

# Exploring Managed Retreat in Rhode Island

**Climate Change Impacts Commission**  
**Emma Gildesgame & Jen West**  
**May 29, 2025**

The Nature  
Conservancy



Narragansett Bay  
Research Reserve

# Today's Agenda

- **Introduction to Managed Retreat:**
  - *What, when, why?*
- **Case studies and examples**
  - *Where, how?*
- **Discussion and Q&A**
  - *What's next?*



## **Presenters:**

### **Emma Gildesgame**

Climate Adaptation Scientist  
The Nature Conservancy

### **Jen West**

Training & Engagement Coordinator  
Narragansett Bay National Estuarine Research Reserve





King Tides in Providence, November 2024 via [MyCoast](#)





A photograph of a flooded street in Bristol, RI, taken in January 2024. The scene shows a two-story white building with a red sign on the left, a utility pole in the foreground, and a flooded road with yellow double lines. In the background, there are trees and a body of water. The sky is overcast.

Bristol, RI , January 2024 via [MyCoast](#)





South Kingstown, January 2024 via [MyCoast](#)





Barrington, RI, January 2024 [MyCoast](#)





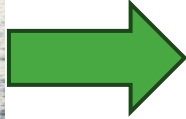
All images © Google Street View



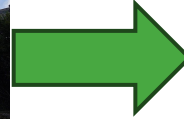
# The Status Quo for Flood Adaptation:



**DEFEND** against  
water



**ACCOMMODATE**  
water



**RETREAT** from  
water

**AVOID**  
building in  
floodplains





# A Better Way: The Flood Adaptation Toolbox

MAKE SPACE FOR WATER

## WHERE WE NEED TO BE

### Natural buffer

Protect existing and future natural coastlines and floodplains.

### Eliminate risk

Employ managed retreat of people and infrastructure to appropriate receiving areas and restore nature; complete removal and relocation (if needed) of infrastructure from the floodplain.

### Passive risk reduction

Implement passive management techniques such as infrastructure redesign and renovation that manage for temporary periods of inundation; elevate structures and utilities, restore and/or expand buffer areas, etc.

### Active risk reduction

Temporarily remove infrastructure during forecasted periods of inundation.

### Nature-based risk reduction

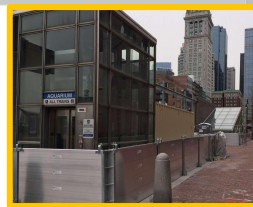
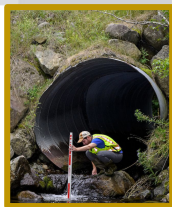
Emulate appropriate natural features to form protective buffers around systems.

### Harden

Build walls and other approaches to defend systems in place relative to design specifications.

FIGHT AGAINST WATER

## WHERE WE ARE



Engineered nature-based shoreline. © SERC



# What is Managed Retreat?

*Eliminating* flood risk by helping people, homes, and infrastructure move out of high flood risk areas.

- Voluntary Buyouts
- Moving structures
- Real estate levers – zoning, easements
- Protect & restore post-retreat





# What is Managed Retreat?

**Politically charged**

**Expensive & hard to fund**

**Painful & emotionally charged**

**High potential for inequity**

**Definitionally cross-sectoral**

**Necessary**

**An opportunity to prevent losses**

**An opportunity to reimagine our coast**

**An opportunity for restoration**

Image Credit: My Coastal Report #167,950 (Nantucket, MA, Sept. 2024)





# What feelings and reactions do you expect this topic to bring up for your communities?

Wordcloud Poll  107 responses  45 participants



Participant Responses from  
"Exploring Managed Retreat"  
workshop at RWU, January 2025



# What happens if we don't plan for managed retreat?

- People will be forced to move to another place
- Environmental pollution & harm to ecosystems
- Harm to real estate markets, affordable housing (incl. Rental affordability)
- Insurance crises
- Septic issues, other water quality issues for surface and drinking water
- Decreased trust in government
- Inequity - people with the money will find ways out and others won't
- Communities will fall apart slowly
- Funding crises for families, towns, state
- Mold & other public health challenges
- People will lose their homes
- Missed opportunities

Participant Responses from  
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# Our Choice: Managed or Unmanaged

## Unmanaged, Unsupported, Unplanned

- **Current Trajectory**
- Loss of community character
- Vacant & abandoned properties
- Exacerbated inequity
- Losses for individuals and community
- Reactive responses miss opportunities







# Edgemere, Queens, NY

- \* **Vision-driven community planning for retreat**  
Community, government, private sector worked together.
- \* **Community-informed resilient neighborhood vision**  
Planned new mixed-income housing, community centers, and green space in safer upland areas
- \* **Centered on long-term livability, equity, and resilience**  
Edgemere Commons is an 11-building complex with more than 2,000 affordable homes, retail, community space, medical facilities, and outdoor public space planned.

# Proactive Planning is Equitable Adaptation

Reactive responses to disasters reinforce social and structural inequality.

- Flooding is a threat multiplier – housing, health, work, transit, social networks, and more
- Proactive planning supports – and reinforces – social, financial, and community resilience





# Proactive Relocation is a Nature-Based Solution

- Natural shorelines provide many benefits
- Strengthen over long term
- Healthy ecosystems adapt to change
- Access to shoreline and nature
- Wide-reaching benefits





Photo © George Steinmetz

**Relocation can make space for dynamic,  
accessible, connected natural coastlines  
that are an asset to their communities.**





For more information and the full plan, visit  
[mass.gov/info-details/resilientcoasts-initiative](https://mass.gov/info-details/resilientcoasts-initiative)



# Draft **Massachusetts** **Resilient Coasts Plan**



*"Comprehensive statewide framework for coastal resilience over the next 50 years. The plan outlines actionable guidance and strategies that address near- and long-term vulnerability, both regionally and coastwide, to hazards like sea level rise, storm surge, and erosion."*

*"Addressing long-term risk requires making **smart, and often hard, decisions** to ensure a more **sustainable and prosperous community** and coast for tomorrow and future generations."*

**STRATEGY 09: Support and incentivize voluntary relocation** of people, infrastructure, and other assets in areas currently or projected to be subject to repetitive flooding, inundation, and/or erosion.



For more information and the full plan, visit  
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## **Proposed State Actions**

### **NEAR-TERM (1-2 years)**

**9.1** – Undertake a statewide voluntary buyout study to understand the options, logistics, and funding needs of administering this type of program at the state level. [STATEWIDE]

**9.2** – Conduct education and outreach with communities on areas projected to experience daily inundation due to high tide flooding. [COASTWIDE]

**9.3** – Expand the network of residents monitoring chronic flooding in vulnerable neighborhoods to increase awareness and documentation and to help inform prioritization of relocation resources. [STATEWIDE]

### **MEDIUM-TERM (3-5 years)**

**9.4** – Track repetitive properties (e.g. properties that have submitted multiple flood damage claims) and provide information at an aggregated community level for planning and awareness. [COASTWIDE]

**9.5** – Investigate and issue guidance on the impact of landform and mean high water changes on existing regulatory programs/requirements. [STATEWIDE]

**9.6** – Establish and capitalize a statewide voluntary buyout program for at-risk residential properties. [STATEWIDE]

**9.7** – Work with municipalities to identify priority areas for relocation of municipal coastal infrastructure and properties. [COASTWIDE]



# Proactive Planning for Collaborative, Equitable Retreat & Relocation in Massachusetts

## Peer Learning Network

*Network Meetings & Workshops*

**Build professional networks so more people are prepared to work towards proactive relocation planning**

<https://groups.google.com/g/coastal-relocation-network>

## Knowledge Hub

*Literature Review & Data gaps analysis*

**Make it easier for people to access the information they need to make good decisions, communicate clearly, and take action to reduce coastal flood hazards**

## Community Engagement

*Outreach & engagement events  
Community perspectives report*

**Amplify the voices and priorities of folks facing extreme flooding in Massachusetts.**

# If we get this right:

**Fewer people are at direct risk from coastal flooding and coastal habitats have more space to adapt to climate change impacts.**

**Proactive Planning** gives communities power to reduce risk, support vulnerable residents, and shape their future coast before a flood event.

**Protection & Restoration** after retreat creates functional coastal habitats, community green spaces, and other features that benefit both nature and people.





Examples of community-focused managed retreat with a focus on:

*What comes next? How to make the receiving areas attractive, resilient, and vibrant.*

# Market to Metacom: Adaptation and Economic Development Plan

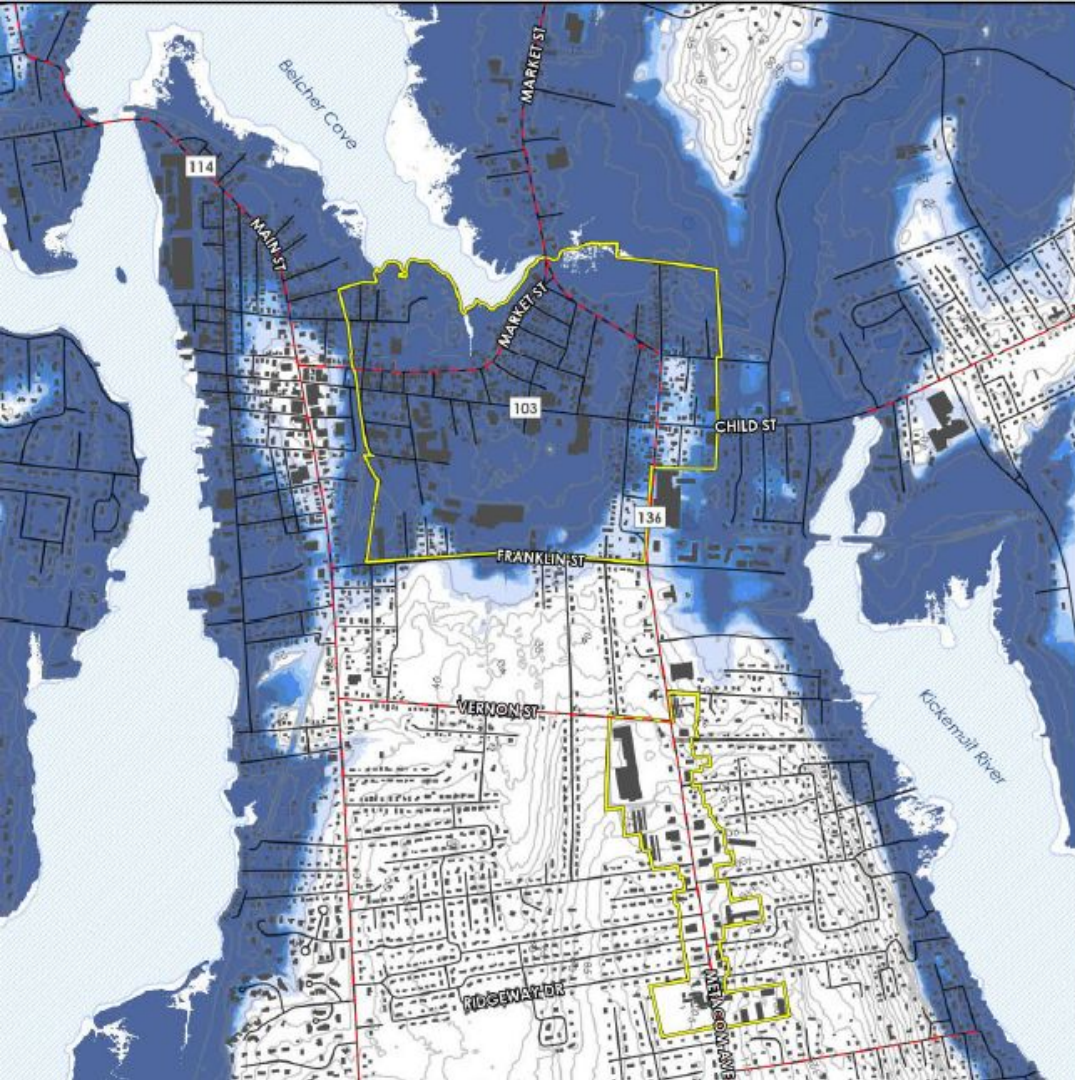
Warren, RI



James A. Sousa

Proposes to buy vulnerable, flood-prone properties and relocate the displaced to a redeveloped corridor out of the floodplain.

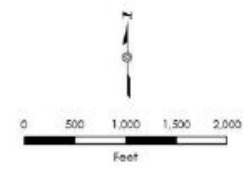




# Market to Metacom Redevelopment Project

Areas at Risk  
from 100-Year Storm

- Project Area
- Buildings
- Roads
- Evacuation Route
- 5 Foot Contours
- 100-Year Storm 2020
- 100-Year Storm 2035
- 100-Year Storm 2050
- 100-Year Storm 2070
- 100-Year Storm 2100
- Water



Data Sources: Town of Warren, RIGIS, RIDEM, CRMC

Sea level rise data reflect CRMC guidance and uses NOAA's "High" sea level rise forecast  
Vertical datum is NAVD88



It's projected that by 2100, more than 800 residents will be displaced and the town will lose \$126.3 million in business revenue, \$85.8 million in infrastructure, and 541 housing units.

# Voluntary buyouts

1980s: 61 houses removed in Warwick (Pawtuxet River Local Protection Project).

After the March 2010 floods: 20+ houses removed along the Pawtuxet and Pocasset rivers in Cranston.



Luthers Corner, East Providence (NRCS)

NRCS currently working with East Providence, Johnston, Lincoln, and Middletown.

**Overall, there's more interest than funding.**



# New Jersey Blue Acres Program



1100 homes in 20 municipalities have been bought-out and restored to provide natural flood storage and community open space.

Funded by a share of the state's corporate business tax revenue (per the 2016 Preserve New Jersey Act).



1

## RESILIENCE PLANNING

The DEP meets with local government officials and homeowners to develop and advance resilience planning, which may include exploring the potential of voluntary residential buyouts.





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Priority ranking criteria, federal funding requirements, funding allocations, and restoration potential cumulatively drive grant application and buyout funding decision making.



# THE BLUE BUYOUT

blueacres@

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## FUNDING AWARDS ANNOUNCED

Upon notification of a federal grant award, local government partners will be updated, and homeowners will be notified in writing by Blue Acres.





# THE BLUE ACRES BUYOUT PROCESS

[blueacres@dep.nj.gov](mailto:blueacres@dep.nj.gov)

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Each property owner is assigned to work with a dedicated Blue Acres case manager. The State handles real estate and grant coordination with funding sources and agency partners.



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Demolition activities will include the removal of all structures and site stabilization so that the land can function as natural flood storage, wetlands, or open space.





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## SITE RESTORATION

Blue Acres encourages consultations to determine permissible land uses, and identify best practices and potential funding sources for designing and constructing flood-resilient landscapes.



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Buyout administrators in New Jersey and other states stress that consistent state-level funding sources are an important foundation for effective buyout programs.

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2022 Innovations in Buyouts workshops (dialogues with buyout participants and community leaders)

**Key recommendation:** buyouts need institutional support at the appropriate scale

Other recommendations from practitioners:

- **Provide a guide:** Hire and train compassionate, informed, and empowered case managers
- **Cover all expenses:** Compensate participants for what they need, not just for what they've lost
- **Design for fairness:** Allocate resources equitably, in a way that meets the community's needs
- **Be transparent:** Communicate accessibly, proactively, and frequently
- **Prevent future buyouts:** Reduce risk so that buyouts don't need to happen

## **How can we make this happen?**

- Invest in building local and state capacity
- Break down silos between agencies and programs
- Make funding simpler- and more expansive
- Shift from reactive to proactive approaches
- Share and learn lessons from each other

## **In other words:**

- Value people, not just property
- Move toward, not just away from
- Build programs, not just projects