

Retail Business Case Study



About the business...

Findings & Recommendations for Risk Reduction

- One → recommendation
- Two → recommendation
- Three → recommendation
- Four → recommendation

For More Information

State of RI Resources

FEMA Resources

replace with **LOGO** **Retail**
[Street Address]
[City, ST ZIP Code]

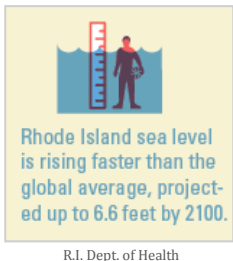
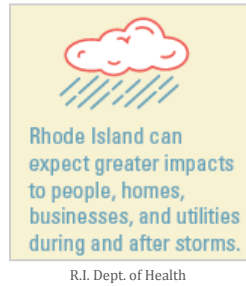
Guide for Making Rhode Island Small Businesses Resilient



RETAIL

Why Should a Small Business Care About Climate Change?

Climate change does not only affect our environment, there are associated risks and impacts to communities as well. In the coming decades it is projected that sea levels will rise, storms will become more frequent and more intense, average temperatures will increase, and many areas will experience an increase in precipitation. With these changes come challenges that communities will face, including the residents and small businesses.



As these trends shift, risk to businesses, their inventory, and operation increase. Increased storm intensity and higher sea levels could mean extensive flood damage, resulting in potential loss of inventory, operation shut down, loss of income, and property damage. By building resilient businesses, the community and employees that rely on these operations become resilient, economies are less impacted, and need for recovery is reduced.

What is Resilience?

Resilient Rhody, a statewide climate resilience action strategy, defines “climate resilience” as the capacity of individuals, institutions, businesses, and natural systems within Rhode Island to survive, adapt, and grow not matter what chronic stresses and weather events they experience. While the effects of climate change are felt across the state, these impacts are not equally distributed. Effective climate resilience requires a focus on environmental justice and equity to support local leadership for sustained interaction between community, business and government.

The Cost of Resilience

Flood mitigation costs vary depending on:

- Building size
- Foundation type
- Availability of resources & professionals
- Building construction material
- Flood depth at the site
- Other costs such as permits, surveys, maintenance, or design work

	Strategy	Description	Cost	Unit	Other Costs
\$	Develop a business continuity plan or evacuation plan		Nominal		
\$	Wet Floodproof	Retrofit to allow flooding without damage	\$2.20 to \$17.00	Per Square Foot	
\$	Dry Floodproof	Retrofit to withstand flooding	\$5.50 to \$16.80	Per Linear Foot of Wall	\$3,000 for drainage and check valves, \$400 - \$1,230 per door
\$	Generator	Size depends on power needs	\$3,000 To \$30,000	Per piece	Warranty or service plans, and installation
\$\$	Rearrange Property	Relocate building or sections within parcel	\$29.00 to \$77.00	Per Square Foot	Demolition/new construction
\$\$	Elevation	Raise structure so first flood is above the flood elevation	\$29.00 to \$96.00	Per Square Foot	
\$\$	Flood Insurance		\$600 to \$5,000	Per Year	
\$\$\$	Floodwalls	Walls built to protect against flooding storms	\$100 To \$5,000	Per Linear Foot	\$5,000 interior drainage, \$2,000 - \$5,000 per opening

The Benefits of Resilience

A more resilient community can more quickly restart local services and chart a path to a “new normal.” This “new normal” may include a higher level of function throughout the local businesses and the community they serve. Resilient businesses may also be capable of restoring operation sooner post event, minimizing excessive loss of sales or revenue, reducing insurance premiums, and protecting their property value.

What are Some Other Risk Reduction Strategies?

Build your team

- Share risk assessment results with managers and employees – they may have certain knowledge that will help to develop strategies
 - Train your team in emergency response, and provide materials that will assist them in preparing their homes for emergencies
 - Designate a manager or employee to incorporate climate hazard management into their duties
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Plan for vulnerabilities and identify opportunities

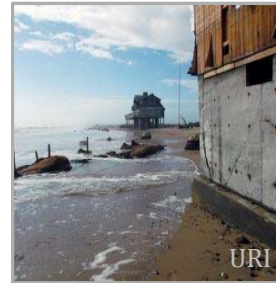
- Incorporate findings and business specific needs into future planning
 - Identify where your business may need additional products, processes and relationships, and where to find them
 - Collaborate with groups such as your chamber of commerce and trade organization to strategize resilience opportunities
 - Develop a continuity-of-operations plan
 - If your business deals with hazardous materials, ensure they are properly stored if they are in a flood-prone area
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Make structural investments to your business

- Dry flood proof the first floor
- Elevate building, parking area, and sidewalks
- Incorporate green infrastructure into design
- Install backup power, such as a generator

How Might Climate Change Impact Your Business?

Coastal Flooding



Businesses located along the coastline are more vulnerable to sea level rise and storm surge. With increases sea levels and wave action associated with strong storms, properties located near the shoreline can be susceptible to property damage, extensive flooding, and erosion. Storm surge can potentially inundate coastal areas and low-lying areas near the coast. Sea level rise can also increase the level of flooding frequency at high tides.

Inland Flooding



Flooding is not necessarily restricted to the coast. Other sources of flooding are riverine and stormwater. As precipitation persists, rivers and streams reach capacity, and water begins to flow over their banks. Resulting flooding can impact nearby residents or business owners. Inadequate drainage systems can also cause stormwater runoff to flood areas where there is nowhere for this excess water to drain to.

Storms



Storms can present risks from flooding and severe winds. The flooding can occur both inland and along the shore, while wind can occur over widespread areas. Projections anticipate more frequent, severe storms, which may include hurricanes and nor'easters; both of which can produce excessive wind. Wind can do damage to buildings, properties, and utilities.

What are Typical Retail Business Assets?



Merchandise



Utilities/Mechanics



Employees

How you can protect these assets



Ensure excess inventory is stored in waterproof containers or above flood elevation



Elevate utilities and building mechanics above flood level to minimize damage



Develop a plan that employees are versed in if there is an event, and provide employees with materials on ways to be resilient at home

