



Coastal Resilience

BK CB18 - September 18, 2024

NYC DEP Bureau of Coastal Resilience

Laurian Farrell, Deputy Commissioner

Bureau of Coastal Resilience

As a part of PlaNYC, DEP established a Bureau of Coastal Resilience to lead and coordinate the planning, implementation and operation of the city's coastal resilience infrastructure.



OUR FLOODING GOAL

We will prepare and protect New Yorkers from the risks of current and future flooding.

Create a new leadership structure for coastal flood resilience in 2023, headed by the Department of Environmental Protection.



Climate.gov 100-year Flood Zone Map

Bureau of Coastal Resilience



Strategic Planning



Engineering



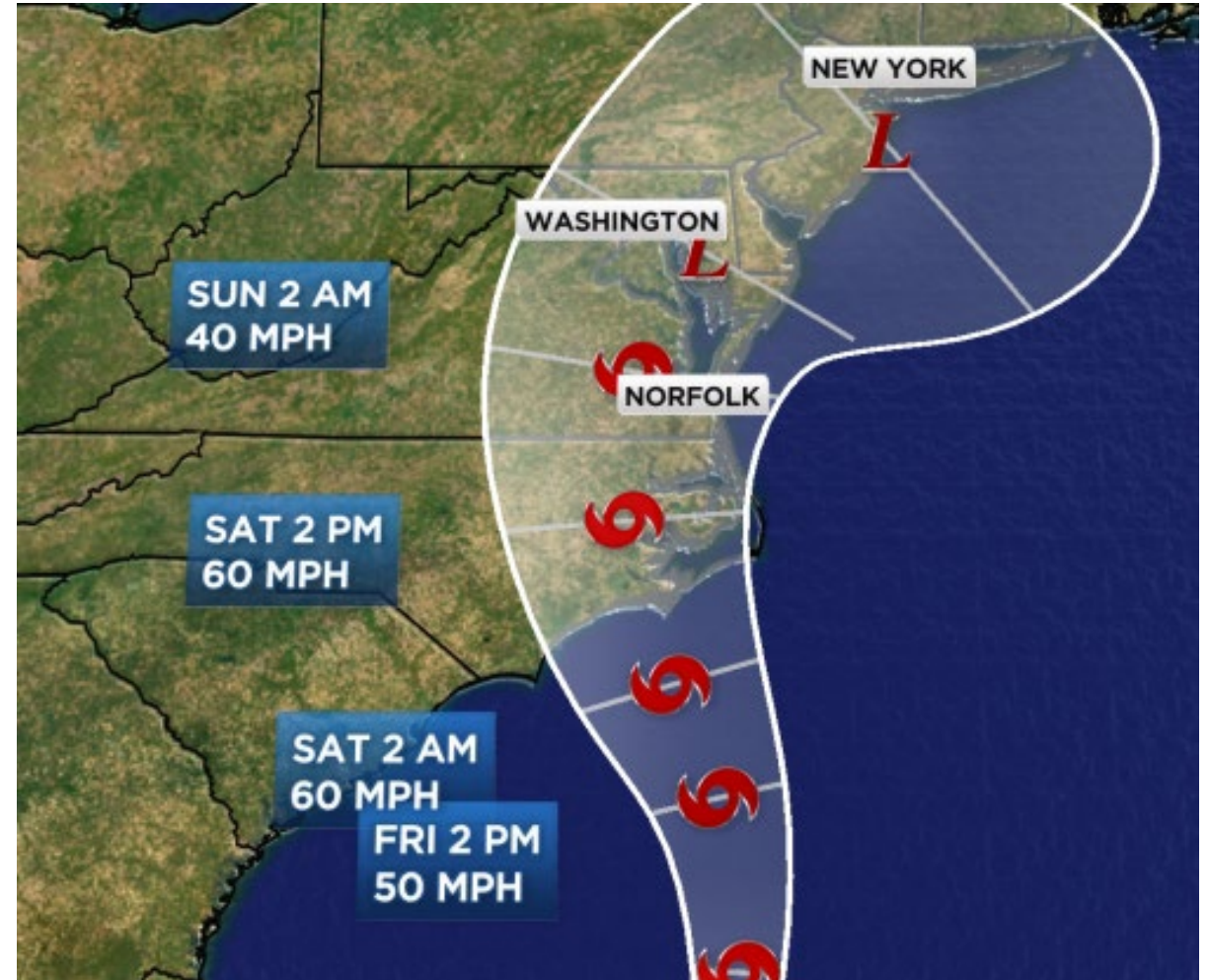
Operations

NYC has
520 Miles of Coastline



Hurricane Season

- Hurricanes are powerful storms that draw their energy from warm tropical waters in the Atlantic Ocean.
- Hurricanes bring high winds that can create a “storm surge” – when the winds push sea level higher and over the coastline, causing flooding.
- Hurricane Season is June through November but typically begins in August in NYC.
- 2024 Hurricane Season is expected to bring a high number of powerful storms to the Atlantic coastline because of higher ocean temperatures caused by climate change.



Coastal Resilience

- Coastal resilience infrastructure protects against flooding from storm surge and sea level rise.
- This infrastructure has many forms:
 - ✓ Raising the height of land
 - ✓ Walls on land or in the water
 - ✓ Gates on land or in the water
 - ✓ Wave breaks
 - ✓ Reinforcing shorelines



Coastal Resilience Infrastructure



Elevated & Reinforced Shorelines



Elevated Boardwalks & Dunes



Sea Walls and Sea Gates



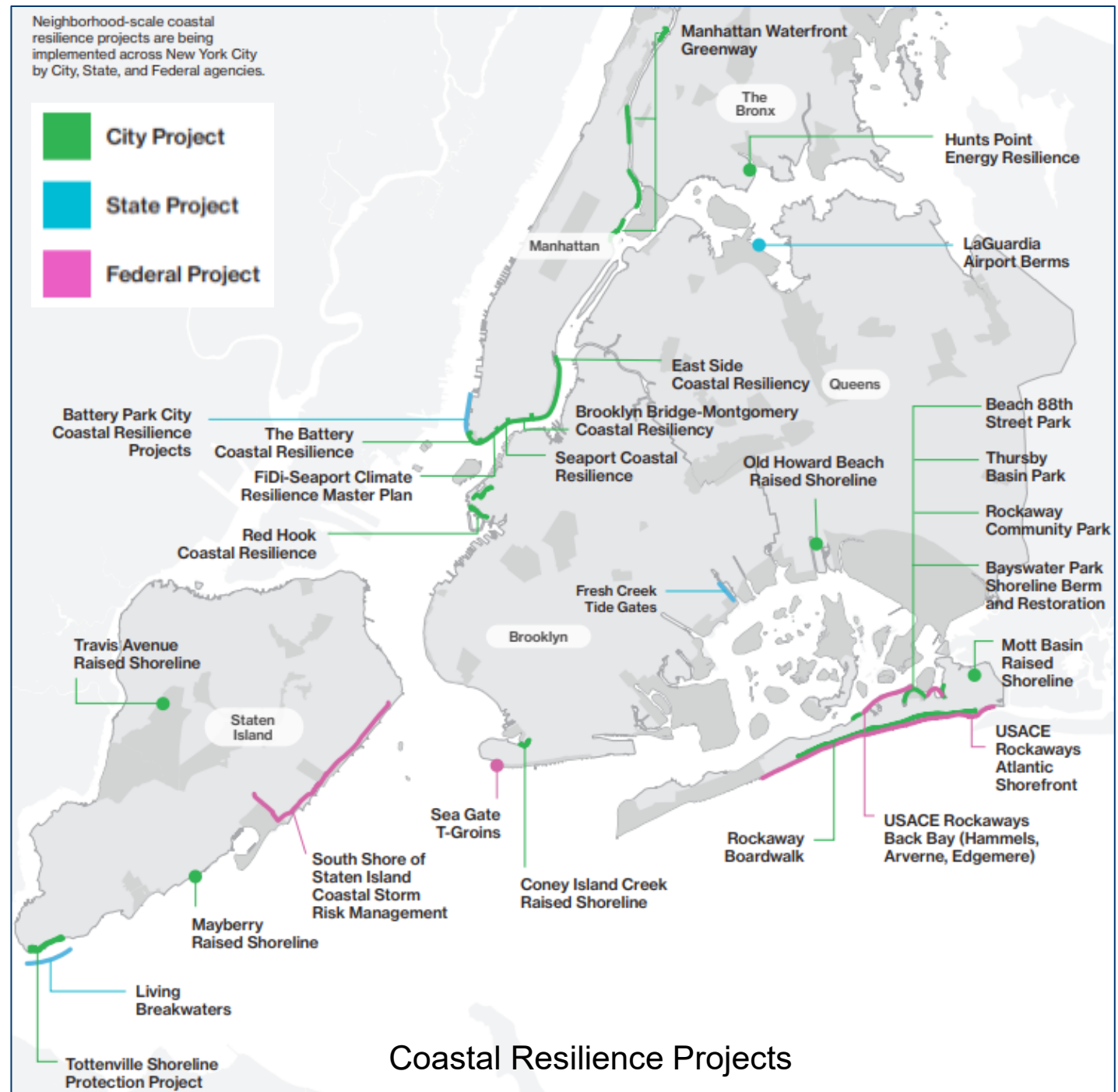
Storm Surge Walls



Storm Surge Gates

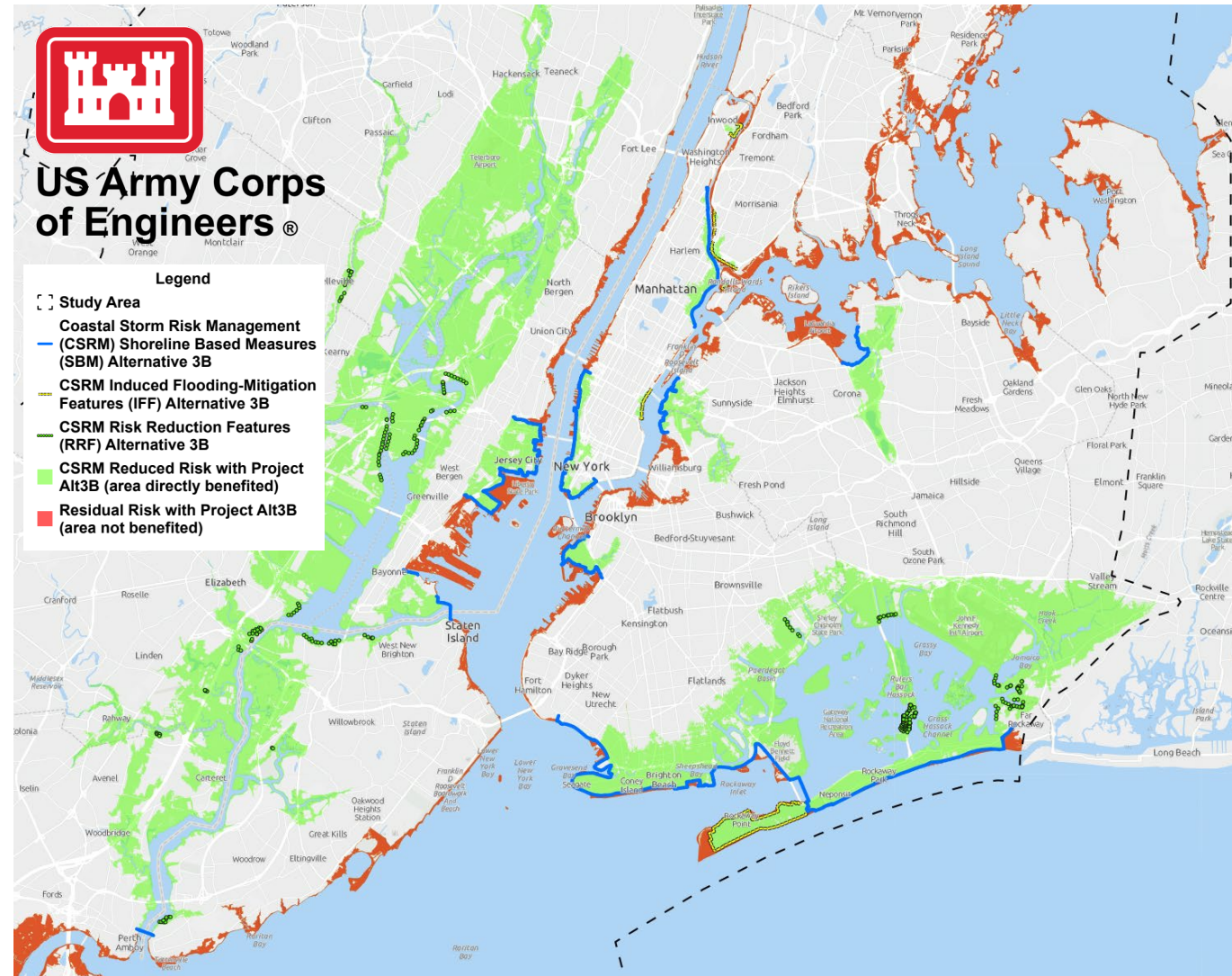
Work Underway

- NYC received \$15 billion in federal funding after Hurricane Sandy to protect the communities damaged in that storm from future storm surge.
- Upgrades in building-level resilience are well advanced – NYCHA invested \$2.7 billion in upgrades to 200 buildings.
- Power plants, wastewater treatment facilities, and transit are all better protected.
- Coastal protection infrastructure projects are underway in all over the city, but these projects are large and take time.



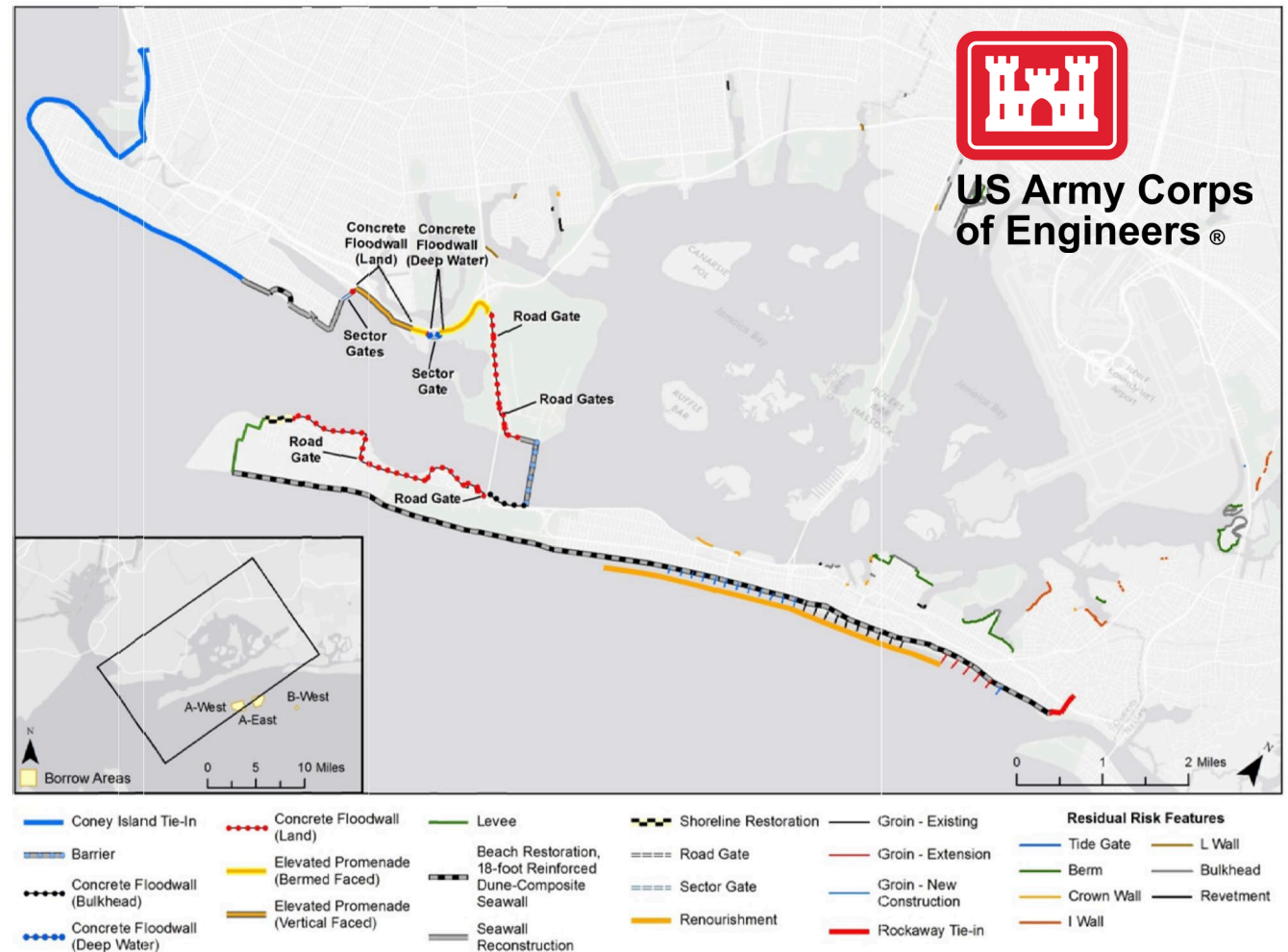
USACE NY-NJ “HATS”

- United States Army Corps of Engineers (USACE) is advancing a regional coastal protection study: New York-New Jersey Harbor and Tributaries Study (“HATS”).
- Tentatively selected \$52.6 billion plan includes projects for NYC to limit storm surge inundation in vulnerable areas around:
 - ✓ Arthur Kill and Kill Van Kull, Staten Island
 - ✓ Lower Hudson River and Harlem River, Manhattan/Bronx
 - ✓ Jamaica Bay and Flushing Creek, Queens
 - ✓ Gowanus Canal and Newtown Creek, Brooklyn/Queens

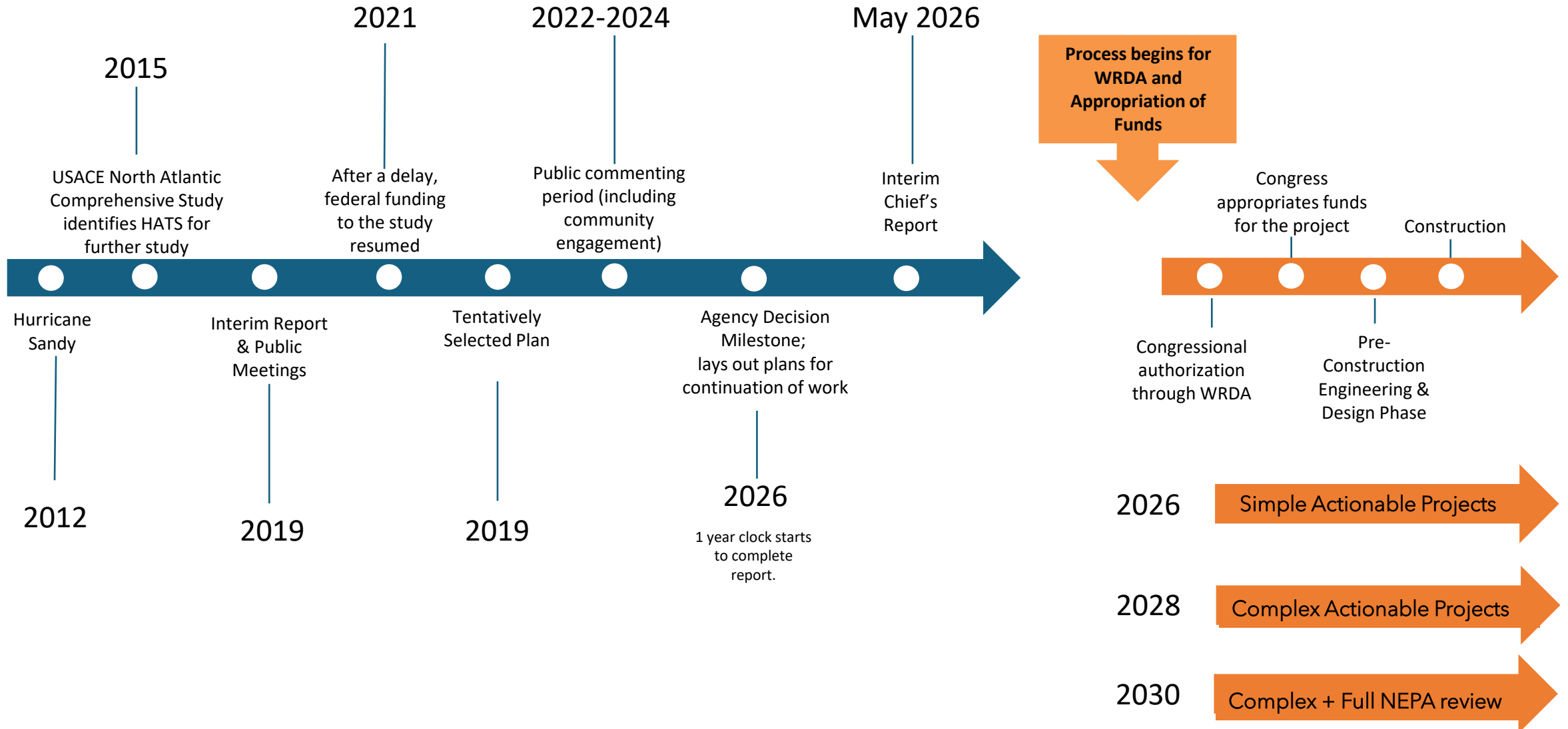


USACE NY-NJ “HATS”

- The United States Army Corps of Engineers (USACE)'s tentatively selected coastal protection plans in the Rockaways are focused on the Atlantic shorefront and the Bay.
- These projects are designed to limit flooding from an Atlantic storm surge and reduce high frequency flooding risk on the Bay side.



NY-NJ “HATS” Timeline



Plan for Intense Storms

Sign up for **Notify NYC** or download the app.

Notify NYC is the City's official source for information about emergencies.



Plan for Intense Storms

Know your zone.

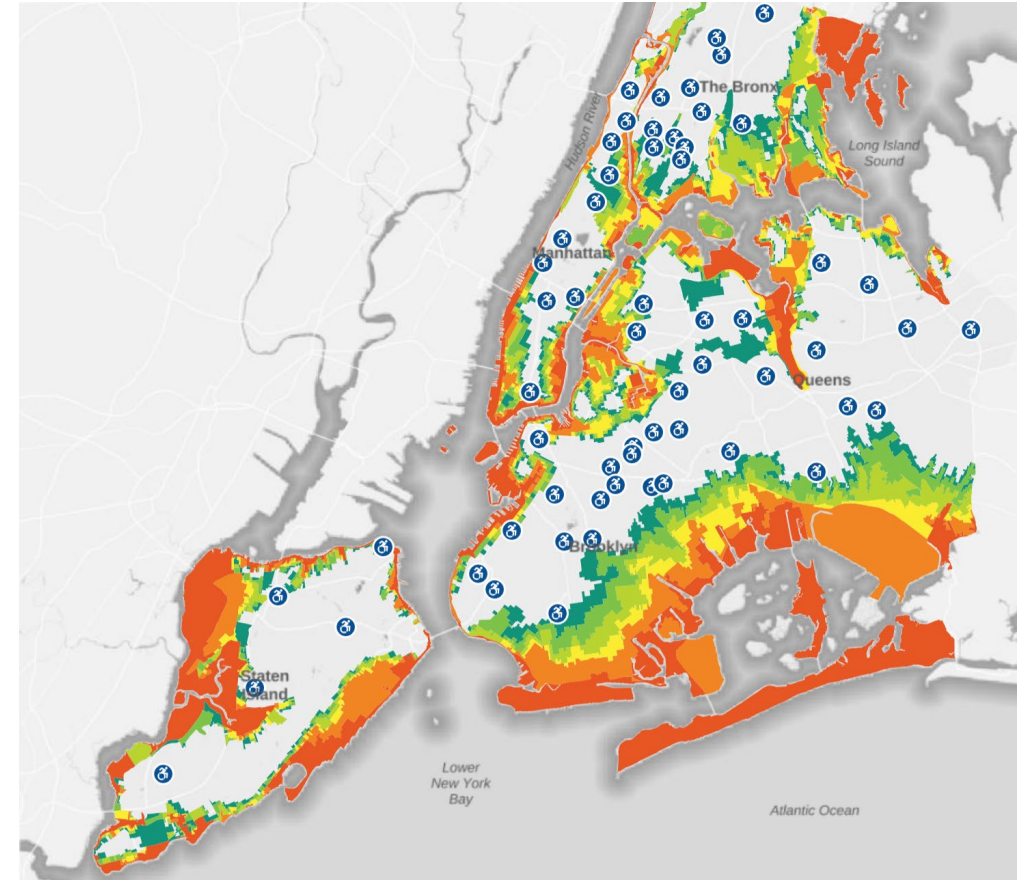
The best way to be prepared for the possibility of a hurricane evacuation is to know your evacuation zone and plan your destination and travel routes ahead of time.

City officials will tell you when to evacuate through the media and direct warnings like Notify NYC.

Evacuation is a last resort during a serious threat to public safety.

Find your zone here:

<https://maps.nyc.gov/hurricane/#>



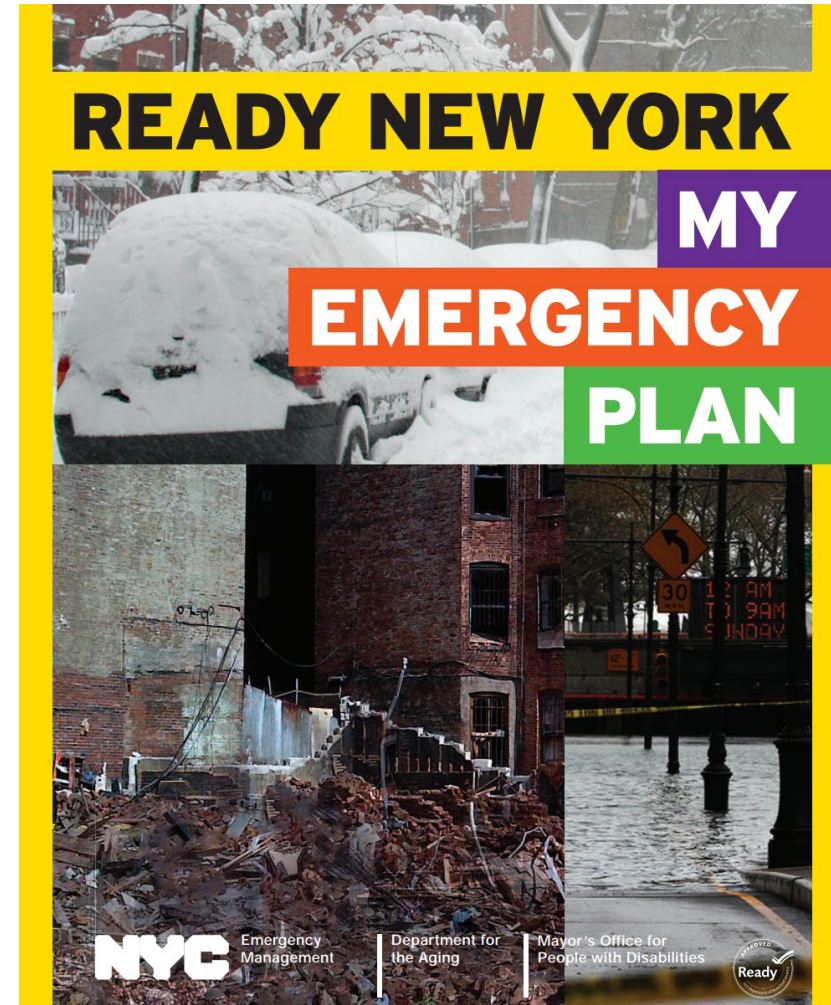
Plan for Intense Storms

Make an emergency plan.

Make a disaster plan with your household members to prepare for what to do, how to find each other, and how to communicate in an emergency.

Make a plan that best suits your needs and the needs of your household.

Download a printable guide or the Ready NYC app at www.nyc.gov/em



Plan for Intense Storms

Make an emergency supply kit and pack a “Go Bag”.

Everyone in your household should have a “Go Bag” — a collection of things you would want if you had to leave home in a hurry.



Find a guide to make your own:

<https://www.nyc.gov/site/em/ready/guides-resources.page>

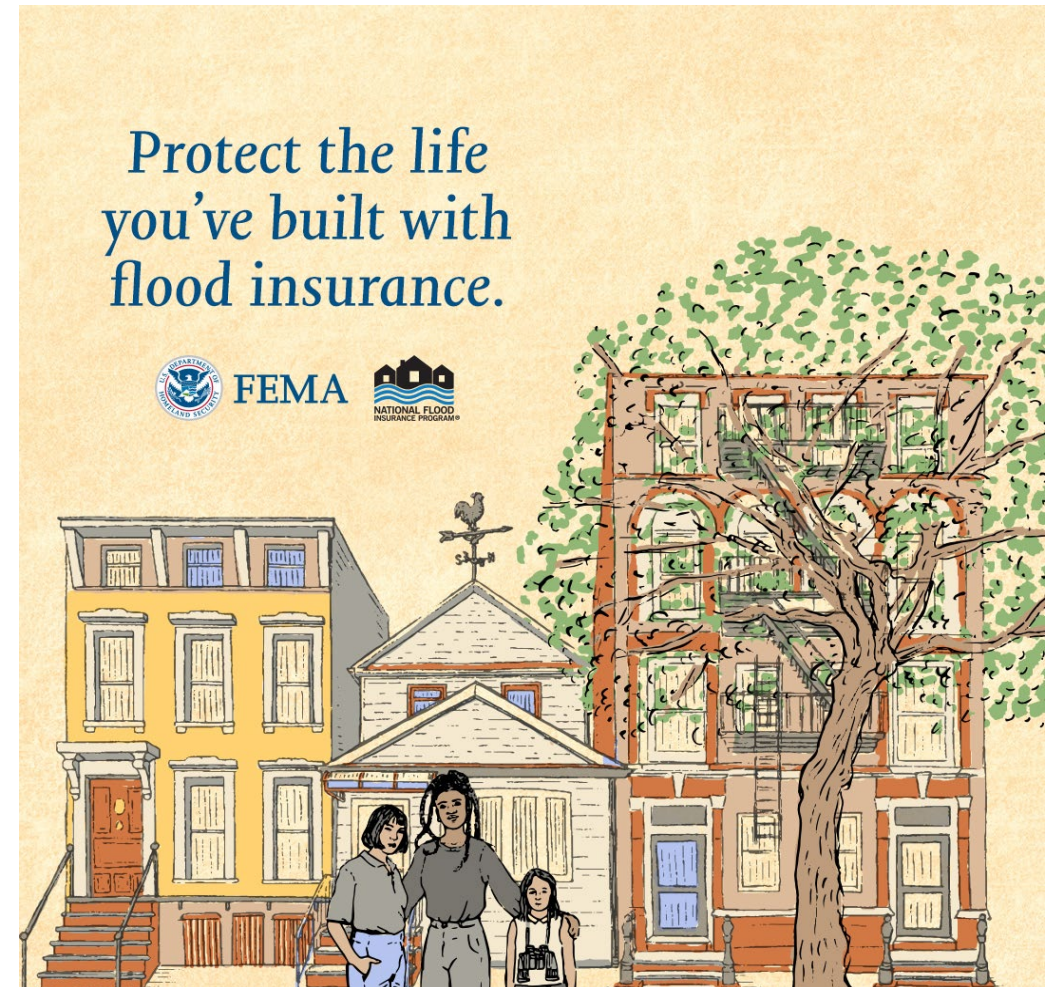
National Flood Insurance Program



NYC Mayor's Office of Climate and Environmental Justice

What is the National Flood Insurance Program?

- The National Flood Insurance Program (NFIP) is a federal program run by the Federal Emergency Management Agency (FEMA).
- Flood insurance through the NFIP is available for homeowners, renters, and businesses.
- Flood insurance may be required for some homes and businesses in the floodplain, **but all New Yorkers are eligible for NFIP – no matter what neighborhood you live in.**



Why should you get flood insurance?

- Homeowners and renters' insurance policies do not cover most flood damage.
- Flood risk in New York City is increasing because of rising sea levels and more extreme rain events.
- It pays to be insured. Nationally, the average NFIP payout is \$66,000 while the average FEMA disaster assistance grant is \$3,000.
- Don't wait to purchase a policy. There is typically a 30-day waiting period after you purchase an NFIP policy before it is effective.
- **Are you protected?**

Just 1 inch of water
can cause **\$25,000** of
damage to your home.

As floodwaters rise, so do the costs of repairing your home and replacing the things inside of it. This summer, when heavy rains lead to flash flooding, make sure you're covered—invest in a flood insurance policy.

Call your insurance agent today, or learn more at [FloodSmart.gov](https://www.floodsmart.gov).



Plan for Intense Storms

If you're a renter, flood insurance can offer financial protection in case of a flood

Renters insurance does not cover most flooding damage

NFIP offers contents-only coverage up to \$100,000 for renters

TYPES OF COVERAGE FOR RENTERS

U.S. DEPARTMENT OF HOMELAND SECURITY **FEMA** NATIONAL FLOOD INSURANCE PROGRAM®

- **CONTENTS COVERAGE**
Examples of what might be covered:
Furniture
Clothes
Television
Rugs
Up to \$2,500 of certain valuable items

Ask your landlord to make sure the building has coverage!

Visit [floodsmart.gov](https://www.floodsmart.gov) to learn more

How to Learn More & Sign Up

Websites for More Information

- **FloodHelpNY.org**
 - Information about flood insurance, flood risk, and how to protect your property.
- **FloodSmart.gov**
 - FEMA resources to help you understand and purchase flood insurance.
 - If you need help finding a provider, go to [FloodSmart.gov/flood-insurance-provider](https://www.floodsmart.gov/flood-insurance-provider).

NYC-based Nonprofits Who Can Help You Sign Up

- **Neighborhood Housing Solutions (nhsnyc.org)**
 - **For renters and homeowners:** Find your local branch and speak with a housing counselor about flood insurance.
- **Center for NYC Neighborhoods (cnycn.org)**
 - **For homeowners:** Access resources for homeowners, including flood counselor resources within CNYCN's network.

DEP is Here to Help

Call 311. All complaints go directly to DEP response teams on duty in your neighborhood.

Contact DEP Community Affairs with your 311 complaint number for follow-up.

DEP Community Affairs:
CommunityAffairs@dep.nyc.gov
718-595-3496

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