- Partnerships between Rhode Island and neighboring states, national resilience organizations, and professional organizations are strengthened.
- RI Resilience Partner Group is actively and regularly convened.

Implementation Need(s):
Intergovernmental Coordination, Technical Assistance & Capacity Building

Potential Funding Source:
NOAA's Rhode Island Sea Grant

Funding Need:

- **N/A**
- $
- $$
- $$$
- $$$$

Action 14.03

State Resilience Office: Support the development of the State Resilience Office, led by the State's Chief Resilience Officer (CRO), through legislation and funding. This office will oversee State resilience planning and the integration State resilience goals with municipal planning, as well as provide buyout and adaptation support, and other resilience services, through grant funding and regulation. The office will coordinate resilience efforts across all State departments, agencies, and quasi-governmental entities. The office's Resilience EC4 Subgroup will serve as a statewide body for collaboration on State agency resilience initiatives, and the office's RI Resilience Partner Group will serve as a statewide forum for non-agency stakeholders on resilience initiatives. The Resilience EC4 Subgroup will also serve as the review body for climate adaptation related EC4 budget requests, and standardize the process by which EC4 budget requests are reviewed and decided upon.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM, Resilience EC4 Subgroup

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- The State Resilience Office is established.
- Resilience EC4 Subgroup and Resilience Partner Group are regularly convened.

Implementation Need(s):
Funding, Rules & Regulations, Technical Assistance & Capacity Building

Potential Funding Source:
RIDEM Climate Resilience Fund (CRF), RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, NOAA Coastal Zone Management (CZM) Program/Grants

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

*Bi-annual need, inclusive of *Resilient Rhody* plan updates

Action 14.04

Regional Resilience Coordinators: Secure Full-Time Equivalent (FTE) funding for the State's three Regional Resilience Coordinators (RRC) long term to support the State Resilience Office, and continue to expand RRC coordination across all State agency resilience initiatives. RRCs offer resilience technical assistance to municipalities and communities through grant writing, project management, community outreach, resilience planning, research & case study development, and regional coordination on open funding opportunities.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM, CRMC

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Long term Full-Time Equivalent funding is secured for three Regional Resilience Coordinator positions.

Implementation Need(s):
Funding, Intergovernmental Coordination

Potential Funding Source:
National Coastal Resilience Fund (NCRF), NOAA Coastal Zone Management (CZM) Program/ Grant, Bond/Legislative Request

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

*Annual need, inclusive of *Resilient Rhody* plan updates

Action 14.05

State Resilience Standards: Develop strengthened resilience standards across agencies and programs that consider various assets, such as residential, commercial, roads, wastewater, stormwater, drinking water infrastructure, electrical infrastructure, and open space. Ensure that these resilience standards and any related permitting processes are streamlined and time-effective.

Consider different timelines & scenarios across these categories, and establish a statewide, EC4 determination for SLR projection timelines to consider for specific assets. Build upon existing State building codes and stormwater design standards to inform this process. Create a collaborative, consensus-driven process—featuring municipal workshops and community engagement—to shape these standards, ensuring they reflect local needs and include input from vulnerable populations.

Conduct a socioeconomic analysis of potential impacts to communities and businesses to inform this process. As a part of this analysis, consider interaction of standards with insurance markets and funding & financing programs.

Provide outreach and educational opportunities to raise awareness of the new standards and clearly communicate them to municipalities (beyond just property owners).

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- **Building Design & Construction**
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM, Resilience EC4 Subgroup

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Municipal resilience standards are established across agencies and asset types.
- A comprehensive socioeconomic analysis of climate impacts is conducted and incorporated into resilience standards.

Implementation Need(s):
Funding, Rules & Regulations, Education, Engagement, & Awareness, Land Use Policy, Public-Private Partnership Frameworks

Funding Need:

- N/A
- $
- $$
- **$$$**
- $$$$

Potential Funding Source:
RIIB – Drinking Water State Revolving Fund (DWSRF) State Program Management Set-Aside, Clean Water State Revolving Fund (CWSRF) - Set Aside, USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Grant Program

Action 14.06

Sea Level Rise Standard: Establish a statewide, EC4 determination that Rhode Island adopt the National Oceanic and Atmospheric Administration (NOAA) High Curve for sea level rise projections for resiliency planning initiatives performed by all State agencies, in alignment with the Shoreline Change Special Area Management Plan. Based on NOAA's 2022 analysis of SLR scenarios, NOAA projects up to 6.4 feet of SLR in Rhode Island by 2100. This particular statistic is based on the "High" Curve and is estimated at the 83% confidence interval.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
CRMC

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- The National Oceanic and Atmospheric Administration (NOAA) High Curve is adopted across all State agencies.

Implementation Need(s):
Rules & Regulations

Potential Funding Source:
N/A

Funding Need:

- **N/A**
- $
- $$
- $$$
- $$$$

Action 14.07

State Land Use Planning: Incorporate climate resilience priorities into Land Use 2050, including but not limited to managed retreat, saltmarsh migration, impacts of inland flooding, stormwater water management needs, policies, and actions for stormwater utility districts. In addition, incorporate guiding frameworks and specifics on high performance green building standards from the Green Building Act.

Align the actions to the updated goals and priorities set by the Long-Range Transportation Plan.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- **Stormwater**
- Ports
- Electric Grid
- Fuel Supply
- **Roads, Bridges, & Culverts**
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- Financing Climate Resilience Projects

Responsibility:
RI Div. of Statewide Planning

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- State
- Gap Analysis
- Community
- Partner
- **Municipal**

Metrics for Success:

- Land Use 2050 is updated to include resilience priorities and is aligned with the Long-Range Transportation Plan.

Implementation Need(s):
Land Use Policy, Intergovernmental Coordination

Potential Funding Source:
EPA Southeast New England Program Opportunity to Advance Resilience (SOAR) Fund

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Action 14.08

Municipal Resilience Planning: Continue to support regular municipal resilience planning through the State's Municipal Resilience Program, providing regulatory and funding support for continuity of planning services through this program. Support streamlining of Municipal Resilience Program plans with existing efforts such as Local Hazard Mitigation Planning and Health Equity Zone Collaboration. Complete Annual Resilience Updates with cities and towns to keep this information up to date, and to assist municipalities on initiatives and projects when needed.

Provide an annual funding source for municipalities to complete vulnerability studies, hydrologic analyses, and watershed assessments, to inform best placement of resilience solutions.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- Community
- Partner
- **Municipal**

Metrics for Success:

- Annual Resilience Updates are completed for all participating cities and towns.
- An additional annual funding source for local resilience assessments and planning initiatives is established.

Implementation Need(s):
Technical Assistance & Capacity Building, Funding

Potential Funding Source:
Bond/Legislative Request

Funding Need:

- N/A
- $
- $$
- **$$$**
- $$$$

*Estimate is based on a single implementation cycle.

Action 14.09

Local Land Use Planning: Establish climate resilience as a priority across all sections of local Comprehensive Plans to ensure coordinated, forward-looking planning. All elements and categories required in the comprehensive plans should integrate and speak to themes of resilience and sustainability.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- Financing Climate Resilience Projects

Responsibility:
RI Div. of Statewide Planning, RI Dep. of Administration

Timeframe:

- Short-Term (1-2 years)
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Climate resilience is integrated into all sections of local Comprehensive Plans.

Implementation Need(s):
Land Use Policy

Potential Funding Source:
Bond or Legislative Request

Funding Need:

- N/A
- $
- $$
- **$$$**
- $$$$

*Estimate is based on a single implementation cycle.

Action 14.10

Vulnerability Assessment: Building off the *Resilient Rhody 2025*, use State resilience sources to regularly update Rhode Island's current and future climate change vulnerabilities across all critical infrastructure. Use established modeling strategies to complete three-dimensional visualizations of storm impacts for this infrastructure.

Identify and map existing municipal and State stormwater management structures, including culverts, and conduct local watershed scale vulnerability analyses to explore the impacts of this flooding on stormwater infrastructure performance. Establish a regular State funding source for municipalities to complete and update these local stormwater vulnerability assessments.

Expand assessments of RIEMA critical facilities, bridges, wells, libraries, and historic structures. Complete vulnerability analysis of resilience needs at these assets.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	**Stormwater**
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIDEM, RIEMA, RIDOT, RI Div. of Statewide Planning

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Local watershed scale vulnerability analyses are completed.
- A regular State funding source for local stormwater vulnerability assessments is established.
- Resilience needs of EMA critical facilities not identified in this Plan are identified and documented.

Implementation Need(s):
Collection & Information Systems, Emergency Preparedness & Response Authorities

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program/Grants, NOAA National Coastal Resilience Fund (NCRF), USACE Continuing Authorities Program, RIIB - Clean Water State Revolving Fund (CWSRF)– Set Asides, RIIB Community Project Assistance Fund (CPAF), RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Estimate is based on a single implementation cycle.

Action 14.11

University Collaboration: Develop a university collaborative around resilience to coordinate across climate tools and ensure products are streamlined in messaging and mission. For university tools, establish and support end user engagement processes, in order to coordinate end user input with developer methodology.

Support and fund continued development of the Rhode Island Climate Resilience Learning Network, which serves as a community of practice and provider of resilience educational materials, webinars, and events.

Support development of municipal resilience ordinance implementation assistance through law schools located in the State.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- **Financing Climate Resilience Projects**

Responsibility:
University Partners (URI, Brown, Roger Williams, RISD, RIC, CCRI, etc.)

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- A university resilience collaborative is established.
- Additional funding is secured for the Rhode Island Climate Resilience Learning Network.
- Law schools offer municipal resilience ordinance implementation assistance.

Implementation Need(s):
Education, Engagement, & Awareness, Collection & Information Systems

Potential Funding Source:
NOAA's Rhode Island Sea Grant Program

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Action 14.12

Data & Mapping: Establish State funding to ensure that are consistent across agencies and municipalities. Developing, updating, coordinating, requiring, standardizing, and maintaining foundational resilience including monitoring systems and GIS layers (e.g., STORMTOOLS, Inland STORMTOOLS, Wind STORMTOOLS, MyCoast, sensor networks such as Network for Environmental Sensing and Technology (NEST) Rhode Island Coastal Hazards Analysis, Modeling and Prediction System (RI-CHAMP), Shoreline Change Maps, Coastal Environmental Risk Index (CERI), RainSnap, Statewide Flood Toolkit) and related meta should be centralized. should include updated statewide precipitation projections that can be used for other sectors as well. Ensure STORMTOOLS is updated to expand statewide, including both Coastal and Inland components, as well as a wind damage component.

Create a centralized public platform for State climate resilience and continue to encourage the use of this GIS mapping for State level work, including policy planning and resilience design standards. Ensure all and materials are offered in multiple languages. Create a statewide working group that reviews climate among State agencies, universities, and the private sector (e.g. insurance sector, commercial real estate) to ensure all are using best available.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
CRMC, RIDEM, URI

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Funding is established for a centralized State climate platform.
- A centralized State climate platform is developed.

Implementation Need(s):
Funding, Rules & Regulations, Collection & Information Systems, Intergovernmental Coordination

Potential Funding Source:
RIIB - Drinking Water State Revolving Fund (DWSRF) Administration & Technical Assistance Set Aside, RIDEM Climate Resilience Fund

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

Action 14.13

GIS Capacity: Continue to support Full-Time Equivalent (FTE) analyst positions within the GIS department to support climate resilience integration and mapping.

Responsibilities should include: 1) Developing recommendations for integrating State systems with person-centered climate impact on critical assets. 2) Incorporating climate resilience and Southeast New England Program (SNEP) Hydrologic Response Unit (HRU) maps into the new statewide GIS framework.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RI Div. of Statewide Planning

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Full-Time Equivalent (FTE) analyst positions are allocated within the GIS department to support climate resilience efforts.

Implementation Need(s):
Collection & Information Systems, Technical Assistance & Capacity Building

Potential Funding Source:
EPA Southeast New England Program (SNEP) Watershed Implementation Grants (SWIG)

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

*Annual need per employee

Action 14.14

Adaptation Carbon Emissions: Hire an energy fellow to assess current carbon emissions standards across State agencies and their programs, and identify opportunities for alignment and improvement. Review past carbon dividend legislation proposed and introduced by Energize Rhode Island: the Economic and Climate Resilience act of 2019. Establish a consistent standard for evaluating the carbon intensity of adaptation solutions across all climate resilience policies and funding programs. This standard should explicitly consider the trade-offs between grey and green infrastructure to support low-carbon, nature-based solutions wherever feasible.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIDEM, OER

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- An energy fellow is hired to assess carbon emissions standards across agencies.
- A consistent standard for evaluating the carbon intensity of adaptation solutions is established.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
N/A

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Building Design & Construction

Action 15.01

Building Commission: Establish climate resilience representation on RI Building Commission, Building Codes and Standard Committee to support the impacts of climate change on building standards. Add a representative of the RI Building Commission to the EC4 to facilitate collaboration regarding climate impacts on the standards. Establish clear communication pathways with the State Resilience Office on this topic. Align with Act on Climate priorities and strategies.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- **Emergency Preparedness**

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- **Building Design & Construction**
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
State Building Commission, RIEMA, RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Climate resilience is represented in Building Commission discussions.

Implementation Need(s):
Intergovernmental Coordination, Technical Assistance & Capacity Building

Potential Funding Source:
N/A

Funding Need:

- **N/A**
- $
- $$
- $$$
- $$$$

Action 15.02

State Building Code: Update the State Building Code and the RI Department of Environmental Management (RIDEM) Wastewater Design Standards to reflect the American Society of Civil Engineers (ASCE) design storm standards (ASCE 24-24) and most recent International Building Code (IBC) and FEMA standards. Align updates with the statutory Green Building Act to promote climate-adaptive, energy efficient, and environmentally responsible practices. Ensure that updates to agency programs and policies (including Stormwater Design Rule and RIDEM Wastewater Standards) similarly reflect these national and international standards and are aligned with this State Building Code update. Align with Act on Climate priorities and strategies.

Establish further clarification around the 50% rule (definition of substantial improvement or repair of substantial damage) in State building code through development of more formalized criteria.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- **Emergency Preparedness**

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- **Building Design & Construction**
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
State Building Commission, RIEMA, CRMC, RIDEM, RIWARN

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- The State Building Code and the Department of RI Environmental Management (RIDEM) Wastewater Design Standards are update to reflect the most recent American Society of Civil Engineers (ASCE) and International Building Code (IBC) standards.
- Criteria are formalized to clarify the 50% rule in State building code.

Implementation Need(s):
Land Use Policy, Rules & Regulations, Intergovernmental Coordination

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

Potential Funding Source:
Bond or Legislation Request

Action 15.03

Facility Preparedness: Continue to support Rhode Island's disaster response for critical facilities through Emergency Support Functions programming and Continuity of Operations plans. Utilize and mapping resources to continually improve predictions of facility level impacts to storms, allowing for better emergency preparation and response.

Develop and fund a -driven retrofit program to strengthen critical facilities against storm impacts, using improved facility-level storm impact predictions to guide project selection and prioritization. Integrate these predictions into State capital planning and permitting processes to ensure that resilience upgrades are strategically aligned with risk. This approach will reduce cascading infrastructure failures and enhance community-wide continuity during major storm events.

Extend beyond coastal areas and flood hazards to provide resources for inland areas and additional risks such as wind, drought, and wildfire. Embed this climate hazard information into permitting systems for structures and infrastructure in the State, such that all projects are treated equitably using current standards.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	**Building Design & Construction**	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA, RIDEM, RI Div. of Statewide Planning

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	Community
Partner	Municipal	

Metrics for Success:

- A -driven retrofit program to strengthen critical facilities against storm impacts is developed.

Implementation Need(s):
Funding, Collection & Information Systems, Rules & Regulations

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG), RIDEM Climate Resilience Fund, RIIB Municipal Resilience Program (MRP) Action Grant

Funding Need:

N/A	$	$$	$$$	**$$$$**

Establishing a retrofit program will require significant investment. The funding required for this initiative will require further cost estimation.

Evacuation Routes & Emergency Shelters

Action 16.01

Evacuation Route Mapping & Planning: Conduct a statewide reassessment of evacuation routes and associated signage. Build off the RIEMA Safety Starts Now campaign to implement a public outreach initiative to inform citizens about evacuation routes and shelter locations through homeowner associations, nonprofit organizations, and State and local governments will help citizens become more resilient to the impacts of a changing climate. Integrate emergency service providers as essential stakeholders in planning efforts. This campaign will ensure that the challenges faced during emergencies are addressed in evacuation routes. It will also emphasize coordinated public information efforts, as well as community outreach and education, to build awareness, strengthen local partnerships, and enhance overall emergency response and recovery.

Revise evacuation routes and update signage every five years based on coastal, riverine, and stormwater flooding projections to ensure safety and accessibility. Ensure that revised evacuation routes are publicly accessible and available online. Prioritize and protect fuel supply and resilient charging station availability along evacuation routes, to ensure that evacuation efforts are not stalled due to stranded vehicles.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA, RIDOT, RI Div. of Statewide Planning

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Statewide reassessment of evacuation routes and associated signage is conducted.
- Findings from the statewide reassessment are incorporated into evacuation route and shelter assignments.
- A public outreach campaign on the locations of evacuation shelters and location routes is conducted.

Implementation Need(s):
Collection & Information Systems, Education, Engagement, & Awareness, Emergency Preparedness & Response Authorities

Potential Funding Source:
USDOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Grant Program, FEMA Emergency Management Performance Grant (EMPG), RIDEM Climate Resilience Fund (CRF), RIIB Municipal Resilience Program(MRP), RIDSP Resilience Technical Assistance Program, Resilient Rhody Infrastructure Fund (RRIF)

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Estimate is based on a single implementation cycle.

Action 16.02

Evacuation Route Maintenance: Develop an asset management program to evaluate the existing conditions and appropriateness of named evacuation routes, including bridges critical to maintaining connectivity for costal communities during emergencies.

Establish a coordinated, systematic process and funding mechanism to maintain access to evacuation routes during storms and to promptly repair roads, bridges, and culverts in flood-affected neighborhoods. Ensure that post-storm recovery efforts are equitably distributed. Coordinate with neighboring states when evacuation routes lead across State lines.

Category:

- **Infrastructure**
- Natural Systems
- Community Resilience
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- **Roads, Bridges, & Culverts**
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- **Evacuation Routes & Emergency Shelters**
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- Financing Climate Resilience Projects

Responsibility:
RIEMA, RIDOT, RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- Gap Analysis
- **Community**
- Partner
- Municipal

Metrics for Success:

- A State Assessment Management Plan for evacuation routes is completed.
- A coordinated process and funding mechanism for evacuation route maintenance is established.

Implementation Need(s):
Emergency Preparedness & Response Authorities, Funding

Potential Funding Source:
RIIB - Municipal Roads & Bridges Revolving Loan Fund (MRBRF), Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP)
RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund

Funding Need:

- N/A
- $
- $$
- **$$$**
- $$$$

*Estimate is based on a single implementation cycle.

Emergency Services

Action 17.01

Emergency Response Guidance: Develop coordinated preparedness and resilience guidelines and best practices for emergency services. Such guidelines may include preparedness and resilience trainings and exercises, self-assessments of emergency response departments, and suggested changes to develop stronger, more resilient response capacity during natural or man-made disasters.

Create standard response procedures for critical facilities and services. For example, fire, ambulance, police department, tree crew, and utilities personnel cannot respond to emergencies when winds exceed 60 mph.

Incorporate local emergency service providers, community organizations, Health Equity Zone (HEZ) collaboratives, and Tribal Nations and native communities, as essential stakeholders in municipal and statewide resilience & emergency planning efforts. This will ensure the challenges facing emergency services and communities during disaster events are addressed in preparedness and recovery plans. Continue to update Recovery Support Functions and host Recovery Town Halls with local communities and provide continued funding to support these efforts.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- Coordinated emergency preparedness and resilience guidelines are developed for emergency services.
- Standardized response procedures are developed for critical facilities and services.
- Engagement is included in all emergency planning efforts.

Implementation Need(s):
Emergency Preparedness & Response Authorities, Technical Assistance & Capacity Building, Intergovernmental Coordination

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG)

Funding Need:

N/A	$	**$$**	$$$	$$$$

Action 17.02

Emergency Response Support: Provide state-level support to municipal emergency services to enhance disaster preparedness and resilience through a broader, more inclusive approach. This includes trainings that strengthen continuity in emergency operations planning, with added emphasis on wildfire danger and response, grants to organizations supporting emergency shelters, healthcare facilities, and vulnerable housing, and recovery funding. In particular, establish a State grant program to support municipalities and communities in addressing damages from non-federally declared disasters.

Concurrently, continue to hold National Weather Service trainings for the Emergency Management Directors, annual State Emergency Operations Center trainings, annual HURREVAC trainings, quarterly WebEOC trainings for Emergency Management Directors and Emergency Support Functions. Expand municipal training and use of NEST (Network for Environmental Sensing and Technology), RI-CHAMP (Coastal Hazards Analysis Modeling and Prediction) and similar tools so that municipal emergency services can be briefed on forecasted impacts to critical infrastructure and roads in real time as a storm approaches.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA, RI Div. of Statewide Planning

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Additional State grant program is established to support municipalities and communities after non-federally declared disasters.

Implementation Need(s):
Funding, Education, Engagement, & Awareness, Technical Assistance & Capacity Building, Emergency Preparedness & Response Authorities

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG)

Funding Need:

N/A	$	$$	$$$	**$$$$**

Establishing a program to address damages from non-federally declared disasters will require significant investment. The funding required for this initiative will require further cost estimation.

Action 17.03

Emergency Response Outreach: Create a centralized, multilingual platform for emergency preparedness materials for residents, such as the evacuation plan and locations of evacuation routes and shelters.

To inform this work, continue to update and fund the State Shelter Plan. In addition, share information on transportation during hazard events, discussing the importance of staying off the road. Ensure the information is accessible in multiple languages.

Category:

Infrastructure	Natural Systems	Community Resilience	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	**Emergency Services**	Community Health & Resilience	Financing Climate Resilience Projects

Responsibility:
RIEMA, RI Div. of Statewide Planning, EOHHS

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	Long-Term (Ongoing)

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- A centralized platform for emergency preparedness materials is established.
- The State Shelter Plan is updated and funded.

Implementation Need(s):
Education, Engagement, & Awareness, Emergency Preparedness & Response Authorities

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG), RI Department of Transportation Capital Improvement Program (CIP)

Funding Need:

N/A	**$**	$$	$$$	$$$$

Action 17.04

Post-Disaster Restoration: Encourage all governmental entities involved in disaster recovery to draft a singular set of appropriate restoration guidance, with vulnerable populations in mind, that are implemented by all entities. Develop consistent restoration & rebuild guidance and clear communication regarding permitting needs across State agencies. Build off the Public Assistance Program and Policy Guide (PAPPG).

Category:

Infrastructure	Natural Systems	**Community Resilience**	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIEMA, CRMC, RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	Community
Partner	Municipal	

Metrics for Success:

- A singular set of restoration protocols is established and implemented by all governmental entities involved in disaster recovery.
- A streamline permitting tool is developed.

Implementation Need(s):
Rules & Regulations, Emergency Preparedness & Response Authorities

Potential Funding Source:
FEMA Emergency Management Performance Grant (EMPG)

Funding Need:

N/A	**$**	$$	$$$	$$$$

Community Health & Resilience

Action 18.01

Resilience Technical Assistance: Establish support to help local governments—especially small, rural, and under-resourced communities—access climate resilience funding, with a focus on health, equity, and infrastructure needs. Through the State's Regional Resilience Coordinators, provide technical assistance to support municipalities in grant writing, capital planning, and shared services agreements, while clarifying agency roles and actively engaging community-based organizations (CBOs). Ensure resilience planning includes mental health and well-being, and evaluate resilience priorities being deprioritized at the federal level to provide targeted State support, particularly for environmental justice communities.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
EOHHS, RIDEM, CRMC

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	**Community**
Partner	Municipal	

Metrics for Success:

- Resilience technical assistance programs are expanded with a focus on small, rural, and under-resourced communities.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
USDA Rural Development Technical Assistance
HUD Community Development Block Grant (CDBG), RIIB - Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF) - Set Asides, RIIB Community Project Assistance Fund (CPAF), NSF EPSCoR

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Estimate is based on a single implementation cycle.

Action 18.02

Model Ordinances: Develop model municipal ordinances to ensure climate resilience goals are met, ensuring that development does not occur in floodplains, highly erosive areas, and other climate vulnerable locations. Make model ordinances accessible to municipalities through a web library of these resources. Support implementation of resilience ordinances locally, including grant funding for municipalities needing legal assistance to implement. Build off the existing model floodplain ordinance that gets adopted by each municipality affected by a FEMA map update.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RI Div. of Statewide Planning, RI League of Cities and Towns, RI Dep. of Administration, RIEMA

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- Model municipal ordinances for climate resilience goals are developed.

Implementation Need(s):
Land Use Policy, Technical Assistance & Capacity Building

Potential Funding Source:
NOAA Coastal Zone Management (CZM) Program/Grants

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Estimate is based on a single implementation cycle.

Action 18.03

Resilience Hubs: Develop a Resilience Hubs Program that provides technical support to create new Hubs, implement backup power systems, deploy mobile health units, and carry out necessary retrofits for shelters, community centers, and other critical infrastructure.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
DPUC, PUC, OER, Utilities

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	Long-Term (Ongoing)

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- A Resilience Hubs Program is established.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
US DOE State Energy Program (SEP), RIIB - Efficient Buildings Fund (EBF), Municipal Resilience Program (MRP), Municipal Infrastructure Grant Program (MIGP)

Funding Need:

N/A	$	$$	**$$$**	$$$$

Action 18.04

School Resilience: Increase funding and technical support to support appropriate resilience upgrades in schools, such as flood resilience measures (elevation, floodproofing, relocation of structures, green stormwater infrastructure, etc.) and heat resilience measures (urban tree planting, removal of impervious surfaces, etc.).

Encourage construction of new school facilities in locations that are not vulnerable to future climate risks, and assess relocation options for existing structures, ensuring long-term safety and continuity of education services. Ensure State funding dedicated to school upgrades, construction, and relocation are equitably implemented, with consideration of flood and heat vulnerabilities.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIDE, RIDOH, RIIB

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	Long-Term (Ongoing)

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- Funding for technical assistance programs for school resilience projects increases.
- New school facilities are not constructed in locations vulnerable to present or future risks.

Implementation Need(s):
Funding, Education, Engagement, & Awareness, Direct Government Investment & Procurement, Technical Assistance & Capacity Building

Potential Funding Source:
HUD Community Development Block Grant (CDBG), USDA Community Facilities Direct Loan & Grant Program

Funding Need:

N/A	$	$$	**$$$**	$$$$

*Not inclusive of physical installation. The funding required for these projects will require project-level cost estimation.

Action 18.05

School Curriculum: Continue to embed environmental literacy and climate resiliency into K – 12 school curriculum. Require at least one climate-related course for graduation from state colleges/universities.

Continue to support Nonprofit Governmental Organizations (NGOs), Community Based Organizations (CBOs), and other organizations that provide hands-on experiences, classroom visits, and professional development for educators to cultivate climate informed, engaged citizens. Specifically, integrate into family and senior programs and other informal learning spaces.

Build upon Energy, Climate Change, and Environmental Justice curriculum developed with the National Energy Education Department, and continue to provide resources to the Rhode Island Science Teachers Association.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIDE w/ RIDOH Support

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	Community
Partner	Municipal	

Metrics for Success:

- Environmental literacy and climate resiliency continues to be integrated into school curriculum.
- The number of educators accessing Energy, Climate Change, and Environmental Justice curriculum increases.

Implementation Need(s):
Education, Engagement, & Awareness

Potential Funding Source:
National Estuary Program (Narragansett Bay Estuary), NOAA Environmental Literacy Program

Funding Need:

N/A	**$**	$$	$$$	$$$$

Action 18.06

Health Impacts & Metrics: Evaluate the health impacts of state-identified climate change risks and integrate mental health and trauma-informed services into resilience planning. Align this work with statewide climate mitigation and adaptation goals by establishing health metrics that reflect both physical and mental well-being.

Develop a set of recommendations for how the State could tie its & vulnerability assessment findings with the person-centered impacts of climate change on assets & establish FTE for an analyst to continue to conduct this work.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
EOHHS, DOH

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	Long-Term (Ongoing)

Driver:

State	**Gap Analysis**	Community
Partner	Municipal	

Metrics for Success:

- Mental health and trauma-informed services are integrated into resilience planning efforts.
- Recommendations to incorporate person-centered impacts of climate change into climate , vulnerability assessments, and funding & financing selection criteria are established.

Implementation Need(s):
Collection & Information Systems

Potential Funding Source:
CDC Climate-Ready States and Cities Initiative (CRSCI)
RI Department of Health (RIDOH) - Current budget allocation, NSF EPSCoR

Funding Need:

N/A	$	**$$**	$$$	$$$$

Action 18.07

Housing & Business Resilience: Develop a centralized, multilingual platform to educate current and prospective homeowners, renters, and business owners about property-specific climate risks, resilience strategies, and zoning-based insurance options. Include coastal risk disclosure materials for real estate agents and tools to address financial barriers to flood-resilient housing, particularly for vulnerable populations. Ensure the platform supports equitable access to waterfronts and empowers communities by closing insurance market gaps. Develop practical, scenario-based guidance such as step-by-step information on how to protect health and safety during common events like basement flooding to further support residents and business owners.

In addition, strengthen statewide requirements regarding disclosure of climate risk information, including through real estate disclosures and homebuyer education programs. Continue to support updates to the Coastal Hazard Analysis tool and incorporate this tool into statewide risk awareness efforts.

Complete a statewide vulnerability assessment of residential and commercial properties. Ensure that statewide funding for the planning and development of future affordable housing incorporates resilient land use strategies and does not further development in flood vulnerable locations.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIDEM, RI Div. Statewide Planning, CRMC, RIEMA, RI Housing

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- A centralized, multilingual housing-focused platform is developed.
- A statewide vulnerability assessment is conducted for residential and commercial properties.

Implementation Need(s):
Collection & Information Systems, Education, Engagement, & Awareness

Potential Funding Source:
HUD Pathways to Removing Obstacles to Housing (PRO Housing) Grant Program, FEMA Flood Mitigation Assistance Grant Program

Funding Need:

N/A	$	$$	**$$$**	$$$$

Action 18.08

Low Income Home Assistance: Expand the Rhode Island Low Income Home Energy Assistance Program (LIHEAP) to ensure equitable access to essential services and resources, including dehumidifiers, mold testing kits, cooling equipment, remediation, and technical assistance for weatherization and home retrofits. The expansion should also create a centralized system for interpreting reports and collecting resident feedback during emergency events. As a part of this expansion, refund the RI Cool it Off Program and LIHEAP Summer Cooling Program. Develop strategies and identify funding resources to support community organizations and residents for their time and expertise.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
DHS, RIDOH

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Metrics for Success:

- The Rhode Island Low Income Home Assistance Program (LIHEAP) is expanded.
- A centralized LIHEAP platform is developed.
- RI Cool if Off Program and LIHEAP Summer Cooling Program are funded.

Implementation Need(s):
Technical Assistance & Capacity Building, Funding

Potential Funding Source:
US DHS Low Income Home Energy Assistance Program (LIHEAP), HUD Community Development Block Grant (CDBG) Program, Regional Greenhouse Gas Initiative (RGGI)

Funding Need:

N/A	$	$$	$$$	**$$$$**

Action 18.09

Community Resilience Planning: Continue to develop technical assistance and statewide support for bottom-up, community-led groups and Health Equity Zone (HEZ) community members, and Green Justice Zone (GJZ) curriculum stewards to carry out planning and action to make their communities more climate resilient, including coordinated guidance on identifying and securing funding. Engage community groups at the very beginning of any State planning process.

Continue to develop Community Assessments for Climate Resilience & Implementation as a partnership between the Executive Office of Health and Human Services and the Health Equity Zones as a part of this process.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIDOH, EOHHS, RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	**Gap Analysis**	**Community**
Partner	Municipal	

Metrics for Success:

- The number of climate resilience initiatives led by community-led groups increases.
- The number of completed Community Assessments for Climate Resilience & Implementation increases.

Implementation Need(s):
Funding, Technical Assistance & Capacity Building

Potential Funding Source:
CDC Climate-Ready States and Cities Initiative (CRSCI), RI Department of Health (RIDOH)

Funding Need:

N/A	$	**$$**	$$$	$$$$

*Estimate is based on a single implementation cycle.

Action 18.10

Resilience Workforce Development: Develop additional climate resilience training opportunities through the Real Jobs RI Platform, Career and Technical Education (CTE), and municipal job boards. Provide State funding for the growth of these programs to further include climate resilience. Invest in post-secondary workforce development, focusing on trades.

Category:

- Infrastructure
- Natural Systems
- **Community Resilience**
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- **Community Health & Resilience**
- Financing Climate Resilience Projects

Responsibility:
Dept. of Labor and Training

Timeframe:

- Short-Term (1-2 years)
- **Medium-Term (2-5 years)**
- Long-Term (Ongoing)

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- Climate resilience training opportunities increase.

Implementation Need(s):
Education, Engagement, & Awareness, Direct Government Investment & Procurement

Potential Funding Source:
USDA Rural Development Training Programs

Funding Need:

- N/A
- $
- **$$**
- $$$
- $$$$

Financing Climate Resilience Projects

Action 19.01

Resilience Funding: Develop incentives to support the statewide adoption of climate resilience standards and establish a consistent funding stream to assist municipalities in developing resilience ordinances. Strengthen State grant assistance for climate adaptation, including restoration, elevation, and buyout initiatives, to better leverage federal funding and assistance programs. Create new funding programs to specifically to support voluntary buyouts; local vulnerability studies, hydrologic analyses, and watershed assessments, to inform best placement of adaptation solutions; emergency relief for non-federally declared disasters; maintenance of installed resilience solutions; and for other key needs established throughout the State resilience actions. Establish annual funding support for these funds through State budget line items.

Utilize the annual EC4 budget to advance resilience priorities, and create a regularly updated, publicly accessible list of federal, State, and local climate resilience funding opportunities to increase awareness and access. Utilize federal and State tools to continually assess cost-benefit of proposed resilience projects.

Continue to establish dedicated green bond funding and a State budget line item to advance the priority actions identified in this Plan. Ensure that annually, both grant and financing options remain available.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIIB, RIDEM, RIEMA, State Building Code Commission, RI League of Cities and Towns, RI Div. of Statewide Planning

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- **Municipal**

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Metrics for Success:

- Incentives are established to support statewide adoption of climate resilience standards.
- A State budget line item to advance the priority actions identified in this Plan is established.

Implementation Need(s):
Funding, Community Incentives

Potential Funding Source:
Bond/Legislative Request

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

*Resilience funding will require significant investment. The funding required for the initiatives outlined in Action 19.01 will require further cost estimation.

Action 19.02

Resilience Web Resources: Update the State's climate change website to include a hub of State resilience actions, municipal resilience actions, State agency resources available, and annual resilience funding programs from federal, State, and local sources. Maintain updates to this page on no less than an annual basis.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- The State's climate change website is updated to include State and municipal resilience actions and information about funding programs.

Implementation Need(s):
Education, Engagement, & Awareness, Intergovernmental Coordination

Potential Funding Source:
N/A

Funding Need:

- N/A
- **$**
- $$
- $$$
- $$$$

*Annual need

Action 19.03

Resilience Loans: Fund and launch the recently established *Resilient Rhody Infrastructure Fund*, which will serve as the State's resilience revolving loan fund. Model this fund after statewide models provided by the Clean Water and Drinking Water State Revolving Funds, utilizing State agency partnership with RIDEM for project criteria development and project technical review. Draw upon successful resilience RLF models from other States to determine loan sizes, terms, project eligibility, and principal forgiveness ratios. Ensure that both large scale (greater than $1M) and small scale (less than $10k) loan options are explored, the latter being accomplished through loans supporting the creation of municipal RLFs to property owners. Voluntary buyouts should be strongly supported as an eligible project category. Following the lead of other states, ensure that grant programs are still offered alongside loan options for all phases of project implementation (planning, design, and construction).

Category:

- **Infrastructure**
- Natural Systems
- **Community Resilience**
- Emergency Preparedness

Asset Type:

- All Critical Infrastructure
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIIB, RIDEM

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- Municipal

Metrics for Success:

- The *Resilient Rhody* Infrastructure Fund is initiated.

Implementation Need(s):
Funding

Potential Funding Source:
Bond/Legislative Request, *Resilient Rhody* Infrastructure Fund

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Resilient Rhody Infrastructure Fund will require significant investment. The funding required will require further cost estimation.

Action 19.04

State Resilience Grants: Continue to support and establish ongoing State funding for climate resilience adaptation on the ground through the Municipal Resilience Program (MRP) Action Grants, Climate Resilience Fund (CRF), and Ocean State Climate Adaptation and Resilience (OSCAR) Program, and enhance the stability and predictability of these grants by creating dedicated State budget line items. Ensure that grant program criteria continually reflects State resilience actions and priorities, that projects funded support long term, sustainable approaches to site and regional resilience, and that proposed & funded projects reflect community buy in through having been established in local resilience plans. Continue efforts to streamline application to these programs, building upon existing efforts to merge MRP Action Grant and Climate Resilience Fund application processes through strong inter-agency collaboration.

Continue to expand the geographical reach and diversify the project types supported by these programs, as well as by the Coastal and Estuarine Habitat Restoration Trust Fund (CEHRTF), to further support planning & vulnerability assessments, capacity growth, equipment, as well as flood vulnerable land acquisition measures.

Category:

- **Infrastructure**
- **Natural Systems**
- **Community Resilience**
- **Emergency Preparedness**

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- Building Design & Construction
- Emergency Services
- Community Health & Resilience
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM, RIIB, CRMC

Timeframe:

- **Short-Term (1-2 years)**
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- **State**
- Gap Analysis
- Community
- Partner
- **Municipal**

Metrics for Success:

- The number of municipalities that access State resilience funding increases.
- Application process and prioritization criteria are revised for improved efficiency and to improve efficiency, to reflect state resilience actions, and to reflect any new State resilience standards.

Implementation Need(s):
Funding

Potential Funding Source:
Coastal and Estuarine Habitat Restoration Program and Trust Fund (CEHRTF), RIDEM Climate Resilience Fund, RIDEM Ocean State Climate Adaptation and Resilience (OSCAR) Fund, RIIB Municipal Resilience Program (MRP) Action Grant, Bond/Legislative Request

Funding Need:

- N/A
- $
- $$
- $$$
- **$$$$**

Continued State funding will require significant investment. The funding required will require further cost estimation.

Action 19.05

Insurance: Continue to track the impacts of climate change on insurance markets in Rhode Island. In particular, develop strategies to address market shifts, rising costs, and sharing challenges.

Ensure needed State Building Code updates as outlined in Action 15.02 are achieved to mitigate rising insurance rates. Introduce Fortified Wind in Rhode Island, with regulatory support, insurance rebates, and funding for implementation.

Explore the creation of a public catastrophe model for Rhode Island, as well as ways in which property owners and municipalities can share resilience adaptation improvements with insurers.

Further, explore State utilization of parametric insurance or insurer credit program which would provide payout under particular storm scenarios or funding to implement resilience solutions, respectively.

Category:

Infrastructure	Natural Systems	**Community Resilience**	**Emergency Preparedness**

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	**Building Design & Construction**	Emergency Services	Community Health & Resilience	**Financing Climate Resilience Projects**

Responsibility:
DBR

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	**Community**
Partner	Municipal	

Implementation Need(s):
Public-Private Partnership Frameworks, Rules & Regulations

Metrics for Success:

- Strategies developed to address market shifts, rising costs, and sharing challenges.
- State Building Code is updated to include resilience considerations.
- Fortified Wind funding program established to assist property owners in upgrading structures.
- Efforts to explore creating a public catastrophe model and utilizing parametric insurance or insurer credit program is initiated.

Potential Funding Source:
Bond/Legislative Request

Funding Need:

N/A	$	**$$**	$$$	$$$$

Cross-Sector Coordination

Action 20.01

Regional and Cross-Sector Resilience: Encourage multi-municipal, cross-governmental, and cross-sector collaboration across statewide resilience initiatives and grant programs. Utilize Regional Resilience Coordinators in abutting states to navigate and advance this work. In doing so, identify policy, regulatory, and/or economic barriers for implementing resilience projects that span multiple private properties, span both public and private properties, or span jurisdictional (municipal or state) boundaries.

Category:

- **Infrastructure**
- Natural Systems
- **Community Resilience**
- Emergency Preparedness

Asset Type:

- **All Critical Infrastructure**
- Drinking Water
- Wastewater
- Dams
- Stormwater
- Ports
- Electric Grid
- Fuel Supply
- Roads, Bridges, & Culverts
- Public Transportation
- Beaches & Barriers
- Coastal Wetlands
- Forests
- Water Resources
- Evacuation Routes & Emergency Shelters
- **Building Design & Construction**
- Emergency Services
- **Community Health & Resilience**
- **Financing Climate Resilience Projects**

Responsibility:
RIDEM, RI. Div of Statewide Planning

Timeframe:

- Short-Term (1-2 years)
- Medium-Term (2-5 years)
- **Long-Term (Ongoing)**

Driver:

- State
- **Gap Analysis**
- Community
- Partner
- Municipal

Metrics for Success:

- Funding for cross- regional and sector resilience projects is established.
- Barriers are identified for implementing cross-regional and sector resilience projects.
- The number of cross-regional and sector resilience projects implemented increases.

Implementation Need(s):
Public-Private Partnership Frameworks, Intergovernmental Coordination

Potential Funding Source:
N/A

Funding Need:

- **N/A**
- $
- $$
- $$$
- $$$$

Action 20.02

Business Resilience: Develop a state-funded climate resilience grant program for businesses, guided by the findings of Ready Set Rhody, to support private-sector adaptation and resilience efforts. Continue to support and fund the Small Business Resiliency project, which provides vulnerability assessments for small businesses as well as Risk Reduction Guides across eight business sectors. Continue to fund RI Commerce's Main Street Program and Site Readiness Program, which can support local business districts to improve their resilience. Support Rhode Island start-ups and small businesses providing and developing resilience solutions to develop through funding & technical assistance.

Category:

Infrastructure	Natural Systems	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	**Financing Climate Resilience Projects**

Responsibility:
Commerce, RI Div. of Statewide Planning, RIIB

Timeframe:

Short-Term (1-2 years)	**Medium-Term (2-5 years)**	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Metrics for Success:

- State-funded climate resilience grant program for businesses is established.
- Funding for the Small Business Resiliency program is continued.
- Funding for the RI Commerce's Main Street Program and Site Readiness Program is continued.

Implementation Need(s):
Funding, Direct Government Investment & Procurement, Technical Assistance & Capacity Building, Public-Private Partnership Frameworks

Potential Funding Source:
Legislative request

Funding Need:

N/A	$	$$	$$$	**$$$$**

Establishing State funding for businesses will require significant investment. The funding required will require further cost estimation.

Action 20.03

Agriculture: Encourage the protection and sustained productivity of Rhode Island's agricultural lands and facilities by supporting farmers and food system operators in adopting climate-smart agricultural practices and infrastructure investments to build resilient agricultural landscapes and local food supply chains in response to climate change. Include consideration of agricultural facilities and supply chain functions, including but not limited to barns, greenhouses, storage, processing, aggregation, cold storage, on-farm water and energy systems, and local distribution infrastructure. Ensure that agricultural asset types are included in future State resilience plans and vulnerability assessments. Continue to update Relish Rhody.

Best management practices may include, but are not limited to, cover cropping, crop diversification/rotation, reduced tillage, and agroforestry, which help safeguard soil health, water quality, biodiversity, and farmer livelihoods. Support the Agricultural Lands Preservation Commission, RIDEM, and other relevant entities in securing conservation easements on agricultural lands to prevent conversion to non-agricultural uses, promote long term stewardship, and preserve the resilience benefits these lands provide.

Create a program to support climate-smart food production in community and home gardens, including guidance on easily replicable methods for individuals with limited time and experience to start growing their own food.

Category:

Infrastructure	**Natural Systems**	**Community Resilience**	Emergency Preparedness

Asset Type:

All Critical Infrastructure	Drinking Water	Wastewater	Dams	Stormwater
Ports	Electric Grid	Fuel Supply	Roads, Bridges, & Culverts	Public Transportation
Beaches & Barriers	Coastal Wetlands	Forests	Water Resources	
Evacuation Routes & Emergency Shelters	Building Design & Construction	Emergency Services	**Community Health & Resilience**	Financing Climate Resilience Projects

Responsibility:
RIDEM

Timeframe:

Short-Term (1-2 years)	Medium-Term (2-5 years)	**Long-Term (Ongoing)**

Driver:

State	Gap Analysis	Community
Partner	Municipal	

Implementation Need(s):
Community Incentives, Intergovernmental Coordination, Funding and Technical Assistance, Capacity Building, Land-Use Policy Alignment, Public-Private Partnership Frameworks, Education, Engagement, & Awareness, Data Collection & Information Systems

Potential Funding Source:
USDA Natural Resources Conservation Service (NRCS) Incentives and Climate-Smart Agricultural Mitigation Activities, RI Green Bond, Regional Greenhouse Gas Initiative (RGGI), USDA Specialty Crop Block Grants, USDA Transition to Organic Partnership Program, USDA Sustainable Agriculture Research and Extension Grants, USDA Rural Development awards, Municipal Resilience Program (MRP) Action Grant, Bond/Legislative Request

Metrics for Success:

- Guidance document developed for farmers on climate-smart agricultural practices.
- Number of secured easements for agricultural lands increases.
- Development of a State Soil Health Plan & increased adoption of Soil Health Plans by landowners.
- Participation increase in soil conservation programs and implementation of climate-smart farming practices
- Increase in the number of agricultural facilities retrofitted or supported for climate resilience.
- Increase in consideration of agricultural resilience into state and local planning processes.

N/A	$	$$	**$$$**	$$$$

*Estimate is based on a single implementation cycle.