

Long-Range Community-Driven Resilience Planning

Ortley Beach, New Jersey
June 15, 2024

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Bloustein School of Planning and Public Policy
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Overview

1. Coastal Hazards



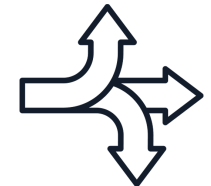
2. Response to Hazards



3. Diverse Perspectives



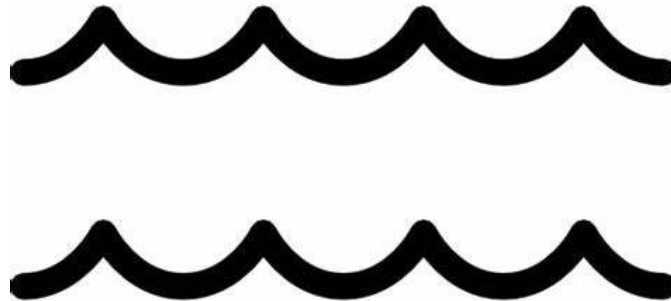
4. Hazard Mitigation Planning Efforts



5. Tools & Resources



1. Coastal Hazards



Aerial views post Superstorm Sandy: Ortley Beach, NJ (2012)



*Former
site of
Joey's
Surf Club*

Ongoing Hazards:

Severe Dune Erosion



Photo by Laura Geronimo April 2024

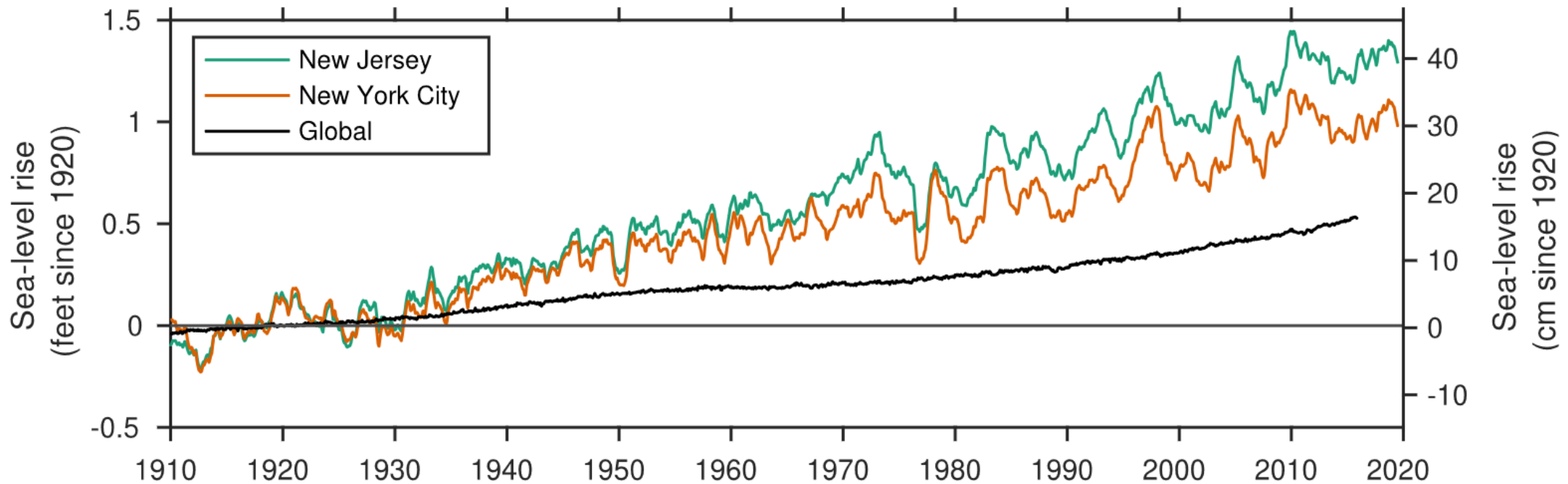


Chronic Bayside Flooding

Photo by Paul Jeffrey, 2019

Fast Facts:

1. From 1911 to 2019, sea level rose 17.6 inches along the New Jersey Coast.



a) Comparison of coastal 'New Jersey' with New York, NY (The Battery). The 'New Jersey' curve is the average of Sandy Hook, Atlantic City, and Cape May.

([STAP 2019](#))

Fast Facts:

2. The frequency of high tide floods has been growing.

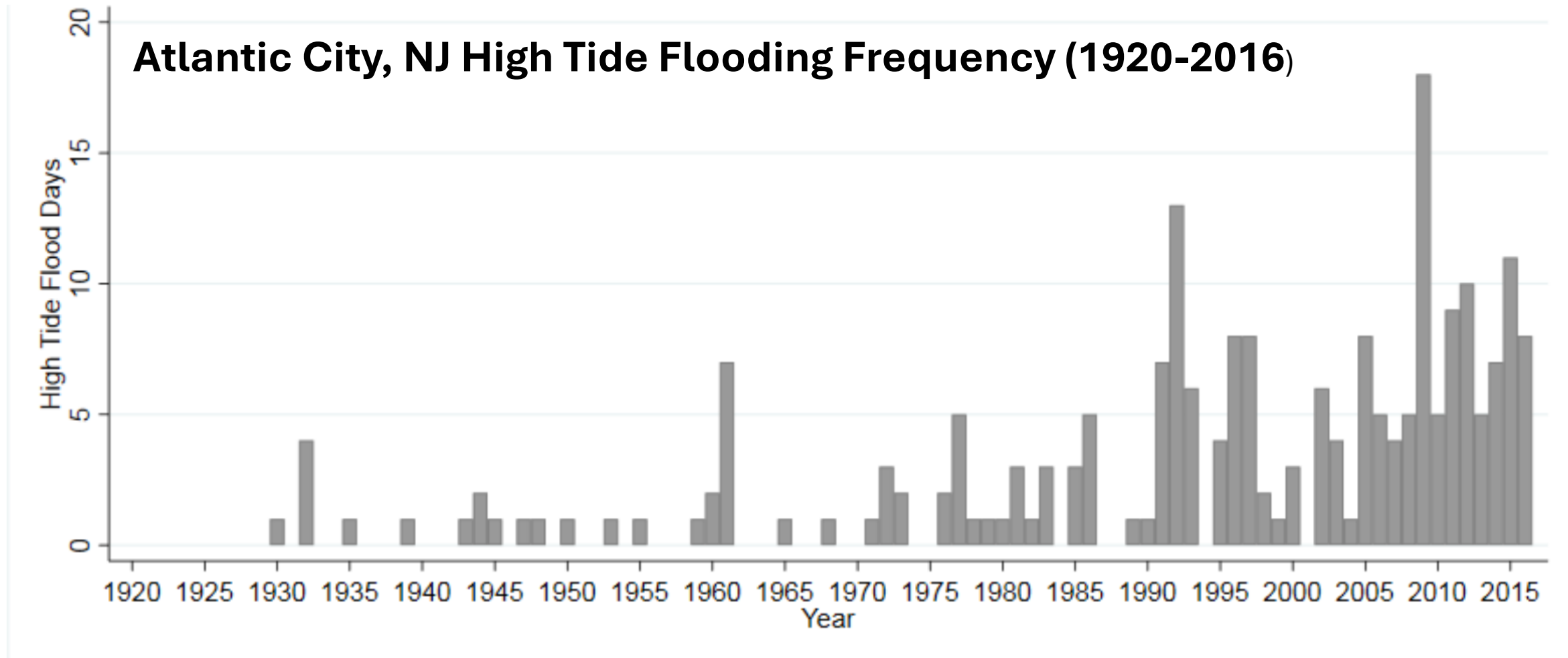
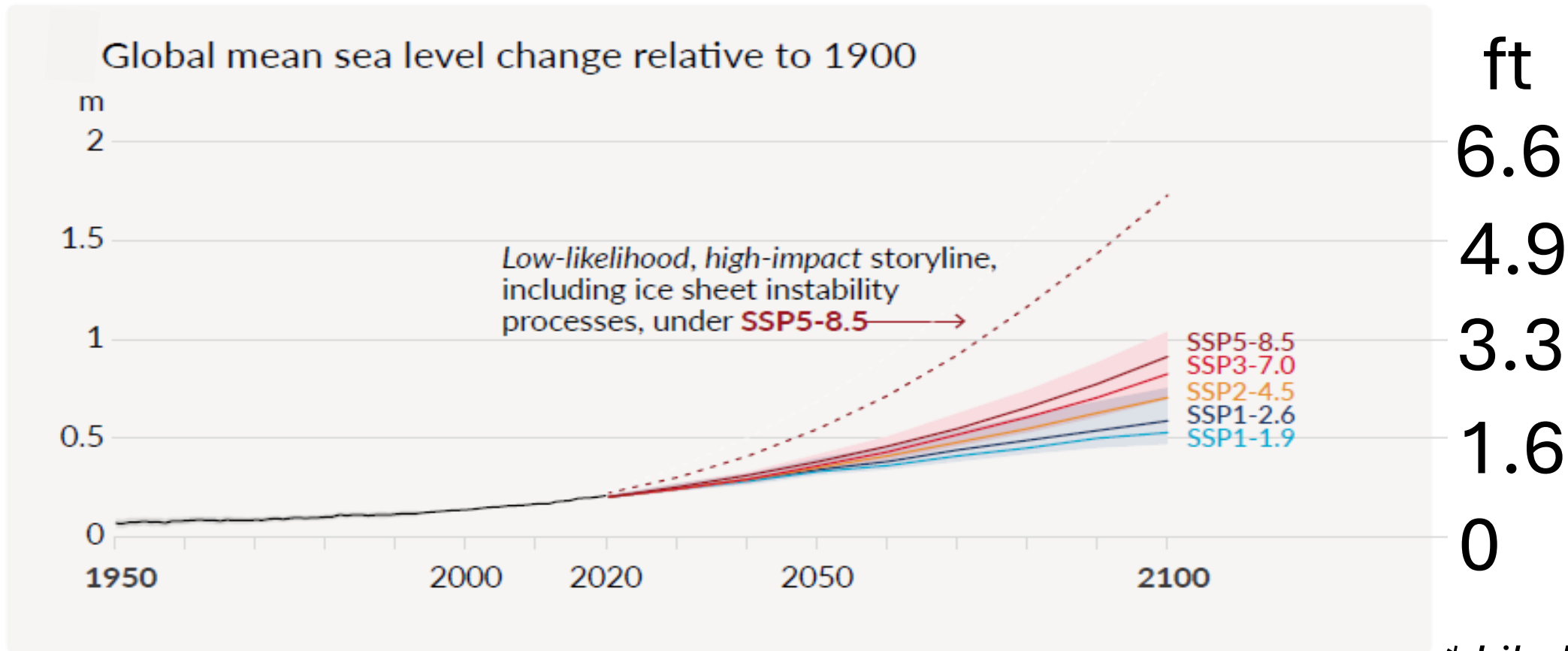


Figure 8. Historical High Tide Flood Frequency (# of flood days) for Atlantic City, NJ (Sweet et al., 2018)

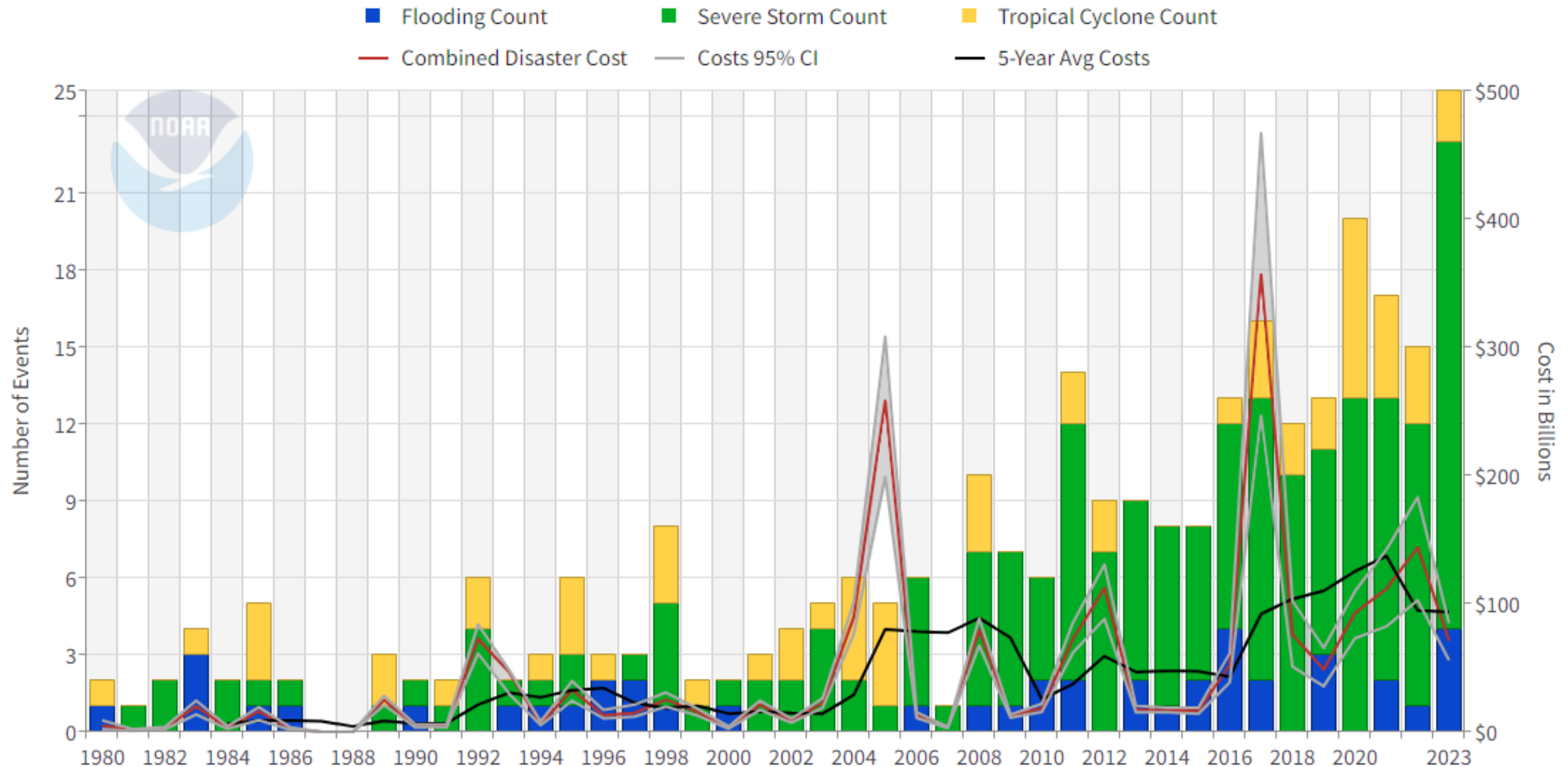
Projections of Sea Level Rise:

3. New Jersey coastal areas are likely to experience Sea Level Rise of about 1 to 2 ft between 2000 and 2050.*



Increasing Frequency of Flood-Related Disasters

United States Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)



Updated: January 9, 2024

Powered by ZingChart

2. Responses to Hazards



Physical Responses to Coastal Flood Risk:

(a) No response



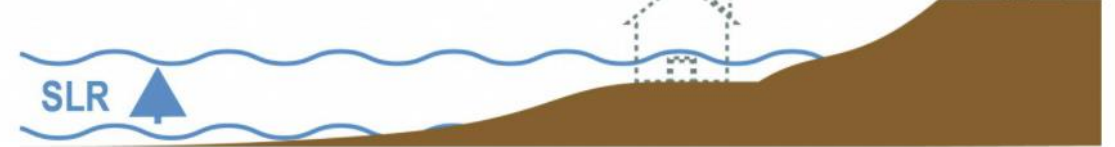
(b) Advance



(c) Protection



(d) Retreat



(e) Accommodation



(f) Ecosystem-based adaptation



Responses Around the World

Storm Surge Barriers, Netherlands



Image credit: Dutch Water Sector, 2019



*Building Islands,
Dubai, United Arab Emirates*

Responses Around the World

Successive Groins

*Gateway National Recreation
Area, New Jersey*



Living Shoreline

*Jefferson Patterson Park,
Chesapeake Bay,
Maryland*



Responses Around the World

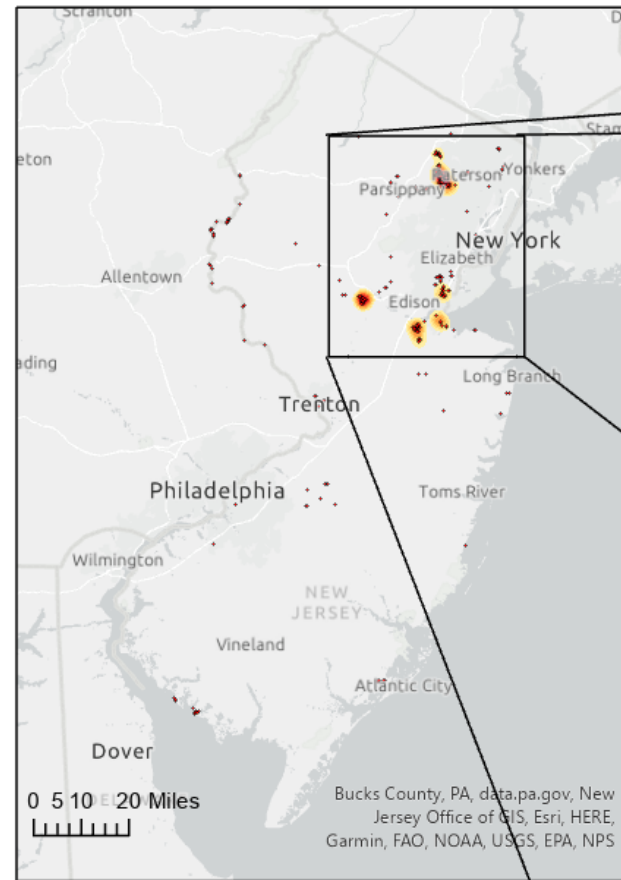
Outer Banks, North Carolina, 2022



Responses in New Jersey

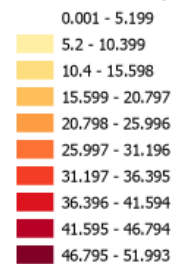
Buyouts:

- Wayne
- Manville
- Woodbridge
- Sayreville



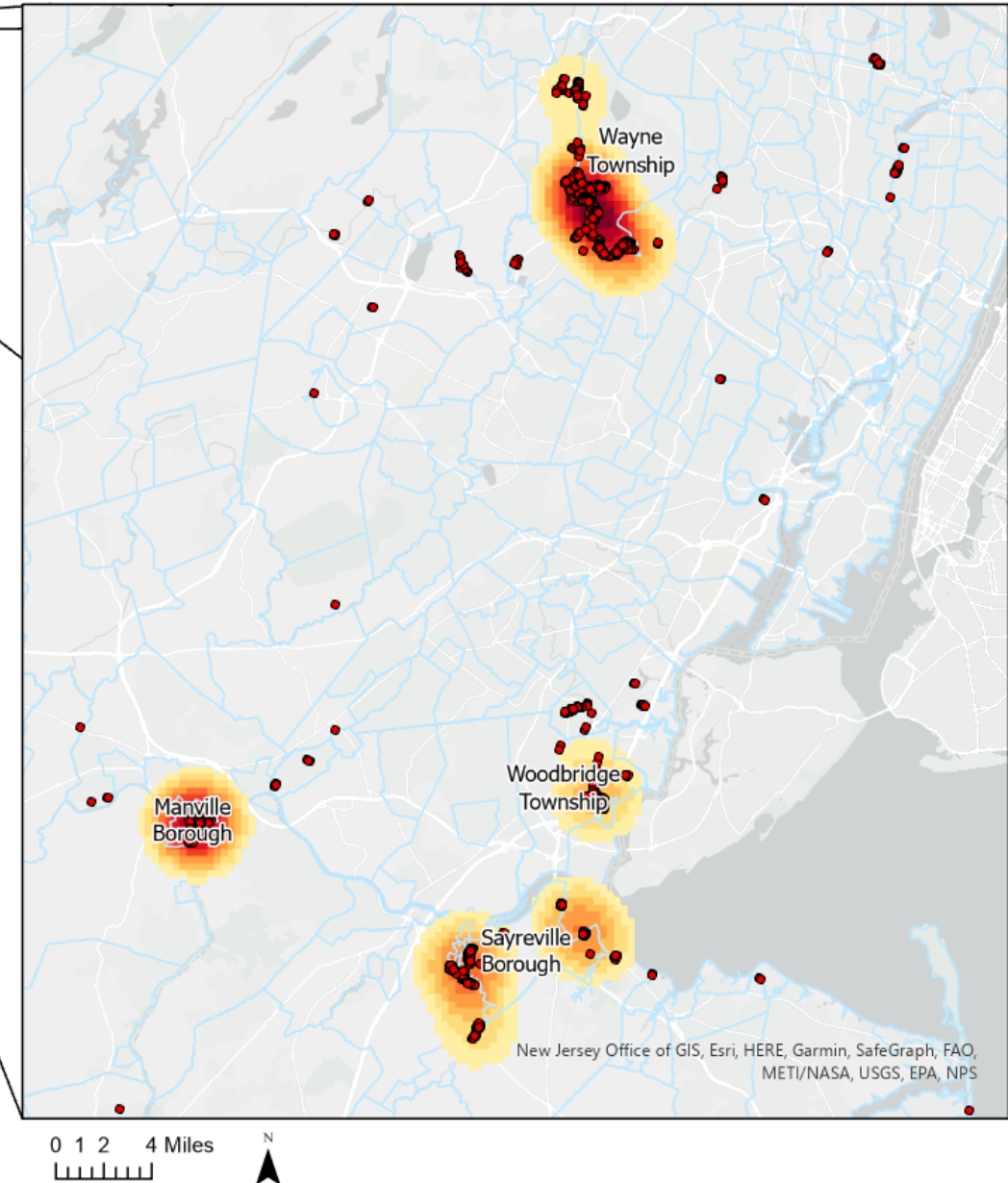
Legend

Kernal Density



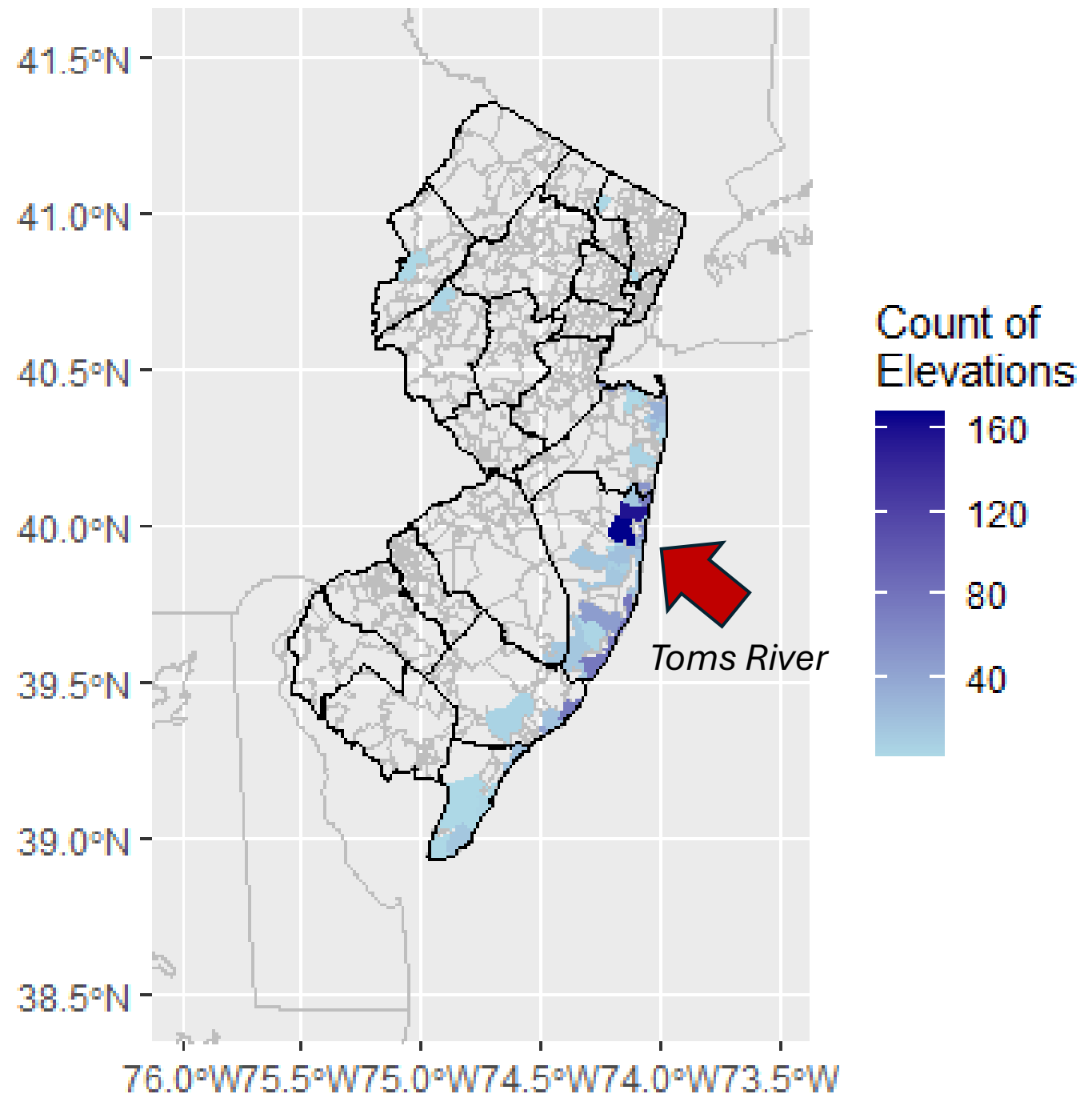
— Municipal Boundaries
● Acquisitions

Kernel Density Map of Acquisitions from New Jersey's Floodplain Acquisitions Database



Responses in New Jersey

*Toms River, NJ
has the highest
count of FEMA-
funded property
elevations post
Sandy.*



Beach Nourishment efforts in Ortley Beach



Uncertainties

- Timeline
- Local cost share
- Future cost and supply of sand
- Politics
- Effectiveness against future storms

Headlines:

NJ Spotlight

ENVIRONMENT

As Memorial Day nears, Ortley Beach looks to replace sand lost to recent storms

Light News

MORE ISSUES

terms
NJ Spotlight News

MORE ISSUES

ROUNDTABLES



ENVIRONMENT

THE CHANGE PROJECT

SUPPORT

ABOUT

[NJ Spotlight News](#)
[MORE ISSUES](#)

NJ's beaches wash away faster than feds can fix them

[NAGAN, SENIOR CORRESPONDENT](#) | MAY 28, 2024 | [ENERGY & ENVIRONMENT](#)

[WHAT TO DO](#)
[ABOUT US/CONTACT](#)

ORTLEY BEA

**NJ's beaches
fix them**

BRENDA FLANAGAN, SENIOR CORRESPONDENT | MAY 28, 2024 | [ENERGY](#)

Shore beach towns look for immediate fixes while nature strips away the sand

Waller in Ortley Beach After Nor'Easters

Cliffs | Shore beach | Trailer in Ortley Beach After Nor'Easters: Here's What it Looks Like (And The Repair Plan)

by **Daniel Nee** March 13, 2024

3. Diverse Perspectives

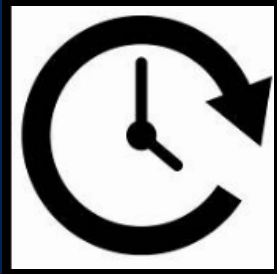


Federal Officials

State Officials

Municipal Officials

Residents



Conflict over risk perceptions and urgency.

“We’ve got this incredible dune project. It’s 40 times bigger.”
– *Former Engineer*

“There is a limit to how much this dune replenishment is going to work.”
– *Resident*

Ortley Beach, NJ, after Tropical Storm Ophelia, Sept. 2023

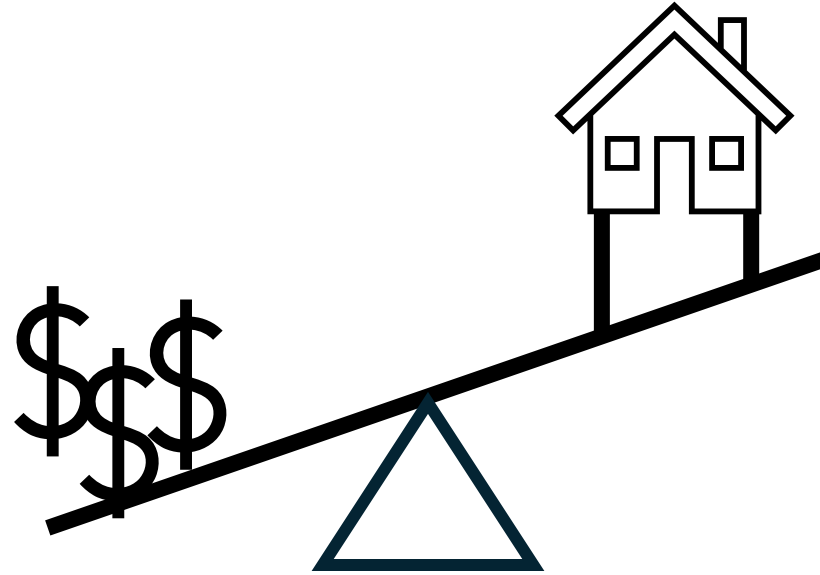


Image courtesy of nj.com ([Rodas, 2023](#))

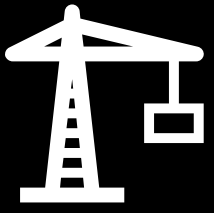
\$\$\$ Concern about rising costs.

“My concern is financial disaster. It cost us about \$100,000 out of pocket to rebuild this house after Sandy. We couldn't afford that a second time.”

– Resident



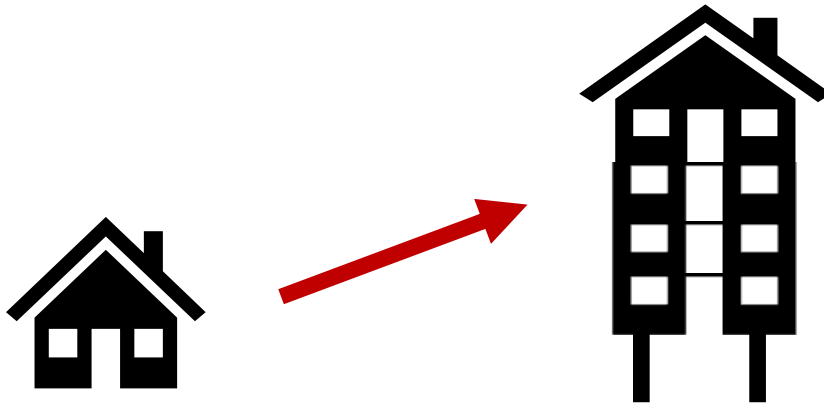
- Flood damages
- Homeowner's insurance
- Flood insurance
- Taxes



Concern about Overdevelopment, Safety, & Community Character

“We're very concerned that the overdevelopment of Ortleigh Beach is leading to future problems.”
– Resident

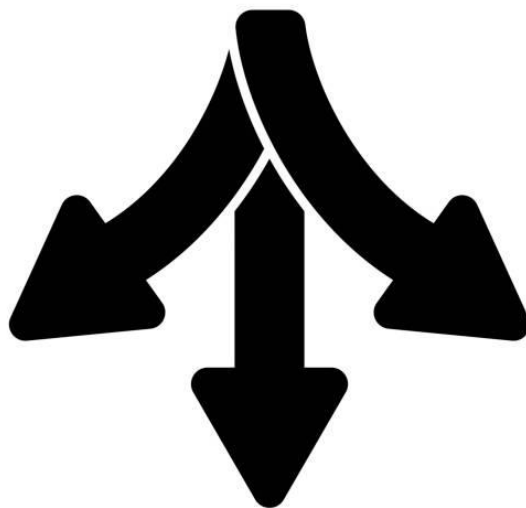
- Overcrowding
- Emergency evacuation
- Displacement & Gentrification





Conflicts over distributing costs.

Who Pays?



Households?

Federal &
State?

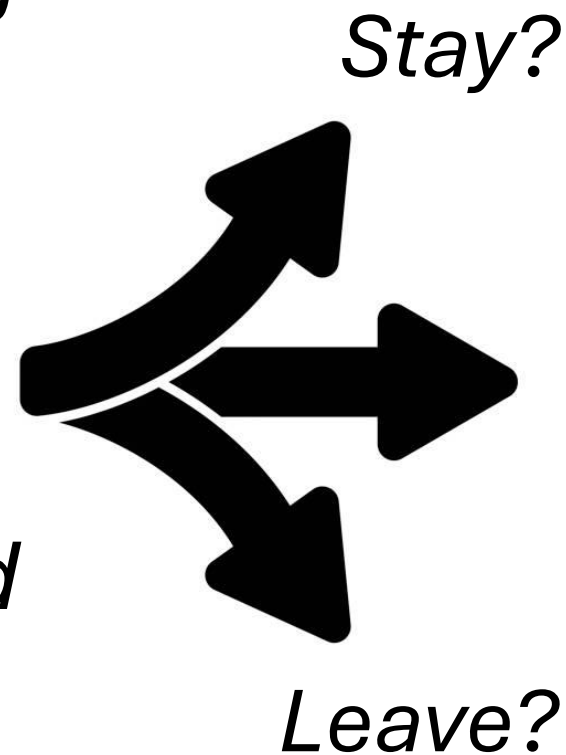
Local
Government?



Conflicting visions for the future

“We’ve already elevated homes, we’re working on elevating roads. And then probably someday you’ll see gates at the inlets.”

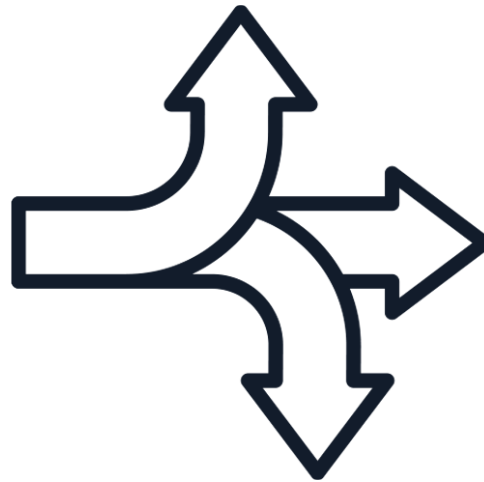
– Former Engineer



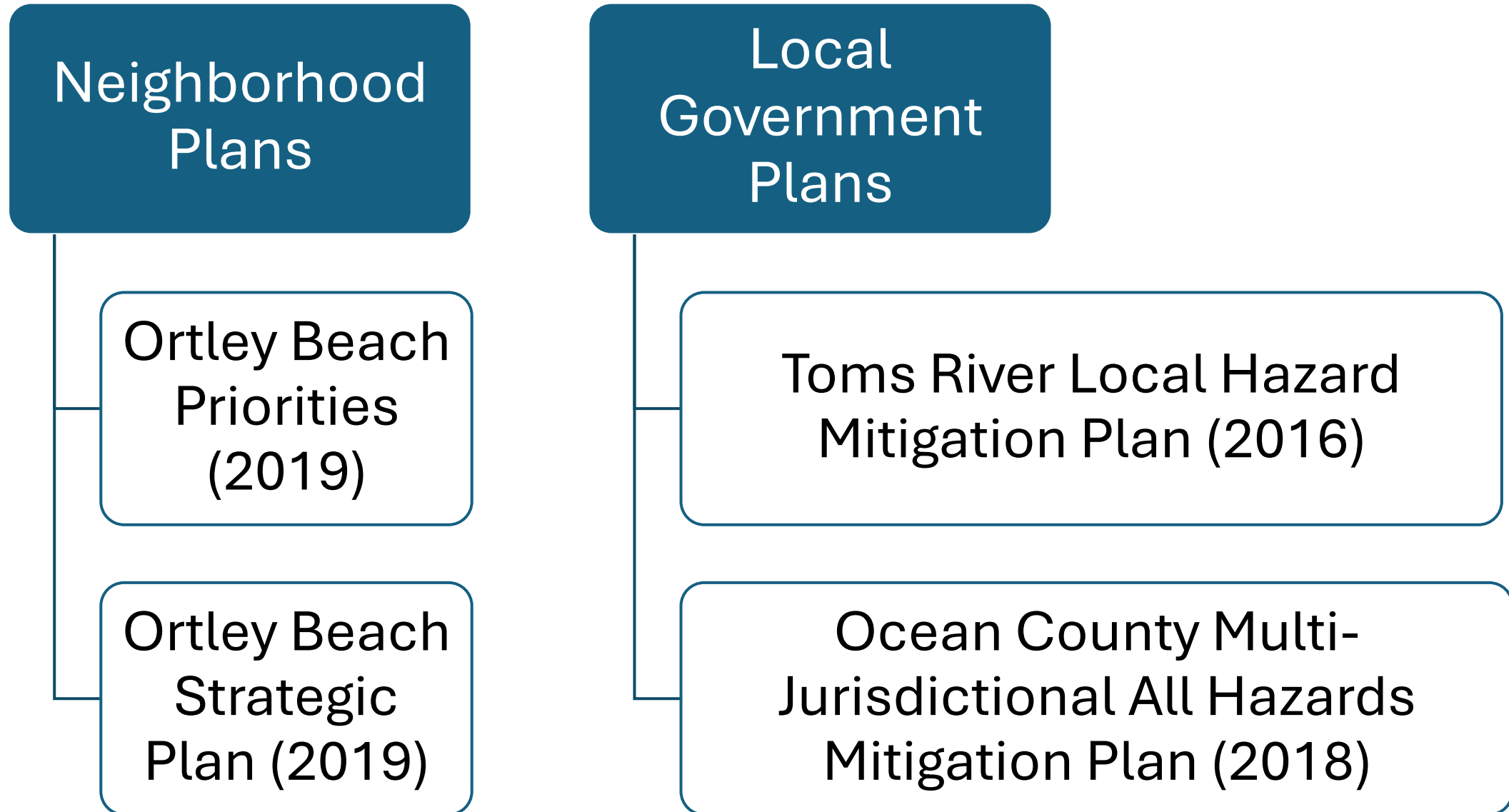
“What’s more expensive: spending billions and dollars every time there’s a storm? Or a billion dollars to get everybody off the island and be done with it?”

– Resident

4. Relevant Hazard Mitigation Plans



4. Relevant Hazard Mitigation Planning Efforts



OCEAN COUNTY, NEW JERSEY 2025 MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



Michael Baker
INTERNATIONAL

OVERVIEW

The Ocean County Sheriff's Office, Office of Emergency Management, is updating its Hazard Mitigation Plan. Hazard mitigation planning identifies risks and vulnerabilities associated with natural disasters and develops long-term strategies for protecting people and property from future hazard events. Updated are required every five (5) years in order for communities in Ocean County to be eligible for certain types of state and federal disaster relief funds after a disaster occurs.

PUBLIC WORKSHOPS

The Project Team is engaging with the public via a workshop to understand unique assets that should be protected, the hazards we face, and findings from the risk assessment. Questions we may discuss include:

- Where are the hazards experienced?
- What are your biggest concerns?
- What are your recommendations for hazard mitigation?



To review the 2020 Ocean County HMP or learn more about hazard mitigation planning, please visit the [Ocean County Hazard Mitigation Planning webpage](#).



ATTEND THE WORKSHOP

Thursday, June 27, 2024
5:00 - 6:00 PM

Join us to discuss our risk assessment findings and discuss how risk in Ocean County is mitigated by existing capabilities and mitigation strategies.

Physical location:

Robert J. Miller Airpark
901 Route 530
Berkeley Township, NJ 08721

To attend the **workshop virtually**, please click on [this link](#), scan the QR Code below, or call in using the number below



Call In Number: (412) 634-6334
Conference Code: 452 381 67#

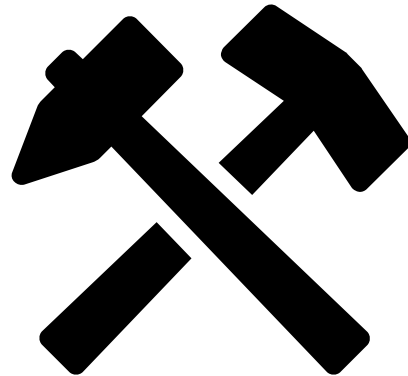


QUESTIONS? COMMENTS?

Contact:

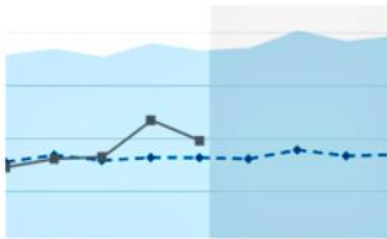
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Consultant Project Manager
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5. Tools and Resources



Overview of NJ ADAPT

NJ Adapt is a suite of tools developed by Rutgers University for climate adaptation planning to assist planners, community leaders, businesses, and residents to understand and adapt to the impacts of climate change on people, assets, and communities in New Jersey.



Climate Dashboard

New Jersey climate trends in moderate and high emissions scenarios



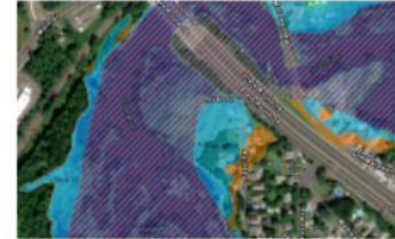
Climate Planning Tool

A guide to using coastal flooding data in climate change planning



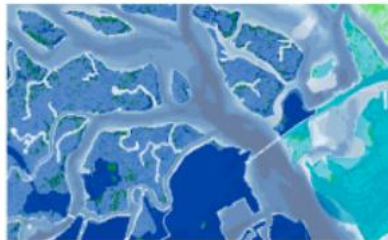
Climate Snapshots

Climate risks summarized by municipality, county and statewide



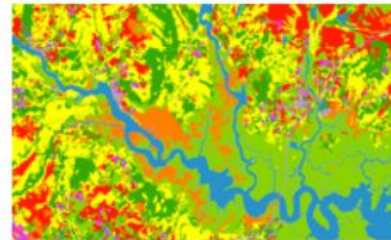
Local Planning Navigator

A decision-support tool for building community resilience



NJ FloodMapper

An interactive flood exposure data mapping tool



NJ Forest Adapt

A data mapping tool for forest management



NJ HazAdapt

Data and resources for hazard mitigation planning



NJ Public Health Adapt

Climate planning for improved health outcomes

NJFloodMapper

Areas inundated
under 2 ft of flooding
(*estimate of
permanent inundation
in 2050**):

SLR 2ft

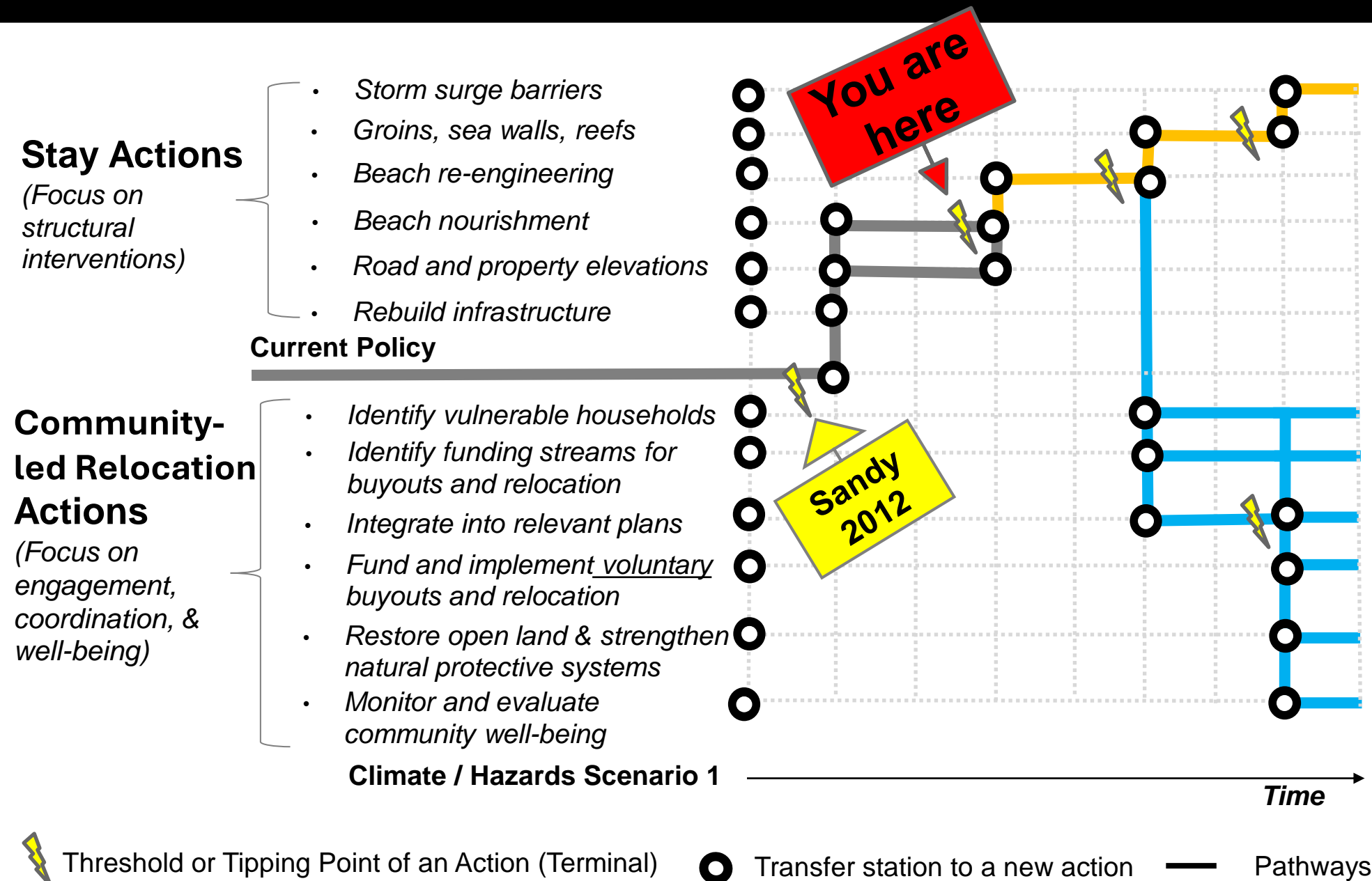
2ft SLR Low-lying Areas





Sample questions to ask of the community:

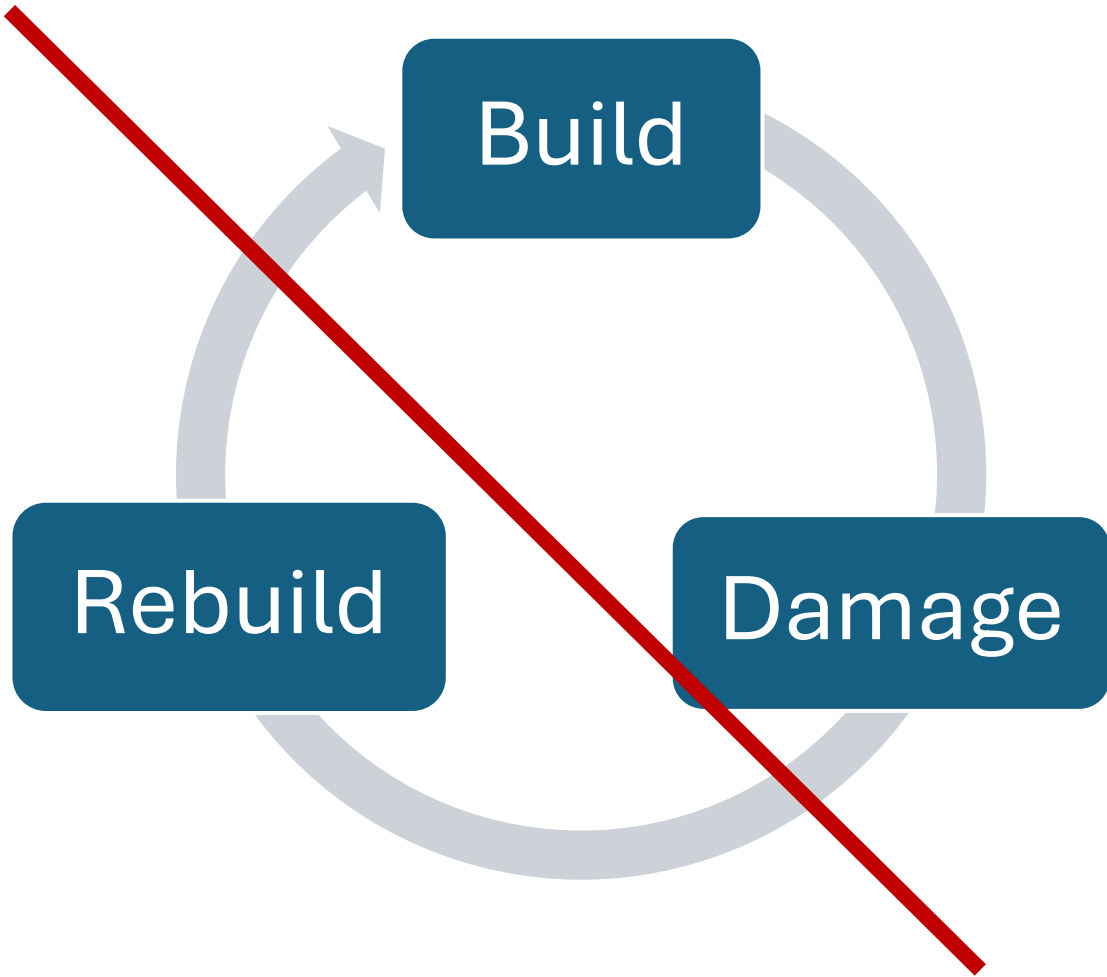
- 1. What do we value about Ortleby Beach?*
- 2. What are threats to the community?*
- 3. Who and what is at risk?*
- 4. What are actions we can take?*
- 5. What do we want our long-term legacy to be?*

Exploratory Dynamic Adaptive Pathways Map:



Scorecard		
Long-term risks	Path  	
Infrastructure failure	↑	↓
Chaotic displacement	↑	↓

Conclusion



“You still want your grandkids to enjoy the beach. But if we don't do something to plan it out, it's just going to be a bunch of homes underwater.”

– Resident

Contact & Resources

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NJADAPT Tools



Crowdsource Ideas (beta)



**Vote on ideas and
add your own!**

References

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