SECURING A RESILIENT NEW YORK CITY:

FUNDING AND FINANCING SHORELINE PROTECTION

FEBRUARY 2025

NYC Environmental Protection

NYC EDC

NYC Office of the Mayor

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Executive Summary

New York City faces escalating risks from climate change that put its viability as a world class city – both economically and culturally – at risk. The devastating wildfires that tore through Los Angeles in January 2025 clearly demonstrate the urgent need for cities to be prepared for climate disaster, though New York City is more likely to face flood hazards than wildfire. Rising sea levels and intensified coastal storms have increased the likelihood of flooding, threatening the safety and economic stability of millions of New Yorkers. Without coastal flood protection infrastructure, these storms can disrupt the entire city through subway shutdowns, power outages, and paralyzed critical services far beyond coastal neighborhoods.

Existing funding sources are insufficient to meet the scale of the investment required to keep New Yorkers safe without shifting significant resources from other planned projects. To pay for citywide flood protection infrastructure, reliable and sustainable new revenue sources are essential. Despite progress planning and building new resilience projects since Superstorm Sandy, large portions of the city remain vulnerable to coastal storms.

To address this gap, the Resilience Finance Task Force was convened in 2024 by NYC Deputy Mayor for Operations Meera Joshi and Chief Climate Officer and DEP Commissioner Rohit T. Aggarwala. The Task Force assembled experts from finance, real estate, and business to develop strategies for new revenue generation and financial structures to support a citywide portfolio of coastal resilience projects. Their work builds on more than a decade of City policy and planning efforts and incorporates critical considerations of equity and financial responsibility.

This report summarizes the findings of the Task Force:

1. Severe coastal storms pose a high risk and could impose meaningful costs to New York City.
2. Inland areas suffer indirect damages from coastal storms, including transit disruptions and energy outages.
3. The impacts of rising premiums and loss of insurance coverage in New York City are not widely understood and could occur before another major storm.
4. Dedicated funding would provide the resources NYC needs immediately to support existing resilience investments and build new projects.
5. Operations and maintenance costs are well-suited to being funded by local user fees.
6. Capital costs would be best supported by a diversified stream of new revenues.
7. A new institutional structure to fund and finance resilience would ensure the funds would not be diverted and the debt not affect other City credits.

To address these conclusions, the Task Force recommends that the City:

1. Operations: Establish Shoreline Protection Districts to fund local operations and maintenance.

Establish districts that can collect user fees on property owners protected by resilience investments, beginning with Lower Manhattan as the City's first coastal resilience project becomes operational, providing a model for funding future districts throughout the city.

2. Capital: Pursue multiple long-term revenue sources to support construction.

Develop a clear plan for coastal resilience, including project phasing, to better estimate the amount and timing of capital and operating needs to achieve citywide coastal resiliency and identify new, broad-based revenue streams to fund them.

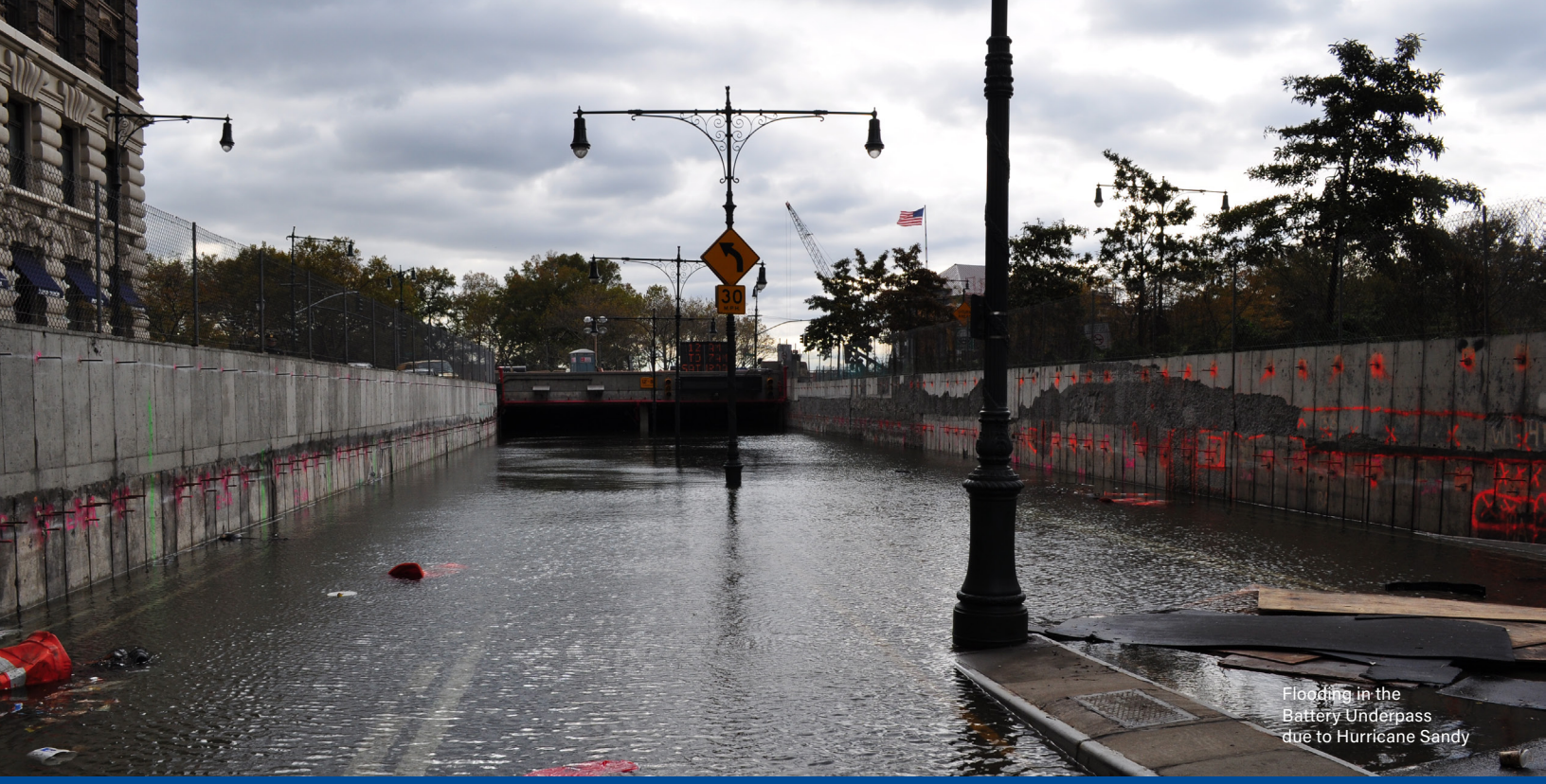
3. Governance: Create a Resilience Finance Authority and Board to finance capital costs.

Establish entities modeled after the successful governance model of New York City's water and sewer system to manage dedicated resilience revenue streams and issue bonds to fund capital projects.

4. Insurance: Collaborate with insurance industry on climate risk and resilience.

Partner with insurers and reinsurers to incorporate risk data into project planning, explore innovative insurance products, and study market dynamics to ensure resilience investments translate into financial benefits and sustained coverage for New Yorkers.

The recommendations in this report represent an opportunity to protect lives, preserve the value of coastal property, and reinforce the stability of the nation's largest and most productive urban economy.



Flooding in the Battery Underpass due to Hurricane Sandy

Background

Superstorm Sandy, ranked as the country's fifth costliest storm on record, demonstrated NYC's vulnerability to coastal storms. In the years since Sandy, New York City has advanced significant policy and planning work in partnership with local community and environmental advocacy organizations. Key coastal resilience efforts include:

- As of early 2025, six large-scale coastal resilience projects are currently being constructed:

Project	Borough	Lead	Estimated Completion
Battery Park City South	Manhattan	Battery Park City Authority	2025
The Battery Coastal Resilience	Manhattan	City of New York	2026
East Side Coastal Resilience	Manhattan	City of New York	2026
Rockaways Atlantic Shorefront	Queens	U.S. Army Corps of Engineers	2026
Brooklyn Bridge-Montgomery Coastal Resilience	Manhattan	City of New York	2026
South Shore Staten Island	Staten Island	U.S. Army Corps of Engineers	2028

- A series of sea gates along the Lower East Side, part of East Side Coastal Resilience (ESCR) project, is already complete as of 2025 and full completion is estimated in 2026. As of the time of this report, the City had not yet identified operations and maintenance funding for ESCR.
- In 2021, the NYC Economic Development Corporation (NYCEDC) released the FiDi & Seaport Climate Resilience Plan and since then have led work to refine design and identify options to fund the project. The FiDi & Seaport project is the last – and only unfunded – of a series of capital projects to protect Lower Manhattan known as the Lower Manhattan Coastal Resiliency (LMCR) portfolio. ESCR and LMCR have been funded through more than $2.2 billion of City capital funding, and together reflect the vision of the "Big U" developed out of a post-Sandy competition led by Rebuild by Design.
- New York City's critical infrastructure has been rehabilitated to better withstand coastal storms. The City has enhanced resilience at New York City Housing Authority's (NYCHA) affordable housing buildings and the NYC Department of Environmental Protection's (DEP) wastewater treatment facilities, utilities have hardened power plants, and the Metropolitan Transportation Authority (MTA) has better defended the subway system from flooding.
- PlaNYC 2023, the citywide sustainability plan, created a new leadership structure for coastal flood resilience, headed by the NYC Department of Environmental Protection (DEP). DEP's Bureau of Coastal Resilience now leads NYC's response to sea level rise, tidal flooding, and storm surge. DEP is also taking over operation of coastal assets and planning and design of new coastal infrastructure projects.
- The City administers nearly $15 billion in post-Sandy federal funding for a variety of recovery needs and has committed billions in matching funds. While some portion of this was used for coastal resilience, the majority supported direct disaster recovery and rebuilding efforts.
- To date, a significant number of shoreline resilience projects have been funded—from federal, state, and City resources—or completed, including large neighborhood-scale projects and smaller-scale, targeted interventions:

Project	Borough	Status
Sea Gate T-Groins	Brooklyn	Complete
Flushing Meadows Tide Gate	Queens	Complete
Broad Channel and Howard Beach Bulkheads/ Road raisings	Queens	Complete
Living Breakwaters	Staten Island	Complete
Raised Shorelines projects (Travis Avenue, SI; Mott Basin, BX; Coney Island Creek, BK)	Multiple	Funded, not complete
Northwest Battery Park City Resiliency Project	Manhattan	Funded, not complete
Tottenville Shoreline Protection	Staten Island	Funded, not complete
Red Hook Coastal Resiliency	Brooklyn	Funded, not complete
USACE Jamaica Bay	Queens	Funded, not complete

Assembly of Corlears Hook Bridge as part of the East Side Coastal Resiliency project.

About the Resilience Finance Task Force

In 2024, New York City Deputy Mayor for Operations Meera Joshi and NYC Chief Climate Officer and Department of Environmental Protection Commissioner Rohit T. Aggarwala convened the Resilience Finance Task Force to develop strategies to fund and finance infrastructure to protect New Yorkers from climate change-induced coastal storms.

Under the direction co-chairs Arlene Shaw and Jamie Rubin, the Task Force brought together an expert group of leaders in finance, real estate, and business. The Task Force was charged with assessing and developing practical and equitable recommendations to raise revenue to fund a citywide portfolio of coastal resilience projects. The goal was to identify revenue sources both to pay for substantial capital costs, expected to be financed with bonds, and the annual operating and maintenance costs to be paid by expense funding.

The Task Force's mandate was focused on coastal resiliency, and its recommendations will inform future work on related topics like inland storm-water flooding mitigation, technical matters like building and zoning codes, and policy tools like property-buyouts in flood-prone areas.

Throughout the process, the Task Force assessed the equity implications of potential funding streams to avoid disproportionate burdens on vulnerable New Yorkers. It also considered financial implications with the goal of protecting the City's existing credit ratings.

The Task Force met several times during the fall of 2024 and winter of 2025. Meetings were informed by presentations and analysis from City subject matter experts and external consultants. Task Force meetings were focused on three themes:

1. The physical and economic risks that coastal storms pose to New York City and the investment required to build infrastructure to protect it.
2. Options for raising new revenue to fund this work, including user fees and surcharges on existing taxes or insurance premiums.
3. The types of entities and financing structures that could use these revenues to secure bonds to pay for resilience capital projects.

The recommendations in this report represent the collective insights and deliberations of the Task Force. However, individual members may not fully endorse every conclusion or recommendation presented. The report is meant to lay the foundation for the City to address resilience needs while balancing equity and responsible financial management to ensure a safer future for all New Yorkers.

Resilience Finance Task Force

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Placement of flood gate at Asser Levy Playground on Manhattan's Lower East Side.

Findings

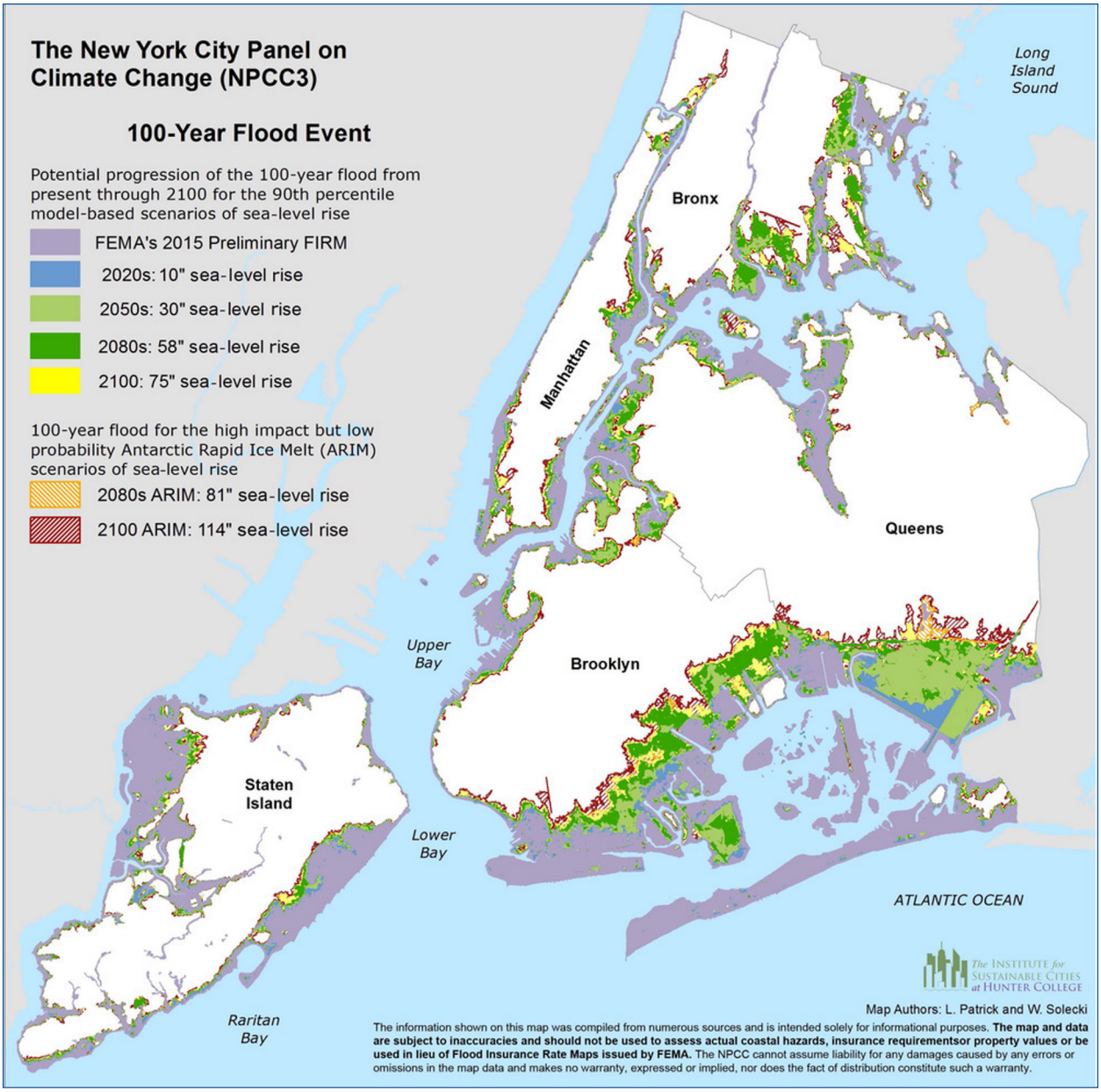
1. Severe coastal storms pose a high risk and could impose meaningful costs to New York City.

Some coastal communities are already experiencing the effects of rising sea levels and higher daily tides, causing flooding even on sunny days. Future climate conditions will exacerbate these challenges, increasing the severity and frequency of coastal storms. Without proactive resilience measures, New Yorkers will face greater risks of property damage, displacement, or loss of life from storm surge and flood-related hazards.[1]

By 2100, sea levels could rise by up to 5.4 feet, annual rainfall could increase by up to 30%, and the frequency of intense hurricanes could rise by 50%. Storm surge risks are exacerbated by the impact of sea level rise; a storm creating an 8-foot surge today may produce a 9-foot surge by 2100. In low-lying areas, even a one-foot rise can push floodwaters hundreds or even thousands of feet farther inland, flooding streets, subway entrances, and utility infrastructure that were previously not at risk. Without intervention, the city's vulnerability to these risks will grow, placing pressure on local insurance costs, public safety, and economic stability.[2]

The areas exposed to direct damages are substantial. New York City has 520 miles of coastline, and one-sixth of New York City's land lies within the current 100-year floodplain, exposing approximately 440,000 residents to heightened flood risks.[3] This area represents $250 billion in property value at risk, including roughly 14,500 businesses that employ about 270,000 people.[4]

Investing in resilience offers a strong return on investment. The current market value of the real estate that would be protected by a citywide portfolio of resilience projects is more than 5 times the estimated $50 billion cost to build it. This infrastructure would protect approximately 1.7 million residents and 1 billion square feet of real estate from direct storm-related damage, and the whole city from indirect losses.[5] A comprehensive coastal defense system would protect against repetitive damage over decades, avoiding over $220 billion in physical, social, and economic losses through the year 2100, paying for itself many times over. [6]



Shaded areas will be inundated by coastal storm surge flooding during a 1% annual chance event. As sea levels rise over the next century, storm surge will worsen.[7]

2. Inland areas suffer indirect damages from coastal storms, including transit disruptions and energy outages.

While significant risk to life and property from coastal storms is concentrated along low-lying coastal areas, losses can extend far beyond those directly in the line of the storm. Indirect damages from a coastal storm in New York City can ripple across the entire city, affecting communities and sectors far from the impacted coastline. In 2012, Hurricane Sandy's was estimated to have caused $19 billion in damages to New York City alone, of which a full 30% were indirect losses.[8, 9]

Indirect losses can include economic disruptions like supply chain interruptions, lost productivity from business closures, tax revenue losses due to depressed economic activity, and decreased revenue in tourism and hospitality. Prolonged infrastructure shutdowns, such as subways and airports, further hinder mobility and economic activity. Public health impacts can arise from extended power outages and limited access to healthcare. [10]

3. The impacts of rising premiums and loss of insurance coverage in New York City are not widely understood and could occur before another major storm.

Like much of the country, property owners in New York City face rising insurance premiums. As coastal storm risks increase, these trends are expected to continue. The state of the insurance industry in other geographies exposed to extreme climate risk like Florida, Louisiana, and California suggest that New York City could also contend with diminished coverage availability.[11] Dramatically higher premiums or withdrawal of coverage could occur even without another Sandy-like event as insurers make their own assessments of climate risk and balance national portfolios. However, the Task Force is unaware of detailed study on how these dynamics might adversely impact New York City specifically.

Escalating insurance costs impact housing affordability for homeowners and renters alike. These rapid increases also introduce uncertainty for property owners, who are faced with budgeting for unpredictable changes in their annual costs.

Insurance market instability could exacerbate housing insecurity, as homeowners rely on insurance to obtain mortgages and protect investments. Without adequate coverage, properties could become uninsurable, driving foreclosures and reducing property values. Properties unable to obtain insurance will be shut out from commercial and retail lending markets. This would be especially impactful for owner-occupants whose net worth is largely tied up in their property and may find suddenly that they can only sell their home at a steep discount.[12]

Conversely, resilience investments in New York City will not automatically lead to insurance premium mitigation or continuity of coverage. The National Flood Insurance Program has such a process – a Letter of Map Revision (LOMR) – by which property owners, developers, and municipalities request that the Federal Emergency Management Agency (FEMA) officially revise floodplain designations to remove areas from high-risk flood zones to reduce insurance requirements. It is critical to understand how private insurance companies will account for this risk reduction as they price premiums and determine coverage in New York City.

4. Dedicated funding would provide the resources NYC needs immediately to support existing resilience investments and build new projects.

The City has made strides in protecting its coastline since Superstorm Sandy, particularly by starting resilience projects in the areas hardest hit by the storm. The projects currently under construction are supported by $2.8 billion in federal funding and $3.4 billion in City funding.[13] The first of these

projects to be completed will be the East Side Coastal Resilience (ESCR) project in Manhattan, which will protect 110,000 Lower East Side residents from future storms and high tides[14], protecting billions of dollars' worth of infrastructure and property in the area. However, as of the time this Task Force met, the City had not yet identified funding to support ESCR's operating budget.

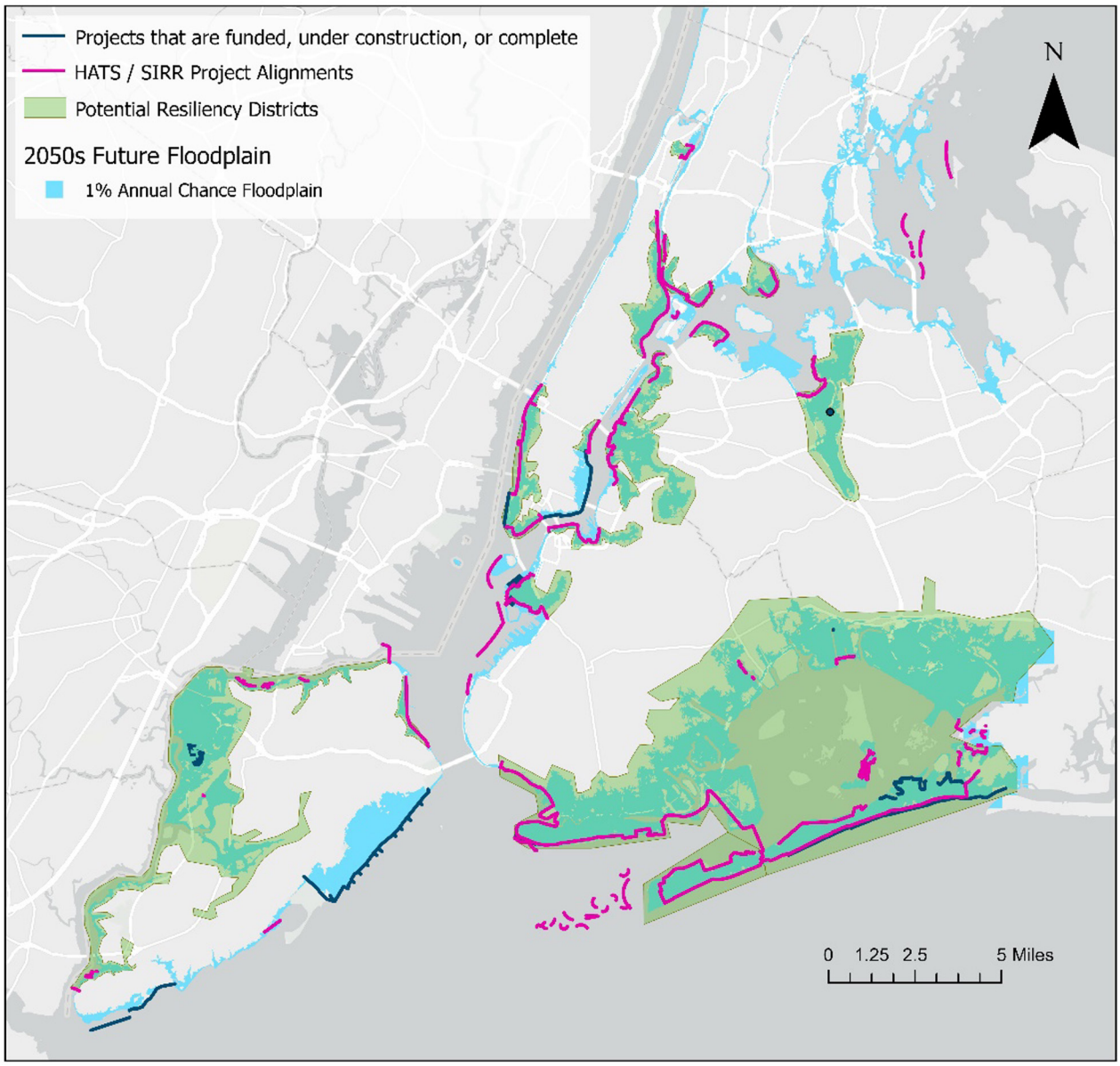
In addition, vast portions of the City remain unprotected, and progress has stalled for lack of funding. The FiDi and Seaport project – the final component in the resilience infrastructure that will protect Lower Manhattan – has completed planning and is advancing preliminary design but does not have funding to begin an environmental review. A more ambitious set of projects is even further from being funded. The Task Force reviewed a large portfolio of projects contemplated by the U.S. Army Corps of Engineers' (USACE) New York-New Jersey Harbor and Tributaries Study (HATS) study[15] and the City's Special Initiative for Rebuilding and Resiliency (SIRR)[16]. The project alignments identified by HATS and SIRR, if funded and constructed, could protect much of the city against Sandy-like storms. The City has no federal, state, or local funding budgeted for these proposed projects.

Federal funding, when available, tends to be sporadic, reactive, and insufficient. The HATS projects are still far from being a reality, and a new presidential administration may further impact the timeline and appropriations. Even it comes to fruition, HATS will require a cost share from the City expected to range from 10% to 35% of project costs.[17] If HATS is not implemented, the City may need to cover the full cost of the components that protect New York City itself – nearly $50 billion.[18]

To date, the City has financed its portion of coastal resilience capital costs primarily through General Obligation bonds; however, budget realities have increased competition for limited capital funds. The City also faces a constitutional debt limit, which means that the City must explore both new revenue streams and new debt instruments to fund coastal resilience infrastructure development and operations, unless it chooses to reduce spending on other planned projects.

The risks to New Yorkers from coastal storms are substantial, but coastal resilience projects would protect entire neighborhoods. These investments would address both immediate threats to financial centers such as Lower Manhattan and the longstanding vulnerabilities of historically underserved communities, including Jamaica Bay and the South Bronx.

Installed flood gate at the East Side Coastal Resilience Project.



The selected project alignments are for discussion purposes. They are comprised of proposed HATS and SIRR projects that would protect against the 100-year storm as the design flood elevation. These do not represent the City's decision on which areas would be prioritized for protection.

The lack of sufficient funding has already begun to impede the City's efforts. The FiDi Seaport Master Plan is an example of a comprehensive vision to reimagine that neighborhood's shoreline and complete the "Big U" but is lacking funding to move forward. A dedicated source or sources of revenue would allow this and other projects to proceed without requiring reduced funding for other City priorities.

5. Operations and maintenance costs are well-suited to being funded by local user fees.

Identifying funding for operations and maintenance is critical to ensure these investments function when needed the most. A system of gates, barriers, and seawalls must function in aggregate to prevent flooding during surge events, which means that failure of a segment of the infrastructure can be catastrophic for a large area. Without a dedicated source of funding, operations and

maintenance costs may be overlooked or deprioritized. This risk already exists: the New York State Comptroller recently found deficiencies with MTA's maintenance and inspections of resiliency equipment, including flood doors, built as a response to Hurricane Sandy.[19]

In the short term, the City's operations and maintenance needs for resilience are in the low millions of dollars per year, while a citywide system may require closer to $500 million per year (based on a conservative estimate of 1% of capital cost).

The properties protected by a project or series of projects could make up a "Shoreline Protection District," or "SPD." An SPD user fee could fund all or a portion of the operations and maintenance costs associated with its coastal resilience infrastructure by implementing a fee-for-service. In New York City, business improvement districts (BIDs) use a similar model, raising funds for cleaning and safety operations through assessments on properties within their boundaries. A resilience fee, similarly, would entitle the City to revenue for the provision of resilience services.

Because resilience infrastructure will reduce risk for the properties protected, they should mitigate insurance costs for protected properties – preserving coverage, reducing annual increases, or even reducing premiums compared to the pre-resilience status quo. These savings should help offset new costs from an SPD user fee.

Such a funding model would align costs with risk exposure, so those benefiting directly from resilience measures contribute proportionately. Under certain conditions, the City can authorize and enact a fee-for-service itself through local legislation.

There are many ways to calculate and implement such a fee. Future policy decisions include whether the fee varies across districts, driven by project-specific operations and maintenance costs, or is the same rate citywide. For example, the table below shows a hypothetical fee to cover the estimated operations and maintenance costs for two areas. In this example, the fee is calculated as a charge per gross square foot for properties that would be protected by contemplated coastal resilience projects.

Selected geographies	Hypothetical O&M Charge per GSF / Year	Hypothetical Monthly Charge for a 1,500 SF Home
FiDi and Seaport, MN	$0.32	$40.00
Jamaica Bay, QN	$0.23	$28.75

This methodology is illustrative; there are many other ways to calculate such a fee. Carveouts, means-tested discounts, and other affordability considerations will likely be necessary given the wide range in ability to pay in every one of New York City's neighborhoods. Similarly, future analysis will be needed to determine whether all properties in an SPD are charged at the same rate, or if properties closer to the coast would pay a higher relative fee than properties further inland.

6. Capital costs would be best supported by a diversified stream of new revenues.

A citywide coastal defense system will require substantial capital investment. A portfolio of projects contemplated by HATS and prior City efforts are estimated to cost nearly $50 billion in 2025 dollars. Such a large system must be constructed in phases, so this capital cost would be deployed over 20 or more years, requiring the City to ramp up to build $1-2 billion of coastal resilience infrastructure per year over this period. This scale of capital investment is most efficiently financed with bonds to spread the repayment over many years, aligning the costs with the project's useful life.

A diversified revenue stream would have several advantages. First, a mix of revenue streams would reduce the financial impact of any one charge and would reduce the risk of disproportionately impacting specific groups of payers. Second, a more diverse mix of revenue sources can strengthen the financial stability and creditworthiness of the bonds to which they are pledged. Should one revenue source decline, it would be less likely lower bond investor confidence. For example, a broad-based decline in property values would reduce the revenue raised from a property tax surcharge, while the proceeds of a sales tax surcharge may remain largely unaffected.

There is likely no single revenue source adequate to address the substantial capital costs required to build a citywide portfolio of coastal resilience projects. A package of multiple revenue sources would be akin to the way the Metropolitan Transportation Authority is funded; MTA's bonds are secured with a variety of fare and toll revenues, taxes, and other sources.

Coastal resilience capital projects could be funded through broad-based charges, such as:

- Property Tax Surcharge: A charge determined as an additional percentage of the value of real property, as measured by assessed value.
- Sales Tax Surcharge: A charge determined as an additional percentage added to the base sales tax rate for retail sales of certain tangible personal property and services; similar to the MTA surcharge of 0.375% of purchase price.
- Property Insurance Surcharges: A charge determined as an additional percentage of a sub-set of property insurance premiums most tied to climate risk.
- SPD User Fee: An increase in the fee could cover both O&M and capital costs to properties protected by specific coastal resilience assets.

There are many other potential revenue streams, including incremental payroll taxes, corporate taxes, personal income taxes, hotel taxes, "sin" taxes, and real property transfer taxes.

7. A new institutional structure to fund and finance resilience would ensure the funds would not be diverted and the debt not affect other City credits.

Because the capital costs for resilience investments must be financed, and the intention is to find an alternative to General Obligation bonds, New York City must identify the entity to issue the bonds and establish a rate-setting mechanism. Further, to ensure these new revenues remain securely set aside and dedicated to resilience, they should be directed to a "lockbox" that does not comingle funds for other purposes.

The Task Force evaluated existing governance and financing structures that support other types of infrastructure investment. This included the NYC Water Board and Municipal Water Finance Authority, which have successfully funded the water and sewer system in New York City through user charges since their establishment in the 1980s.[20] The Task Force also considered the Transitional Finance Authority, which manages several credits that finance a portion of New York City's capital program.[21] Either the Municipal Water Finance Authority or Transitional Finance Authority could establish new credits to leverage new revenue streams.

The City and New York State could also create new entities focused specifically on coastal resilience investments to issue and sell bonds without impacting existing City credits. Once established, the City could determine whether this new institutional structure would receive the revenue streams that will support capital investment and the SPD fees to support operations.

Placement of concrete for new pier piles to support esplanade at East Side Coastal Resilience Project.

Aerial view of the East Side Coastal Resilience Project.

Key Recommendations

1. Operations: The City should establish Shoreline Protection Districts (SPD) to locally fund operations and maintenance of completed resilience projects.

The City should establish Shoreline Protection Districts (SPDs) in all areas where coastal resilience projects have been designed or are under construction. An SPD would include all properties projected to be protected by a given resilience project. SPDs would generate revenue through a fee-for-service paid by property owners, ensuring that the property owners paying into the district directly benefit from resilience measures. The Task Force concluded that such a fee should only be imposed after a project was operational, so many of the initial SPDs may not see a fee charged for several years.

Initial SPDs	Borough	Lead	Status	Est. Completion
Lower Manhattan	Manhattan	City	In Construction	2025
Rockaways Atlantic Shorefront	Queens	USACE	In Construction	2026
South Shore	Staten Island	USACE	In Construction	2028
Red Hook	Brooklyn	City	Design Complete	2028

The Lower Manhattan SPD would be the first to see its user fee activated. This SPD would include the area protected by the series of resilience projects around southern part of the island formerly known as the "Big U" and now known as LMCR, which runs from the Lower East Side down the southern tip of Manhattan and up to Battery Park City. Most of the projects that make up the "Big U" are well underway, with the East Side Coastal Resilience (ESCR) project estimated to be operational in 2026.

Initially, the proceeds of the user fee would be used to fund operations and maintenance of costs for ESCR and would be increased to support other components of LMCR as they are delivered. The City should also explore using the funds to pay for planning work for the FiDi and Seaport project – the final component of the LMCR.

The SPD fee model offers a scalable approach to fund the operations and maintenance of coastal protection projects across the city. SPD fees must be designed to minimize adverse impacts on economically vulnerable populations and consider the local context of each district.

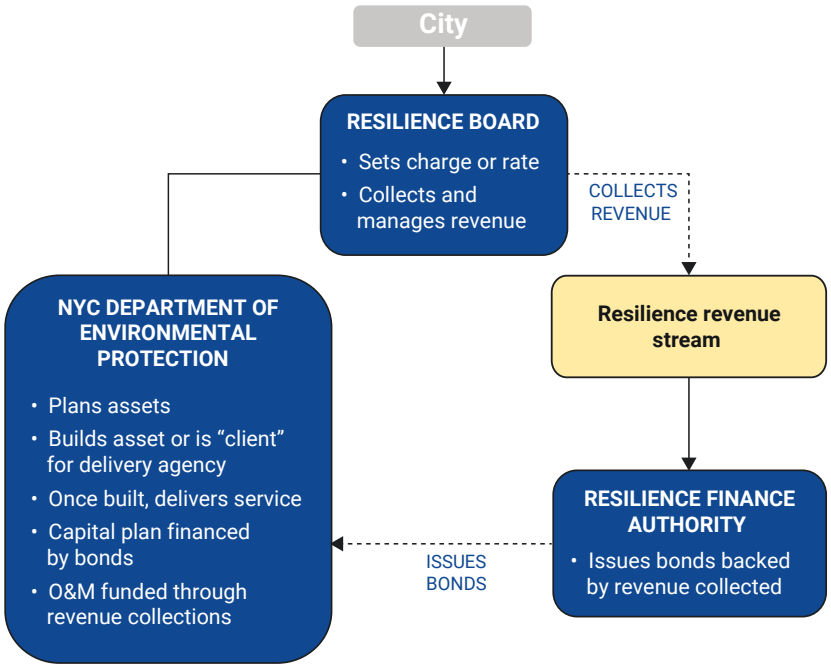
The City can authorize and enact certain fees-for-service itself. The first step would require a user cost analysis to determine how the fee should be set in relation to the value of the service received. City legislation would be required to enact and authorize the fee.

2. Governance: The State should create a new Resilience Finance Authority and Resilience Board.

The task force recommends creating two new entities – a Resilience Finance Authority and a Resilience Board – to finance the portfolio of resilience projects to be planned, implemented, and operated by DEP's Bureau of Coastal Resilience. These entities would be modeled after the NYC Municipal Water Finance Authority and Water Board, which have a long track record of successfully collecting water bills and issuing debt, respectively, to support the capital and operating needs of New York City's water and wastewater system.

- The Resilience Board would collect dedicated revenue sources such as fee-for-service proceeds and tax or insurance surcharges through a lockbox that would restrict the use of funds to resilience projects. It could set and enforce the SPD fee-for-service model, determine exemptions or adjustments based on equity concerns, and work closely with the Resilience Finance Authority to ensure transparency and accountability.
- The Resilience Finance Authority would serve as the issuing entity for bonds and manage the financial infrastructure required to fund coastal resilience projects. Establishing a standalone credit would safeguard the City's existing financial obligations without impacting the credit of the City's existing debt obligations. This structure would be attractive to investors focused on the reliability and transparency of dedicated funding.

A Resilience Finance Authority and Resilience Board would fill a critical gap by creating a dedicated entity to manage resilience funding and financing. The Resilience Board would integrate equity into its funding models, ensuring vulnerable populations are not disproportionately burdened. For instance, exemptions or subsidies could be applied to properties with limited ability to pay, similar to programs administered by the NYC Water Board.



Potential framework for an NYC Resilience Board

3. Capital: The City should pursue multiple new capital funding sources and develop a refined plan for citywide coastal resilience.

Early estimates suggest that sustaining a steady pace of construction for citywide resilience projects would require significant capital commitments. The City may need to build up the capacity to deploy $1-2 billion per year in capital costs over several decades, reaching nearly $50 billion (in 2025 dollars) in the absence of federal or state subsidy. Once built, a portfolio of citywide projects is estimated to cost up to $500 million per year in operating and maintenance costs. More refined long-term planning, like a 10-year capital plan or masterplan, is needed to show project phasing, estimate more specific revenue requirements, and account for cost escalation.

While SPD user fees may serve as a cornerstone to fund operations, relying exclusively on this mechanism for capital would likely be unaffordable for properties within SPDs and constrain funding flexibility. In order to provide adequate, sustainable, and recurring capital funding, the City must create blended revenue streams with a large payer base.[22] While there are additional options, the Task Force focused on a property tax surcharge, sales tax surcharge, property insurance surcharge, and increased SPD user fees to cover capital costs.

While not covered by this Task Force, the City should also explore other options to raise revenue, including payroll tax surcharges and corporate taxes. Large corporations are increasingly attuned to climate exposure as it relates to business continuity, both with respect to their own facility risks and their employees' homes. In addition, in certain parts of the city, value capture opportunities may also be available. This may allow the City to leverage the incremental revenue generated by higher post-protection property values or incentivize private sector funding of resilience infrastructure in exchange for additional development.

Most of these broad-based funding sources would require collaboration with the State legislature to enact. To the extent a new revenue source would be collected statewide, policymakers should consider funding projects that protect against multiple climate hazards, not just coastal resilience, to better align with the statewide climate risk profile.

4. Insurance: The City should establish ongoing collaboration with the insurance industry and encourage study of industry dynamics in New York City.

The City should regularly inform insurers and reinsurers about the City's construction of resilience projects so that the industry can quantify how they reduce the risk of damage during coastal storms and reflect this value in their premiums. Clear evidence of risk reduction should lead to benefits like continuity of coverage and potentially even lower insurance costs. Further, the City should maintain regular contact with the insurance industry to integrate industry insights into the City's own risk assessments. Insurers have access to advanced risk modeling tools and actuarial data that may inform the design and prioritization of coastal resilience projects.

Collaboration with insurers may also open pathways for innovative products, like parametric insurance policies that provide rapid payouts if pre-defined climate triggers are met. While not in scope for this report, the Task Force recommends that City leaders explore the potential role of catastrophe insurance, reinsurance, pooled risk models, and other insurance tools emerging to reduce financial exposure to climate risks.

The City should also engage the New York State Department of Financial Services (DFS), which regulates the insurance industry in New York. DFS plays a critical role in overseeing the financial stability of insurance companies and provides guidance to insurers on management of financial risks from climate change. Through proactive engagement with DFS, the City can seek changes to regulatory frameworks that incentivize insurers to offer products aligned with resilience goals, such as reduced premiums for properties protected by resilience infrastructure.

In addition, the City and broader public must better understand how it may be affected by the adverse trends affecting geographies exposed to significant climate risk. With climate-related disasters increasing in frequency and severity, insurers may meaningfully increase premiums or withdraw coverage to take these actions even before another natural disaster has occurred.

The impact of these dynamics on New York City's property values and mortgage markets is not well understood. This should be addressed by a study led private sector partners that possess specialized expertise in complex insurance market dynamics and climate risks. Such data will be important for both State insurance regulators and the City as they consider the unique risks and needs of New York City's coastal areas. This will help illustrate the cost of inaction and, conversely, the value generated by coastal defense infrastructure, building the business case for investing in resilience.

City and state officials break ground at The Battery Coastal Resilience, 2024.

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