

Funding and Financing Resiliency in Lower Manhattan

As you're waiting for the meeting to start, please take a moment to update your name and affiliation by hovering over your name in the participant window and clicking "More" and "Rename."

Financial District & Seaport Climate Resilience Plan

April 2021

Welcome to Zoom!

A few requests:

1. *Please mute yourself while others are speaking. You will have time in the second half to unmute and discuss.*
2. *Add questions to the chat box during presentations. Please message “everyone” as others may have the same question!*
3. *Turn on your camera if you can!*

Introductions

Please share in the chat:

- *Name*
- *Organization*
- *What is your goal for today's meeting?*



Join the conversation!

Please use the chat function to ask questions as we go!

AGENDA

1. Introductions
2. Meeting Purpose & Objectives
3. NYC Coastal Protection Funding Overview (MOR)
4. FiDi-Seaport Master Plan Overview (EDC)
5. Financing Resilience Projects: What Sources Are Available? (MOR)
6. Panel Discussion featuring Amy Chester, Liz Yee, and Tom Rousakis
7. What's Coming Next?



Join the conversation!

Please use the chat function to ask questions as we go!

Your participation today will support **the FiDi Seaport Climate Resilience Plan** and our understanding of the **funding pathways available** for resilience projects Citywide

Meeting objectives:

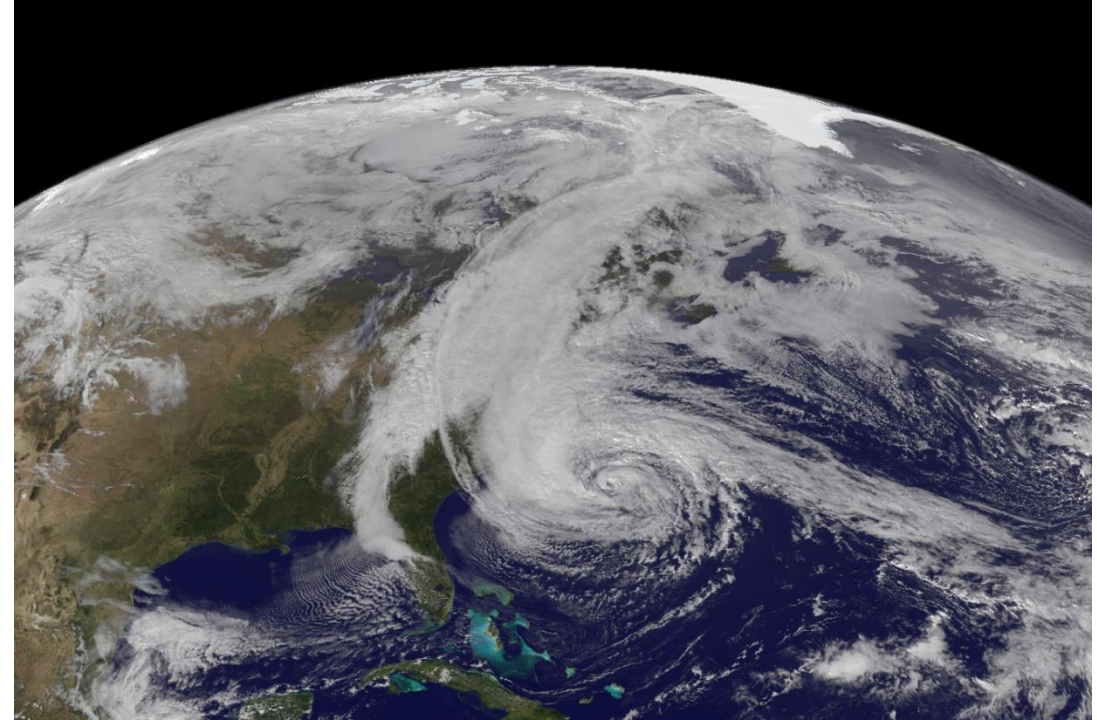
1. **Share information** with a broader group of stakeholders about the FiDi Seaport Master Plan, how resiliency projects are funded, and what kind of tools are available to finance this kind of project
2. **Hear from experts in this field** about how they have approached financing resiliency projects, what their experiences have been like, and identify relevant takeaways for the FiDi Seaport Plan
3. **Build relationships** with stakeholders for continued engagement throughout the planning process, building new relationships and incorporating new perspectives.

NYC COASTAL PROTECTION FUNDING OVERVIEW



CURRENT LANDSCAPE

- Coastal protection capital projects initiated after Hurricane Sandy have proven to be more complex and expensive than anticipated, but this experience allows us to plan more accurately for future projects
- Focus on the future – an unprecedented number of federal and State opportunities to fund resiliency projects, the New York City Council is increasingly focused on resiliency planning and projects, soon be a new slate of elected leadership in New York
- MOR's Climate Adaptation Roadmap in progress: Citywide multi-hazard threat analysis and the tools available for tackling all climate threats citywide



COASTAL PROTECTION: OVERVIEW

- Federal funding following Hurricane Sandy enabled New York City to begin advancing some of the largest and most ambitious coastal protection projects in North America
- **Completed:** Rockaway Boardwalk, Sea Gate T-Groins, and ~10 miles of dunes in Staten Island and the Rockaway Peninsula
- **Interim Protection:** Interim flood protection measures at 50+ sites across the city
- **In progress:** 15 major projects, most entering construction or in advanced design, with 7 in or entering construction this year (ESCR, USACE Rockaways, BMCR, South Battery Park City, two Raised Shorelines projects, SSSI)



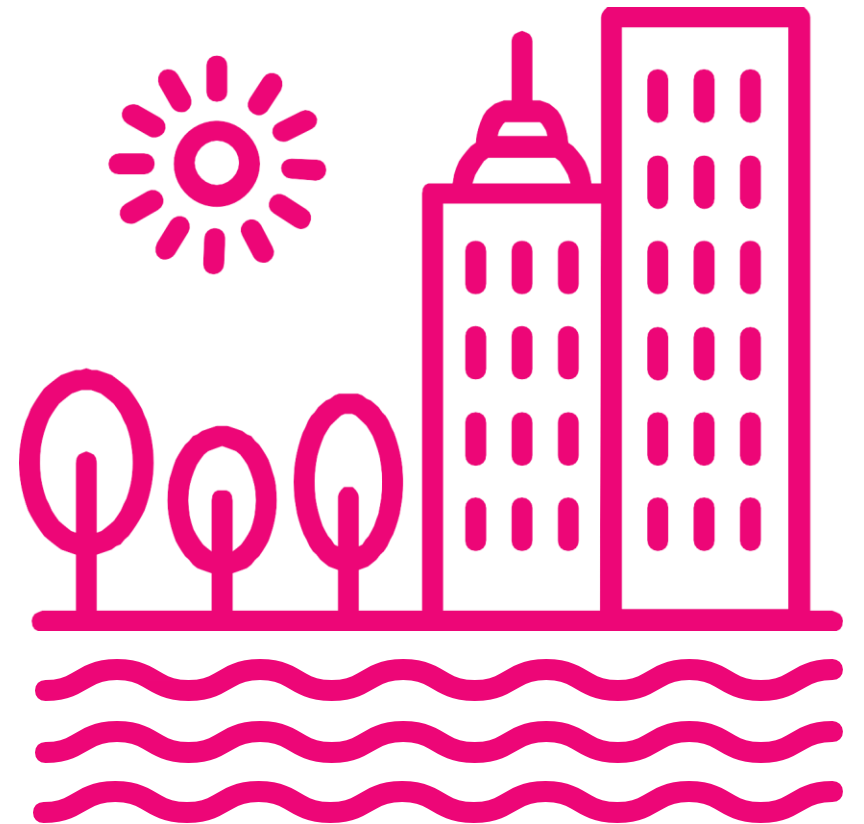
COASTAL PROTECTION PROJECTS STATUS SUMMARY

- **17 projects total**
 - **5 Lower Manhattan Coastal Resiliency projects**
 - Manhattan
 - **3 US Army Corps of Engineers projects**
 - Queens, Staten Island
 - **5 Raised Shorelines projects**
 - Brooklyn, Queens, Staten Island
 - 3 projects led by the **Department of Design and Construction**
 - Brooklyn, Queens, Manhattan



CASE STUDIES

- Raised Shorelines
- USACE Staten Island Coastal Storm Risk Management
- Red Hook Coastal Resiliency
- East Side Coastal Resiliency



RAISED SHORELINES (5 PROJECTS)

- New elevated edges/roads in Howard Beach (Q), Travis Ave (SI), Mott Basin (Q), Mayberry (SI), Coney Island Creek (B)
- Designed for future tidal flooding due to projected sea level rise
- Budget: \$115M
 - \$107 M **City Capital**
 - \$7.1 M **HUD-CDBG**
- Led by EDC with DOT, DEP, DPR, MOR



Howard Beach



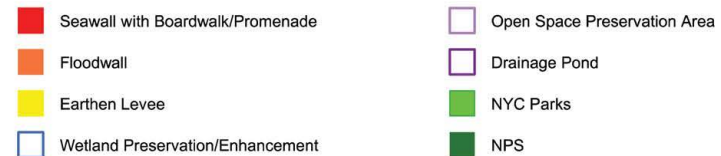
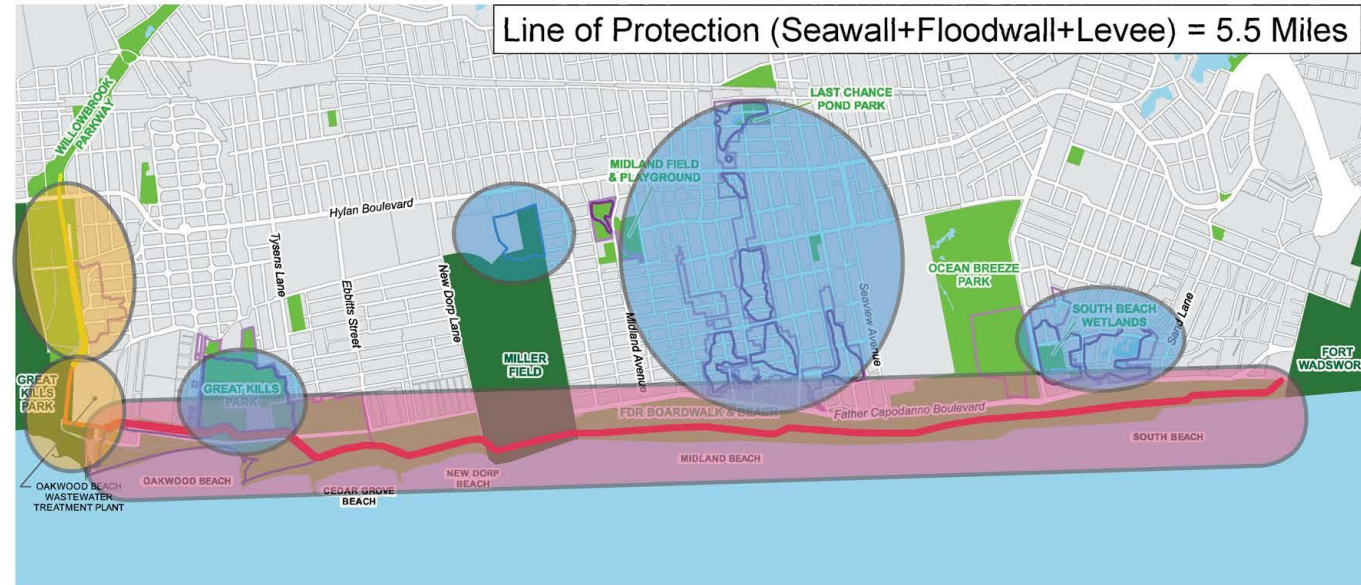
Travis Avenue



Mott Basin

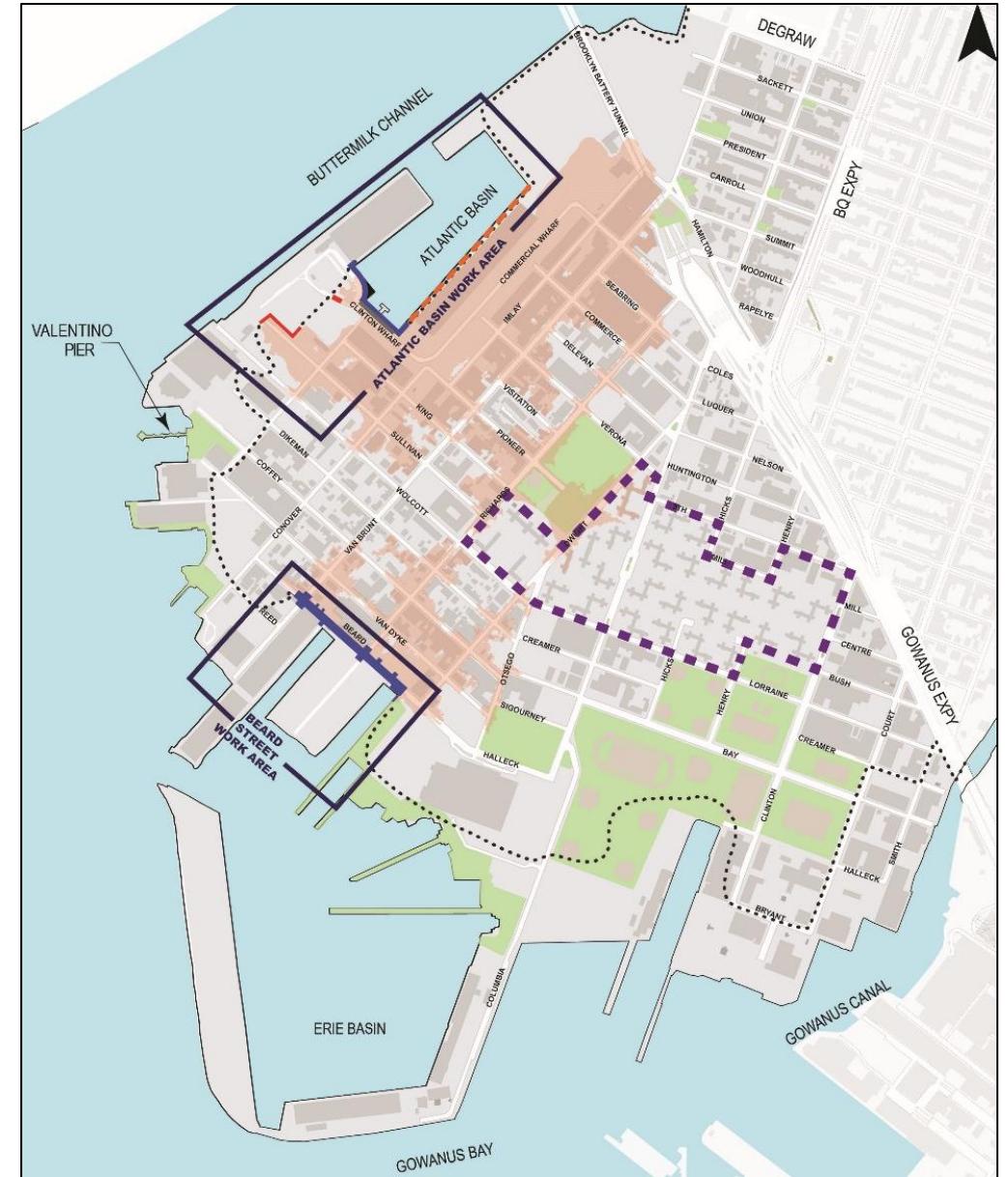
USACE SI COASTAL STORM RISK MANAGEMENT PROJECT

- Series of seawalls, floodwalls, levees, road raising, and interior drainage infrastructure improvements
- Designed for storm surge
- Budget: \$615M+
 - \$65M City Capital
 - \$400M USACE
 - \$150M State
 - + DEP funding
- Led by USACE/MOR with DPR, DEP, DOT, DCAS, NPS, DEC



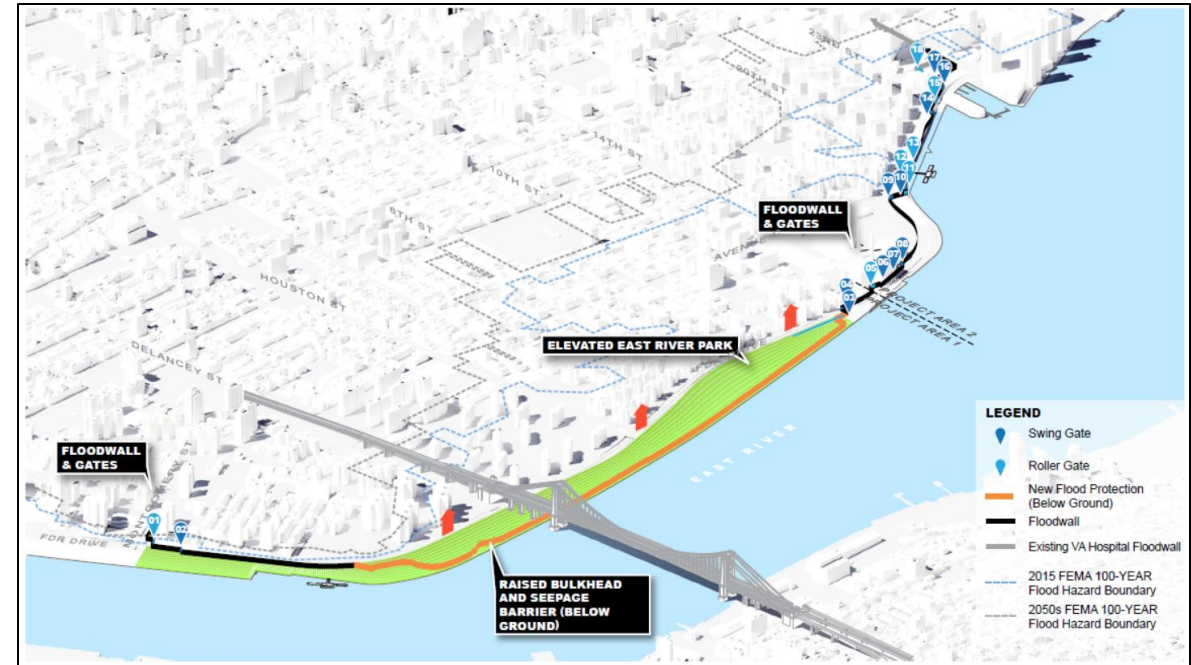
RED HOOK COASTAL RESILIENCY

- Elevation of portions of Beard Street and Atlantic Basin, and interior drainage infrastructure improvements
- Designed for storm surge
- Budget: \$100M
 - \$50M City Capital
 - \$50M FEMA HMGP
- Led by DDC with DOT, DEP, EDC, PANYNJ, EM and OMB



EAST SIDE COASTAL RESILIENCY (ESCR)

- Elevating East River Park approximately eight feet with flood protection beneath it, along with a combination of floodwalls, floodgates, and interior drainage infrastructure improvements
- Designed for storm surge
- Budget: \$1.45B
 - \$1.112B City Capital
 - \$338M HUD-CDBG
- Led by DDC with Parks, DOT, DEP, EDC, MOR

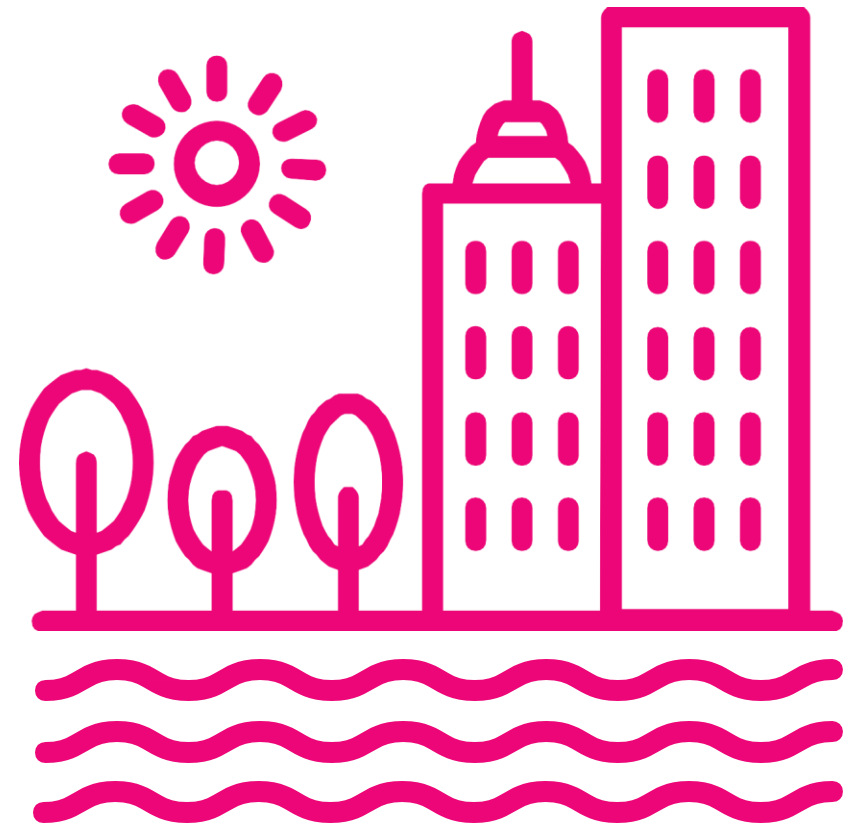


FUNDING AND FINANCING OF FUTURE ADAPTATION CAPITAL PROJECTS

- Advocate for increased Federal hazard mitigation and disaster recovery funding, and better alignment of Federal funding streams and grants to the needs of urban areas and natural resource protection projects (BRIC, STORM, Build Back Better infrastructure bill, earmarks)
- Work with agency and stakeholder partners on developing resiliency projects for funding via the recently passed Environmental Bond Act
- Develop recommendations for state legislative action to create a replenishing resiliency fund
- Continue to integrate resiliency into City governance, capital planning, and budgeting
- Assess project specific potential private revenue sources



FIDI-SEAPORT CLIMATE RESILIENCE MASTER PLAN OVERVIEW



Climate change isn't coming; **it's here.**



Daily tidal flooding combined with sea level rise is bringing **higher** water levels along the coast, causing recurrent flooding in low-lying areas.

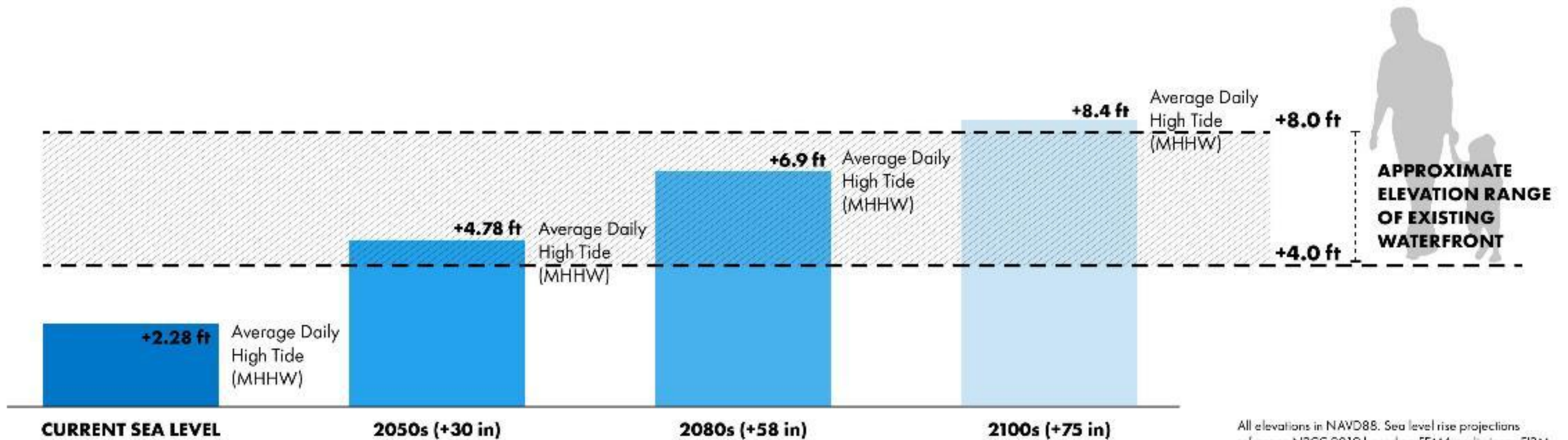


Coastal storms are **increasing** in frequency and intensity, bringing the impact of surge to our front doors.



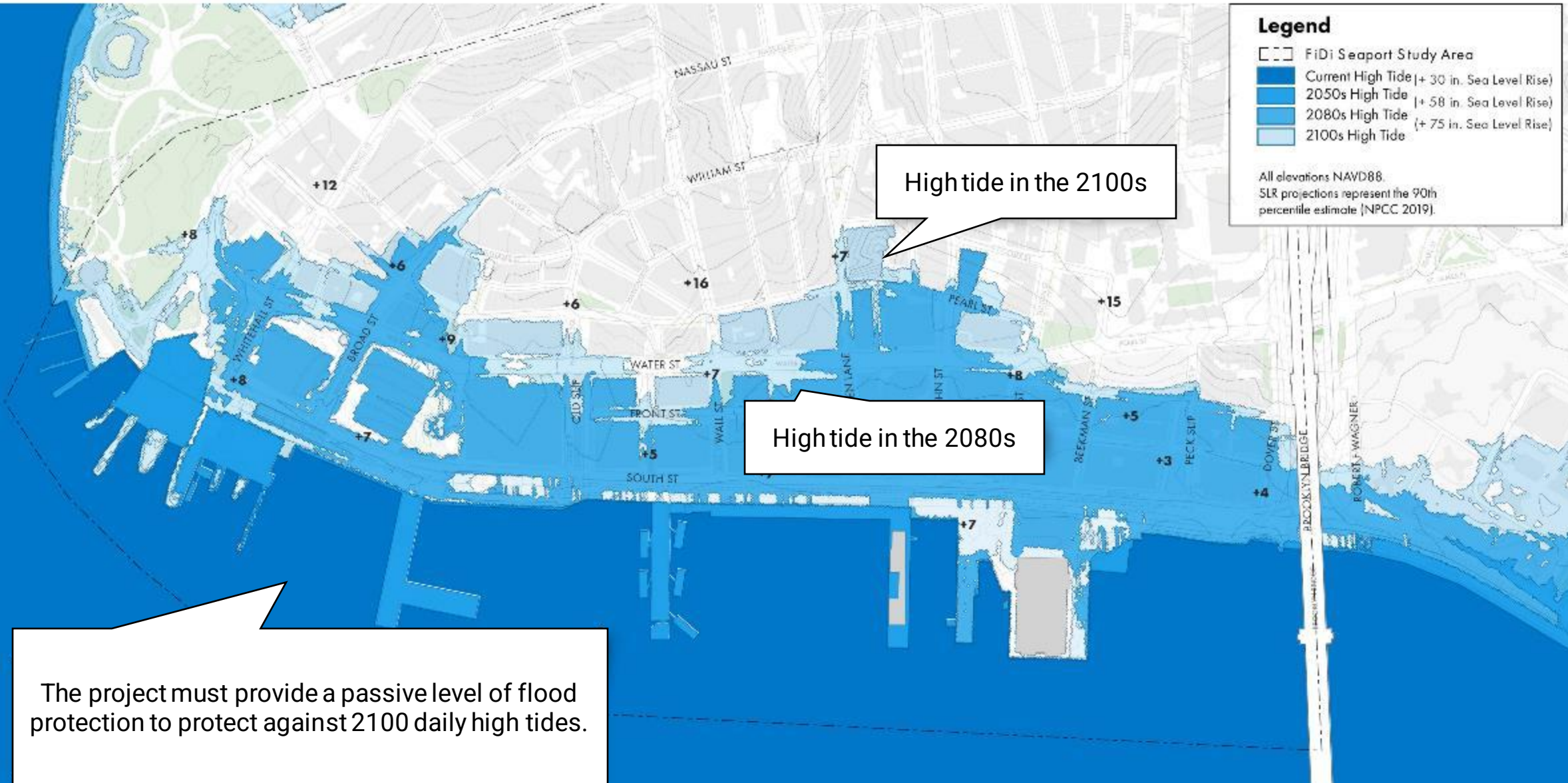
Extreme precipitation is occurring **more frequently**, stressing our sewer system and flooding our streets.

The waterfront could be inundated by high tide almost **daily** by the 2080s

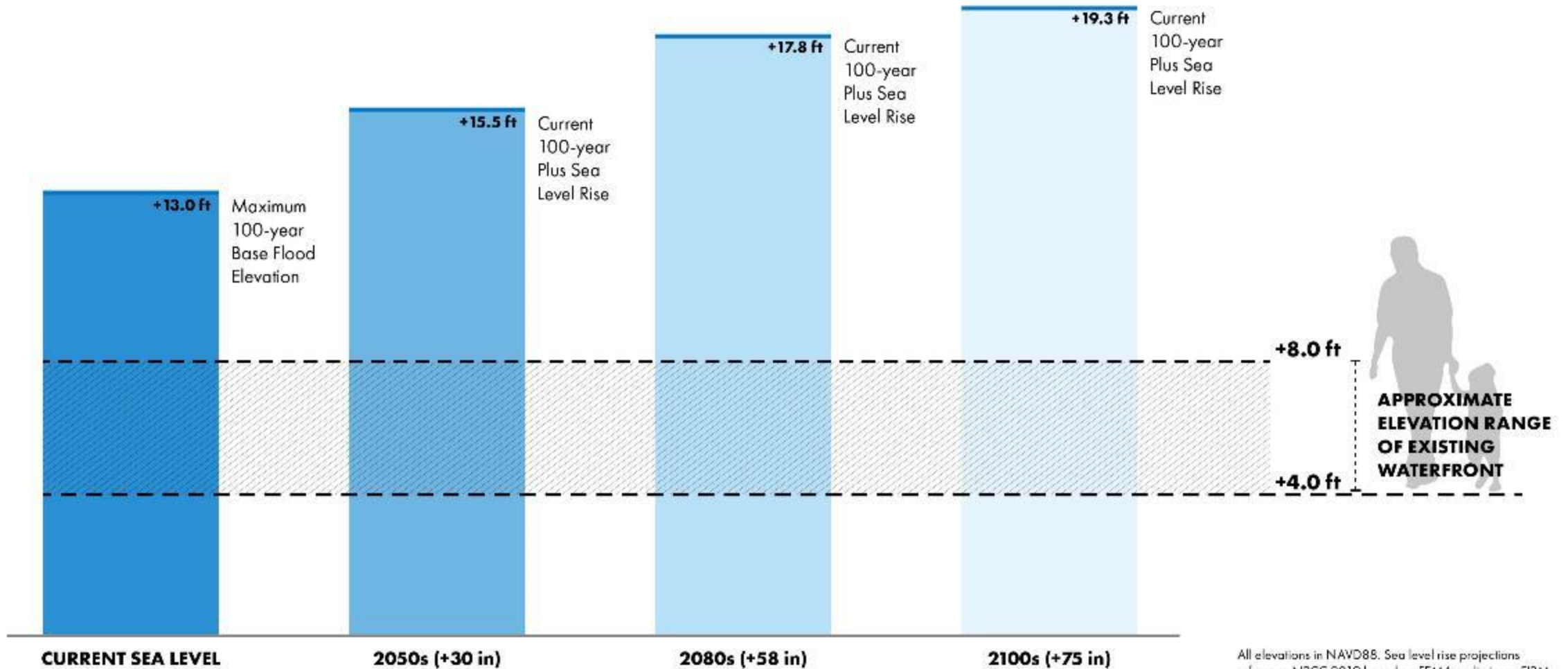


All elevations in NAVD88. Sea level rise projections reference NPCC 2019 based on FEMA preliminary FIRM data. MHHW is based off of the 2001 NOAA National Tidal Datum Epoch (NTDE). Additional modeling / wave studies to be completed later in Phase II.

By 2100, **daily high tides** could inundate most of the area east of Water Street, impacting Lower Manhattan & the region



Future storms are becoming more frequent and intense



All elevations in NAVD88. Sea level rise projections reference NPCC 2019 based on FEMA preliminary FIRM data. MHHW is based off of the 2001 NOAA National Tidal Datum Epoch (NTDE). Additional modeling / wave studies to be completed later in Phase II.

Future storms will have **larger and deeper floodplains** than those of today

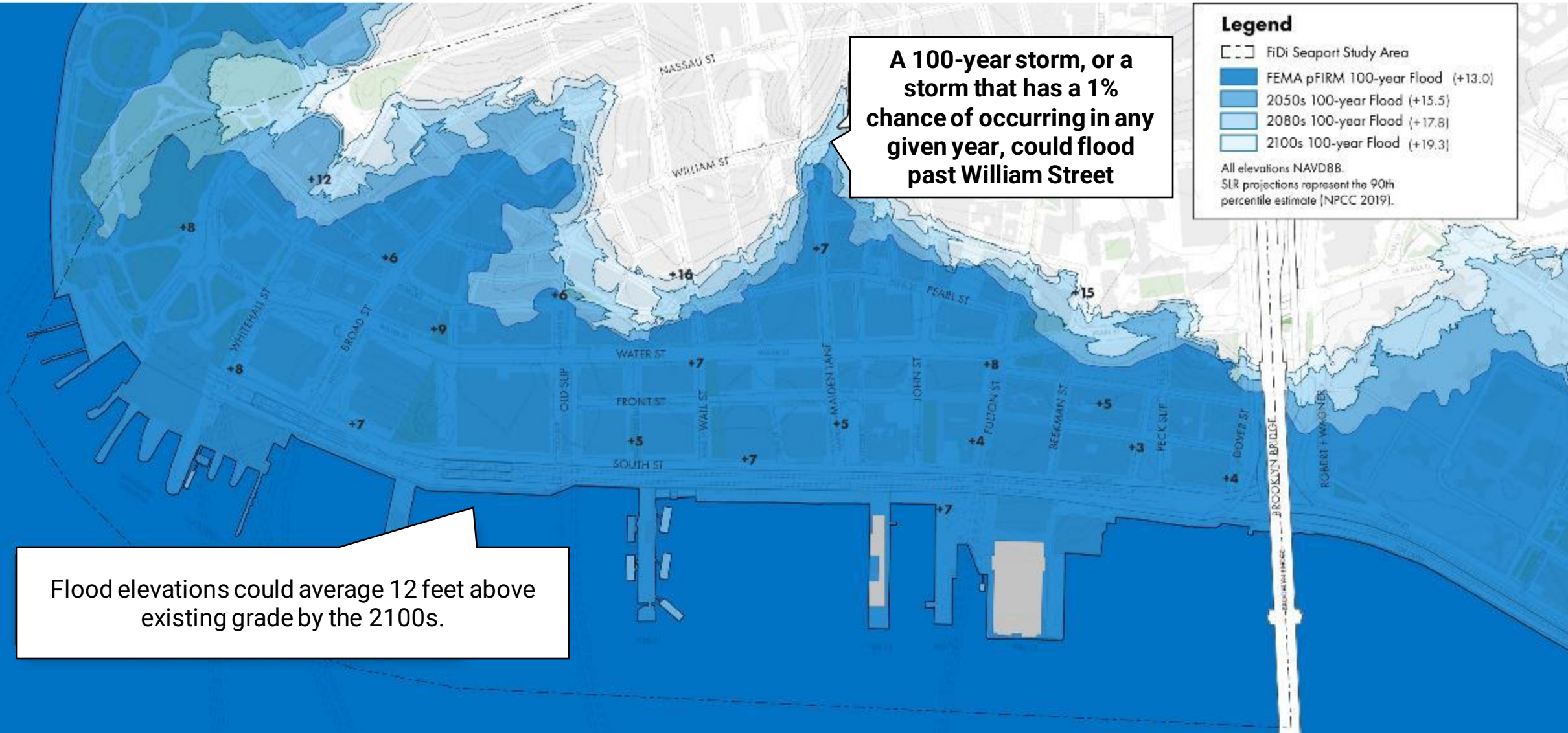
A 100-year storm, or a storm that has a 1% chance of occurring in any given year, could flood past William Street

Legend

- FiDi Seaport Study Area
- FEMA pFIRM 100-year Flood (+13.0)
- 2050s 100-year Flood (+15.5)
- 2080s 100-year Flood (+17.8)
- 2100s 100-year Flood (+19.3)

All elevations NAVD88.
SLR projections represent the 90th percentile estimate [NPCC 2019].

Flood elevations could average 12 feet above existing grade by the 2100s.



Why Protect Lower Manhattan?

Driver of the City's Workforce & Economy



of NYC jobs are located in Lower Manhattan.



in estimated annual tax contributions in 2019.



in annual GDP (8% of the city's total).

Transportation Hub for the City & Region



of commuters through Lower Manhattan live outside of the area.

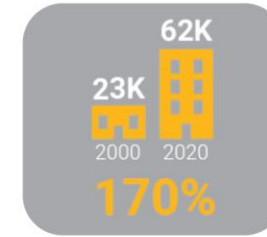


of Lower Manhattan workers live outside of Manhattan.



of Lower Manhattan workers live outside of NYC.

Center of Culture, Community, & Civic Life



increase in Lower Manhattan residents between 2000 and 2020.



students at 21 higher learning institutions in Lower Manhattan.

In Lower Manhattan, the City is advancing \$500M in climate adaptation projects to protect various areas within the district



FIDI-SEAPORT CLIMATE RESILIENCE PLAN

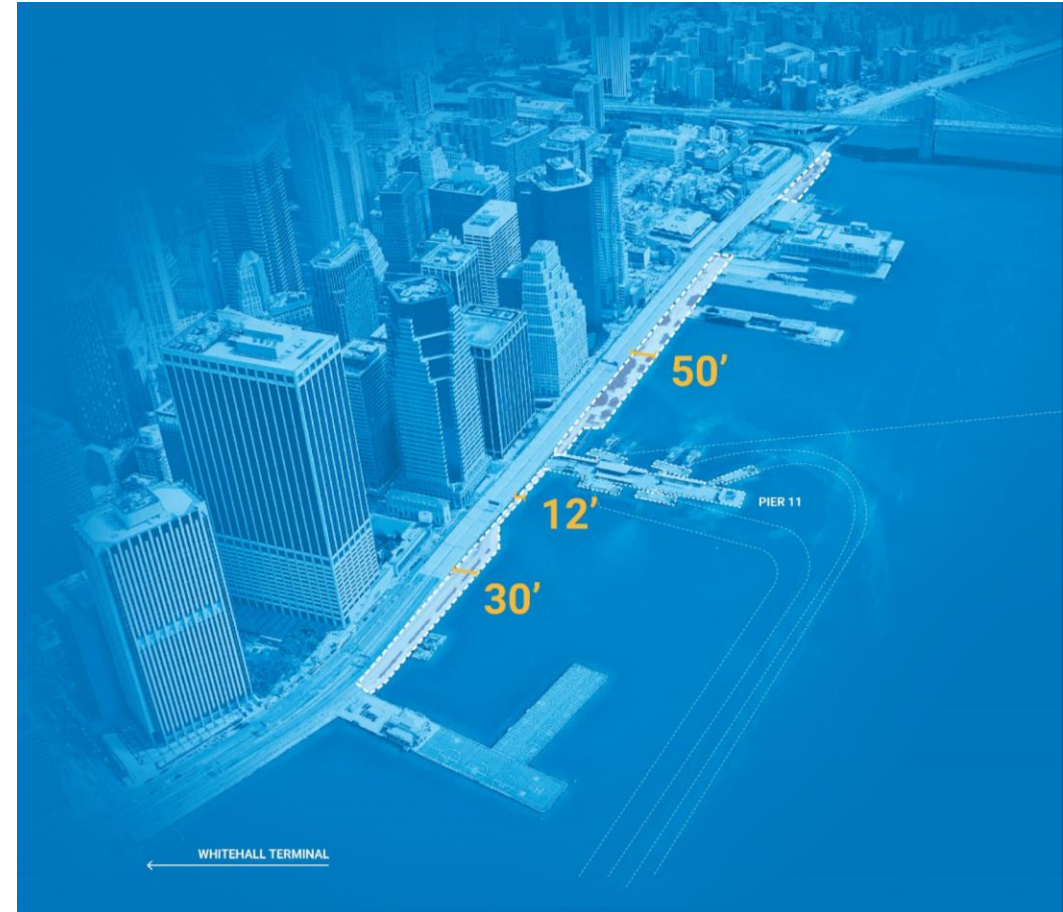
- The FiDi-Seaport Climate Resilience Plan will include a comprehensive resilience plan to protect the Financial District and South Street Seaport

What can we achieve by 2021?

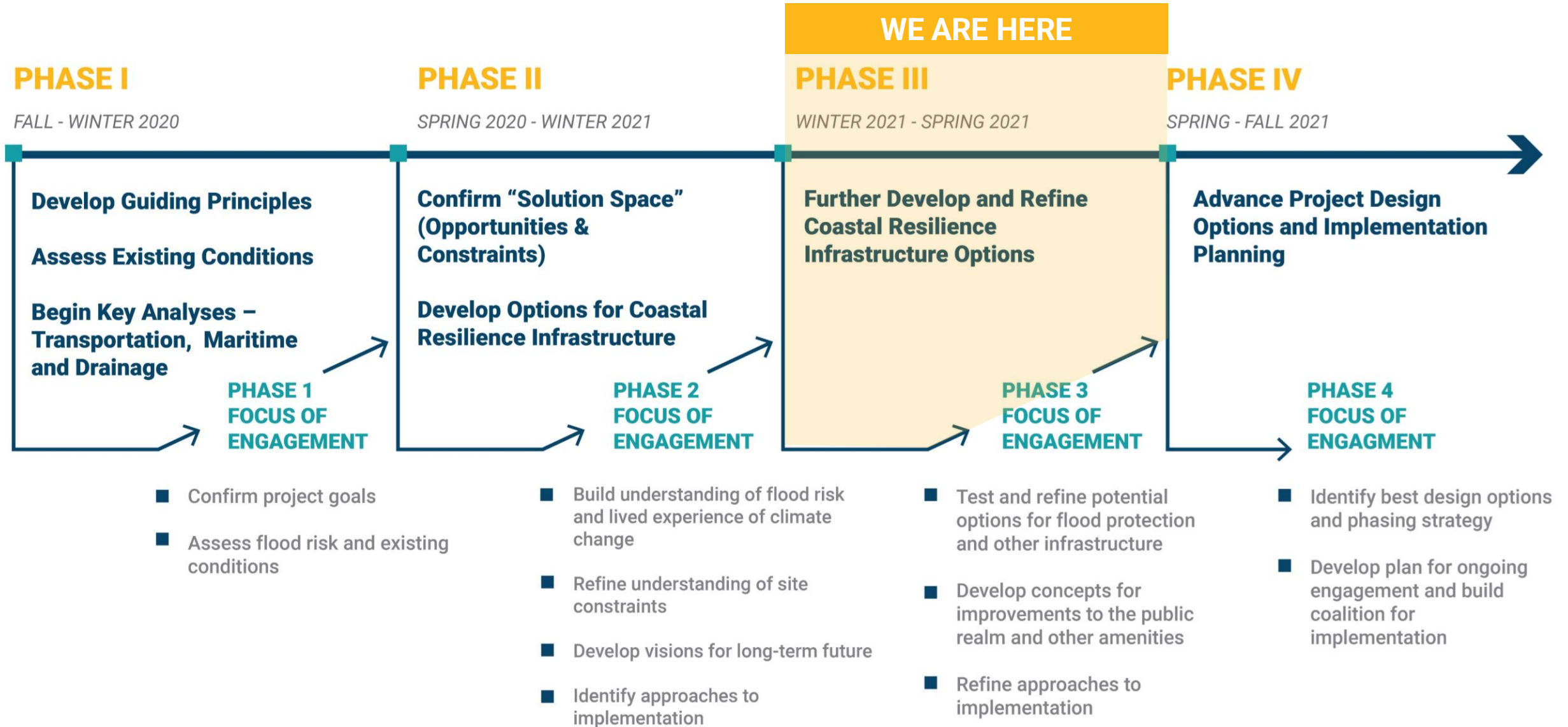
- Develop a plan to protect FiDi-Seaport from sea level rise, coastal storms, and extreme precipitation
- Develop a conceptual design of coastal defense infrastructure and identify first phase project options
- Create a roadmap with details on implementation, financing, construction, and governance framework

Who is our project team?

- New York City Economic Development Corporation and Mayor's Office of Resiliency are leading this process, with support from additional City agencies
- An interdisciplinary team of experts will support this work, led by the Dutch engineering firm Arcadis.



WHERE WE ARE IN THE PLANNING PROCESS



OUR GUIDING PRINCIPLES

We drafted our guiding principles with input from the Climate Coalition of Lower Manhattan, City Agencies, and the broader public



Ensure a **secure future for those who live in, work in, or depend upon Lower Manhattan** by addressing near and long-term climate risks, including impacts of flooding from daily tides, rain, and coastal storms.



Strengthen Lower Manhattan as a **central hub of the region's workforce, transportation network and economy**.



Plan a project that is **feasible, financeable, and implementable**, with a broad coalition of support and clear regulatory and permitting pathways.



Create an **equitable and inclusive public engagement process** that advances widespread understanding of climate risks and fosters the development of a shared vision for Lower Manhattan.



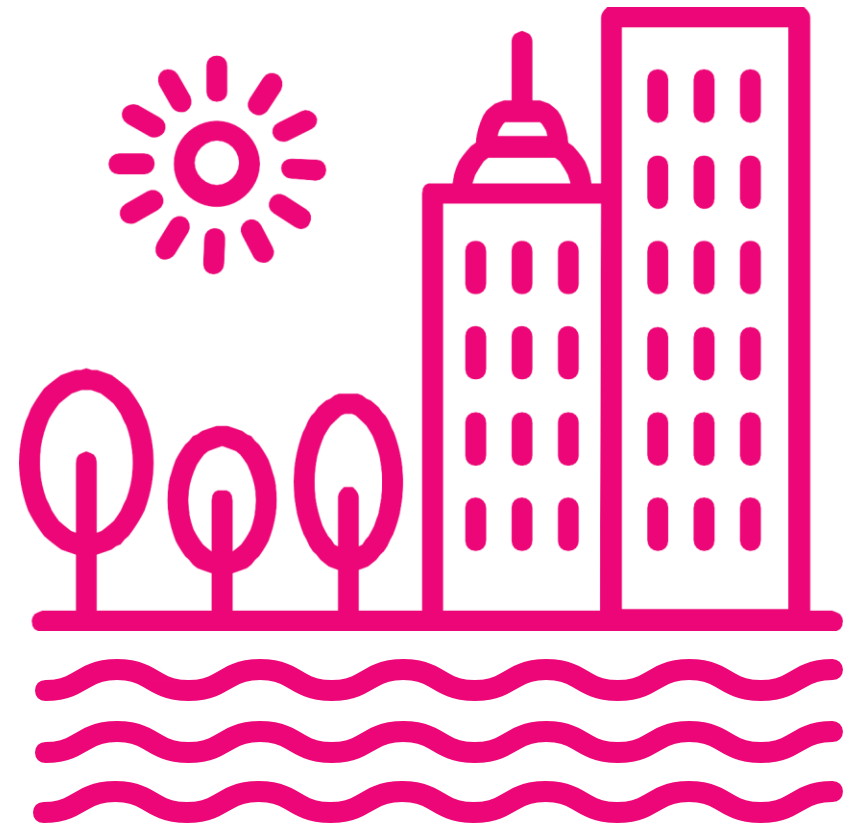
Plan for resiliency infrastructure that protects **key historic assets, maximizes ecologically-sensitive design and sustainability**, and is **adaptable over time**, adopting best practices from around the world.



Maintain and look to improve infrastructure that creates **an accessible public realm for all** – including **strong connections to an active waterfront**, as well as a range of **water-dependent transportation and recreational uses**.

**FINANCING
RESILIENCE
PROJECTS:**

**WHAT SOURCES
ARE AVAILABLE?**



FEDERAL GRANT PROGRAMS

Resiliency

- American Jobs Plan / Build Back Better
- Disaster Recovery Grants (FEMA/HUD)
- Mitigation Grants (FEMA HMP/BRIC)
- STORM Act

- *American Jobs Plan and new sources are priority*
- *FEMA pre-disaster programs generally limited to small projects (BRIC cap is \$50M per project)*

Transportation

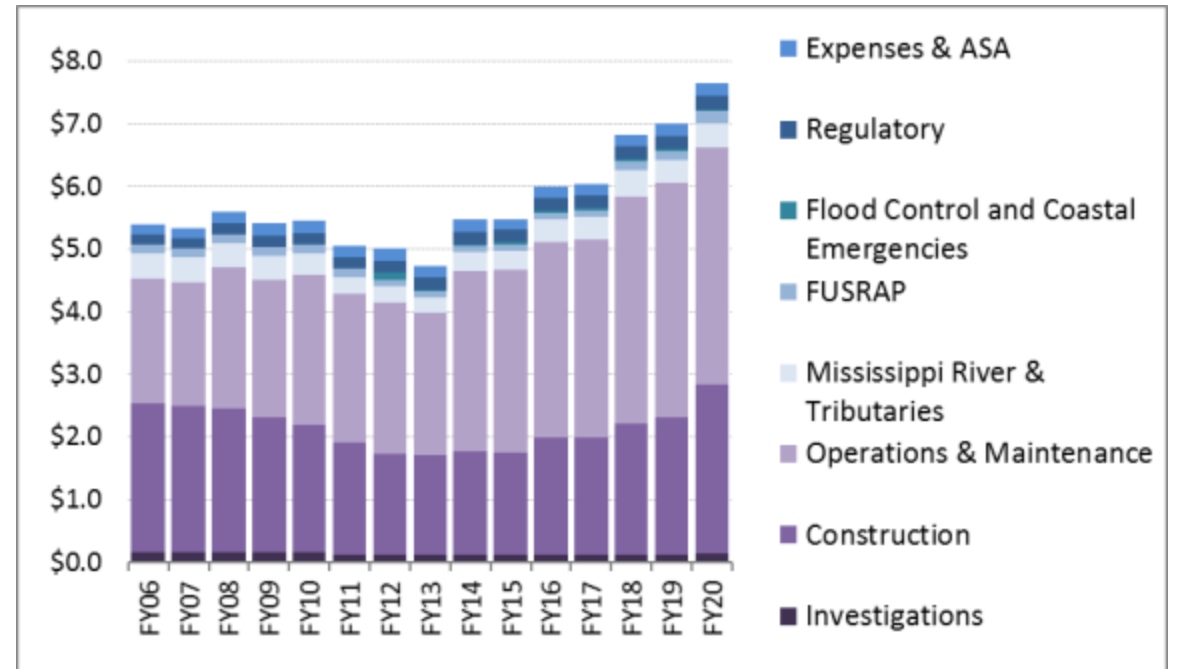
- American Jobs Plan / Build Back Better
- BUILD (Better Utilizing Investment to Leverage Development, formerly TIGER)
- INFRA (Nationally Significant Freight and Highway Projects Program)
- FTA Capital Investment Grant (CIG) program

- *Limited to transportation-related elements and not likely to be major contribution to overall funding (INFRA 60% max. funding share with max. grant awarded of \$135M in FY2020, BUILD 80% max. funding share with max. grant size \$25M)*
- *Highly competitive*

USACE CIVIL WORKS PROGRAM

- USACE funding is provided through annual, project-specific appropriations. In the last decade \$4.7-\$7B have been appropriated annually nationwide.
- Maximum federal funding share of project cost is 65% of eligible project cost (including other non-USACE federal funding sources).
- Federal share based on national economic interest; local sponsor can pay for additional “betterments.”
- USACE leads design and implementation process--not a direct funding source to the City.
- The City would be responsible for operations & maintenance costs.
- USACE currently advancing projects with City partnership in Staten Island and Jamaica Bay / Rockaways.

USACE Annual Appropriations by Account, FY2006 to FY2020



Source: Congressional Resource Service
All numbers in billions

NEW YORK STATE ENVIRONMENTAL BOND ACT

- **\$3 billion** New York State bond to combat climate change, reduce flood risk, invest in resilient infrastructure and revitalize critical fish and wildlife habitats
- Included in the State's FY2022 Enacted Budget Bill, after being removed from the 2020 ballot due to the COVID-19 pandemic; to be submitted for state voter approval on the November 2022 ballot
- While specific uses are not yet available, would include allocations to resiliency-related initiatives*:
 - **\$1 billion for restoration and flood risk reduction**
 - **\$550 million for water quality improvement and resilient infrastructure**
 - *\$700 million for climate change mitigation (potentially limited applicability)*
 - *\$550 million for open space conservation and recreation (potentially limited applicability)*
- A new **financing** mechanism with a resiliency focus

*Per the Environmental Bond Act of 2020, subject to additional specifications in the FY2022 Enacted Budget Bill - Capital Projects (S2504-D/A3004-D)



INSURANCE SURCHARGE

- A pass-through surcharge on consumer insurance premiums, depending on structure and allocation, could generate significant funding.
- Existing New York State insurance surcharges (ex. fire insurance and interest assessment) are potential models.
- Examples elsewhere in the country (CA Earthquake Authority and FL Hurricane Catastrophe Fund).
- A statewide fund could equitably fund resiliency measures throughout the state.



Would require legislative and gubernatorial approval.

PRIVATE REVENUE SOURCES

Revenue from New Development

- Ground Lease
- PILOT (Payments in Lieu of Taxes)

Cost to create space for development may exceed its value, and present regulatory challenges. Financing supported by development revenues are highly sensitive to market conditions, development program and timing.

Revenue from Existing Properties

- “Resiliency District” / Assessment District
- Tax Increment Financing (TIF)

Special Districts, TIFs, or similar place-based assessments can be used to target more direct project beneficiaries.

Other Assessments/User Fees

- Water and Sewer Increment
- Stormwater Fee
- Sales Tax Increment

These sources may generate additional revenue but would be implemented at a larger scale and would need to consider how much should be allocated to individual projects, and what is most equitable allocation approach.

SUMMARY BY JURISDICTION

Federal

- American Jobs Act (FEMA/HUD mitigation programs)
- Congressional Appropriations (Earmarks)
- USACE Civil Works Program
- Transportation Grants (BUILD, INFRA)

State

- Clean Water State Revolving Fund Loans
- Restore Mother Nature Bond Act
- Consumer Insurance Surcharge

Local

- City General Obligation Bond Funding
- Water Rate Bond Funding
- Stormwater Fees
- Resilience District
- Development Revenue

Given the scale of resilience projects like the Financial District and Seaport, federal funding is critical.

Federal sources will likely require some contribution from the State and/or City.

PANEL DISCUSSION



Moderator: Eric Clement

Senior Managing Director of Strategic Investments Group, *NYCEDC*

Eric directs the entities that oversee the negotiation of tax incentives, taxable/tax-exempt debt issuance, New Markets Tax Credit investments, in addition to a portfolio of debt & equity funds of \$500+ million on behalf of NYC.

Panelists:



Amy Chester

Managing Director, *Rebuild by Design*

Amy oversees an international design-driven process to create implementable large-scale infrastructure projects; in NYC, this has helped address vulnerabilities exposed by Hurricane Sandy, leading to over \$930M in awards from HUD.



Elizabeth Yee

Executive Vice President, Program Strategy and Chief of Staff, *The Rockefeller Foundation*

Liz oversees The Foundation's portfolio of global programs, leading the advancement of the Foundation's strategic priorities.



Tom Rousakis

Senior Managing Director, *Ernst & Young Infrastructure Advisors, LLC*

Tom leads a team of professionals dedicated to helping US infrastructure projects get off the ground with innovative financial and commercial solutions to complex problems.

WHAT'S COMING NEXT?

1. **June Public Open House (date TBD – stay tuned!)**
2. **Meeting minutes and notes:** Summary notes and presentation materials will be shared in the coming weeks
3. **Continue the conversation online:** Explore our engagement portal to learn more about other aspects of this project and share your feedback through interactive features
<https://fidiseaportclimate.nyc/>