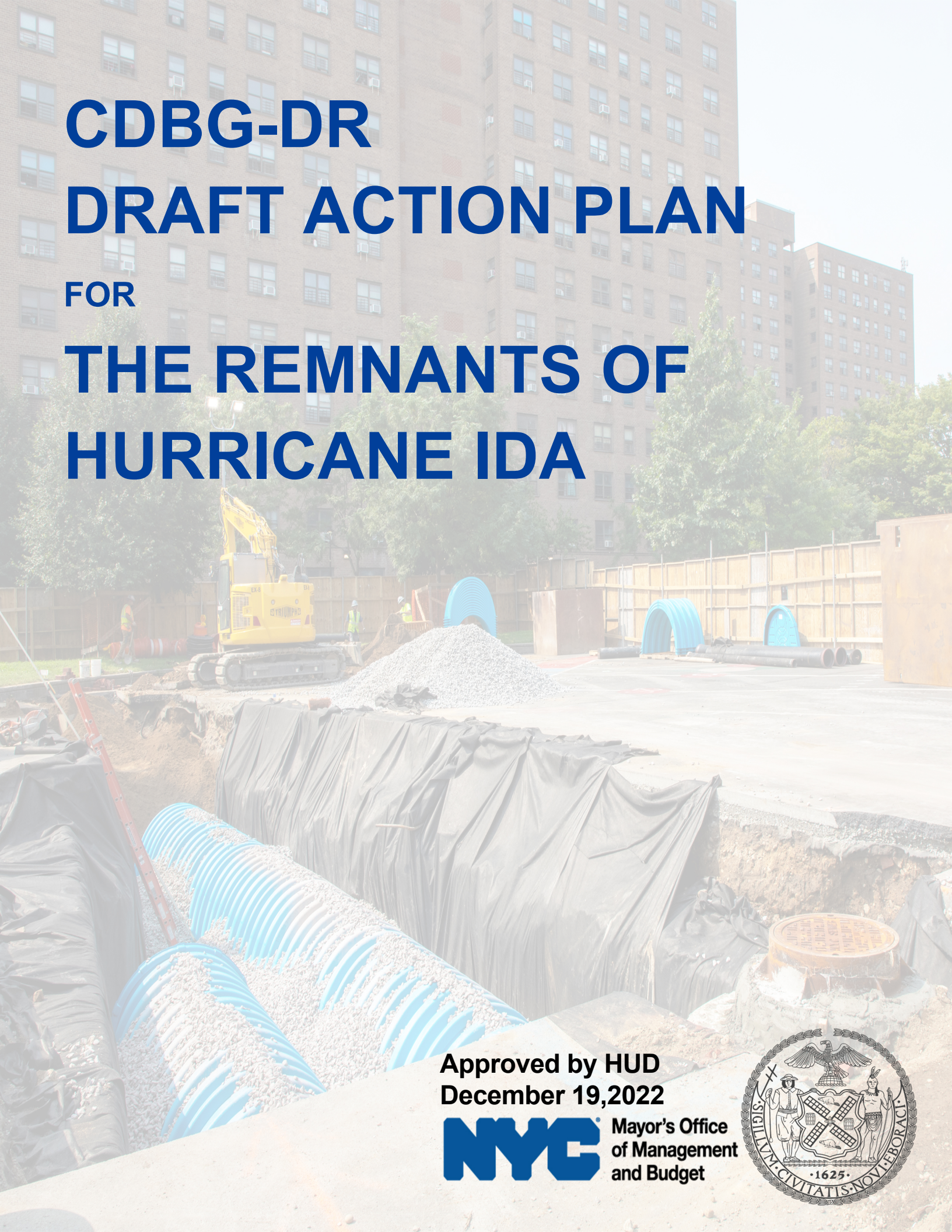
CDBG-DR DRAFT ACTION PLAN

FOR

THE REMNANTS OF HURRICANE IDA



Approved by HUD
December 19,2022

Mayor's Office of Management and Budget

Cover photo credit: NYC Department of Environmental Protection
Installation of stormwater chamber at Van Dyke Houses
Brownsville, Brooklyn, September 14, 2021

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1. Executive Summary

Overview

On the evening of Wednesday, September 1, 2021, the remnants of Hurricane Ida reached New York. Although the storm had been reclassified as a post-tropical cyclone by that point, it smashed the City's record for the most single-hour rainfall, caused widespread flooding and hundreds of millions of dollars of damage, and took the lives of 13 people within New York City. On September 5, 2021, President Joseph R. Biden, Jr. issued a major disaster declaration for the State of New York (4615-DR-NY).

On March 22, 2022, the U.S. Department of Housing and Urban Development (HUD) announced that the City of New York ("the City") will receive $187,973,000 in funding to support long-term recovery efforts following Hurricane Ida, which will be administered by the City's Office of Management and Budget. This allocation was announced in the *Allocations for Community Development Block Grant Disaster Recovery (CDBG-DR) and Implementation of the CDBG-DR Consolidated Waivers and Alternative Requirements* Federal Register Notice (Vol. 87, No. 100, 5/24/2022, 87 FR 31636, "the HUD Notice") with funds made available through the Disaster Relief Supplemental Appropriations Act, 2022 (Public Law 117-43).

Funds must be used for "disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization, and mitigation, in the most impacted and distressed areas." This Action Plan identifies how the City will use its CDBG-DR allocation to support recovery and resiliency efforts, including criteria for eligibility, how the funds will address unmet needs, and how the City will comply with the requirements associated with the funding. The City is releasing this plan for a 30-day public comment period that will end on September 26, 2022. Additionally, the City will hold a public hearing on September 14, 2022 at 7:00PM EST to solicit further comments.

Disaster-Specific Overview

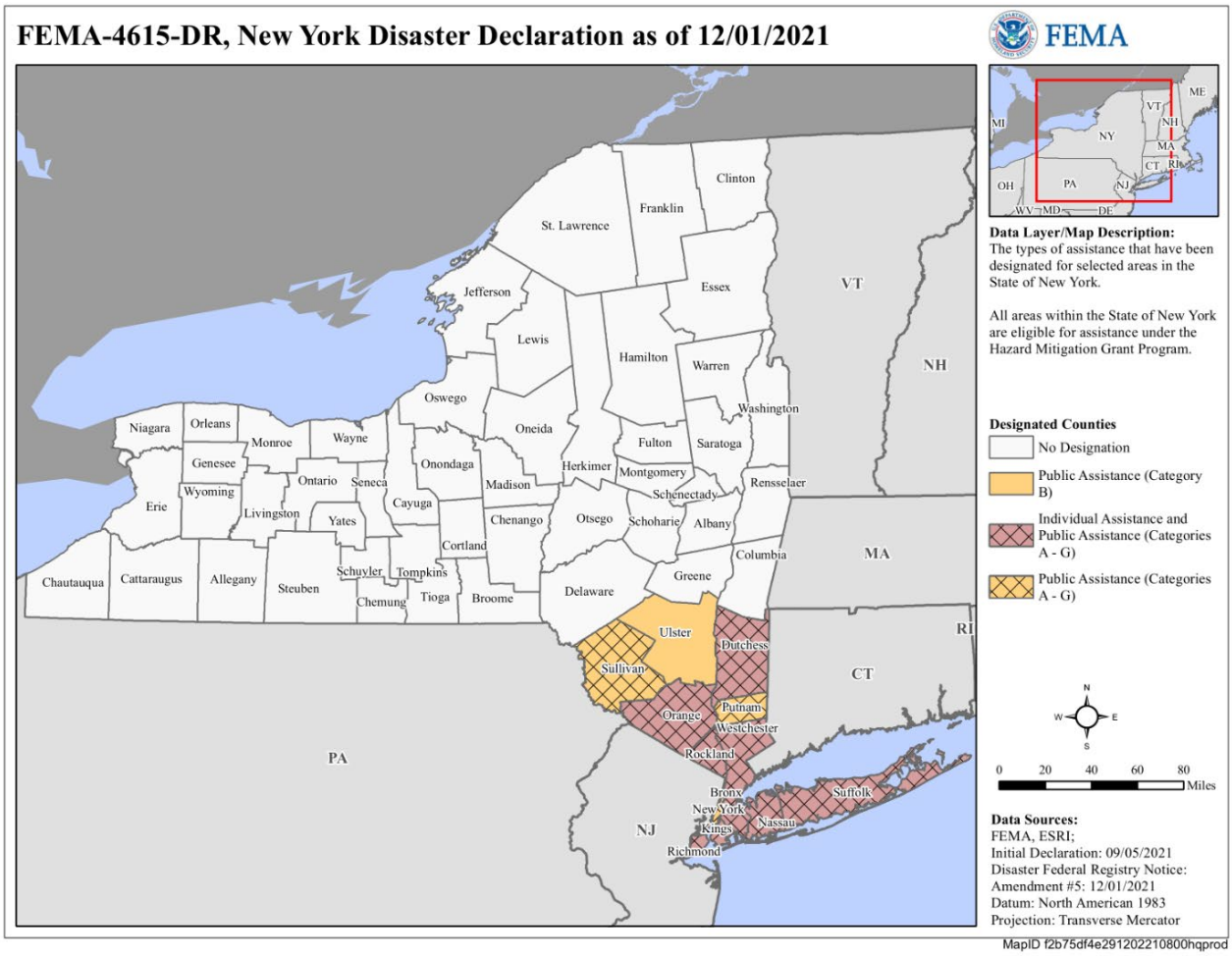
New Yorkers are, unfortunately, no strangers to severe weather. As a coastal city along the eastern seaboard, residents have long known New York City is susceptible to heatwaves, blizzards, and coastal flooding. In the summer of 2021, though, a series of severe storms made clear that another threat is officially upon us: extreme rainfall events leading to inland flooding. Beginning on July 8th with Tropical Storm Elsa and culminating on September 1st and 2nd with Post Tropical Cyclone (PTC) Ida, the city endured three storms that *each* produced rainfalls having only a one percent or less chance of occurring in a given year. Tropical Storm Henri, which hit on August 21st, broke the city's record for rainfall in a single hour, only to be surpassed by PTC Ida 10 days later.

The City has been planning for extreme rainfall for several years – the City released a Stormwater Resiliency Plan in May of 2021 – however, the region had not yet before experienced a storm with the intensity and ferocity of PTC Ida. While the summer's earlier tropical storms brought heavy rainfall, those events took place over longer periods of time and did not see the consistent, intense rains wrought by Ida. For the first time ever, the National Weather Service issued a Flash Flood Emergency for New York City. In Staten Island, Ida produced over nine inches of rain in less than 12 hours, with a substantial portion falling in a three-hour period. In the western Bronx, over three inches of rain fell in one hour.

In addition to Ida's historic rainfall totals, the storm was also notable for where flooding occurred. The storm's sustained rainfall overwhelmed the City's sewer system, which typically has the capacity to handle 1.75 inches of rain per hour. As a result, water accumulated in streets and cascaded into the subway system, cellars, and basements particularly in inland areas outside of the 100-year floodplain. Based on the City's analysis of damaged properties, only 6.9% of Ida-impacted buildings are in the 100-year floodplain, and 13.7% are in the 500-year floodplain.

The City estimates approximately 33,500 buildings sustained damage, about 3.3% of all buildings in the city. While Ida's impact was felt throughout all five boroughs, the storm was particularly impactful in the outer boroughs. Of the damaged properties, 39.9% were in Queens, 26.7% were in Brooklyn, 18.7% were in the Bronx, and 12.7% were in Staten Island while only 2.0% were in Manhattan. As a result, the Presidential Disaster Declaration designated Bronx County, Kings County (Brooklyn), Queens County, and Richmond County (Staten Island) eligible for FEMA's Individual and Public Assistance programs, while New York County (Manhattan) is only eligible for FEMA Public Assistance. Additionally, HUD did not include Manhattan in the list of most impacted and distressed areas for which CDBG-DR funds should be prioritized.

Figure 1.1: Disaster Declaration Map for New York State



On a borough-basis, Queens and Brooklyn contained the largest numbers of damaged properties. However, when looking at the damage on a Community District Tabulation Area (CDTA) basis,

damage was spread relatively evenly throughout the four most-impacted boroughs: no CDTA accounted for more than 7.1% of the damaged properties.

Figure 1.2: Heat Map of Damaged Properties

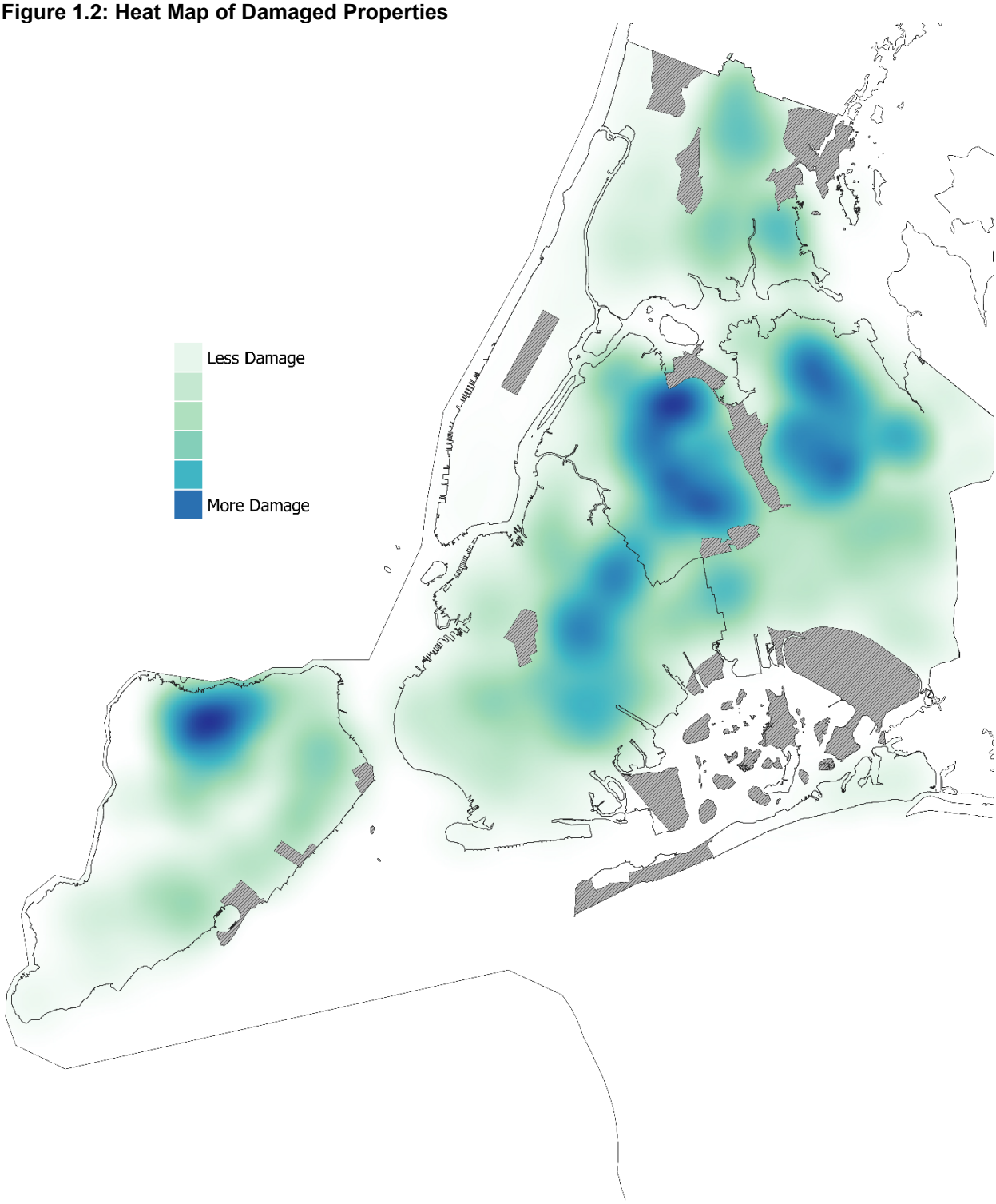


Figure 1.3: Damaged Properties by CDTA – By Number of Buildings Damaged

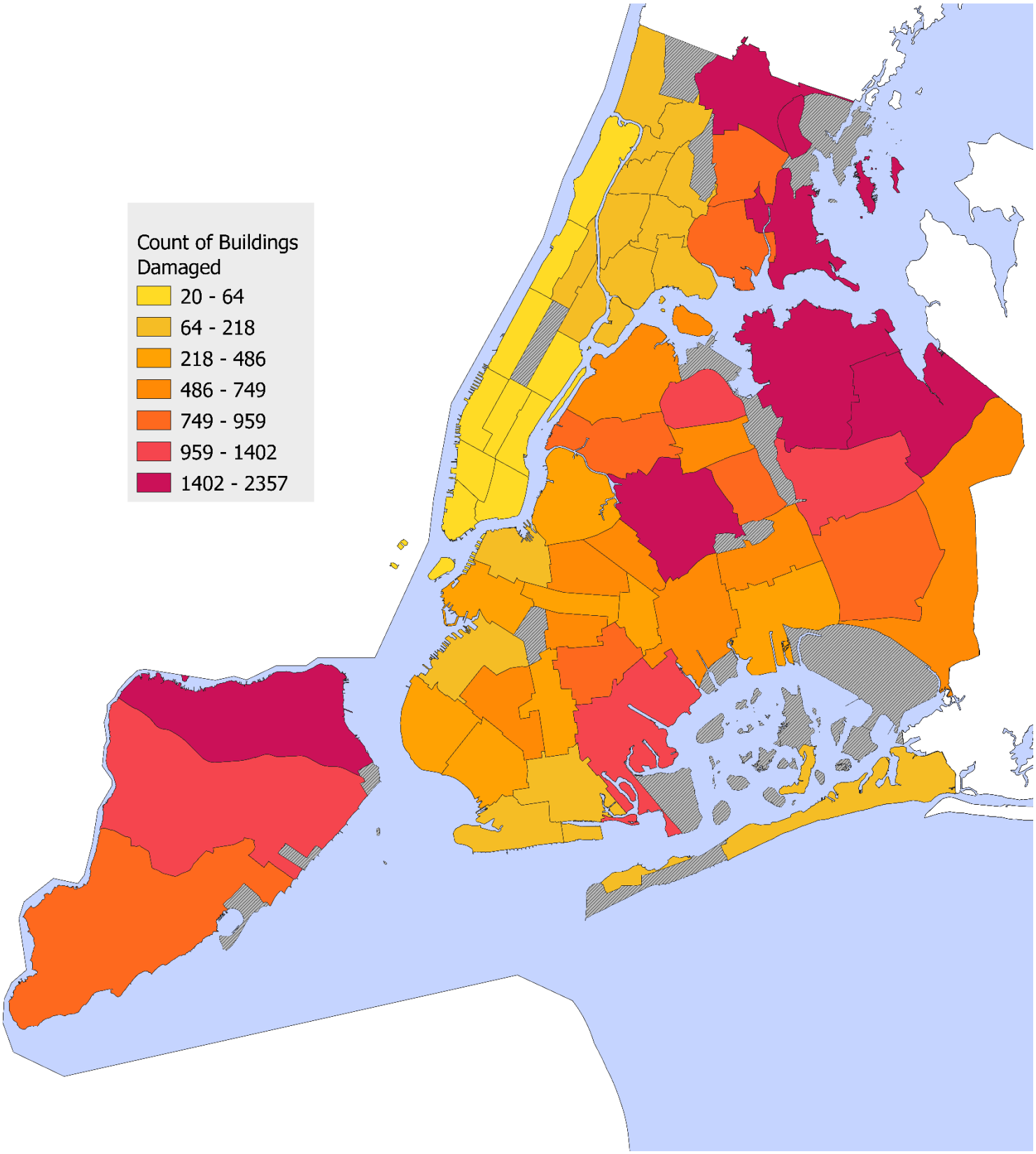
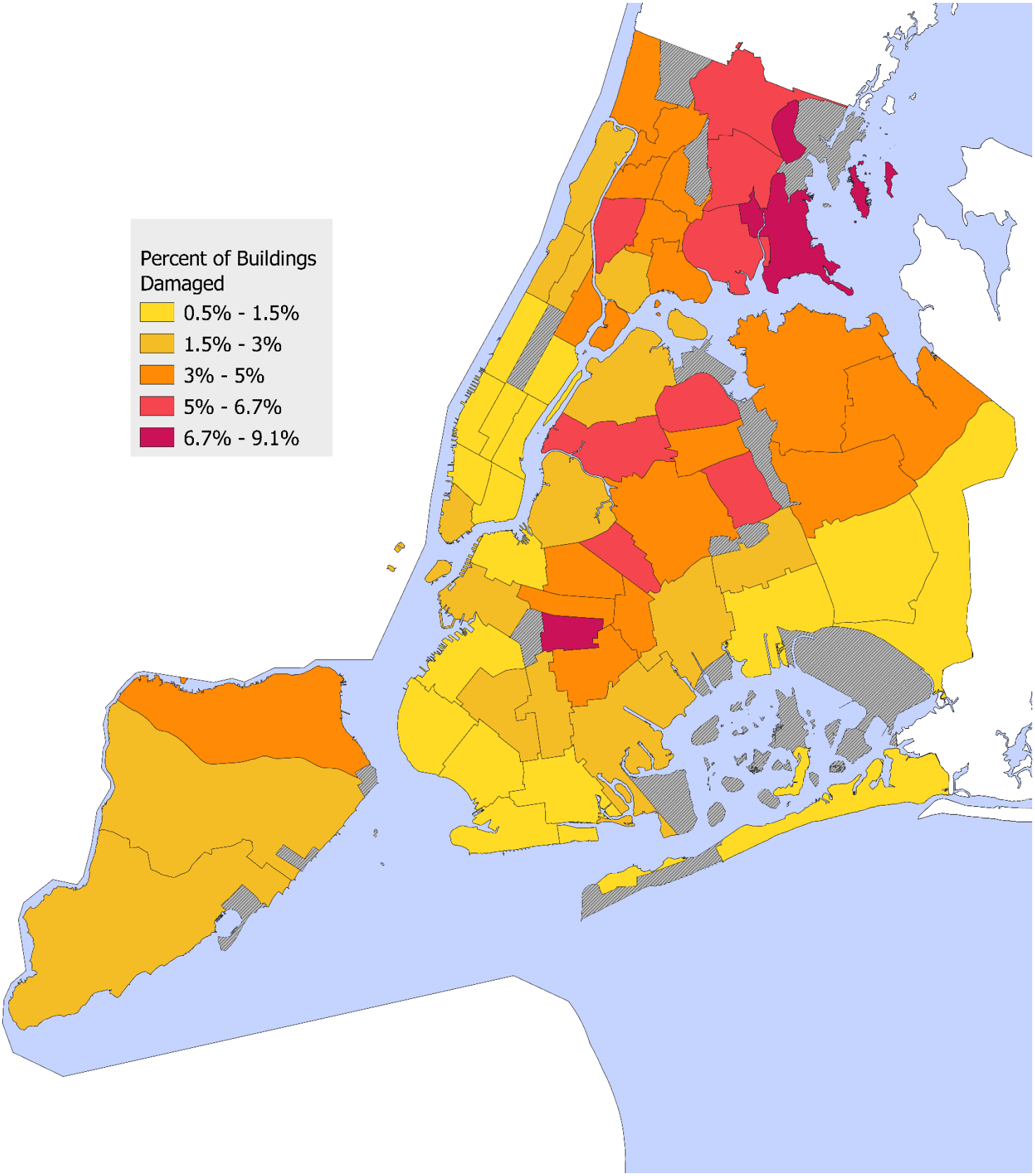


Figure 1.4: Damaged Properties by CDTA – By Percent of Buildings in CDTA Damaged



The storm also had a disproportionate impact on residential properties: over 92% of the damaged properties are residential structures despite residential properties representing less than 87% of all buildings citywide. Buildings with commercial space, including mixed-use buildings, account for 7.5% of buildings impacted. Approximately 800 damaged buildings were solely commercial, representing 2.4% of all impacted buildings. Damage to commercial properties was primarily related to losses of inventory and equipment rather than structural damage.

In the immediate aftermath of Ida, the City's Department of Buildings inspected thousands of buildings citywide and deemed 116 buildings structures unsafe to occupy in whole or in part. Further, FEMA inspections completed to date identified 10 residential buildings as having been destroyed, and 1,282 suffered major damage. While the severity of damage was lower than previous storms, such as Hurricane Sandy, the inland nature, the scale of the damage across the outer-boroughs, and the swiftness of the rainfall represent a dramatic shift in how the City responds to, and prepares for, severe weather events.

Based on the City's initial analysis, City needs for DR funding can be grouped into six main areas:

Single-Family Homes & Basement Apartments

Small residential buildings were disproportionately impacted: while one- and two-family homes account for 52% of buildings citywide, they comprised 75% of buildings impacted by Ida. These damaged properties are located across the city, though concentrated in Queens, Brooklyn, and the Bronx, with many in lower-income and immigrant communities with a high percentage of at-risk populations. Most damage in single-family homes (1-4 units) is from flooding in sub- or at-grade space (e.g., basements, ground floors).

Basement Apartments

Across the city, tens of thousands of New Yorkers occupy illegal subgrade apartments. These units often lack basic safety requirements, putting occupants at increased risk from floods, fires, and other safety hazards. However, these units are also a key source of affordable housing and critical opportunity for the City to meet its affordable housing goals. These units typically offer more modest rents and can be more accessible to low-income New Yorkers, including groups that are underserved in the housing market. Basement apartments also provide a secondary source of income to property owners, who are often small landlords that live on-site. Complex and outdated codes and regulations make it difficult to bring these units into safe and legal use. Improving safety for basement occupants, especially during flooding events, is a top priority for the City.

Sewer Backups

Damage arose from flood waters entering both through windows and doors, and from sewers backing up into homes through plumbing fixtures. Backwater valves reduce the likelihood of raw sewage backups into basements and are an inexpensive means to prevent tens of thousands of dollars in damage. The City is currently studying where the installation of backwater valves would be most effective for property owners.

Public Housing

The New York City Housing Authority (NYCHA) owns and operates over 170,000 units of public housing that nearly half a million low-income New Yorkers call home. Many of these households would be unable to find an affordable apartment in the City's increasingly expensive and competitive

housing market. Preserving this crucial segment of the affordable housing stock – both for NYCHA residents today and generations to come – is a top priority for the City.

Approximately 230 NYCHA buildings were impacted by Ida, with 12 developments across the Bronx, Brooklyn, and Queens suffering particularly significant damage. NYCHA currently estimates the cost of damage alone to be at least $150 million. While a significant portion of this cost is expected to be covered by flood insurance, FEMA Public Assistance, and potentially assistance from New York State, NYCHA will bear some of the cost. Additionally, Ida-related restoration work also offers an opportunity to incorporate mitigation efforts to prevent significant damage, and significant costs, from future events.

Outreach and Other Public Services

Public Information

PTC Ida hit persons with limited English proficiency (LEP) particularly hard. Based on media reports, several of the Ida victims in New York City did not speak or had limited proficiency in English. While the City is able to release emergency alerts in multiple languages through its Notify NYC service, the National Weather Service is not. Additionally, users must sign up to receive Notify NYC alerts rather than receiving them more or less automatically, as is the case with location-based NWS alerts. As demonstrated by Ida, inequities in information can lead to drastic and disproportionate impacts on LEP communities and early *and accessible* notification is crucial to protecting and preserving lives.

Flood Insurance

The City is planning and implementing numerous projects to manage extreme rainfall, but it may take years or decades before the full impact of these efforts will be realized. Additionally, the City will never be able to prevent all flooding events. As extreme rainfall events become more frequent, the City will educate and encourage residents to protect themselves by purchasing flood insurance even in inland areas where it has not typically been required. The City recognizes and is working with its federal partners to address the rising costs of insurance policies. However, purchasing flood insurance is the best way to prevent financial devastation from a flood event. The City will also work with owners and renters to perform resiliency audits and retrofits to lower the cost of insurance.

Resiliency and Mitigation

The City has made transformative investments in stormwater management that will improve water quality and prepare for climate change. However, there is always a need to do more. The City has developed and will expand numerous approaches to make the city more resilient, including

- Green infrastructure systems that collect stormwater from streets, sidewalks, and other hard surfaces before it can enter the sewer system or cause local flooding;
- Bluebelts and wetlands that convey, store, and filter runoff precipitation or stormwater;
- Grey infrastructure improvements that would expand the capacity of the city's sewers, water treatment plants, pumping stations, etc.; and
- Incorporating mitigation and resiliency considerations into all City facilities (e.g., healthcare facilities, educational facilities, recreation areas and open space, utilities, evacuation centers) and programs (e.g., assistance to small businesses, affordable housing, workforce development efforts).

Planning

Finally, Ida highlighted numerous areas where the City, its governmental partners, and other stakeholders could improve. These areas include, but are not limited to:

- Studying specific spatial areas for potential stormwater management improvements;
- Planning to better evacuate occupants from subgrade space in the event of a flash flood;
- Identifying where basement and cellar apartments are located and how they may be better protected from floods, fires, etc.;
- Improving methods for forecasting, monitoring, tracking, and evaluating the impacts of extreme weather events; and
- Evaluating innovative technologies and methods for reducing carbon emissions and increasing resiliency.

Summary

Guiding Principles

Prior to and during the development of this Action Plan, the City consulted with disaster-affected residents, local business owners, service providers, the State of New York, NYCHA, the federal government, and other stakeholders to ensure the City's planned uses of funds are responsive to identified needs and consistent with other recovery efforts. When selecting funding initiatives, the City has prioritized programs intended to benefit the City's most vulnerable populations, to mitigate loss of life and property in the future, and that fit within the eligibility criteria of the CDBG-DR grant. As described in the HUD Notice, at least $150,378,400 of the City's allocation must be spent in the HUD-defined most impacted and distressed areas of the Bronx, Brooklyn, Queens, and Staten Island. Additionally, at least 70% of the grant must be used to benefit low- and moderate-income people and areas.

The programs proposed for funding include activities related to housing, infrastructure, economic revitalization, public services, planning, and administration of the grant. Funded activities include

- Financial counseling and flood insurance assistance for small homeowners and renters;
- Restoring public housing developments and creating more resilient properties;
- Subsidizing resiliency improvements in single-family housing;
- Adding resilient community spaces in affordable housing;
- Increasing local commercial districts' capacity to respond to disasters;
- Expanding the city's green infrastructure network;
- Performing outreach and increasing awareness of hazards in vulnerable communities; and
- Planning for recovery and resiliency.

While the City's Office of Management and Budget will be the main entity administering the grant, implementing these programs will be a coordinated effort among numerous City agencies. The City will continue citizen engagement efforts throughout the duration of this grant and will make adjustments as necessary.

Proposed Allocation Amounts

Table 1-1: CDBG-DR Program Allocations

Programs	Allocation	Expected Benefit to Low- and Moderate-Income Persons	Expected Benefit to MID Areas
Housing	*123,200,000*	*110,460,000*	*117,495,239*
Flood Insurance and Financial Counseling	1,000,000	510,000	800,000
Public Housing Restoration and Resiliency Program	88,200,000	88,200,000	87,695,239
Resiliency Improvements in Single-Family Housing	25,000,000	12,750,000	20,000,000
Resilient Community Spaces in Affordable Housing	9,000,000	9,000,000	9,000,000
Infrastructure			
Green Infrastructure Expansion	30,000,000	30,000,000	30,000,000
Economic Recovery			
Capacity Building for Emergency Response in Local Commercial Districts	450,000	229,500	360,000
Public Services			
Elevated Hazard Awareness and Community Outreach	6,716,000	3,814,850	4,862,000
Planning			
Planning for Recovery and Resiliency	20,369,000	N/A	5,348,812
Total Non-Administrative Programs	*180,735,000*	*144,504,350* 80%	*158,066,051* 87%
Administration			
CDBG-DR Administration	7,238,000	5,787,050	6,330,163
Total	**187,973,000**	**150,291,400**	**164,396,214**

Unmet Needs and Proposed Allocations

Based on the Unmet Needs Assessment in the next section of this plan, the City has estimated an unmet need of $320,205,695. This estimate is based on the best data available to the City at the time, primarily information from FEMA, the U.S. Small Business Administration, and City analyses. However, the City will update the unmet needs section whenever new, significant data become available.

Table 1-2: Unmet Needs and Proposed Allocations

Category	Remaining Unmet Needs	% of Unmet Needs	Allocations	% of Program Allocation
Housing	$188,600,000	58.9%	$123,200,000	65.5%
Infrastructure	$86,151,695	26.9%	$30,000,000	16.0%
Economic Revitalization	$0	0.0%	$450,000	0.2%
Public Services	$6,716,000	2.1%	$6,716,000	3.6%
Planning	$31,500,000	9.8%	$20,369,000	10.8%
Administrative Costs	$7,238,000	2.3%	$7,238,000	3.9%
Total	$320,205,695	100.0%	$187,973,000	100.0%

2. Unmet Needs Assessment

Overview

CDBG-DR funding is designed to address needs that remain after all other assistance has been exhausted. Accordingly, grantees must conduct a needs assessment to determine where *unmet* needs exist. This analysis, which is mandated by HUD, serves as the basis by which the City must allocate its CDBG-DR grant.

HUD requires the assessment to consider four main categories of need, which are housing, infrastructure, economic recovery, and mitigation. Grantees must account for assistance available from various sources including, but not limited to, federal and state resources (e.g., FEMA and the Small Business Administration), local funds such City tax levy or City capital funds, and private sources such as insurance proceeds.

The City began assessing Ida's impact immediately as the storm hit and the effort continues to this day. However, as of the release of this plan, the City and HUD are still finalizing formal agreements through which the City can access detailed FEMA data. This section will be updated as additional data becomes available, particularly if this information reveals unmet needs that had not previously been considered. Any significant changes to the unmet needs section (i.e., changes that would affect eligibility, intended program beneficiaries, or how funds will be distributed) will result in a substantial amendment.

When reviewing the information in this section, please note the following:

Flood Hazard Areas

As Ida was primarily a flooding event, this plan makes numerous references to properties located in floodplains. While the delineation of floodplains can be very technical, this document primarily considers three types of areas:

- The 100-year floodplain, also referred to as the 1% annual chance floodplain or Special Flood Hazard Area, is the area expected to be inundated by a 100-year flood. A common misconception is that the 100-year floodplain generally experiences flooding once every 100 years. That is not the case. Instead, these areas have a one percent or greater chance of experiencing a flood in any single year.
- The 500-year floodplain, also referred to as the 0.2% annual chance floodplain, is the area expected to be inundated by a 500-year flood. Similar to the 1% annual chance floodplain, the areas in the 500-year floodplain have a 0.2% or greater chance of experiencing a flood in any single year.
- Areas of minimal flood hazard are areas that are outside the 100- and 500-year floodplains. As the name implies, these areas are considered to have significantly lower risk of flooding on an annual basis. However, as made evident by PTC Ida, areas of minimal flood hazard are still at risk for flooding events, particularly as climate change intensifies.

Sources Referenced

As a global leader in the fight against climate change, the City already had a wealth of reports and data to pull from when completing this Action Plan. These resources, which are referenced throughout this plan, include the following:

- Department of City Planning: NYC's Floodplain by the Numbers
- Emergency Management: NYC's Risk Landscape: A Guide to Hazard Mitigation
- Mayor's Office: New York City Stormwater Resiliency Plan
- Office of the Chief Housing Officer: Housing Our Neighbors: A Blueprint for Housing and Homelessness
- Office of the Deputy Mayor for Housing and Economic Development: Where We Live NYC
- Office of the Deputy Mayor of Administration, in collaboration with the Department of Environmental Protection and NYC Emergency Management: The New Normal: Combating Storm-Related Extreme Weather in New York City.

HUD-Identified Most Impacted and Distressed Areas

The Appropriations Act requires CDBG-DR funds to be used for "disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization, and mitigation, in the most impacted and distressed (MID) areas resulting from a major disaster." The HUD Notice requires the City to use at least 80% of the Ida allocation—or $150,378,400— to benefit the MID. As noted in the Executive Summary, PTC Ida was particularly impactful in the outer boroughs. The Presidential Disaster Declaration designated Bronx County, Kings County (Brooklyn), Queens County, and Richmond County (Staten Island) eligible for FEMA's Individual and Public Assistance programs, while New York County (Manhattan) is only eligible for FEMA Public Assistance. For this reason, the HUD Notice did not include Manhattan in the MID for New York City.

Grantee-Identified Most Impacted and Distressed Areas

The HUD Notice also allows the City to use up to 20% of the grant to address unmet needs within areas that are outside the MID if they were included in a presidential disaster declaration. While the City is prioritizing its CDBG-DR allocation for areas that were most heavily impacted, funds may be used to benefit Manhattan as well, particularly for planning and mitigation activities. Despite PTC Ida's clearly disproportionate impact on the outer boroughs, the future risk that extreme rainfall presents for Manhattan cannot be ignored.

On a borough-basis, Queens and Brooklyn contained the largest numbers of damaged properties. However, when looking at the damage on a Community District Tabulation Area (CDTA) basis, damage was spread relatively evenly throughout the four most-impacted boroughs: no CDTA accounted for more than 7.1% of the damaged properties.

Table 2-1: Damaged Buildings by Community District Tabulation Area (CDTA)

CDTA	CDTA Name	Borough	Damaged Buildings	Total Buildings in CDTA	% of Buildings in CDTA Damaged by Ida	% of Buildings Damaged Citywide
QN07	Flushing-Murray Hill-Whitestone (CD 7 Approximation)	Queens	2,357	48,793	4.83%	7.04%
SI01	North Shore (CD 1 Equivalent)	Staten Island	2,213	48,694	4.54%	6.61%
BX10	Co-op City-Throgs Neck (CD 10 Approximation)	Bronx	1,855	20,318	9.13%	5.54%
QN05	Ridgewood-Maspeth-Middle Village (CD 5 Approximation)	Queens	1,551	41,496	3.74%	4.63%
QN11	Auburndale-Bayside-Douglaston (CD 11 Approximation)	Queens	1,461	39,801	3.67%	4.36%
BX12	Wakefield-Williamsbridge-Eastchester (CD 12 Approximation)	Bronx	1,423	24,029	5.92%	4.25%
BK18	Canarsie-Flatlands (CD 18 Approximation)	Brooklyn	1,280	44,629	2.87%	3.82%
QN08	Fresh Meadows-Hillcrest-Briarwood (CD 8 Approximation)	Queens	1,261	29,609	4.26%	3.77%
QN03	Jackson Heights-East Elmhurst (CD 3 Approximation)	Queens	1,213	19,212	6.31%	3.62%
SI02	Mid-Island (CD 2 Approximation)	Staten Island	1,105	40,437	2.73%	3.30%
BK17	East Flatbush (CD 17 Approximation)	Brooklyn	959	24,792	3.87%	2.86%
SI03	South Shore (CD 3 Approximation)	Staten Island	939	52,010	1.81%	2.80%
BX11	Pelham Parkway-Morris Park (CD 11 Approximation)	Bronx	893	15,458	5.78%	2.67%
BX09	Soundview-Parkchester (CD 9 Approximation)	Bronx	870	13,139	6.62%	2.60%
QN12	Jamaica-St. Albans-Hollis (CD 12 Approximation)	Queens	838	58,900	1.42%	2.50%
QN06	Forest Hills-Rego Park (CD 6 Approximation)	Queens	814	14,215	5.73%	2.43%
QN02	Long Island City-Sunnyside-Woodside (CD 2 Approximation)	Queens	789	11,846	6.66%	2.36%
BK03	Bedford-Stuyvesant (CD 3 Approximation)	Brooklyn	749	16,666	4.49%	2.24%
BK09	Crown Heights (South) (CD 9 Approximation)	Brooklyn	709	8,409	8.43%	2.12%
BK05	East New York-Cypress Hills (CD 5 Approximation)	Brooklyn	698	23,446	2.98%	2.08%

CDTA	CDTA Name	Borough	Damaged Buildings	Total Buildings in CDTA	% of Buildings in CDTA Damaged by Ida	% of Buildings Damaged Citywide
QN01	Astoria-Queensbridge (CD 1 Equivalent)	Queens	678	24,444	2.77%	2.02%
QN04	Elmhurst-Corona (CD 4 Approximation)	Queens	672	14,759	4.55%	2.01%
BK04	Bushwick (CD 4 Equivalent)	Brooklyn	641	11,408	5.62%	1.91%
BK12	Borough Park-Kensington (CD 12 Approximation)	Brooklyn	609	24,484	2.49%	1.82%
QN13	Queens Village-Bellerose-Rosedale (CD 13 Approximation)	Queens	573	70,618	0.81%	1.71%
QN09	Kew Gardens-Richmond Hill-Woodhaven (CD 9 Approximation)	Queens	523	29,031	1.80%	1.56%
BK01	Williamsburg-Greenpoint (CD 1 Equivalent)	Brooklyn	486	16,101	3.02%	1.45%
QN10	South Ozone Park-Howard Beach (CD 10 Approximation)	Queens	448	37,164	1.21%	1.34%
BK14	Flatbush-Midwood (CD 14 Approximation)	Brooklyn	444	16,535	2.69%	1.33%
BK16	Ocean Hill-Brownsville (CD 16 Approximation)	Brooklyn	423	8,501	4.98%	1.26%
BK08	Crown Heights (North) (CD 8 Approximation)	Brooklyn	345	8,373	4.12%	1.03%
BK11	Bensonhurst-Bath Beach (CD 11 Approximation)	Brooklyn	345	29,126	1.18%	1.03%
BK06	Park Slope-Carroll Gardens (CD 6 Approximation)	Brooklyn	309	14,358	2.15%	0.92%
BK10	Bay Ridge-Dyker Heights (CD 10 Approximation)	Brooklyn	304	23,909	1.27%	0.91%
BK15	Sheepshead Bay-Gravesend (East) (CD 15 Approximation)	Brooklyn	218	28,916	0.75%	0.65%
BX04	Highbridge-Concourse (CD 4 Approximation)	Bronx	210	3,276	6.41%	0.63%
BK07	Sunset Park-Windsor Terrace (CD 7 Approximation)	Brooklyn	208	14,286	1.46%	0.62%
BX08	Riverdale-Kingsbridge-Marble Hill (CD 8 Approximation)	Bronx	179	5,382	3.33%	0.53%
BX05	Morris Heights-Mount Hope (CD 5 Approximation)	Bronx	165	3,567	4.63%	0.49%
QN14	The Rockaways (CD 14 Approximation)	Queens	162	20,423	0.79%	0.48%

CDTA	CDTA Name	Borough	Damaged Buildings	Total Buildings in CDTA	% of Buildings in CDTA Damaged by Ida	% of Buildings Damaged Citywide
BX03	Morrisania-Crotona Park East (CD 3 Approximation)	Bronx	155	3,584	4.32%	0.46%
BX06	Tremont-Belmont-West Farms (CD 6 Approximation)	Bronx	150	4,200	3.57%	0.45%
BX07	Fordham-Bedford Park-Norwood (CD 7 Approximation)	Bronx	146	3,910	3.73%	0.44%
BX01	Melrose-Mott Haven-Port Morris (CD 1 Approximation)	Bronx	128	4,210	3.04%	0.38%
BK13	Coney Island-Brighton Beach (CD 13 Approximation)	Brooklyn	115	8,621	1.33%	0.34%
BK02	Downtown Brooklyn-Fort Greene (CD 2 Approximation)	Brooklyn	111	8,164	1.36%	0.33%
MN11	East Harlem (CD 11 Equivalent)	Manhattan	110	3,184	3.45%	0.33%
MN10	Harlem (CD 10 Equivalent)	Manhattan	108	4,575	2.36%	0.32%
BX02	Longwood-Hunts Point (CD 2 Approximation)	Bronx	104	3,129	3.32%	0.31%
MN12	Washington Heights-Inwood (CD 12 Equivalent)	Manhattan	64	2,860	2.24%	0.19%
MN03	Lower East Side-Chinatown (CD 3 Equivalent)	Manhattan	57	4,584	1.24%	0.17%
MN08	Upper East Side-Roosevelt Island (CD 8 Equivalent)	Manhattan	56	5,916	0.95%	0.17%
MN01	Financial District-Tribeca (CD 1 Equivalent)	Manhattan	42	1,701	2.47%	0.13%
MN09	Morningside Heights-Hamilton Heights (CD 9 Equivalent)	Manhattan	42	2,605	1.61%	0.13%
MN07	Upper West Side (CD 7 Approximation)	Manhattan	42	4,707	0.89%	0.13%
MN04	Chelsea-Hell's Kitchen (CD 4 Approximation)	Manhattan	41	3,769	1.09%	0.12%
MN02	Greenwich Village-SoHo (CD 2 Equivalent)	Manhattan	37	5,208	0.71%	0.11%
MN06	East Midtown-Murray Hill (CD 6 Approximation)	Manhattan	36	3,283	1.10%	0.11%
MN05	Midtown-Flatiron-Union Square (CD 5 Approximation)	Manhattan	20	2,781	0.72%	0.06%
		Totals	**33,483**	**1,081,551**		**100.00%**

Housing Unmet Need

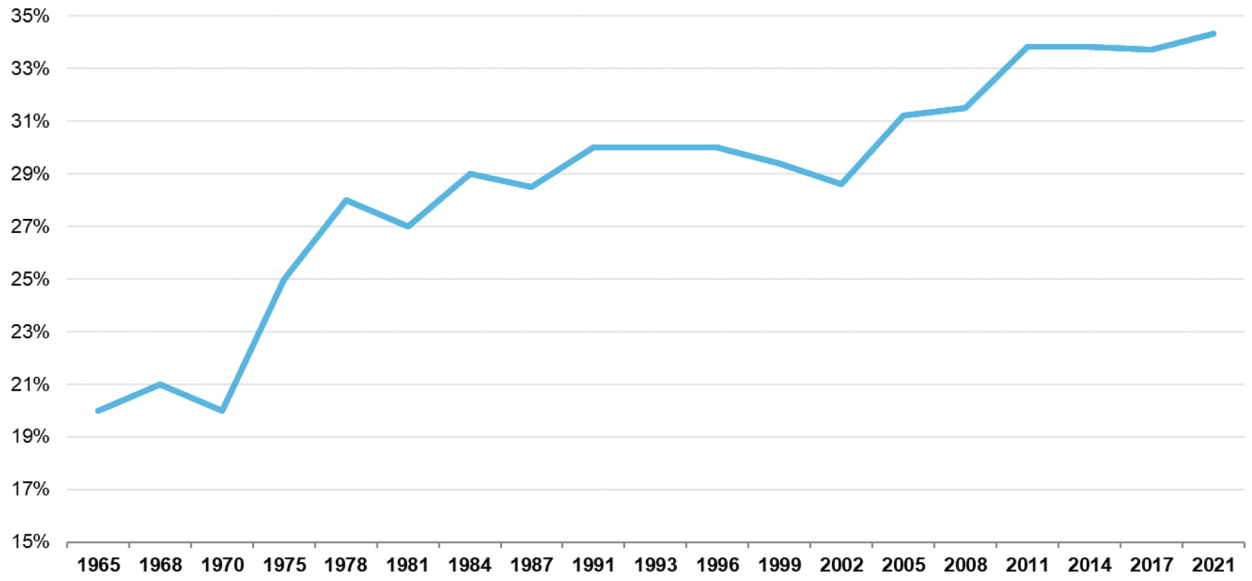
The following section describes the impact of PTC Ida on New York City's housing stock and its residents to inform a framework for recovery and mitigation projects using CDBG-DR funds.

Disaster Damage and Impacts

Pre-Disaster Housing Conditions

New York City continues to face both a housing shortage and an affordability crisis. The share of New York renters who are rent-burdened, meaning they pay more than 30% of their gross income toward rent, remains the highest on record. The figure below shows the median rent burden (rent-to-income ratio) for renter households in New York City from 1965 to 2021.

Figure 2.1: Median Rent Burden of NYC Households, 1965-2021



Source: NYC Housing and Vacancy Survey, 1965-2021. US Census Bureau/NYC HPD. The U.S. Census Bureau reviewed thi data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY22-199 and CBDRB-FY22-POP001-010. Rent burden is defined as gross rent to income ratio

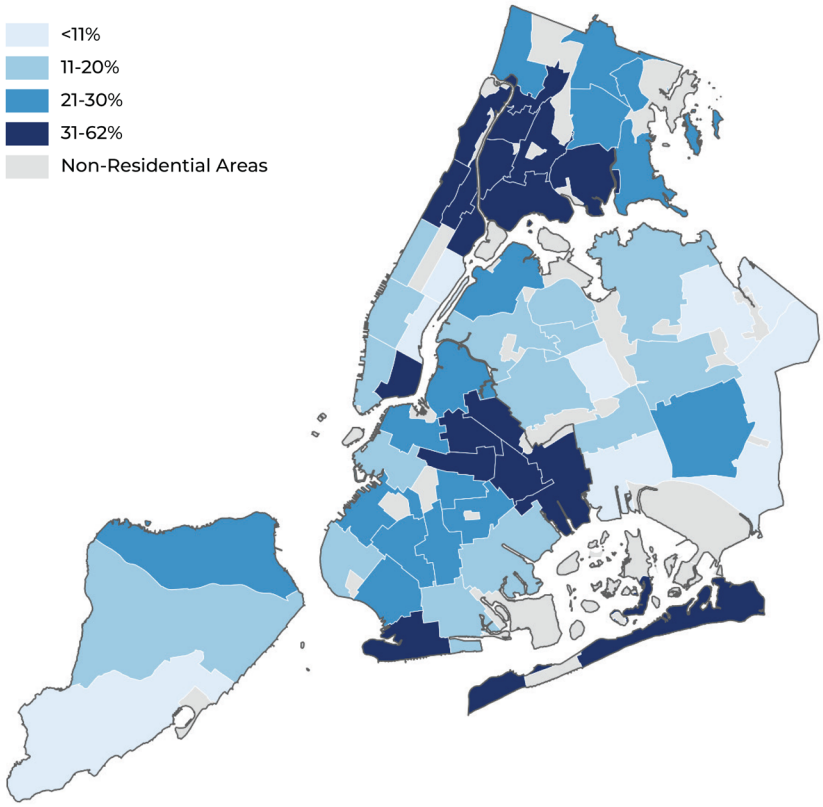
In 2021, the typical New York renter paid 34% of their income toward housing costs. For lower-income households, this high level of rent burden means that residents have less money to spend on food, childcare, education, healthcare, and other necessary expenses. Today, 53% of renter households are rent-burdened, including 32% of renter households who are severely burdened, meaning they pay more than 50% of their income toward housing costs.[1]

The high cost of housing and lack of affordability is not evenly dispersed throughout the city, which is evident in the borough-wide vacancy rates. In 2021, Manhattan had a significantly higher net rental vacancy rate than any other borough at 10.01%. The net rental vacancy rate was 4.15% for Queens and Staten Island combined, 2.73% in Brooklyn, and less than one percent in the Bronx. The median

[1] Housing Our Neighbors: A Blueprint for Housing and Homelessness

rent of an available unit was $2,750, which would require an income of at least $110,000, yet the median household income of renters in 2021 was only $50,000.

Figure 2.2: Low-Cost Rental Units by Share of Total Units



Source: 2015-2019 American Community Surveys Public Use Micro Data. Note: Denominator includes both owner and rental units. Affordable units include both those that receive subsidies or are under regulatory agreements and units that are unregulated but still affordable to families below 60% AMI. Rent tiers are based on 2019 HUD Income Limits.

To further illustrate the variance of affordability across the boroughs, the median monthly rent was $1,200 in the Bronx, $1,593 in Brooklyn, $1,898 in Manhattan, $1,625 Queens, and $1,545 in Staten Island. Extremely low vacancy rates and high rates of rent burden indicate that housing mobility for low-income people is extremely limited.

Rent-burdened households have a very limited margin to cope with unexpected financial expenses – a margin that shrinks if household members also lose income due to a hazard event. If someone's home or apartment is damaged by an extreme weather event or other hazard, finding an affordable place to stay while repairs are being made – even temporarily – can be a serious challenge. To avoid paying higher rent for temporary shelter or becoming homeless, some people choose to remain in their damaged homes – a choice that can come with its own health hazards.

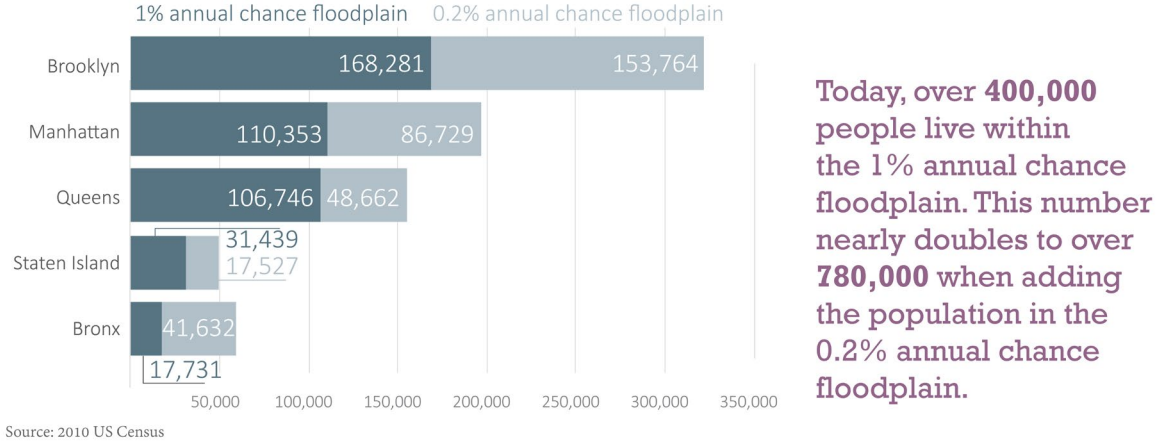
Housing in the Floodplain

Previous City reports estimate that approximately 71,500 residential properties are in the 1% annual chance floodplain in New York City, as show on FEMA's Preliminary Flood Insurance Rate Maps

(PFIRMS).[2] Much of the information that follows is borrowed from the NYC Department of City Planning's report, *NYC's Floodplain by the Numbers*, which provides an in-depth analysis of the population and building types that occupy the floodplain.

All five boroughs have sizable populations within the floodplain. With over 300,000 residents, Brooklyn contains the largest population living within both the 1% and 0.2% floodplains. On the lower end, the Bronx's floodplain population more than triples to nearly 60,000 when factoring in the 0.2% floodplain.

Figure 2.3: Total Population in the 1% and 0.2% Annual Chance Floodplains

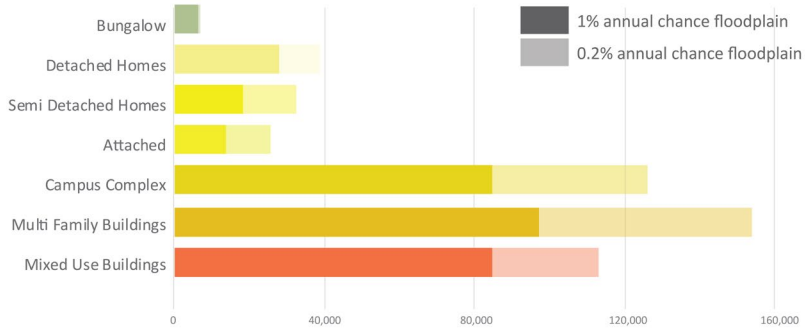


Development patterns in the floodplain vary across the city; therefore, there is no one-size-fits-all solution for adapting buildings. Single- and two-family residences dominate the landscape in many of the city's coastal areas, including a number of smaller-scale bungalow communities, while other neighborhoods are characterized by higher density residential, mixed-use, and commercial buildings.

While most buildings in the floodplain – about 70% – are single- and two-family structures, those only encompass a fifth of all household *units* in the floodplain. About 80% of residential units in the floodplain are located within multifamily buildings. Low density residential homes are commonly found throughout coastal neighborhoods in Brooklyn, Queens, Staten Island, and the Bronx. Multi-family buildings, including campus complexes and mixed-use buildings, are more common throughout Manhattan, and some higher density neighborhoods including portions of North Brooklyn, Coney Island, and the Rockaways.

[2] NYC Department of City Planning, Retrofitting Buildings for Flood Risk, 2014

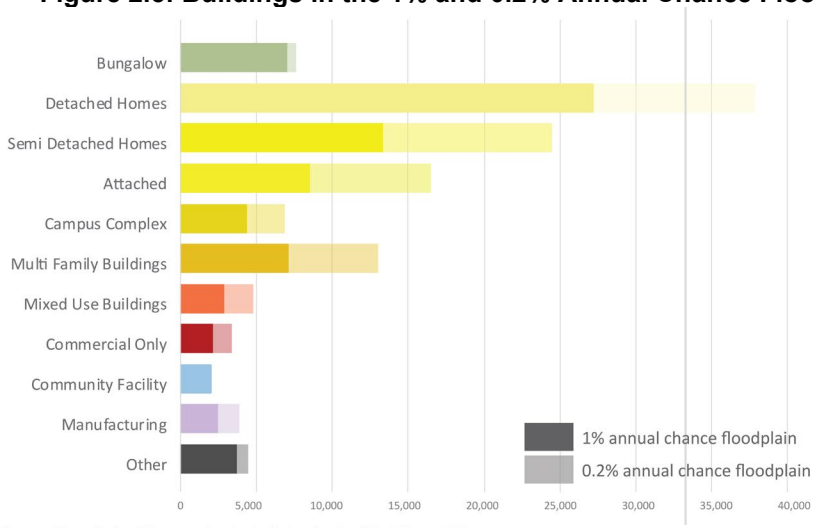
Figure 2.4: Housing Units in the 1% and 0.2% Annual Chance Floodplain by Type



80% of all housing units are located in multifamily buildings and distributed across a range of building typologies.

Source: Data for building typologies is derived using MapPluto 18V1.

Figure 2.5: Buildings in the 1% and 0.2% Annual Chance Floodplain by Type



While **70%** of all buildings in the combined 1% and 0.2% annual chance floodplains are single- and two-family homes, they include only a fifth of the area's total housing units.

Source: Data for building typologies is derived using MapPluto 18V1.

Floodplain property owners face several challenges when retrofitting to reduce flood risks and meet flood-resistant construction standards. Basements and other below grade spaces are common throughout the floodplain in Brooklyn, Queens, and Staten Island, and are highly vulnerable to coastal flooding. While filling and relocating basements can significantly limit flood damages and losses, doing so can be structurally challenging and costly. Elevating buildings also raises accessibility issues and requires ramps or lifts to access homes on often constrained sites.

Attached and semi-detached buildings face greater challenges to retrofitting than those that are detached and more easily elevated. Some challenges are structural, such as shared party walls, while others relate to the complexity of coordinating among adjoining property owners or managing zoning height and floor area limits.

The City's Zoning for Coastal Flood Resiliency text amendment provides a framework to better accommodate resiliency investments. However, the cost of retrofitting structures further compounds the issues facing property owners in the floodplain. Like the rest of the City, the floodplain is largely developed. As previously outlined, tenants and property owners already face high rates of housing cost-burden and can thus be financially limited when it comes to investing in resiliency measures. Additionally, there are over 55,000 rent regulated housing units in the 1% annual chance floodplain, providing critically needed affordable housing options for floodplain communities. Though the city's

waterfront is comprised of many racially and economically diverse neighborhoods, citywide disparities in access to affordable housing, community resources, and the financial means to invest in flood protection persist and contribute to the challenges of ensuring a safe and resilient city.

Flood Insurance

Flood insurance is an important financial tool to support households' repair needs after a flood. Traditional homeowner and renter insurance policies do not cover flood damage and federal disaster assistance is never guaranteed. Following Hurricane Sandy, homeowners with flood insurance received an average payment of $68,000. By contrast, federal disaster assistance through FEMA Individual Assistance only provided an average of $3,685 per household.

The number of city households with active flood insurance policies is between 46,000 and 52,000 based on FEMA data.[3] While the city's rate of resident enrollment surpasses the nationwide rate of enrollment, there is a considerable gap between those who should have flood insurance and those who do. Over the past decade, federal changes to the National Flood Insurance Program (NFIP) have caused flood insurance premiums to rise for many New Yorkers with further increases expected.[4] Barring interventions at the federal level, the increasing costs of flood insurance combined with the significant costs of retrofitting properties may lead to the long-term displacement of low- and moderate-income homeowners from flood-prone areas.

The national average cost of flood insurance is about $700 per year. However, in New York City, the average annual cost is $1,152.[5] Based on the FEMA insurance enrollment data and the earlier-cited figure of 71,500 buildings in the 100-year floodplain, there appears to be a gap of *at least* 19,500 property owners who do not have flood insurance. Closing that gap would cost approximately $22.5 million using the citywide average premium of $1,152. When factoring in properties located in the 500-year floodplain, the cost would be substantially more.

Further, not all homes that experience flooding are in designated floodplains. Following PTC Ida, 52% of all recorded damage was outside both the FEMA-established floodplain and the recently-released NYC Stormwater Flood Maps. This unpredicted flooding during PTC Ida indicates that the original projections of how these increasingly frequent storms are going to impact New Yorkers need to be revisited.

A study commissioned by the Natural Resources Defense Council (NRDC) estimated that at least 110,897 single-family homes in the NY metropolitan statistical area, approximately 7%, have prior flood damage. People who purchase homes that have previously flooded can expect to pay around $46,887 over the course of a 15-year mortgage and $93,774 over a 30 year-mortgage in flood damage costs. In 2021, 7,645 previously flooded homes were purchased. For these homes alone, the combined total of damage costs is $23,000,000 annually.[6]

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[3] Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance by State, June 30, 2022.
[4] The City: *Flood Insurance Hikes Haunt Homeowners Still Recovering from Ida and Henri* https://www.thecity.nyc/2021/10/12/22723591/flood-insurance-hikes-haunt-homeowners
[5] ibid
[6] Milliman, Estimating Undisclosed Flood Risk in Real Estate Transactions, July 2022

Single Family v. Multi Family Needs; Owner Occupied v. Tenant

Impacted Buildings

Small residential buildings were disproportionately impacted by Ida: while one- and two-family homes account for 52% of buildings citywide, they comprised 75% of buildings impacted. An additional 12% of damaged properties are three- to four-unit homes.[7]

Damage arose from flood waters entering both through windows and doors, and from sewers backing up into homes through plumbing fixtures. In the immediate aftermath of Ida, the City's Department of Buildings inspected thousands of buildings citywide and deemed 116 buildings structures unsafe to occupy in whole or in part.[8] Further, FEMA inspections completed to date identified 10 residential buildings as having been destroyed, and 1,282 suffered major damage.[9]

While the City has limited information on the properties damaged, the City is still in the process of calculating Ida's damage to residential properties. As noted earlier, the City and FEMA are still finalizing formal agreements through which the City can access detailed federal data. The charts below reflect federal disaster assistance, aggregated by borough, approved for private homeowners and renters, which is the best available data the City has received. The City anticipates receiving additional data that will show the variance between estimated damage and federal assistance provided.

Table 2-2: FEMA Individual Assistance

		Bronx	Brooklyn	Queens	Staten Island	Total
IHP Registrations	Valid Registrations	13,887	17,164	23,186	7,459	61,696
	IHP Eligible	5,869	7,829	12,342	4,079	30,119
	IHP Amount	$31,869,786	$35,924,588	$67,259,442	$23,130,835	$158,184,651
Housing Assistance	HA Eligible	4,756	5,969	10,905	3,616	25,246
	Received Rental Assistance	1,442	1,771	2,649	789	6,651
	HA Amount	$27,652,777	$30,827,299	$59,832,676	$21,499,734	$139,812,486
	Average HA Amount	$5,814	$5,165	$5,487	$5,946	$5,603
Other Needs Assistance	ONA Eligible	2,428	3,433	4,342	1,258	11,461
	ONA Amount	$4,217,009	$5,097,289	$7,426,766	$1,631,101	$18,372,165
	Average ONA Amount	$1,737	$1,485	$1,710	$1,297	$1,557

Source: FEMA Individual Assistance Overview DR-4615-NY NY City, August 8, 2022

[7] NYC Ida Damaged Building Composite Dataset

[8] NYC Office of the Deputy Mayor of Administration, in collaboration with the Department of Environmental Protection and NYC Emergency Management: The New Normal: Combating Storm-Related Extreme Weather in New York City, October 2021

[9] FEMA Individual Assistance Overview DR-4615-NY NY City, August 8, 2022

Table 2-3: Total Home Disaster Loans Approved by the SBA

	SBA Loan Type	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Total
Home Loans	Applications Received	1,179	1,284	1	1,940	849	5,253
	Applications Approved	564	544	0	924	518	2,550
	Dollars Approved	$24,982,140	$24,859,456	$0	$38,379,380	$21,274,460	$109,495,436

Source: U.S. Small Business Administration Disaster Loan Statistics for New York State, August 15, 2022

While the City awaits access to further datasets, initial reports suggest the combined aid of insurance payouts, FEMA IA, and SBA Disaster Loans is not enough to cover the damage caused by PTC Ida. To partially address outstanding needs, the City's Housing Recovery Office is operating a Hurricane Ida Supplemental Funding Program that may cover certain repairs and mitigation work. The program is accepting applications until September 12, 2022. For more information, you may contact (212) 615-8329 or IdaAssist@recovery.nyc.gov. Please note this program is not funded with CDBG-DR funds.

Sub-grade Units and Residents

PTC Ida took the lives of 13 NYC residents, 11 of whom were residents of cellar or basement subgrade apartments. While both are below-grade structures, they are differentiated by the amount of height below the ground and suitability for housing. A cellar has more than 50% of its floor to ceiling height below curb level, and cellar occupancy is explicitly prohibited. Conversely, basements must have more than 50% of their height above curb level, and occupancy is permitted albeit heavily regulated. Basement apartments in the City are largely deemed illegal for the lack of a second means of egress, as well as a failure to meet other building code requirements.

As discussed in the City's recently released housing plan, Housing Our Neighbors: A Blueprint for Housing and Homelessness, basement apartments are an important supplement to the housing stock that disproportionately serve very low-income households, immigrant New Yorkers, and other communities that lack access to affordable options in the general housing market. The New Yorkers living in basement apartments often face unsafe and unstable living conditions. However, the process of bringing a basement apartment into safe and legal use is too difficult and expensive for many homeowners who could benefit from legally renting out a secondary unit in their home.

To begin the process of solving this problem, the City partnered with the City Council and community-based organizations to operate a pilot program that provided funding and regulatory relief for a limited number of basement conversions in East New York, Brooklyn. Through this effort, it became clear that the City cannot meet its goals for basement conversions without further analysis and statutory changes at the state level. However, initial findings from the City's pilot program suggests that converting basement apartments to legal residences could cost approximately $275,000 to $375,000 per conversion.[10] Based on the conservative estimate of $275,000 per unit, converting 50,000 illegal units into decent, safe homes would cost $13.75 billion.

[10] NYC Office of the Deputy Mayor of Administration, in collaboration with the Department of Environmental Protection and NYC Emergency Management: The New Normal: Combating Storm-Related Extreme Weather in New York City, October 2021, p. 48.

In the meantime, the City will improve community outreach to ensure that basement occupants are alerted ahead of time about potential flooding events and can take the necessary steps to keep themselves safe. As many basement occupants are new migrants who may have limited English proficiency (LEP) or face documentation challenges, outreach must be strategic and shaped to meet specific community needs.

Flooding events can also create financial liabilities for owners and occupants when properties are damaged. If left unaddressed, flood-related damages can lead to decaying conditions that may cause mold and reduce the quality of the housing stock. These conditions are particularly difficult for low-income communities that have limited access to savings. The City will use funds made available through this grant to increase awareness of flood risks and to connect homeowners and renters with available resources to reduce this risk. These efforts will promote health and safety, reduce the risk of housing instability, and help more owners understand how to maintain the quality of their buildings and homes.

CDBG-DR funds will be used to continue studying the feasibility of converting basement apartments, in the interest of furthering the City's affordable housing stock and providing safe residences for low-income people. To read more about how the City is furthering fair housing visit the Where We Live NYC website or download the Where We Live Report.

Public and Affordable Housing

Damage to Public Housing

The New York City Public Housing Authority (NYCHA) is home to more than 300,000 low-income residents. According to a City analysis of damaged properties, approximately 230 NYCHA properties were impacted by PTC Ida.[11] The following are the 12 most damaged sites:

- Bronx
  - 1471 Watson Avenue
  - Bronx River Houses
  - Butler Houses
  - Claremont Rehab 4
  - McKinley
  - Moore Houses
  - Sotomayor Houses
  - Webster Houses
- Brooklyn
  - Ingersoll Houses
- Queens
  - Latimer Houses
  - Leavitt Houses
  - Woodside Houses

Based on NYCHA's preliminary estimates, which are subject to change, the aggregated cost of storm damage is $156,127,245.

The FEMA Public Assistance (PA) program provides grants to governmental entities and certain types of private nonprofits so that communities can respond to and recover from major disasters quickly. Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act also allows FEMA

[11] NYC Ida Damaged Building Composite Dataset

to fund mitigation work, known as Section 406 Mitigation, during the recovery process to protect these damaged facilities against future events.

NYCHA expects, but is not guaranteed, to receive $10,000,000 from insurance to cover a portion of the documented damage, while FEMA PA is expected to cover 90% of the remaining balance. NYCHA is also applying for Section 406 Mitigation funding to cover approximately $158,708,925 in mitigation work with FEMA covering 90% of that cost as well. After expected FEMA reimbursement, NYCHA estimates it will have to contribute approximately $30.5M towards FEMA-assisted restoration and mitigation efforts.

Table 2-4: NYCHA Unmet Need for Damage Restoration

	FEMA PA	FEMA 406 Mitigation	Total
Estimated Cost of Damage	$156,127,245	$158,708,925	$314,836,170
Expected Insurance Reimbursement	($10,000,000)	$0	($10,000,000)
Remaining Cost	$146,127,245	$158,708,925	$304,836,170
Expected FEMA Reimbursement (90%)	$131,514,521	$142,838,033	$274,352,553
Unmet Need for Restoration	$14,612,725	$15,870,893	$30,483,617

In addition to the cost of restoring NYCHA's facilities to their pre-storm condition, NYCHA has identified nearly $120 million in additional mitigation work that would make properties more resilient to future storms and other hazards. Such work includes, but is not limited to, plumbing replacement in conjunction with replacing storm-damaged heating equipment, the installation of flood doors, making elevators less susceptible to power outages, etc.

Affordable Housing

The City has not received reports of significant damage regarding specific units within its affordable housing portfolio of Single Family or Multifamily households. However, given the extensive distribution of affordable housing throughout the five boroughs, it is fair to assume that households within HPD's portfolio, including affordable unit dwellers, market rate unit dwellers, and units receiving project-based rental assistance were impacted just as the broader NYC resident population was. As stated previously, the City will update this needs assessment if additional information becomes available.

Table 2-5: Assisted Housing Impacted by the Disaster

Borough	Total HCV Units	Total Impacted HCV Units	Total LIHTC Units	Total Impacted LIHTC Units	Total Public Housing Dwelling Units	Total Impacted Public Housing Dwelling Units
Bronx	14,272	1,361	67,014	10,742	41,982	6,169
Brooklyn	11,309	1,233	66,604	8,528	61,483	1,840
Manhattan	11,494	1,426	74,176	3,061	55,621	0
Queens	2,811	284	15,085	2,773	15,438	1,863
Staten Island	1,326	194	4,960	2,121	4,510	0
Totals	**41,212**	**4,498**	**227,839**	**27,225**	**178,944**	**9,872**

Source: Open Data – New York City Housing Authority: Data Development Book

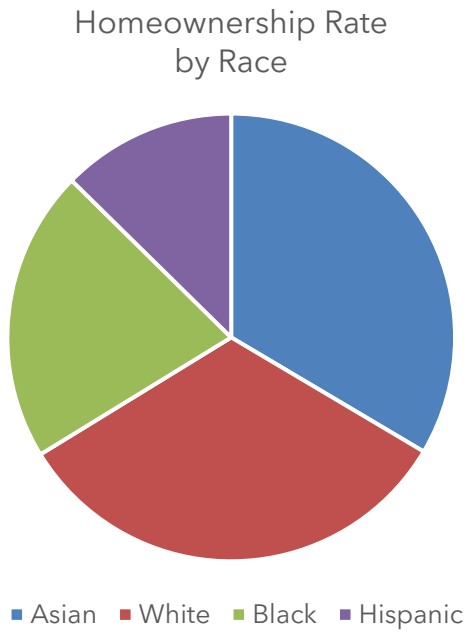
Fair Housing, Civil Rights Data, and Advancing Equity

Overview

Although all New Yorkers will experience severe weather and hazards, some segments of the population are more vulnerable than others. Recent population statistics show an increase in the number of seniors and children in New York City, two population segments that could be more vulnerable to hazardous conditions. Other highly vulnerable groups are people with disabilities, access and functional needs, or serious health conditions, people who are socially isolated, and households with limited English proficiency. In addition, low-income populations may have a harder time recovering from the impacts of hazards. The following explains why these population segments are considered more vulnerable to the range of hazards detailed in the following sections and the programs proposed for CDBG-DR funding will work to address the disparate impact of damage on communities most impacted by the City's affordability crisis.

Homeownership and Race

The overall homeownership rate declined slightly in every borough from 33.6% to 31.9% over 2009-2019, reflecting a national trend. The rate of homeownership for Asian (42.2%) and white (41.2%) households, however, remained significantly higher than Black (26.6%) and Hispanic (15.9%) households in New York City. Nearly two-thirds (65.7%) of households in Staten Island are homeowners, followed by Queens (44.1%), Brooklyn (29.8%), Manhattan (23.3%), and the Bronx, where less than one-fifth (18.9%) of households are homeowners.



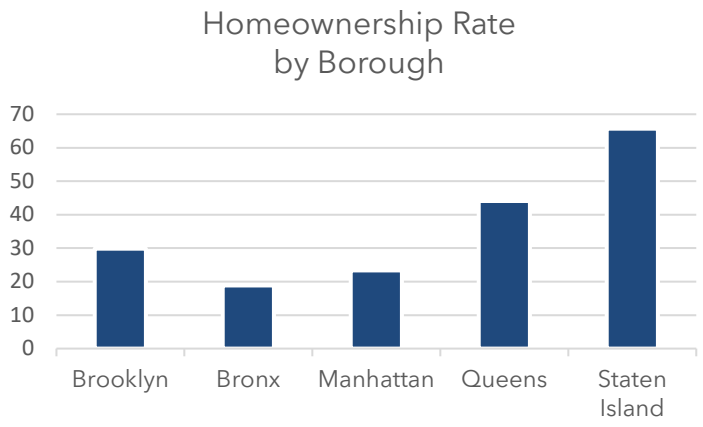


Table 2-6: Grantee Demographics and Disaster Impacted Populations

	New York State		New York City		MID	
Demographic	Area-Wide Estimates	Area-Wide%	Disaster Declaration Estimate	Disaster Declaration%	MID Estimates	MID%
Total Population	19,835,913	100%	8,467,513	100.00%	6,890,637	100%
White alone	13,706,616	69.1%	3,497,083	41.3%	3,412,018	49.52%
Black or African American alone	3,491,121	17.6%	2,015,268	23.8%	2,043,389	29.65%
American Indian and Alaskan Native alone	198,359	1.0%	33,870	0.4%	106,674	1.55%
Asian alone	1,844,740	9.3%	1,210,854	14.3%	1,104,770	16.03%
Native Hawaiian and Other Pacific Islander alone	19,836	0.1%	8,468	0.1%	13,497	.20%
Multi-Racial	555,406	2.8%	474,181	5.6%	211,713	3.07%
Hispanic or Latino	3,868,003	19.5%	2,447,111	28.9%	2,047,523	29.71%
White alone, not Hispanic or Latino	10,850,244	54.7%	2,701,137	31.9%	1,964,272	28.51%

Source: U.S. Census Bureau, Population Estimates Program (PEP), updated annually. Population and Housing Unit Estimates

Table 2-7: Race and Ethnicity of NYCHA Residents by Head of Household

Race	Estimate	Percentage
White or Caucasian	7,500	4.77%
Black or African-American	68,611	43.61%
Asian	8,857	5.63%
Hispanic or Latino	70,566	44.85%
Other	1,800	1.14%
Total Population	**157,334**	**100.00%**

Source: NYCHA Resident Data Book Summary for 2022

Table 2-8: Household Comparison by Tenure: Race and Ethnicity

	Renters		Owners		
Race/Ethnicity	Estimate	Percent	Estimate	Percent	Citywide
White Non-Hispanic	705,700	33%	438,700	45%	37%
Black Non-Hispanic	481,100	22%	189,000	19%	21%
Hispanic	658,100	30%	152,800	15%	26%
Asian Non-Hispanic	298,800	14%	192,500	20%	16%
Other or Two or More Races	27,370	1%	13,140	1%	1%
	2,171,070	**100.00%**	**986,140**	**100.00%**	**100.00%**

Source: HPD & U.S. Census Bureau: 2021 NYC Housing and Vacancy Survey Selected Initial Findings

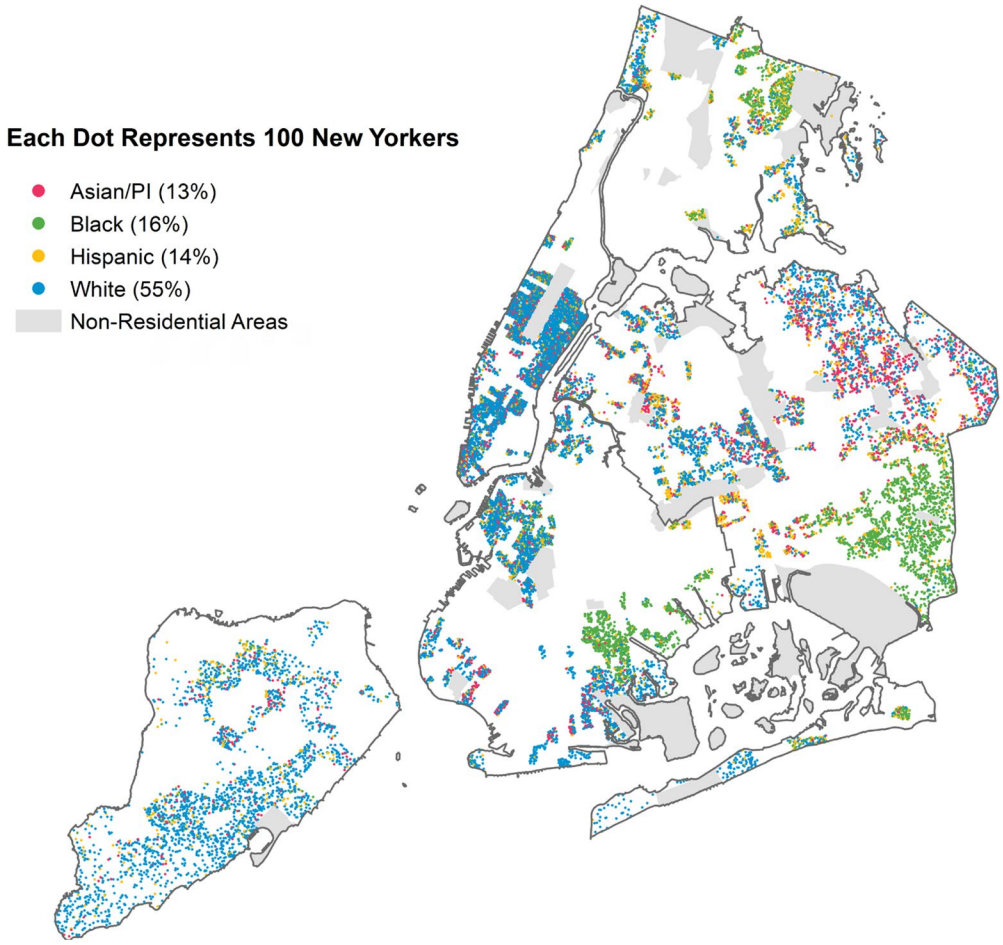
Low-Income Population

Approximately 1.7 million people, or 20% of New York City's population, live below the federal poverty line. Of this, over 30% are children under 18 years old.

When looking at New York City as a whole, Black and Hispanic New Yorkers are overrepresented in high-poverty areas, while White New Yorkers are the only racial group overrepresented in low-poverty areas.[12]

The following two maps, from the City's fair housing plan *Where We Live*, display the intersection of race and high- and low-poverty census tracts across the five boroughs. Areas with a small share of people living in poverty are shown in Figure 2.6. White New Yorkers predominate in low-poverty areas in Manhattan, Staten Island, and western Brooklyn, and are the only group over-represented in low-poverty areas as compared to their city-wide share of the population. Other groups are concentrated in a handful of low-poverty areas spread throughout New York City: Flatlands (BK), southeastern Queens, and the northern Bronx are predominantly Black; parts of northeastern Queens are predominantly Asian/PI; and parts of southern Queens have large Hispanic populations. Parts of Staten Island and northeastern Queens are racially diverse while also having low rates of poverty.

Figure 2.6: Population of Low-Poverty (<10%) Census Tracts by Race and Ethnicity, 2012-2016



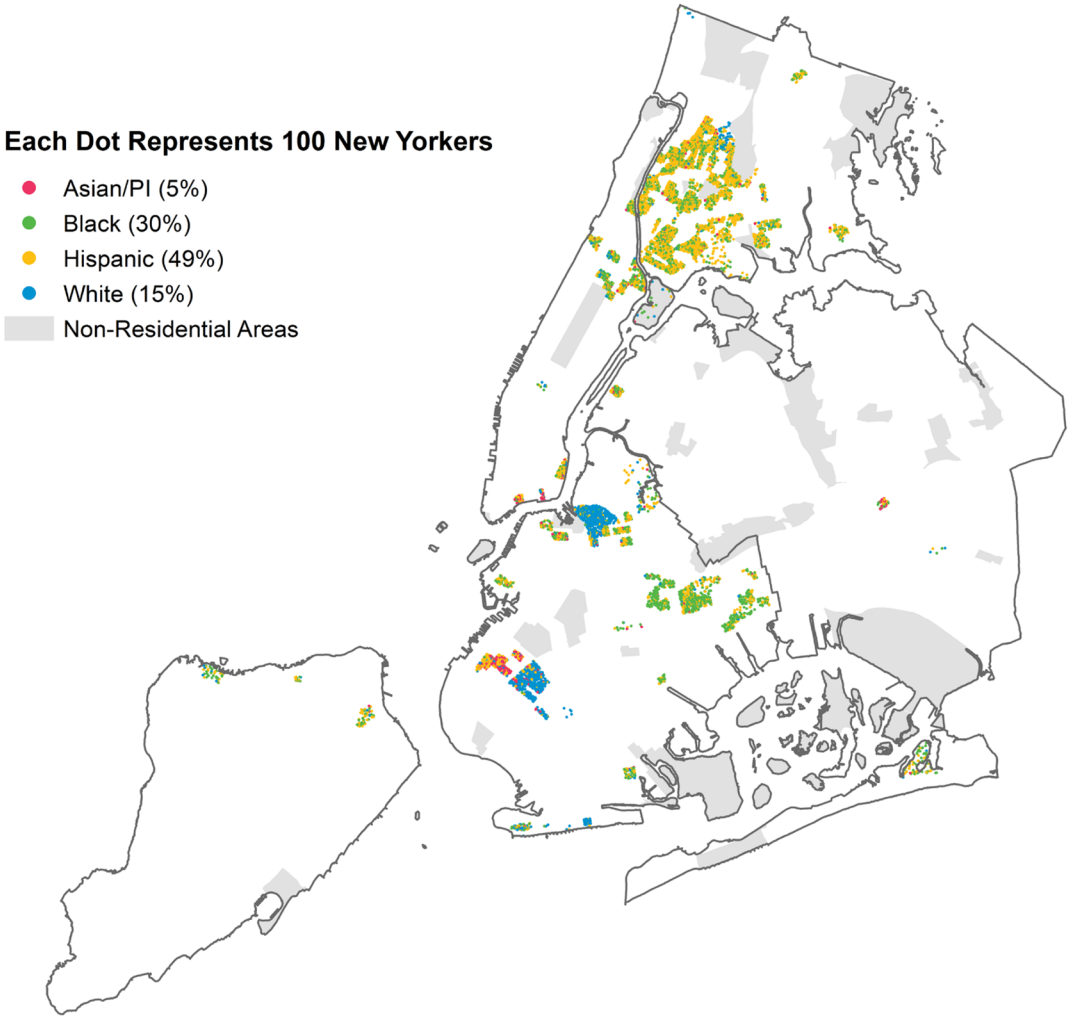
Source: ACS 2012-2016, five-year estimates. Table B17001. Unpopulated areas are excluded.

Figure 2.7 shows the racial and ethnic composition of the population who lives in high-poverty census tracts. Many of these tracts are located in the South Bronx, where Hispanic and Black New Yorkers

[12] NYC Office of the Deputy Mayor for Housing and Economic Development: Where We Live NYC, October 2020, p. 92.

have a large presence. There is a cluster of high-poverty, majority Black Census tracts in eastern Brooklyn, while high-poverty, predominantly White areas are concentrated in Borough Park and Williamsburg, and high-poverty, majority Asian/PI areas are concentrated in Sunset Park.

Figure 2.7: Population of High-Poverty (>40%) Census Tracts by Race and Ethnicity, 2012-2016



Sources: ACS 2012-2016, five-year estimates. Table B03002 for race/ethnicity and Table B17001 for poverty – tract level data.

The greatest concentrations of low-income populations are in the South Bronx and Upper Manhattan, and in scattered neighborhoods in Brooklyn.

The New York City Housing Authority (NYCHA), the largest landlord in the City and the largest public housing authority in the United States, houses over 300,000 low-income tenants. During severe weather events and other emergencies low-income tenants are often vulnerable if building infrastructure fails.

Affordable, Resilient Housing

In recent years, the number of people seeking affordable housing, coupled with the loss of homes that were damaged by Hurricane Sandy in 2012, have put additional pressure on New York City's tightly constrained housing market. Housing units are being added, but the supply is not growing fast

enough to meet the demand. In the future, the number of housing units added is expected to grow significantly, and the City has made access to affordable housing a policy priority.

Table 2-9: Income Demographics

Income/Economic Demographics	New York State Statewide	New York City Areas Impacted by Disaster	HUD MIDs Bronx	Brooklyn	Queens	Staten Island
Median Household Income	$71,117	$67,046	$41,895	$63,973	$72,028	$85,381
Per Capital Income	$40,898	$41,625	$22,749	$36,295	$33,629	$38,096
Persons in Poverty	12.7%	17.3%	24.4%	17.8%	10.3%	10.6%

Source: U.S. Census Bureau, Population Estimates Program (PEP), updated annually.

Table 2-10: LMI Analysis - Citywide

Category	Total LMI Persons	Total Population	Percent LMI
New York City	4,842,263	8,250,930	58.7%

Source: Income estimates are based on American Community Survey ACS 5-Year 2011-2015 Low- and Moderate-Income Summary Data, provided to the City by HUD for use with the CDBG program

Table 2-11: LMI Analysis - Federally Declared Disaster Areas

County	Non-MID Total LMI Persons	Non-MID Total Population	Non-MID-Percent LMI	MID-Total LMI Persons	MID-Total Population	MID % LMI
Bronx	-	-	-	1,024,765	1,386,245	73.9%
Brooklyn	-	-	-	1,611,085	2,555,965	63.0%
Manhattan	758,115	1,569,655	48.3%	-	-	-
Queens	-	-	-	1,254,098	2,273,880	55.2%
Staten Island	-	-	-	194,200	465,185	41.7%

Source: Income estimates are based on American Community Survey ACS 5-Year 2011-2015 Low- and Moderate-Income Summary Data, provided to the City by HUD for use with the CDBG program

Manufactured Homes

The City's only manufactured housing community is located on the northwest shore of Staten Island. At this time, the City has not received any reports of Ida damage to this community.

Unhoused Population

New York City is one of only three U.S. municipalities that guarantees the right to shelter. The City provides shelter and other services for tens of thousands of people nightly, and shelters are located in all five boroughs. Shelter counts taken prior to and after Hurricane Ida did not show significant difference in the number of homeless people served by the City shelter system.[13] However, the COVID-19 pandemic may have undermined other data collection that normally would have taken place after the storm.

At least 130 households received shelter and other services through a City-operated, FEMA-funded hotel program. As part of this program, a nonprofit provides case management services to displaced individuals and families with the goal of relocating evacuees to permanent housing.

[13] NYC Department of Homeless Services Daily Shelter Report via NYC OpenData

Table 2-12: Point-in-Time Count – Type of Shelter

Geography	Emergency Shelter (Jan. 2022)	Transitional Housing	Unsheltered Homeless (Jan. 2022)	Total Known Homeless
New York City	45,347	Unknown	3,439	48,786

Table 2-13: Point-in-Time Count – Impacted by Disaster

Geography	Emergency Shelter (Sept. 2021)	Transitional Housing	Unsheltered Homeless (Jan. 2022)	Total Known Homeless
New York City	45,181	Unknown	3,439	48,620

No homeless shelters or other special needs population shelters reported significant damage from PTC Ida. However, the City's housing plan, Housing Our Neighbors: A Blueprint for Housing and Homelessness, acknowledges the specific needs of these shelters and has committed funding through other sources. Additionally, the City allocates other HUD Formula Entitlement funding to specifically meet the needs of the unhoused community and further equity. No CDBG-DR funds will be used to directly address the needs of the City's unhoused population.

Non-English Speakers

New York has one of the most diverse populations of any major city in the United States and the world. As of 2020, New York City is home to the largest foreign-born population in the United States at 3.1 million people, approximately 36% of the City population. At that time, nearly half of all residents in Queens were foreign-born.

Table 2-14: Number and Percent of Foreign-Born Population by Borough

	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
Total Population	1,427,056	2,576,771	1,629,153	2,270,976	475,596	8,379,552
Total Foreign Born	494,349	917,402	460,810	1,065,898	113,816	3,052,275
Foreign Born %	34.6%	35.6%	28.3%	46.9%	23.9%	36%

Source: American Community Survey 2016-2020 Five-Year Estimates, Table B05006: Place of Birth for the Foreign-Born Population

Over 200 languages are spoken in New York City and nearly half of all New Yorkers speak a language besides English at home. According to the 2015-2019 American Community Survey, an estimated 22% of New Yorkers had limited English-speaking proficiency (LEP). LEP persons are at higher risk during an emergency because they might not be aware of or fully understand evacuation orders, instructions on how to access critical City services, directions from first responders, or other warnings.

Table 2-15: Limited English Proficiency Breakdown of Disaster Related Areas

County/Municipality	Estimate Speak English Less than 'Very Well'	Percent Speak English Less than 'Very Well'
Bronx	350,473	25.38%
Brooklyn	527,342	21.05%
Queens	622,117	27.76%
Staten Island	50,172	10.72%

Source: NYC Civic Engagement Commission, Population of the Limited English Proficient (LEP) Speakers by Community District Dataset

Warnings for PTC Ida were disseminated by the National Weather Service in English and Spanish. One of the shortfalls identified by the City was the lack of communication to the public in languages other than English and Spanish. Approximately 40-80% of households located in the neighborhoods where a majority of the deaths occurred speak languages other than English and Spanish.[14] Most of the 11 basement deaths from Hurricane Ida's historic flooding were people of Asian descent, including Chinese, Nepalese, and Indo-Caribbean families. The City will utilize CDBG-DR funding to aid in closing the gap in communication and ensure LEP communities have access to weather warnings.

Table 2-16 further demonstrates the diversity of languages spoken in New York City.

[14] Maldonado, Samantha. "Ida Fund for Excluded Flood Victims Re-Opens After Doling Small Slice of $27M." *The City*. March 22, 2022. https://www.thecity.nyc/2022/3/4/22961802/ida-fund-for-excluded-flood-victims-re-opens-after-doling-small-slice-of-27m

Table 2-16: Limited English Proficiency Population of MID Areas by Languages Spoken

Languages Spoken	Bronx		Brooklyn		Queens		Staten Island		Total	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Akan (incl. Twi)	4,619	0.33%	573	0.02%	370	0.02%	13	0.00%	5,575	0.08%
Albanian	3,790	0.27%	3,071	0.12%	3,261	0.15%	2,765	0.59%	12,887	0.20%
All Other LEP	3,890	0.28%	4,227	0.17%	5,933	0.26%	1,596	0.34%	15,646	0.24%
Arabic	4,676	0.34%	14,591	0.58%	5,570	0.25%	2,273	0.49%	27,110	0.41%
Armenian	118	0.01%	505	0.02%	884	0.04%	33	0.01%	1,540	0.02%
Bengali	9,595	0.69%	10,467	0.42%	37,365	1.67%	589	0.13%	58,016	0.88%
Bosnian	218	0.02%	281	0.01%	990	0.04%	0	0.00%	1,489	0.02%
Burmese	23	0.00%	931	0.04%	2,270	0.10%	259	0.06%	3,483	0.05%
Chinese (incl. Mandarin, Cantonese)	3,846	0.28%	121,413	4.85%	144,650	6.45%	10,691	2.28%	280,600	4.26%
Croatian	174	0.01%	115	0.00%	1,498	0.07%	74	0.02%	1,861	0.03%
Farsi	86	0.01%	778	0.03%	1,610	0.07%	21	0.00%	2,495	0.04%
Filipino	774	0.06%	400	0.02%	3,147	0.14%	232	0.05%	4,553	0.07%
French	7,160	0.52%	5,712	0.23%	2,957	0.13%	364	0.08%	16,193	0.25%
Fulah	1,408	0.10%	495	0.02%	49	0.00%	58	0.01%	2,010	0.03%
German	195	0.01%	386	0.02%	1,035	0.05%	0	0.00%	1,616	0.02%
Greek	665	0.05%	1,950	0.08%	8,137	0.36%	323	0.07%	11,075	0.17%
Gujarati	60	0.00%	254	0.01%	2,139	0.10%	168	0.04%	2,621	0.04%
Haitian	1,294	0.09%	26,483	1.06%	10,045	0.45%	64	0.01%	37,886	0.57%
Hebrew	235	0.02%	4,876	0.19%	1,287	0.06%	123	0.03%	6,521	0.10%
Hindi	267	0.02%	1,112	0.04%	9,223	0.41%	73	0.02%	10,675	0.16%
Hungarian	237	0.02%	1,011	0.04%	592	0.03%	0	0.00%	1,840	0.03%
Igbo	665	0.05%	234	0.01%	399	0.02%	16	0.00%	1,314	0.02%
Indonesian	44	0.00%	62	0.00%	1,340	0.06%	0	0.00%	1,446	0.02%
Italian	2,834	0.21%	7,320	0.29%	7,802	0.35%	3,071	0.66%	21,027	0.32%
Jamaican Creole English	399	0.03%	481	0.02%	366	0.02%	38	0.01%	1,284	0.02%
Japanese	251	0.02%	1,767	0.07%	3,140	0.14%	0	0.00%	5,158	0.08%

Languages Spoken	Bronx		Brooklyn		Queens		Staten Island		Total	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Khmer	846	0.06%	215	0.01%	259	0.01%	0	0.00%	1,320	0.02%
Korean	1,542	0.11%	2,003	0.08%	31,296	1.40%	1,404	0.30%	36,245	0.55%
Malayalam	105	0.01%	338	0.01%	956	0.04%	815	0.17%	2,214	0.03%
Manding languages	1,233	0.09%	52	0.00%	115	0.01%	0	0.00%	1,400	0.02%
Min Nan Chinese	48	0.00%	885	0.04%	2,255	0.10%	65	0.01%	3,253	0.05%
Nepali	95	0.01%	196	0.01%	3,700	0.17%	40	0.01%	4,031	0.06%
Non-LEP	1,030,285	74.62%	1,977,267	78.95%	1,618,904	72.24%	417,796	89.28%	5,044,252	76.49%
Other and unspecified languages	13	0.00%	2,051	0.08%	553	0.02%	123	0.03%	2,740	0.04%
Other Indo-Iranian languages	0	0.00%	1,094	0.04%	147	0.01%	0	0.00%	1,241	0.02%
Other languages of Asia	0	0.00%	4,824	0.19%	625	0.03%	14	0.00%	5,463	0.08%
Other Mande languages	1,660	0.12%	424	0.02%	119	0.01%	62	0.01%	2,265	0.03%
Other Niger-Congo languages	1,062	0.08%	228	0.01%	148	0.01%	70	0.01%	1,508	0.02%
Pakistan	0	0.00%	365	0.01%	1,382	0.06%	124	0.03%	1,871	0.03%
Pashto	52	0.00%	172	0.01%	1,139	0.05%	48	0.01%	1,411	0.02%
Pennsylvania German	12	0.00%	0	0.00%	0	0.00%	0	0.00%	12	0.00%
Polish	301	0.02%	8,383	0.33%	11,958	0.53%	1,816	0.39%	22,458	0.34%
Portuguese	106	0.01%	667	0.03%	2,439	0.11%	0	0.00%	3,212	0.05%
Punjabi	226	0.02%	1,105	0.04%	10,315	0.46%	73	0.02%	11,719	0.18%
Romanian	0	0.00%	404	0.02%	2,453	0.11%	24	0.01%	2,881	0.04%
Russian	1,838	0.13%	79,899	3.19%	15,966	0.71%	6,553	1.40%	104,256	1.58%
Serbian	228	0.02%	132	0.01%	1,008	0.04%	133	0.03%	1,501	0.02%
Spanish	288,280	20.88%	162,246	6.48%	253,794	11.32%	13,192	2.82%	717,512	10.88%
Tagalog	817	0.06%	986	0.04%	7,467	0.33%	440	0.09%	9,710	0.15%

Languages Spoken	Bronx		Brooklyn		Queens		Staten Island		Total	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Tamil	157	0.01%	231	0.01%	577	0.03%	260	0.06%	1,225	0.02%
Thai	358	0.03%	161	0.01%	2,592	0.12%	40	0.01%	3,151	0.05%
Tibetan	0	0.00%	287	0.01%	3,043	0.14%	0	0.00%	3,330	0.05%
Turkish	62	0.00%	1,554	0.06%	1,390	0.06%	216	0.05%	3,222	0.05%
Ukrainian	300	0.02%	4,009	0.16%	708	0.03%	491	0.10%	5,508	0.08%
Urdu	1,092	0.08%	12,001	0.48%	6,099	0.27%	1,127	0.24%	20,319	0.31%
Vietnamese	1,852	0.13%	1,772	0.07%	2,600	0.12%	122	0.03%	6,346	0.10%
Yiddish	64	0.00%	30,474	1.22%	346	0.02%	57	0.01%	30,941	0.47%
Yoruba	540	0.04%	689	0.03%	609	0.03%	19	0.00%	1,857	0.03%
Total	**1,380,697**	**100.00%**	**2,504,609**	**100.00%**	**2,241,021**	**100.00%**	**467,968**	**100.00%**	**6,594,295**	**100.00%**

Senior Residents

Seniors, one of New York City's fastest-growing demographic groups, face many challenges during severe weather events and other emergencies. Between 2000 and 2016, New York City's senior population increased by 17%, reaching 1.1 million or 13% of total population. Almost 48% of senior New Yorkers are foreign-born and approximately 31% live alone, two factors that increase a person's vulnerability if they lack English-language proficiency or are socially isolated during emergencies. Seniors are generally at higher risk during severe weather events or other emergencies if they have chronic health conditions or disabilities; rely heavily on medical services, hospitals, and nursing homes; or have limited access to emergency care. Seniors with mental health conditions, such as dementia, anxiety, or depression, are also at higher risk during these times. Seniors with limited mobility might require accessible transportation or help with refilling prescriptions and other basic tasks.

Power outages during an emergency can endanger seniors who need elevators to reach their apartments, keep medications refrigerated, or use oxygen tanks, motorized wheelchairs, or other power-dependent medical equipment. Where seniors live contributes to their vulnerability. Approximately 8% of New York City's seniors with disabilities live within the 1% annual chance floodplain in communities such as the Rockaways, Coney Island, and Brighton Beach. This percentage does not include seniors living in nursing homes, adult care facilities, and other institutions.

As shown in Table 2-16, nearly 18% of adult care facilities in New York City are located within the floodplain, putting a significant number of the most vulnerable people at risk during extreme weather events.

Table 2-17: Senior Healthcare Facilities Located in the 1% Annual Chance Floodplain

Facility Type	Total number	Number located in 1% Annual Chance Floodplain	Percent located in 1% Annual Chance Floodplain
Adult Care Facilities	76	14	18%
Adult Care Facility Beds	10,968	2,203	20%
Nursing Homes	171	14	8%
Nursing Home Beds	47,982	3,648	8%

Source: NYC Emergency Management: NYC's Risk Landscape: A Guide to Hazard Mitigation, May 2019

The City will use its CDBG-DR allocation to help provide safer conditions for seniors during future storms.

Children

Approximately 30% of New York City households overall and in each of the MID areas have children under the age of 18, and children are a growing segment of the population. Children are particularly vulnerable to hazards because they depend on parents and other adult caretakers for food, shelter, transportation, and guidance. In addition, the emotional stress that follows a hazard event may linger longer in children than in adults according to the Federal Emergency Management Agency's mental health experts. Children who are from very low- or low-income families or have disabilities are at even greater risk. In New York City, approximately 29% of people under the age of 18 live below the federal poverty level, with over 150,000 of these children being under the age of five. About 3% of New York City's children under the age of 18 have some form of disability.

Table 2-18: Average Household Size and Households with Persons Under 18 Years of Age

Households	Bronx	Brooklyn	Queens	Staten Island
Total households	510,135	972,314	783,362	167,160
Average household size	2.71	2.61	2.86	2.81
Households with one or more people under 18 years	36.3%	30.0%	30.1%	34.2%

Source: American Community Survey 2016-2020, 5-Year Estimates, DP02: "Selected Social Characteristics In The United States"

Populations with Disabilities

The U.S. Census assesses several major categories of disabilities:

- Sensory disabilities: Blindness, deafness, or severe vision or hearing impairment.
- Cognitive disabilities: Because of a physical, mental, or emotional problem, having difficulty remembering, concentrating, or making decisions (DREM).
- Physical disabilities: Long-lasting conditions that substantially limit one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying things.
- Self-care disabilities: Conditions lasting six or more months that make it a challenge to dress, bathe, or move around inside the home.
- Go-outside-the-home disabilities: Conditions lasting six or more months that make it difficult for people to shop or visit a doctor's office by themselves.

According to the 2016-2020 American Community Survey, approximately 11% of all New Yorkers, 37% of its seniors, and 3% of people under the age of 18 have at least one disability. New York City's population with a disability increases relative to population age.

Table 2-19: Number and Percent of Persons in MID Areas with a Disability by Borough

Borough	Total Civilian Non-institutionalized Population	Number of Persons with a Disability	% of Persons with a Disability
Bronx	1,405,816	220,572	15.7%
Brooklyn	2,562,576	256,247	10.0%
Queens	2,255,744	218,694	9.7%
Staten Island	471,599	46,923	9.9%
MID Area	**6,695,735**	**742,436**	**11.1%**

Source: American Community Survey 2016-2020, 5-Year Estimates, Table S1810: "Disability Characteristics".

Table 2-20: Number of Persons by Type of Disability and Borough

Type of Disability	Bronx	Brooklyn	Queens	Staten Island	MID Area
With at least one disability	220,572	256,247	218,694	46,923	742,436
With a hearing difficulty	33,504	46,867	47,875	9,467	137,713
With a vision difficulty	58,728	48,212	45,322	7,511	159,773
With a cognitive difficulty	91,242	91,371	73,225	14,883	270,721
With an ambulatory difficulty	125,032	163,050	130,890	27,754	446,726
With a self-care difficulty	54,067	68,888	56,936	11,627	191,518
With an independent living difficulty	82,531	113,949	91,796	21,253	309,529

Source: American Community Survey 2016-2020, 5-Year Estimates, Table S1810: "Disability Characteristics".

Table 2-21: Number and Percent of Persons with a Disability in MID Areas by Age and Borough

	Bronx		Brooklyn		Queens		Staten Island	
Age	Persons with a disability	% of Pop. in Age Group	Persons with a disability	% of Pop. in Age Group	Persons with a disability	% of Pop. in Age Group	Persons with a disability	% of Pop. in Age Group
<5 years	983	1.0%	977	0.5%	764	0.5%	106	0.4%
5-17 years	23,016	9.2%	13,912	3.5%	12,057	3.8%	2,400	3.1%
18-34 years	27,999	7.7%	24,619	3.6%	19,476	3.6%	4,519	4.4%
35-64 years	93,252	18.2%	87,591	9.3%	75,691	8.3%	18,118	9.6%
65-74 years	34,033	34.1%	49,386	24.4%	40,528	20.4%	8,640	19.2%
75+	41,289	55.3%	79,762	53.2%	70,178	46.8%	13,140	43.6%
Total	**220,572**	**15.7%**	**256,247**	**10.0%**	**218,694**	**9.7%**	**46,923**	**9.9%**

Source: American Community Survey 2016-2020, 5-Year Estimates, Table S1810: "Disability Characteristics".

People with disabilities face unique challenges during extreme weather events. The City will use CDBG-DR funding to better understand how the City can ensure safety for vulnerable populations in future weather events.

Undocumented Households

Undocumented households face numerous, unique challenges after climate disasters such as PTC Ida. For a household to qualify for FEMA assistance, the household must be able to demonstrate its members are lawful permanent residents. New York City is home to many immigrants, and not all meet the requirements set forth by the FEMA Individual Assistance program.

Approximately 5,100 people impacted by PTC Ida were ineligible for any FEMA assistance. To compensate for the need to aid undocumented households, the New York State Office for New Americans set aside a $27 million fund for this population. Over 250 payments, an average of $5,642, have been provided to households, and 247 households were referred to FEMA. News reports indicate that $3 million of the fund would be distributed after the final application period for the fund ended in May 2022. The majority of applications finalized are from Queens households (180) followed by Brooklyn (41), the Bronx (32), and Staten Island (4). The majority of aid to undocumented New Yorkers went to Other Needs and Assistance ($1,069,212) with the remaining 26% of assistance going to Housing Related Assistance ($380,841).

News reports immediately in the months after Ida indicated that at least some undocumented people impacted by the storm were reluctant to apply for compensation. In some cases, this fear was driven by fact they reside(d) in illegal basement apartments and they, and their landlords, suspected applications would trigger inspections of such apartments by the City, resulting in tenants' loss of relatively affordable housing and of landlords' supplemental income.

Summary of Housing Unmet Needs

Based on this assessment, the City has identified the following areas of unmet need associated with Housing activities:

Basement Apartments

As previously discussed, the City estimates converting illegal basement apartments into safe, habitable units may cost up to $13.75 billion. However, the City must first conduct further analysis of viable options. The City estimates this analysis would cost $400,000.

Public Housing Restoration and Mitigation

NYCHA's estimated unmet need for restoration and mitigation work at Ida-damaged developments is approximately $150 million.

Expanding Flood Risk and Flood Insurance Awareness in Inland Areas

While past extreme events like Hurricane Sandy devastated our coastline, Ida made clear that we are in a new moment where inland neighborhoods face a growing danger. The City must help re-educate New Yorkers living inland on this new danger, and part of that is protecting property owners and renters against financial devastation in the event of a flood disaster. Understanding the real limitations some face around getting insurance, the City will take significant steps to help residents know their options. Additionally, homeowners would benefit from in-home resiliency audits and financial counseling programs, which could lower their premiums. While this is an ongoing need, the estimated need for the immediate future is $1 million.

Subsidizing Cost-Effective Flood Retrofits

As described earlier in this section, retrofitting properties at risk of flooding is a necessary step to protect those who reside in the floodplain. However, it is also expensive and has the potential to displace those who cannot afford to make such improvements. In an effort to stabilize the existing housing stock in flood-prone areas, the City has identified an urgent need to fund sustainability and resiliency upgrades to reduce energy costs, advance emissions reduction goals, and help protect homeowners from extreme weather and flooding events. While this is will be an ongoing need, the estimated need for the immediate future is $25 million.

Included in this need is the installation of backwater valves, which is a relatively easy and inexpensive method to prevent thousands of dollars' worth of damage from a potential sewage backup. The City is currently studying where the installation of backwater valves would be most effective for property owners and will incorporate the study's findings into resiliency initiatives.

Outreach to LEP Communities

As demonstrated by Ida, equitable access to information can literally be a matter of life and death. The City has identified an increased need to conduct outreach and education to LEP persons on the risks of flooding and coastal storms and the steps New Yorkers can take to be prepared. In the immediate future, the City will seek to dramatically increase awareness of the Notify NYC system's ability to send alerts in multiple languages. Estimated need: $7 million.

Public and Affordable Housing Mitigation Projects

The City has identified the following needs intended to prevent damage and increase resiliency from future hazardous conditions and events:

- Upgrading infrastructure to prevent power and heating system outages at NYCHA developments ($2 million);
- Installing flood doors in NYCHA developments susceptible to flooding to protect critical infrastructure ($200,000); and

- Incorporating resilient community spaces in affordable housing developments, particularly developments dedicated to vulnerable populations, so residents and the surrounding community may shelter-in-place or find safe refuge during extreme weather events ($35 million).

Planning: Housing

Finally, the City has identified unmet needs for housing-related planning activities that will help improve the City's response to future disasters. These needs include:

- Evaluating post-disaster housing response options and developing a Housing Recovery Playbook ($1.1 million);
- Exploring innovative technologies to increase energy efficiency at NYCHA sites ($400,000)
- Developing a Disaster Recovery IT system to streamline management of the City's response and recovery operations and funding, which would also result in an improved customer experience those seeking assistance ($1.5 million); and
- Creating a standing, flexible citywide operational canvassing plan to assess the needs of affected communities and connect them with recovery resources ($1 million).

Infrastructure Unmet Needs

Fewer than 400 City-owned buildings and facilities sustained damage. Two-thirds of all PA costs are attributed to parks and school facilities, which each suffered damage of nearly $100 million. Nearly half of all PA-eligible expenses are for the repair or replacement of buildings, their contents and systems, heavy equipment, and vehicles, amounting to $136.8 million in damage. Notably, several public schools that serve as evacuation centers for coastal storms experienced flood damage.

The City is still evaluating PTC Ida's impact on public facilities and infrastructure and is tracking potential recovery resources from FEMA Public Assistance (PA). FEMA PA-eligible activities include emergency work and permanent restoration work, which are divided into the following categories:

- Emergency work
    - Debris Removal; and
    - Emergency Protective Measures.
- Permanent work
    - Roads and Bridges;
    - Buildings and Equipment;
    - Utilities and Water Control Facilities; and
    - Other.

Current estimates for emergency work and damage to City-owned facilities, excluding NYCHA-owned properties, place the total cost between $250 million and $300 million.

For the remnants of Hurricane Ida, FEMA has established the City's contribution, known as the "FEMA match," as 10% of eligible project costs. However, the state of New York has announced its intention to cover the City's share of its FEMA match. The City is awaiting further information on how this assistance will be applied. For the purposes of this plan, the City assumes it does not have unmet needs for restoration work.

Table 2-22: FEMA Public Assistance Program

PA Category	Estimated PA Cost	10% Local Match	Resiliency	Total Need
Debris	$9,487,091	$948,709	TBD	TBD
Emergency Measures	$31,475,841	$3,147,584	TBD	TBD
Roads and Bridges	$57,683,007	$5,768,301	TBD	TBD
Building and Equipment	$136,827,101	$13,682,710	TBD	TBD
Utilities & Water Control Facilities	$19,227,430	$1,922,743	TBD	TBD
Other	$28,656,977	$2,865,698	TBD	TBD
All Categories	**$283,357,448**	**$28,335,745**	**TBD**	**TBD**

Summary of Infrastructure Unmet Needs

Based on the City's analysis of damage and expected reimbursements, the City has not identified a quantifiable unmet need related to the repair and restoration of infrastructure. However, the City has identified unmet needs for planning activities to better prepare for and implement emergency protective measures during periods of hazardous conditions. These needs are described in the Mitigation section of this chapter.

Economic Revitalization Unmet Needs

Buildings with commercial space, including mixed-use buildings, account for 7.5% of buildings impacted by Ida. Approximately 800 buildings are solely commercial, 2.4% of all impacted buildings. Overall, an estimated 194,000 commercial units are in buildings impacted by PTC Ida, though high-rise buildings in Manhattan drive this large number.[15]

Over half of impacted buildings with commercial space are in Brooklyn (32%) and the Bronx (27%). Nearly half of impacted commercial buildings are large commercial spaces, with commercial area in the top quartile of City buildings. The large average square footage (compared to the median) reinforces the large size of these buildings, suggesting industrial and warehousing activities.

The City's Department of Small Business Services rapidly supported small businesses hit by the storm by activating its emergency response protocols, including:

- Sending its Emergency Response Unit (ERU) door-to-door to visually assess the impact of Ida, help businesses record and report damage, manage communication from first responders and enforcement agencies, and expedite government and utility processes.
- Working daily with community partners, including Business Improvement Districts (BIDs), Chambers of Commerce, industry associations, elected officials, and others to ensure efforts were coordinated and comprehensive.
- Providing one-on-one support, technical assistance, and information to business owners and communities through its Small Business Hotline (1-888-SBS-4NYC).
- Connecting businesses to legal support for commercial leases.

Similar to residential properties, PTC Ida primarily damaged businesses with ground-floor and/or sub-grade spaces. Based on data available at the time this Action Plan was released, damage to commercial properties was primarily related to losses of inventory and equipment rather than

[15] NYC Ida Damaged Building Composite Dataset

structural damage. Additionally, the City's Economic Development Corporation estimates that Hurricane Ida could have resulted in a reduction of $3.022 billion (in 2021 dollars) in economic output.

The Small Business Administration provides low-interest disaster loans to help businesses recover from declared disasters. The following table displays the number of business loans that have been approved by SBA in the months since Ida.

Table 2-23: Total Business Loans Approved by the SBA

	SBA Loan Type	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Total
Business Loans	Applications Received	262	355	5	455	89	1,166
	Applications Approved	47	62	1	79	21	210
	Dollars Approved	$2,609,200	$4,834,100	$73,600	$4,752,300	$997,000	$13,266,200
Economic Injury Loans	Applications Received	41	38	14	48	8	149
	Applications Approved	1	1	0	1	1	4
	Dollars Approved	$1,500	$400	$0	$22,800	$3,000	$27,700
Total	Applications Received	303	393	19	503	97	1,315
	Applications Approved	48	63	1	80	22	214
	Dollars Approved	$2,610,700	$4,834,500	$73,600	$4,775,100	$1,000,000	$13,293,900

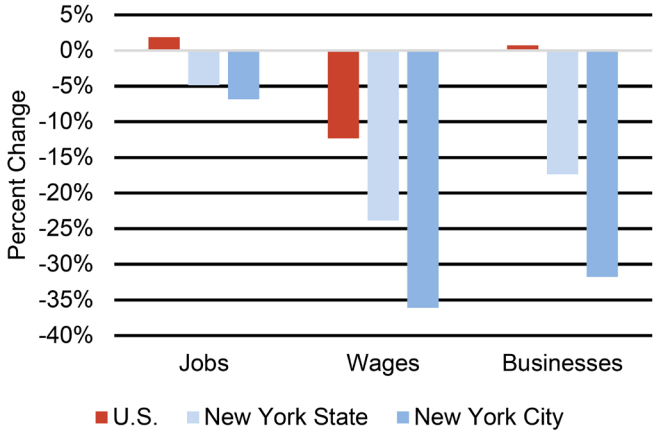
Source: U.S. Small Business Administration Disaster Loan Statistics for New York State, August 15, 2022

Summary of Economic Recovery Unmet Needs

Based on the City's analysis of damage and reimbursements, the City has not identified an unmet Economic Recovery need *associated with PTC Ida*. However, readers should note it is difficult to truly estimate Ida's impact on the City's economy as the storm occurred during the COVID-19 pandemic. While Ida occurred at a time of relatively low COVID transmission, the City's business sector was, and is still, in the recovery phase. The pandemic was particularly hard on the restaurant, retail, and service (e.g., salons, dry cleaners) sectors, which are also the most common business types to occupy ground-floor spaces in the primarily residential areas that were hardest hit by Ida. The disproportionate impact on these sectors was especially pronounced in New York City, which experienced greater job and wage losses than the rest of the state and the nation.

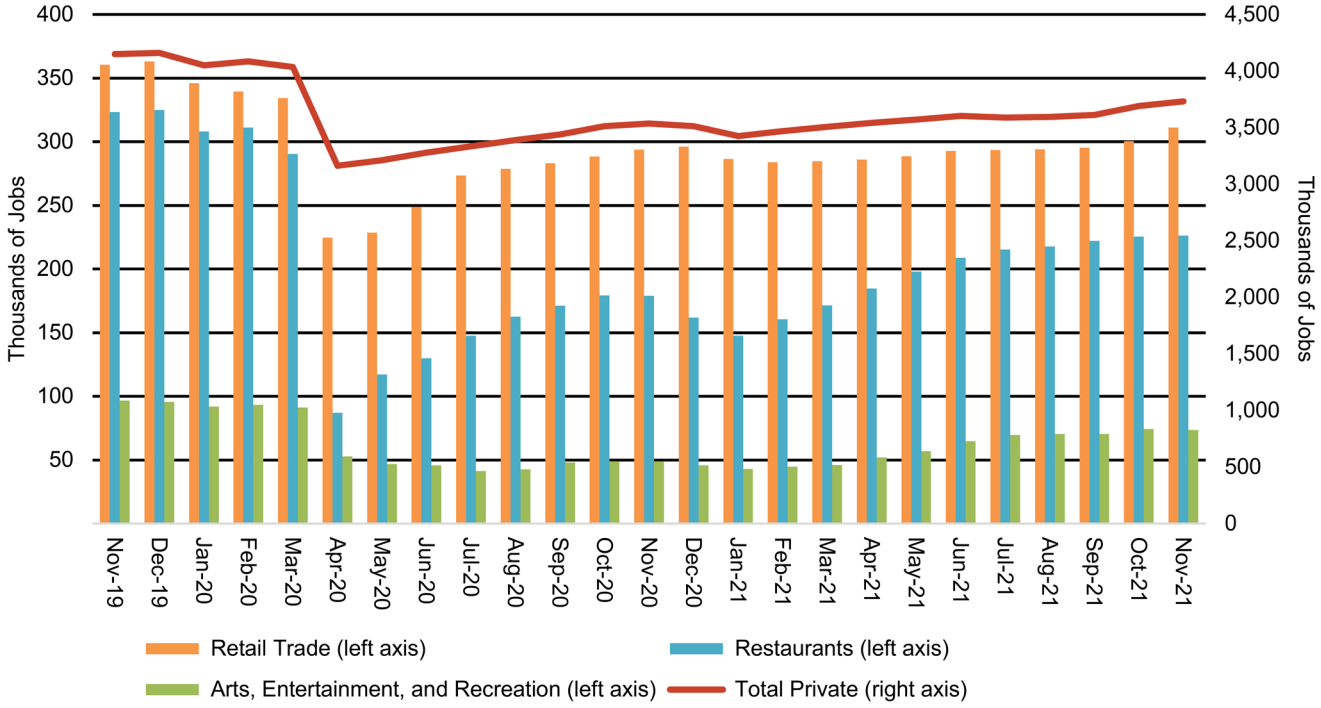
As shown in the following charts, prepared by the Office of the NYS Comptroller based on information obtained from the NYS Department of Labor, the City has also faced a longer road to recovery than the rest of the state or the nation.

Figure 2.8: Change in Economic Indicators for Restaurants through the Pandemic, Q2 '19- Q2 '21



Source: Office of the New York State Comptroller: New York City Restaurant, Retail, and Recreation Sectors Still Face Uphill Recovery, January 2022

Figure 2.9: Employment in New York City's Retail, Restaurant, and Recreation Sectors



Source: Office of the New York State Comptroller: *New York City Restaurant, Retail, and Recreation Sectors Still Face Uphill Recovery*, January 2022

The City's economy has also been impacted by the Great Resignation and other factors, further complicating a true assessment of Ida's impact on businesses. While the City acknowledges the struggles local businesses have endured in recent months and years, the extent of Ida's impact on the economy remains unclear. Accordingly, the City will continue to foster economic recovery through existing programs and new initiatives, but these will primarily not be funded with CDBG-DR funds.

Mitigation Only Activities

Overview

New York City is by far the most populous city in the United States and its position as a global, coastal city and the sheer scale and diversity of its people, neighborhoods, buildings, and landscape illuminate why careful planning and risk mitigation efforts are so important. Our coastline is approximately 520 miles long and borders an ocean, rivers, bays, tidal straits, inlets, and a harbor. The city covers approximately 305 square miles and across the five boroughs, variations in population density and neighborhood characteristics expose areas to different risks. New York City's 8.6 million residents are embedded within a metro region of nearly 22 million people, who are heavily dependent on complex, interdependent regional systems for energy, water, telecommunications, transportation, and wastewater treatment. And with approximately 1 million buildings, the scale of New York City's built environment is both complex and immense.

In order to determine the potential natural and human-caused threats across New York City, the Mitigation Needs Assessment utilizes data from the City's 2019 Hazard Mitigation Plan (HMP), NYC's Risk Landscape: A Guide to Hazard Mitigation. The HMP information informed the proposed use of CDBG-DR funds and how the City will meet the HUD requirement to use at least 15% of the grant for mitigation efforts targeted towards the unique needs of the MID areas.

The HMP assessed the threat of nine hazards most pressing to New York City: coastal erosion, coastal storms, earthquakes, extreme heat, flooding, high winds, winter weather, cyber threats, and the release of hazardous materials (e.g., chemical, biological, radiological, and nuclear). As mentioned earlier in this plan, the HUD-determined MID areas include four of the five boroughs that make up New York City: the Bronx, Brooklyn, Queens, and Staten Island.

Through the Mitigation Needs Assessment, the City sought to measure the physical and social characteristics that may amplify the impacts of the assessed hazards on vulnerable populations. The mitigation programs funded with CDBG-DR will work to reduce or at the very least, not worsen the conditions outlined in the report.

Top Risks Impacting New York City and the HUD-Identified MID Areas

Coastal Erosion

Coastal erosion is the loss or displacement of coastline land from the interaction of oceans, waves, and beaches, often coupled with the impact of human activity. New York City has identified coastal erosion as a threat to three main areas: the Rockaway peninsula in Queens, Coney Island in Brooklyn, and the South Shore of Staten Island. Collectively, the land in these areas account for 0.7% of New York City and have been identified as Coastal Erosion Hazard Areas (CEHA). The average annual change in shoreline is captured in the table below.

Table 2-24: Average Annual Shoreline Change

CEHA Name	Annual change of shoreline
Rockaway Peninsula, Queens	East and West Shore Area: +15 ft Middle shore Area: -5
Coney Island, Brooklyn	-1.3 ft
South Shore, Staten Island	-1.3 ft

The table below identifies the total number of exposed buildings in each CEHA that face the threat of coastal erosion.

Table 2-25: Acreage and Buildings Within the Coastal Erosion Hazard Areas (CEHA)

CEHA Name	Acreage Exposed	Exposed Building Footprints	Exposed Building Centroids
Coney Island, Brooklyn	305	51	21
Rockaway Peninsula, Queens	708	29	21
South Shore, Staten Island	415	108	55
Total	**1,428**	**188**	**97**

Building owners and residents in each of the three defined Coastal Erosion Hazard Areas are at a financial risk due to the potential for necessary structural repairs or modifications as well as potential relocation expenses if businesses and residents need to move away from the waterfront. This can disproportionately impact low- and moderate-income people, people with disabilities, or seniors as the ability to relocate can be costly and logistically challenging.

Managing coastal erosion requires collaboration between the City, state, and federal partners. Measures to mitigate coastal erosion are already widely used and include implementing environmental protection policies, building nature-based buffers on the shoreline, and constructing barriers to protect against erosion where the water meets the shoreline.

Three of the HUD-defined MID areas, Queens, Brooklyn, and Staten Island, are included in the CEHA designations. The damage from PTC Ida was heavily concentrated inland, minimizing the negative impacts on coastal areas. Therefore, recovery and resiliency efforts specific to PTC Ida will focus on the need to strengthen inland storm readiness and response as opposed to coastal protection. To that end, the City will ensure the inland mitigation efforts do not worsen the effects of coastal erosion in the identified CEHAs.

Coastal Storms

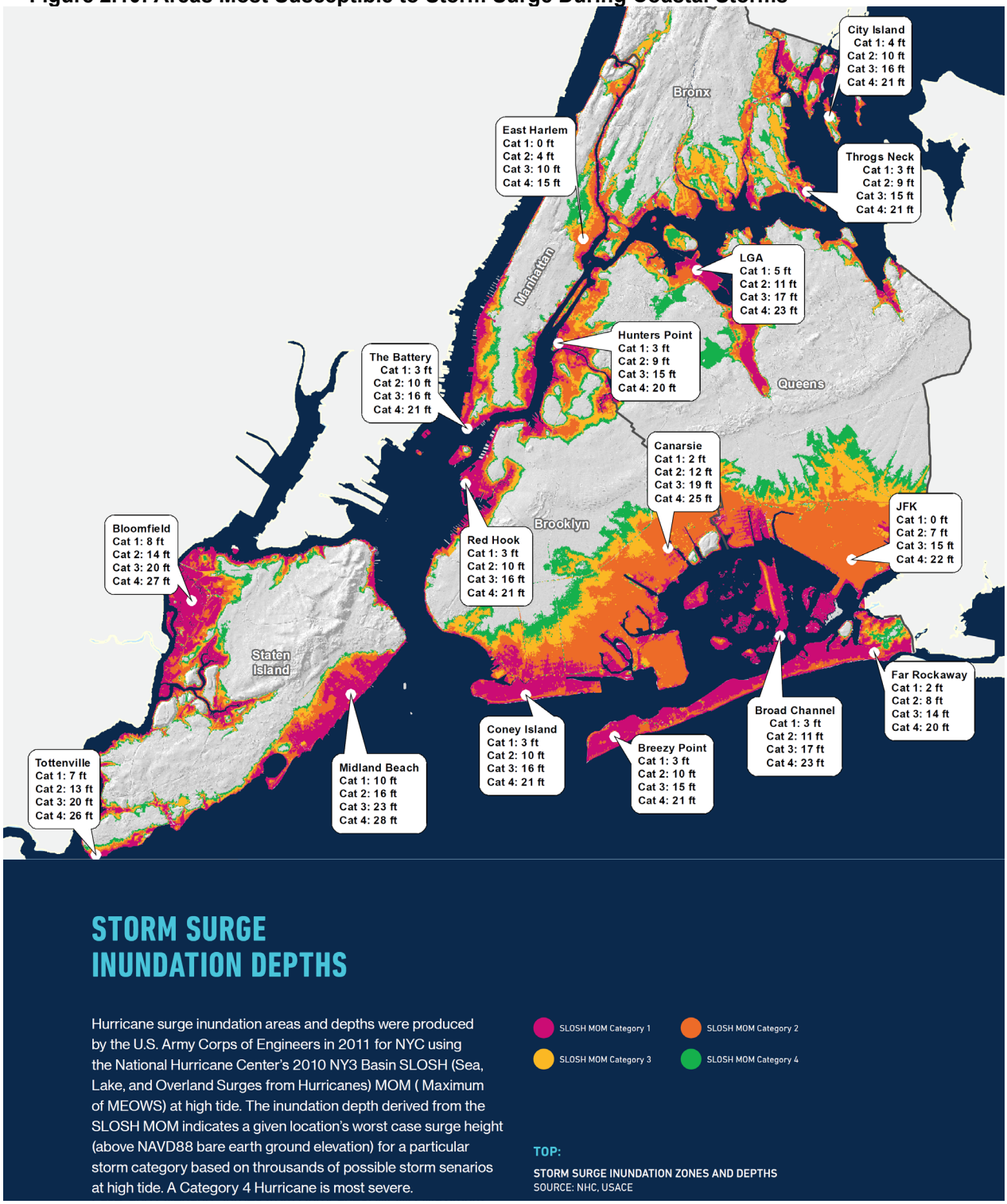
New York City's densely populated coastline makes it one of the cities most vulnerable to coastal storms. Tropical cyclones and nor'easters are two types of storm systems that threaten the City.

Tropical Cyclones include three types of storms:

- **Tropical depressions:** an organized system of thunderstorms that produce circular wind flow with maximum sustained winds of 38 miles per hour or less.
- **Tropical Storms:** an organized system of thunderstorms with well-defined wind circulation with maximum sustained winds between 39 and 73 mph.
- **Hurricanes:** a strong, highly organized group of thunderstorms, with a well-defined low-pressure center ("eye") and having maximum sustained winds of 74 mph or more.

Areas that face the highest threat to coastal storms and potential storm surge are depicted in the following map.

Figure 2.10: Areas Most Susceptible to Storm Surge During Coastal Storms



Tropical cyclones are the biggest threat to New York City when the water along the coast of Africa, the Caribbean Sea, and the Gulf of Mexico is at its warmest. This is typically between August and October,

with the highest risk around mid-September. The risk to New York City when tropical cyclones make landfall is storm surge, heavy rain, high wind, and tornadoes.

The National Hurricane Center (NHC) estimates New York City may experience a lower category hurricane once every 19 years, and a major hurricane (category 3 or greater) once every 74 years.

A nor'easter is defined as a type of coastal storm that primarily threatens the Mid-Atlantic and New England states between October and April. They typically consist of heavy rain or snow fall that can cause inland flooding, heavy wind, and potentially storm surges. New York City's coastal location amplifies the potential threat of storm surges during both nor'easter storms and tropical cyclones, however the probability of New York City experiencing a severe nor'easter typically remains low. The most likely threat to New York City during a nor'easter is heavy rainfall that can cause minor-to-moderate damage across the City.

Based on the storm surge inundation estimates, approximately 35% of all critical facilities and key assets are located within storm surge inundation areas for category 1-4 hurricanes. This includes subway tunnels, subway stations, car tunnels, telecommunication networks, powerlines, and electric substations. Damage to such assets poses a threat to New York City's ability to respond to and ensure the safety of residents during and after a coastal storm.

While the greatest risk for flooding and storm surge damage is isolated in areas near the shoreline, coastal storms that bring heavy rainfall present a risk and need for mitigation strategies in the MID areas. PTC Ida produced a total of 9.1 inches of rain over the course of approximately 11 hours. The intensity of the storm exceeded the typical sewer capacity of 1.75 inches of rain per hour.

Figure 2.10 indicates that three of the four PTC Ida MID areas, Queens, Brooklyn, and Staten Island, will face the greatest risk during a coastal storm surge. Storm readiness activities will ensure people at risk from both coastal storms and inland flooding will be better prepared in the future.

Earthquakes

An earthquake is a sudden, rapid shaking of the earth as plates shift, rocks crack beneath the surface, and large plates either collide or try to push past one another. While New York City does not sit along a fault line, the threat of a severe earthquake is considered moderate. However, due to New York City's extreme density of high-rise buildings, and the fact that seismic activity was not required to be considered during building design until after 1995, the overall risk posed to City after an earthquake is high.

Figure 2.11 features historical seismic activity in the tristate area between 1737 and 2018. The frequency of damaging earthquakes has historically been low. One of the strongest earthquakes, which occurred in Brooklyn in 1884, is estimated to have registered with a magnitude at 5.2.

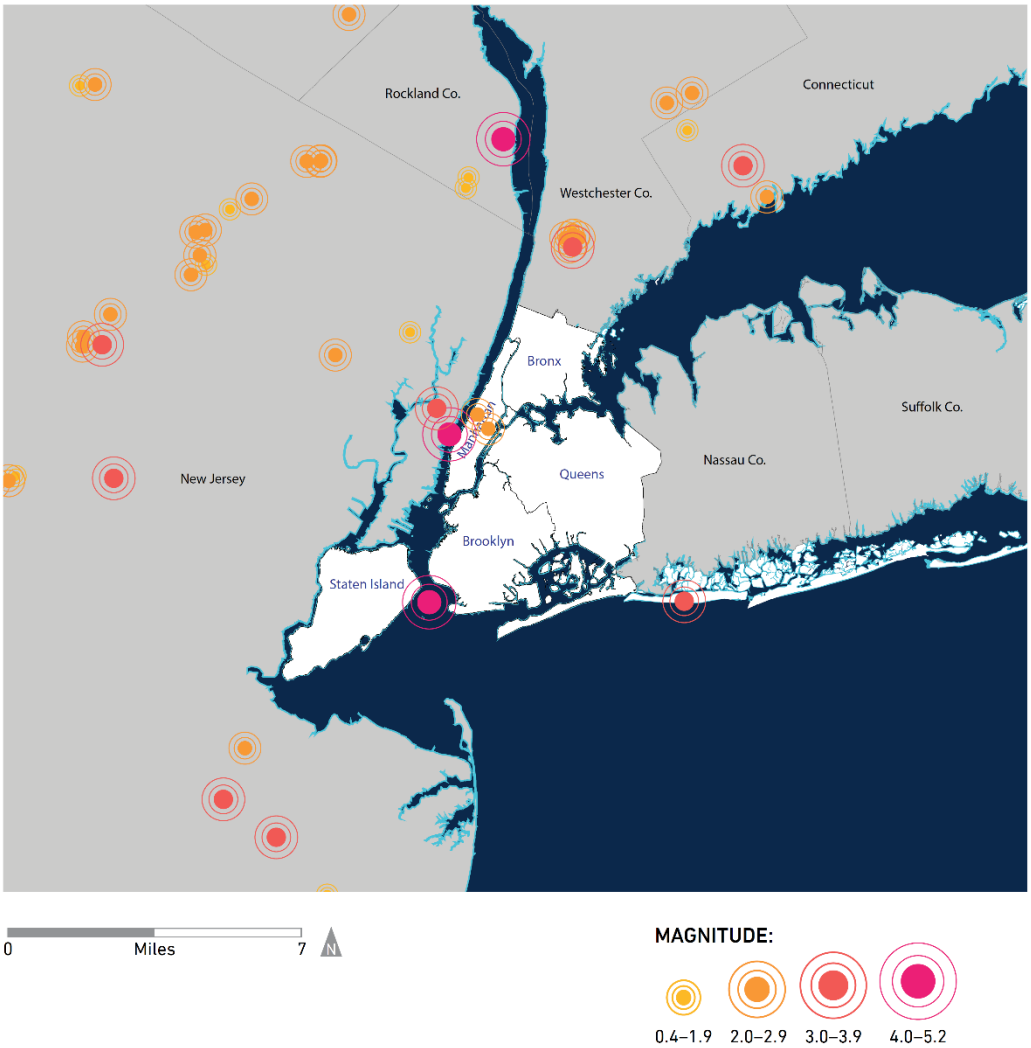
As most buildings in NYC were built prior to 1995, the economic cost to rebuild after a potentially damaging earthquake would be very high. However, New York City continuously works to ensure that buildings remain structurally sound, and public infrastructure is reinforced to withstand seismic activity. A potentially greater threat is posed to those that live in or around neighborhoods with higher rates of code violations. Poor building maintenance could lead to structural insecurities that would be detrimental in the event of an earthquake. As noted in the Housing Unmet Needs Assessment, low-

income people are more likely to occupy a building with outstanding code violations. Thus, the impact of an earthquake in New York City could have a disproportionate effect on low-income people.

Historical seismic activity indicates greater risk to Manhattan, Brooklyn, and Staten Island. However, due to the interconnected nature of the City's infrastructure, the risk would be equally spread amongst all five boroughs.

Figure 2.11: Historical Earthquake Epicenters in the NYC Metro Area (1737-2018)

SOURCE: USGS, NYS DHSES

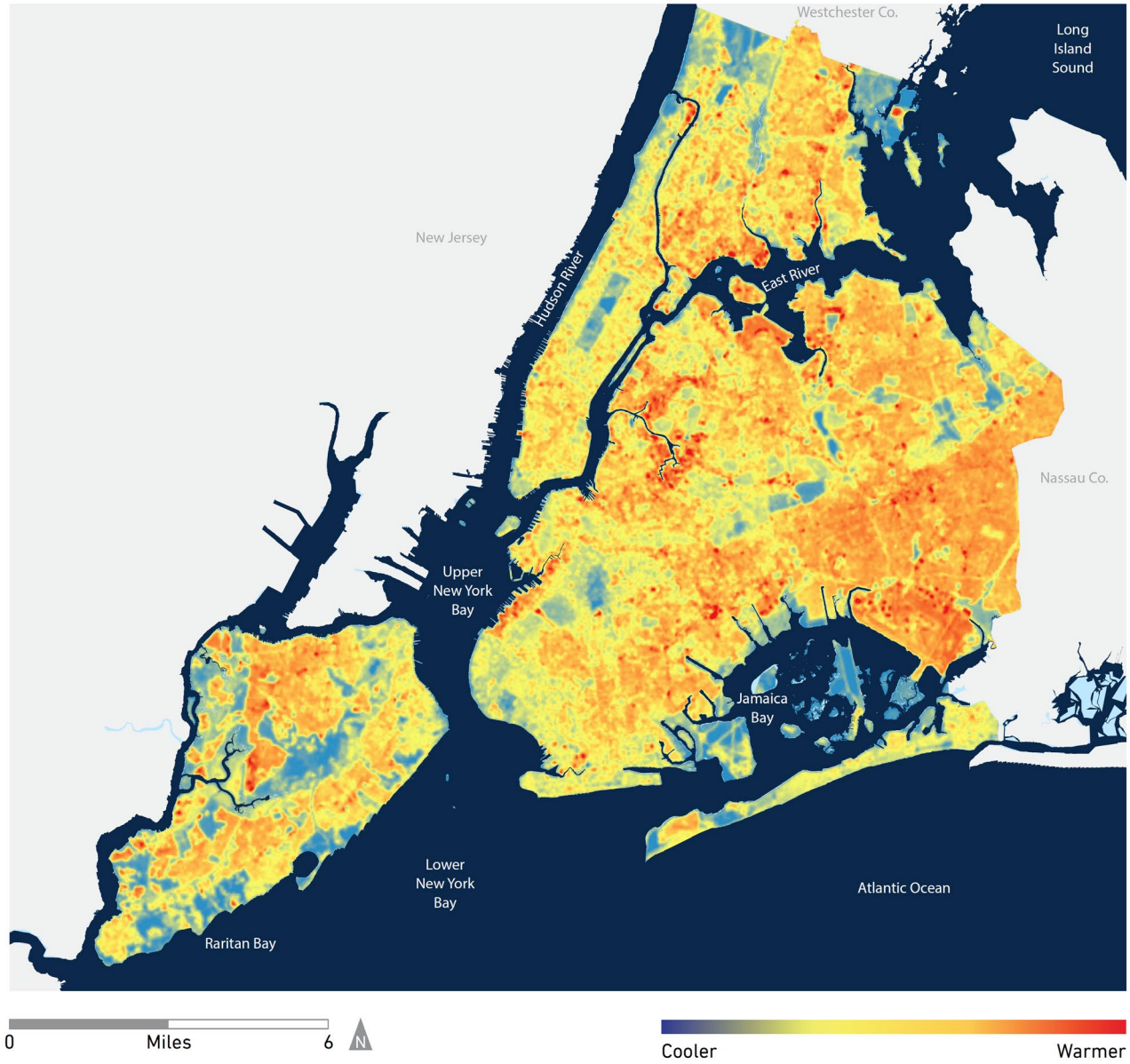


Extreme Heat

Extreme heat occurrences in New York City are responsible for more deaths than all other extreme weather events combined. Climate change is likely to bring hotter temperatures and more hot days, leading to longer and more frequently registered heat waves. A registered heat wave is any three consecutive days with temperatures at or above 90 degrees Fahrenheit. In fact, heat waves are projected to triple from two heat waves per year to six by 2080.

Due to the extreme density of buildings, and extensive asphalt cover throughout the City, average temperatures are seven degrees Fahrenheit warmer than in neighboring suburbs. Figure 2.12 demonstrates the variability of heat throughout the City.

Figure 2.12: New York City Thermal Imagery (Taken July 17, 2018)
SOURCE: USGS



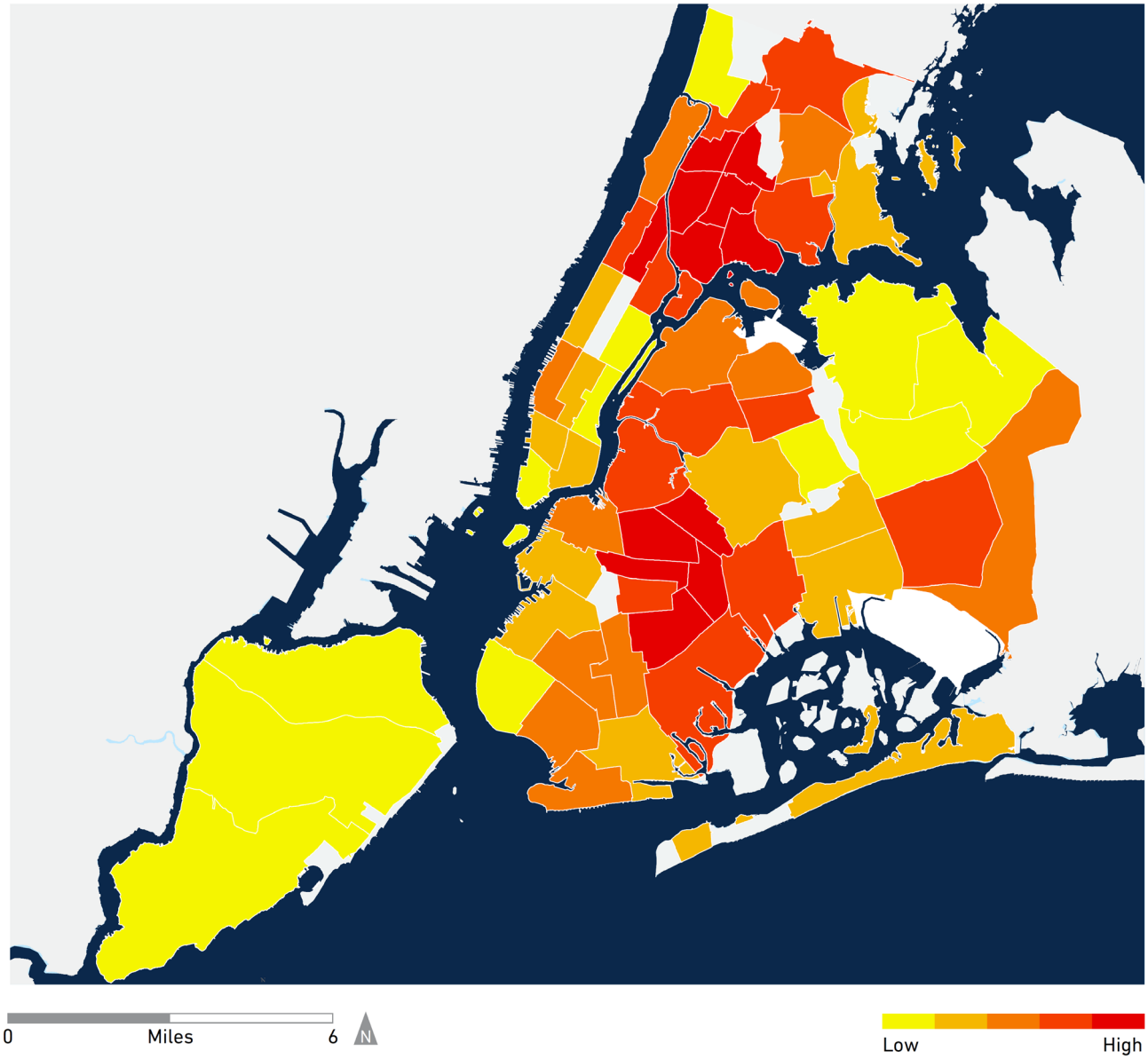
The areas that face the greatest levels of heat, according to the map above, have the highest building density and lowest levels of vegetation. Notable areas with excessive levels of heat include parts of the Bronx, Queens, Brooklyn, and Staten Island.

Approximately 80% of heat-related deaths in New York are due to extended exposure to heat inside the home, suggesting that air-conditioning could prevent most heat-related deaths and illnesses. According to City estimates, one in four New Yorkers either do not have, or do not regularly use, air

conditioning during hot weather as the expense of doing so is too high. About 17% of households in higher poverty neighborhoods lack air conditioning compared to just 6% of households in lower poverty neighborhoods. This demonstrates a disproportionately harmful impact of extreme heat on lower-income communities. To determine the full extent of the harm to New York City residents, the City measures risk using the Heat Vulnerability Index (HVI), which measures heat intensity and socio-economic variables that assess a community's ability cope with excessive heat. See the map below.

Figure 2.13: Heat Vulnerability Index (HVI) for New York City Community Districts

SOURCE: NYCEM, 2014



Communities with the highest vulnerability of death or illness during an extreme heat event have the following characteristics: high surface temperatures, less green space, and poor communities of color whose populations have experienced historical racism and segregation.

In addition to negative health impacts, extreme heat increases the demand for power and stresses the power grid, causing outages that can create a cascade of negative impacts throughout the City. These impacts can include physical damage of critical infrastructure, the inability for seniors or persons with disabilities to use elevators, and the lack of power to operate life-sustaining medical equipment.

Flooding

New York City is subject to four types of flooding; tidal, coastal, inland, and riverine flooding. The diagram below illustrates the type flooding associated with each category.

Figure 2.14: Four Major Types of Flooding in NYC
SOURCE: NYCEM

Coastal flooding is primarily caused by a storm surge during coastal storms. Water rushes in from the coastline, which can threaten both coastal neighborhoods and low-lying inland areas. The threat of severe coastal flooding during a coastal storm is documented by FEMA Flood Insurance Rate Maps (FIRMs), which project the 1% and 0.2% annual chance of flooding.

Inland flooding is commonly referred to as a "flash flood," "cloudburst," or "urban flood." Such events can be caused by short, intense rainfall often associated with sudden small-scale thunderstorms or downpours from very large storm systems. Other contributing factors to inland flooding are sewer/drainage capacity as well as the presence of impervious surfaces. If sewer and drainage management systems are overwhelmed, flooding may occur.

Riverine flooding occurs when the volume of freshwater flowing in a river or a stream exceeds its holding capacity and water overruns the surrounding banks.

Approximately 400,000 people live within the 1% annual chance floodplain region in NYC. Of this population, the people most at risk are seniors, people with chronic health conditions or disabilities, low-income residents, and rent or housing cost burdened households. These specific populations are at an increased risk due to the increased difficulty of relocating during a flooding event. Additionally, post-flood, these populations are at increased risk of exposure to mold and other hazardous materials, which could lead to health problems, lost wages, loss of employment, or further financial stress.

Flooding also poses an enormous risk to essential infrastructure. This includes electrical systems, steam systems, telecommunications, transportation, highways, as well as wastewater and hazardous materials systems. Of the essential City infrastructure systems, the City's electrical, steam, and wastewater systems face the greatest risk of flooding. Approximately 53% of in-city electric generation capacity, 37% of transmission substation capacity, and 12% of large distribution substation capacity are within the 1% annual chance floodplain. Approximately 88% of the City's steam generation capacity lines are within the 1% annual chance floodplain, and all wastewater and hazardous materials systems are located in the 1% annual chance floodplain. Additionally, all 14 of the wastewater treatment plants are located at low elevations along New York City's waterfront. Flooding of these centers could lead to the release of hazardous waste that could thus cause harm to employees, nearby communities, and surrounding natural areas.

Protecting city infrastructure and preparing communities prior to the arrival of a flood is essential to managing the risk posed by flooding events. This is true of areas both inside and outside the designated floodplain as areas previously considered at low risk of flooding saw damage during PTC Ida, particularly in the inland MID areas of the City.

High Winds

High wind events are winds that exceed 50 to 60 mph. These events can coincide with tornadoes, severe thunderstorms, straight line winds (winds blowing in a single direction that are associated with intense low atmospheric pressure), as well as microburst or macrobursts (powerful downdrafts causing severe localized damage; associated with thunderstorms).

New York City's dense high-rise environment, high population of older buildings, and numerous open construction sites threaten the public and increase vulnerability. In fact, since 1950 at least one tornado has occurred in each of the five boroughs.

Winter Weather

During the winter months, New York City is subject to snow and ice events, as well as periods of extreme cold. These pose risks to the City's infrastructure as well as residents. On average, New York City experiences 72 days with temperatures at or below 32 degrees F. Additionally, the City experiences a winter storm that drops six or more inches of snow about 13 times every decade. As a result of climate change, these risks are projected to decrease, but in present times, the threat of winter weather poses a risk to New York City residents and infrastructure.

Residents face risk during travel as icy conditions on roadways create slippery conditions and can cause accidents. Power outages place a risk for people that rely on electricity for necessary medical equipment and to heat homes. Without electricity for heat, people may resort to unsafe methods that can lead to further harm such as carbon monoxide poisoning and fires. Additionally, for people that are unhoused, exposure to extreme cold can lead to frostbite, hypothermia, and even death.

The types of infrastructure that are at risk from winter storms are power and telecommunications networks, fuel supply chains, transport systems, and local roadways. The accumulation of snow or prolonged freezing temperatures can cause critical infrastructure to freeze, making the environment slippery and prone to breakage.

In order to reduce the threat of winter weather to residents throughout the city, the Department of Buildings encourages building owners to repair vulnerable masonry and maintain buildings to ensure proper heat retainage. This can include clearing snow and ice off roofs, inspecting exterior walls and window inlets, ensure all spaces are properly sealed, and to wrap exposed pipes in insulation to slow heat transfer.

Cyber Threats

A cyber-attack involves either the theft or modification of information on City agency computer systems, or a system compromise that has the potential to disrupt essential services.

Nearly every City system, from the delivery of water and electricity to transportation or emergency response, is reliant on technology. Thus, a cyber-attack can have wide ranging effects on both public and private industries including, but not limited to, stolen personal information, a loss of trust in institutions, and the disruption of essential services to New York City residents.

Every New Yorker relies on the continuous delivery of City services, from public transportation and sanitation to public housing and food pantry assistance. Disruption to service delivery could have a disproportionate impact on low-income communities, people with disabilities, and seniors, as they may not have access to resources to supplement City services. For example, if the City faces a cyber-attack during a natural disaster, the City's ability to provide restoration or recovery efforts would be hindered. Those without the means to relocate to a safer area, or who do not understand the threat of the hazard due to a language barrier, will be disproportionately at risk and in greater need of post disaster aid.

Hazardous Materials Release

A hazardous materials incident is a situation in which harmful substances are released into the environment. These types of releases are often classified as chemical, biological, radiological, or nuclear (CBRN) and may result from an accidental or intentional release. New York City's density and congestion leave it highly vulnerable to CBRN releases.

Both the level of risk and harm vary depending on the type of material that's been released.

- **Chemical:** The harm presents at point of contact, meaning direct physical contact or contact through a contaminated source of water, air, or soil. Both can have varying degrees of consequences. Persons most at risk of chemical hazards are first responders, waterfront residents near industrial areas, and low-income individuals who have historically faced the burden of equity issues concerning environmental hazards. There are approximately 16,000 reports of chemical releases per year, with most releases being petroleum. While the threat of widescale intentional release of harmful chemicals is present, its far less likely than a localized accidental spill.
- **Biological:** New York City is a dense urban environment. The possibility of spreading biological hazards is high as most recently seen with the COVID-19 pandemic, with New York City becoming the early epicenter of cases in the U.S. Individuals that face a higher risk to biological hazards are seniors, young children, people with disabilities and mobility impairments, and people with pre-existing medical conditions or compromised immune systems. Other risks for outbreaks include restaurants or markets selling tainted food, or a sewer overflow that exposes residents to raw sewage.

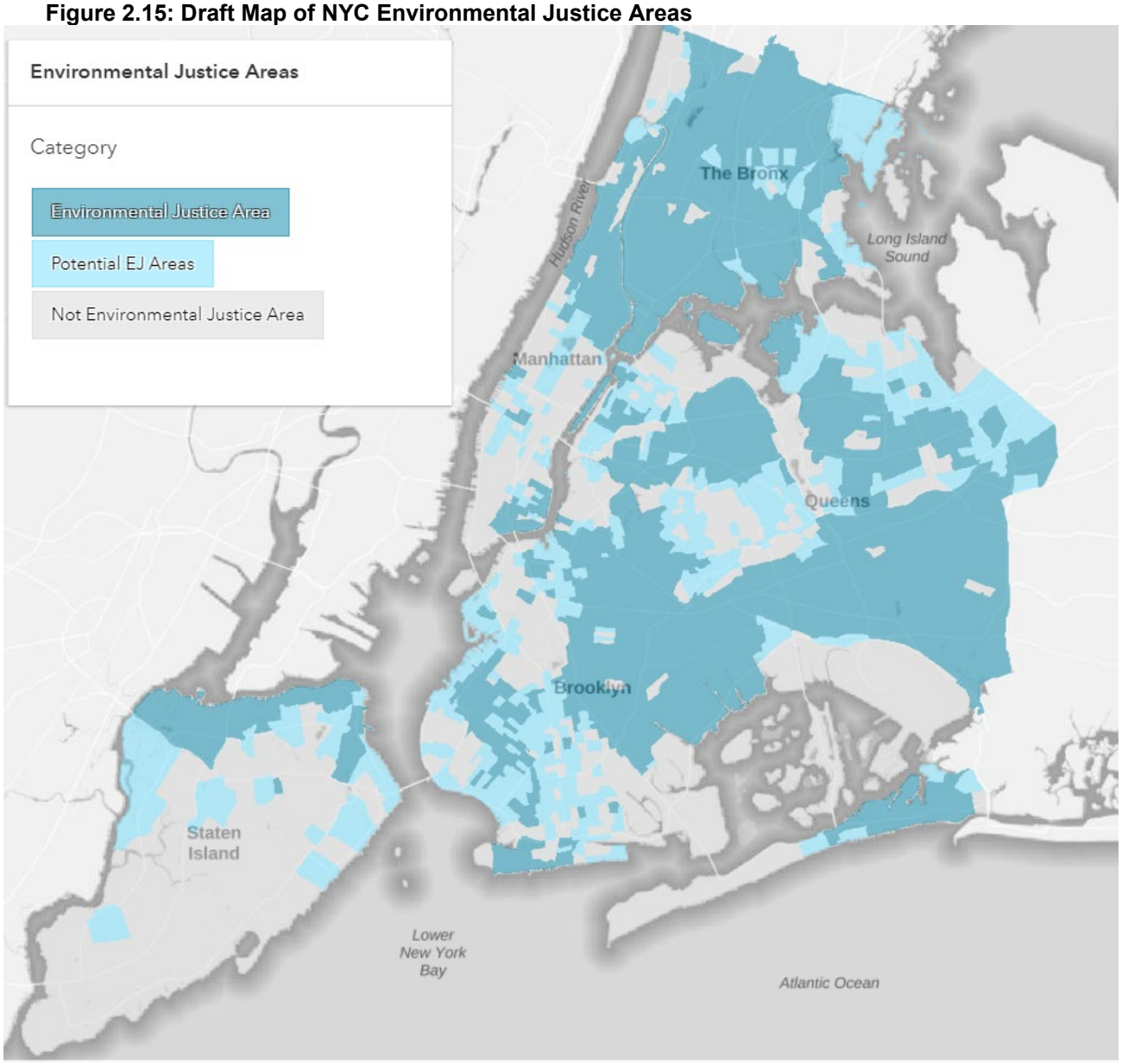
- **Radiological:** Accidental radiological incidents are most likely to occur near facilities storing radioactive materials or waste. Buildings that store such materials are medical facilities, hospitals, research and development facilities, and universities. These facilities may experience small spills on occasion. The threat to individuals varies depending on exposure. Factors that increase the risk of prolonged illness are age, gender, and pregnancy. Children and fetuses are more sensitive to radioactivity as they are still developing. Women exposed to significant doses of radiation are at a slightly greater risk of developing cancer. With proper storage and monitoring of facilities that store waste, the likelihood of widespread radiological hazards is low.
- **Nuclear:** The closest nuclear facility to New York City is the Indian Point Nuclear Power Plan in Buchanan, New York. An accidental nuclear release at this facility is not expected to expose the City to harmful radiation unless a unique and rare set of meteorological conditions occur simultaneously with a large nuclear release.

As hazardous facilities are located across the City in various locations, the threat is spread across the MID areas. In an effort to better understand where these threats are located, how they impact their surrounding areas, and how best to address them in a fair and equitable manner, New York City passed Local Laws 60 and 64 to assess environmental equity issues and develop a plan to incorporate environmental justice (EJ) into the fabric of City decision-making. This legislatively mandated work, known as Environmental Justice New York City (EJNYC), represents a historic investment from the City of New York to study environmental inequities affecting how and where low-income communities and communities of color live, and to provide all residents the tools to advocate for the best outcomes for their communities. The legislation centers on three main products:

- A report, expected to be released in 2023, which will be the City's first comprehensive study of environmental justice.
- A web-portal, which will be a public web-based portal and mapping tool based on the data and analysis from the EJNYC Report. This portal will host interactive maps, a data repository, and information on relevant City programs relating to environmental justice. It will be used by City agencies to inform their environmental decision-making, and will empower residents and organizers with the tools to continue advocating for the best outcomes for their communities.
- The EJNYC Plan will be the culmination of all the EJNYC work. The plan will identify potential citywide and local initiatives for promoting environmental justice and outline a set of discrete recommendations for better embedding equity and environmental justice into the City's decision-making processes.

In early 2021, the City released an interactive map of the City's Environmental Justice Areas. NYC's environmental justice law defines "Environmental Justice Areas" as low-income or minority communities located in the City of New York, based on census data. Defining Environmental Justice Areas in this way enables the City to start from a baseline of social vulnerability in the EJNYC Report. These areas have been and continue to be more vulnerable to potential environmental injustices due to factors including history of systemic racism and inequitable resource distribution. The EJNYC Report will identify and describe these injustices.

Figure 2.15: Draft Map of NYC Environmental Justice Areas



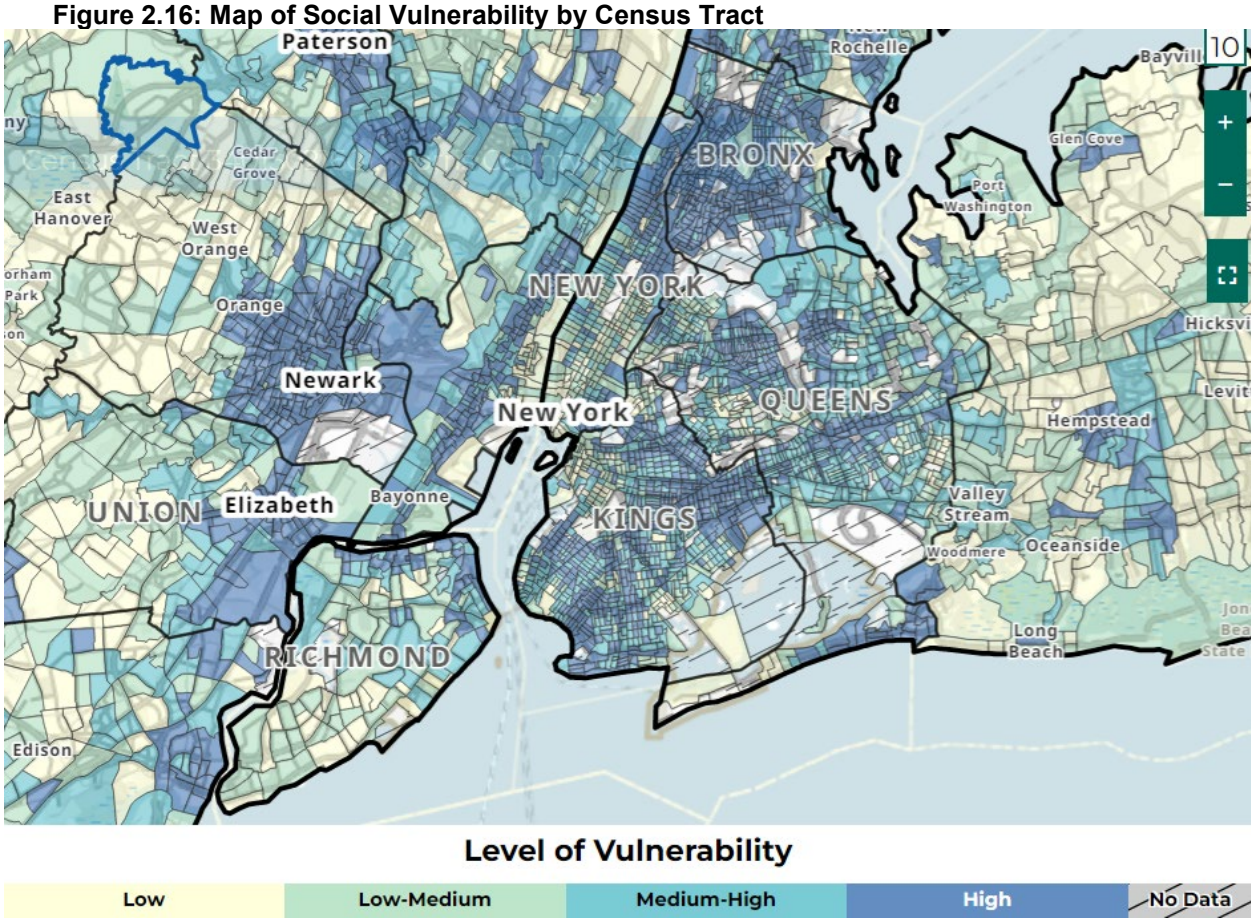
Draft Environmental Justice Areas Map is accessible at https://arcg.is/KCfXq. Low-income communities are those where the population below poverty is equal to or greater than 23.59% of the total population, while minority communities are those where the minority population is equal to or greater than 51.1% of the total population.

Similarly, the U.S. Centers for Disease Control and Prevention (CDC) / Agency for Toxic Substances and Disease Registry (ATSDR) has developed a measure of social vulnerability, which refers to the potential negative effects on communities caused by external stresses on human health. Such stresses include natural or human-caused disasters or disease outbreaks. Reducing social vulnerability can decrease both human suffering and economic loss.

The CDC/ATSDR Social Vulnerability Index uses 16 U.S. Census variables, including unemployment, racial and ethnic minority status, access to transportation, overcrowded housing, and disability, to help local officials identify communities that may need support before, during, or after disasters. A percentile ranking represents the proportion of tracts (or counties) that are equal to or lower than a

particular tract (or county) in terms of social vulnerability. Possible scores range from 0 (lowest vulnerability) to 1 (highest vulnerability). For example, a CDC/ATSDR SVI ranking of 0.85 signifies that 85% of tracts (or counties) in the state or nation are less vulnerable than the tract (or county) of interest and that 15% of tracts (or counties) in the state or nation are more vulnerable.[16]

Figure 2.16: Map of Social Vulnerability by Census Tract



Source: U.S. Centers for Disease Control and Prevention (CDC) / Agency for Toxic Substances and Disease Registry (ATSDR), https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html

Table 2-26: Overall Social Vulnerability Scores by Borough[17]

Borough	SVI Relative to NYS	SVI Relative to U.S.
Bronx	1.000 - High	.9987 - High
Brooklyn	.9836 - High	.8972 - High
Manhattan	.8197 - High	.6849 – Medium/High
Queens	.9180 - High	.7798 - High
Staten Island	.6885 – Medium/High	.5866 – Medium/High

Source: U.S. Centers for Disease Control and Prevention (CDC) / Agency for Toxic Substances and Disease Registry (ATSDR), https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html

[16] U.S. Centers for Disease Control and Prevention (CDC) / Agency for Toxic Substances and Disease Registry (ATSDR), https://www.atsdr.cdc.gov/placeandhealth/svi/faq_svi.html

All five boroughs of New York City have relatively high SVIs, with the Bronx having among the highest scores in the state and nation. Additionally, there is significant overlap between higher SVI census tracts and the areas impacted by Hurricane Ida.

Finally, EJScreen is the Environmental Protection Agency's (EPA) environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators. EJScreen users choose a geographic area; the tool then evaluates 12 environmental indicators and 7 socioeconomic indicators to create Environmental Justice indexes for that area. The EJ index is higher in block groups with large numbers of mainly low-income and/or people of color residents with a higher environmental indicator value.[17]

As shown in the next two tables, the four counties in the Most Impacted and Distressed Areas rank higher, significantly higher in many cases, than the majority of New York State and the nation for 11 of the 12 variables. The Bronx ranks significantly higher in all 12 categories.

Table 2-27: Environmental Justice (EJ) Index for Entire MID Area and by Borough

EJ Index for Selected Variables	Bronx		Brooklyn		Queens		Staten Island		Combined	
	State %ile	USA %ile	State %ile	USA %ile	State %ile	USA %ile	State %ile	USA %ile	State %ile	USA %ile
Particulate Matter 2.5	93	88	79	77	75	73	64	61	81	78
Ozone	92	87	61	71	78	77	57	59	75	77
Diesel Particulate Matter	91	97	80	89	78	90	58	76	81	91
Air Toxics Cancer Risk	92	95	81	83	77	82	56	61	81	85
Air Toxics Respiratory HI	91	96	81	86	78	86	56	64	81	88
Traffic Proximity	89	93	75	82	75	82	55	63	78	84
Lead Paint	82	93	75	87	74	87	44	65	75	88
Superfund Proximity	75	90	83	88	79	87	58	72	79	87
RMP Facility Proximity	87	85	78	76	68	66	64	64	77	75
Hazardous Waste Proximity	90	96	79	88	74	87	57	72	79	89
Underground Storage Tanks	91	96	78	87	78	87	57	69	80	89
Wastewater Discharge	79	79	29	29	23	23	30	29	48	45

Source: U.S. Environmental Protection Agency, EJScreen: Environmental Justice Screening and Mapping Tool, https://ejscreen.epa.gov/mapper/

[17] U.S. Environmental Protection Agency, EJScreen: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen

Table 2-28: EJ Screen Indicators by Borough

Selected Variables	Bronx			Brooklyn			Queens			Staten Island		
	Value	%ile in State	%ile in USA	Value	%ile in State	%ile in USA	Value	%ile in State	%ile in USA	Value	%ile in State	%ile in USA
Pollution and Sources												
Particulate Matter 2.5 (µg/m3)	9.07	84	64	8.87	73	58	8.57	62	49	8.71	67	53
Ozone (ppb)	42.7	70	55	41.5	38	42	42.3	62	51	42	55	47
Diesel Particulate Matter* (µg/m3)	1.12	75	95-100th	1.22	79	95-100th	1	70	95-100th	0.707	59	95-100th
Air Toxics Cancer Risk* (lifetime risk per million)	40	98	95-100th	39	97	95-100th	34	80	80-90th	30	67	80-90th
Air Toxics Respiratory HI*	0.55	86	95-100th	0.57	91	95-100th	0.52	81	95-100th	0.41	61	80-90th
Traffic Proximity (daily traffic count/distance to road)	1800	85	89	1300	79	85	1300	80	86	860	70	78
Lead Paint (% Pre-1960 Housing)	0.62	52	81	0.69	60	85	0.66	57	83	0.32	24	59
Superfund Proximity (site count/km distance)	0.1	42	68	0.5	88	95	0.28	80	90	0.17	63	81
RMP Facility Proximity (facility count/km distance)	0.6	73	63	0.67	76	65	0.36	60	52	0.86	82	71
Hazardous Waste Proximity (facility count/km distance)	9.4	78	95	11	82	96	7.3	72	92	4.4	59	85
Underground Storage Tanks (count/km2)	18	84	95	16	81	94	15	78	93	6.5	62	82
Wastewater Discharge (toxicity-weighted concentration/m distance)	1.5	87	94	1	87	93	12	95	97	0.026	66	76
Socioeconomic Indicators												
Demographic Index	0.7	89	90	0.51	71	75	0.53	73	77	0.31	54	53
People of Color	0.91	84	89	0.64	69	75	0.75	75	81	0.4	56	59
Low Income	0.49	83	79	0.37	71	65	0.3	59	53	0.23	47	41
Unemployment Rate	0.1	82	82	0.07	68	68	0.06	65	65	0.05	58	58
Limited English Speaking	0.18	85	92	0.14	81	89	0.18	85	92	0.06	67	78
Less Than High School Education	0.27	87	88	0.17	72	75	0.17	74	76	0.12	59	61
Under Age 5	0.07	70	69	0.07	71	70	0.06	63	61	0.06	59	57
Over Age 64	0.13	38	39	0.14	43	44	0.16	51	52	0.16	53	53

Source: U.S. Environmental Protection Agency, EJScreen: Environmental Justice Screening and Mapping Tool, https://ejscreen.epa.gov/mapper/

Summary of Mitigation Unmet Needs

There are at least nine hazards that pose a threat to New York City and the MID areas. By identifying the specific vulnerabilities that people in the MID neighborhoods face, the City can better allocate CDBG-DR funds to cost-effective mitigation projects. Such projects will ensure that members and infrastructure in MID areas will be better prepared for the next hazard. While not all hazards will be mitigated with the CDBG-DR funds, the City will ensure that at the very least, other funded projects do not exacerbate their impacts.

Based on this assessment, the City has identified the following areas of unmet need associated with mitigation activities:

Improving City Infrastructure Capacity to Capture/Absorb Stormwater and Prevent Flooding

The City's 7,400 miles of sewer pipes were largely designed a century ago, for a very different climate than the extreme one we now face. Completely recalibrating the City's sewers for storms like Ida would require a potential $100 billion investment.[18] While this is an unmet need, that work would take place over decades and would not be a good fit for a time-limited grant.

While the City is committed to pursuing upgrades over the longer-term, the City will supplement sewer work with creative green infrastructure (GI) projects designed to absorb or redirect stormwater. The City has identified $86.2 million in currently unfunded GI projects at parks, playgrounds, and other public spaces, including NYCHA developments, that would be eligible for CDBG-DR funds.

Enhancement of Extreme Weather Communications

We cannot rely on antiquated tools to protect the city from modern storms. As demonstrated during PTC Ida, the City must ensure proper systems are in place to communicate the threat of hazardous events to the public, both before and during extreme weather events. To further this, the City has identified unmet needs related to:

- enhanced weather forecasting ($100,000 per year over the life of the grant);
- developing a system to track real-time impacts so the City can deploy emergency response teams using the best data available ($1 million); and
- conducting a study to inform updates to the City's evacuation plans, particularly related to flash floods, persons living in basement apartments, vulnerable populations, etc. ($1 million).

Planning: Mitigation

The City has identified several planning efforts that will help inform future City initiatives and programs designed to make the city more resilient to hazards and to protect public health and safety. These include:

- Creating a database of subgrade spaces, including those that may be used as basement apartments, so the City can quickly and proactively alert property owners and tenants of potential flood risk. The system would also be used to predict where specific flood events may lead to critical infrastructure failure so the City can make efforts to prevent damage and power outages. Finally, the data collected would enable the City to properly scope

[18] NYC Office of the Deputy Mayor of Administration, in collaboration with the Department of Environmental Protection and NYC Emergency Management: The New Normal: Combating Storm-Related Extreme Weather in New York City, October 2021

capital projects to avoid underground utilities, preventing costly and dangerous accidental utility strikes and unnecessary project delays. Estimated cost: $10 million.

- Undertaking area-wide planning studies, particularly for areas proposed for rezoning, affordable housing developments, etc. to identify opportunities to incorporate resiliency and mitigation considerations early in the process. While the need for early planning is almost limitless, the City has identified immediate needs of approximately $15 million.

3. General Requirements

Fair Housing

CDBG-DR-funded programs in New York City are subject to numerous laws that prohibit discrimination, including the Federal Fair Housing Act, the New York City Human Rights Law; and the New York State Human Rights Law. Protected classes under the NYC Human Rights Law include:

- Age
- Immigration or citizenship status
- Color
- Disability
- Gender (including sexual harassment)
- Gender Identity
- Marital status and partnership status
- National origin
- Pregnancy and lactation accommodations
- Race
- Religion/Creed
- Sexual orientation
- Status as a Veteran or Active Military Service Member

Other federal civil rights laws, including Title VI of the Civil Rights Act, Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act, prohibit discrimination in housing and community development programs and activities. These civil rights laws include obligations such as taking reasonable steps to ensure meaningful access to programs and activities for persons with LEP and effectively communicating with individuals with disabilities by providing auxiliary aids and services. Where applicable, the City will work with its Commission on Human Rights, the Mayor's Office for People with Disabilities, and subrecipients to address potential barriers to participating in the programs identified in this plan.

Citizen Participation

Outreach and Engagement

The City of New York recognizes that affected stakeholders are the center of, and partners in, the development and implementation of this Action Plan. Prior to and during the development of this plan, the City consulted with various parties in the surrounding geographic area to ensure consistency of disaster impacts identified in the plan, and that the plan and planning process was comprehensive and inclusive. These parties included disaster-affected residents, local business owners, service providers, the State of New York, the New York City Housing Authority, the federal government, and other stakeholders.

On September 3rd, 2021, less than two days after PTC Ida reached New York City, the City convened an Extreme Weather Response Task Force, comprised of over 20 City agencies and offices, to explore the City's response to extreme weather events and to review protocols and policies to protect the City in the future. The Task Force focused on several key areas including, but not limited to:

- Short-term infrastructure;
- Long-term infrastructure;
- Basement apartments;
- Homeowner and landlord investments;
- Flood insurance and outreach;

- Preparation and emergency planning;
- Subway flooding;
- Challenges faced by commercial and residential renters;
- Messaging and communications strategies; and
- Environmental justice.

Additionally, the City immediately launched a multi-agency and multi-pronged (phone calls, text messages, online, door-to-door visits) outreach, canvassing, and recovery effort that not only linked impacted residents with crucial services and resources but also provided the City with a wealth of data regarding impact and need.

When preparing this Action Plan specifically, the City consulted with the entities listed below. Consultation efforts were focused on, but not limited to, identifying disaster impacts, needs for both in-kind and direct financial assistance, evaluating capacity to implement programs, and proposals for disaster response.

- United States Federal Emergency Management Agency (FEMA)
- United States Department of Housing and Urban Development (HUD)
- New York State Division of Homeland Security and Emergency Services (NYS DHSES)
- New York State Department of State (NYS DOS)
- New York State Homes and Community Renewal (NYS HCR)
- American Red Cross
- Archdiocese of New York/Catholic Charities of New York
- Business Improvement Districts, Chambers of Commerce, merchants' associations, and other Community-Based Development Organizations
- Human Services Council
- New York Disaster Interfaith Services
- Salvation Army
- Voluntary Organizations Active in Disaster
- NYC Department for the Aging (DFTA)
- NYC Department of Buildings (DOB)
- NYC Department of City Planning (DCP)
- NYC Department of Environmental Protection (DEP)
- NYC Department of Health and Mental Hygiene (DOHMH)
- NYC Department of Homeless Services (DHS)
- NYC Department of Housing Preservation and Development (HPD)
- NYC Department of Parks and Recreation (DPR or PARKS)
- NYC Department of Small Business Services (SBS)
- NYC Economic Development Corporation (NYCEDC)
- NYC Housing Authority (NYCHA)
- NYC Human Resources Administration (HRA)
- NYC Mayor's Office for People with Disabilities (MOPD)
- NYC Mayor's Office of Climate and Environmental Justice (MOCEJ)
- NYC Mayor's Office of Housing Recovery Operations (HRO)
- NYC Mayor's Office of Immigrant Affairs (MOIA)

- NYC Mayor's Office of Management and Budget (OMB)
- NYC Mayor's Office of Operations (Operations)
- NYC Office of Emergency Management (NYCEM)
- NYC Office of the Mayor

In addition to the activities above, the City has published this action plan on www1.nyc.gov/site/cdbgdr/index.page and encourages relevant stakeholders to submit comments during the 30-day public comment period and public hearing. The release of the plan and the public hearing were advertised in multiple languages and in multiple newspapers (including local and ethnic media outlets), on the City's website, and via emails to interested parties including but not limited to elected officials, all the City's Community Boards, other governmental offices, local development corporations, nonprofit service providers, etc. A summary of public comments, along with the responses from the City, will be incorporated into the Appendix of the HUD-submission version of this Plan.

For more information, interested parties can refer to the City's DR citizen participation plan that can be found the website linked above.

The City also notes the Mayor's Office of Climate and Environmental Justice (MOCEJ) and the New York City Panel on Climate Change (NPCC) are standing entities whose missions are to forecast and mitigate the negative impacts of climate change, with a particular focus on equity and vulnerability issues.

Public Hearings

For the City's initial Action Plan submission, the City must also hold at least one public hearing to obtain the views of residents and other impacted parties. Public hearings will not be required for substantial amendments. However, the City will consider scheduling public hearings for amendments on an as-needed basis.

The hearing for the initial Ida Action Plan took place on September 14, 2022 at 7:00PM. While the hearing was virtual, attendees were able to ask questions of and submit comments to the panel. A summary of comments received and City responses can be found in the Appendix.

Complaints and Appeals

Complaints

Complaints may fall into two categories:

- **Formal complaints:** Formal complaints are written statements of grievance about a specific, addressable issue and may include faxes, emailed comments, handwritten notes, and comments submitted through the City's CDBG-DR website.

  The City and all CDBG-DR partners shall ensure that a grievance process is in place prior to a program commencing. The process must stipulate how client grievances shall be resolved, and at the minimum contain the following elements:
  - How the grievance shall be documented;

  - Who (name and position title) shall be authorized to review and respond to the grievance;
  - An appeal process if the complainant is not satisfied with first level response;
  - Timeline for complaint resolution; and
  - Tracking of complaints (how status and results shall be documented and reported).

Investigation results shall be maintained on file by each agency responsible for implementing a program. The City (and its designated subrecipients) shall make every effort to respond to formal complaints within fifteen (15) working days of receipt. If this is not possible, the City (or subrecipient) must document why additional time was needed. The City will track complaints by category through the resolution process.

- **Informal complaints:** Informal complaints are verbal complaints or written complaints that are too general in nature to act upon. The City (and its designated subrecipients) will attempt to resolve informal complaints; however, they are not subject to the written response process described above.

The City notes the following additional routes for submitting complaints:

- Complaints alleging violation of fair housing laws will be directed to HUD for immediate review. Members of the public can file a complaint directly with the HUD Region II Fair Housing and Equal Opportunity Office by emailing ComplaintsOffice02@hud.gov or by calling (800) 496-4294 or TTY (212) 264-0927.
- The City will forward all complaints regarding fraud, waste, or abuse of funds to the HUD Office of the Inspector General (OIG) Fraud Hotline (phone: (800) 347-3735 or email: hotline@hudoig.gov). The City's procedures for identifying and addressing waste, fraud, and mismanagement will also be available for review on the CDBG-DR website.

All program applications, regardless of the language in which they are printed, will include information about the right and process to file a formal complaint.

The City will investigate and respond to all complaints thoroughly, sensitively, and fairly.

Appeals

An appeal is a written request to reverse or revise a decision affecting eligibility for a CDBG-DR-funded program. Each program providing direct assistance to the public will develop and implement policies and procedures for a formal appeals process including the timeline for considering and responding to the appeal, contact information for submitting appeals, and criteria on which appeals will be considered.

Applicants may appeal decisions related to the following:

- determinations of eligibility for assistance based on income, maintenance of flood insurance, etc.;
- award amount; and
- determinations of necessary and reasonable costs.

Applicants may not appeal decisions based on overall program eligibility criteria. As an example, an applicant may appeal a decision of ineligibility by providing additional information to document the

property owner properly maintained flood insurance on the subject property. The applicant may not appeal a decision of ineligibility by requesting to be exempted from the flood insurance requirements.

The City will consider and respond to all appeals thoroughly, sensitively, and fairly.

Public Website

The City's comprehensive website related to its CDBG-Disaster Recovery funding can be accessed at https://www1.nyc.gov/site/cdbgdr/index.page. Through this website, the City will account for how all grant funds are used, managed, and administered. At a minimum, the website will include the following information:

- The current version of the CDBG-DR Action Plan, along with all previous versions/amendments;
- Quarterly Performance Reports as developed in HUD's Disaster Recovery Grant Reporting (DRGR) system, other required reports, and other ad hoc reports generated by the City;
- The City's Citizen Participation Plan for its CDBG-DR funds; and
- Procurement documents, including:
    - Policies and procedures;
    - Executed contracts (as defined at 2 CFR § 200.22) funded with CDBG-DR funds;
    - Subrecipient agreements; and
    - Summaries of the description and status of services or goods currently being procured by the City or its subrecipients (e.g., phase of the procurement, requirements for proposals, etc.).
        - Please note contracts and procurement actions that do not exceed the micro-purchase threshold, as defined in 2 CFR § 200.67, are not required to be posted.

The website will be updated in a timely manner to reflect the most up-to-date information about proposed uses of funds, changes in policies and procedures, procurement actions, etc. At a minimum, the website will be updated on a monthly basis.

Accessibility

The City of New York is committed to ensuring that all digital content can be accessed by New Yorkers with disabilities and persons with Limited English Proficiency. Local law requires City agencies to make a reasonable effort to make their websites accessible, and to develop and implement language access plans. NYCOMB will work with the City's Digital Accessibility Coordinator, based at the Mayor's Office for People with Disabilities, and the Mayor's Office of Immigrant Affairs to ensure the CDBG-DR website meets accessibility and LEP standards.

Amendments

This plan describes needs and programs that were developed based on the best data available at the time. The City recognizes that recovery needs will change over time, particularly as the impacts of climate change continue to be revealed and understood. Thus, the City will amend the Action Plan as often as necessary to best address our long-term recovery needs and goals. However, an amendment may not be triggered if a proposed change is consistent with the descriptions provided in this plan.

Amendments may be classified as Substantial or Non-Substantial (aka a "Minor Amendment or "Technical Amendment"). The criteria and process for each is described below.

Regardless of the level of the amendment, in order to further the public's understanding of the City's Action Plan, the City will ensure the following are posted on the City's CDBG-DR website:

- Each amendment to the Action Plan;
- A summary description of each Action Plan amendment including:
    - What content is being added, deleted, or changed;
    - A clear illustration of where funds are coming from and moving to; and
    - A revised budget table that reflects the entirety of the City's CDBG-DR grant.
- The current version of the entire Action Plan as a single document, incorporating all previous amendments.

All amendments will be numbered sequentially and posted to the website in one final, consolidated plan.

Substantial Amendment

The City has determined that a substantial amendment will be required when the following occurs:

- When a program newly identifies or changes the eligibility criteria or benefits offered;
- When the City identifies a new or eliminates an existing category of unmet need;
- The creation of a new program or the deletion of an existing program; and
- The allocation or reallocation of the greater of $10 million or a reallocation that constitutes a change of 15% or greater of a program budget.

The City will continue to monitor the data related to PTC Ida's impact and will update its Needs Assessment as necessary. At a minimum, the City will review this data and consider updates each time the City prepares a substantial amendment to its Action Plan.

When proposing a substantial amendment, the City will follow its Citizen Participation Plan (CPP). At a minimum, the City will publish a public notice announcing the plan's release, the timeframe of the associated 30-day public comment period, and instructions for submitting comments on the Plan. The notice will be published in the media outlets identified in the CPP, translated into the languages described in the CPP, emailed to the Consolidated Plan mailing list, and posted on the City's CDBG-DR website.

Proposed substantial amendments and translated Executive Summaries will be published on the CDBG-DR website for the duration of the amendment's 30-day public comment period. Additionally, the City will identify and consider barriers that may limit or prohibit equal participation by and engagement with underserved communities and individuals.

At the end of the comment period, all comments shall be reviewed and City responses will be incorporated into the Action Plan. The final Ida Action Plan, containing a summary of the comments and the City's responses, will be submitted to HUD and posted on the City's CDBG-DR website.

Non-Substantial Amendment

A non-substantial amendment, which may also be referred to as a Technical or Minor Amendment, will generally incorporate technical and budgetary corrections and clarifications that do not meet the substantial amendment criteria described previously. Such amendments do not require a comment period. The City will notify HUD five (5) business days before the change is effective.

Displacement of Persons and Other Entities

The City recognizes that displacement or even temporary relocation can lead to emotional and financial impacts. These impacts can be particularly significant for renters who may have concerns about a lack of communication about federally-funded projects, whether they'll be able to return to their home upon completion, etc. Accordingly, the City's policy is to minimize displacement unless it is truly necessary.

The City will coordinate with the NYC Department of Housing Preservation and Development and the New York City Housing Authority before implementing programs proposed under this Action Plan that involve physical work. The City will update its existing Residential Anti-Displacement and Relocation Assistance Plan (RARAP) and develop Optional Relocation Plans (ORP) for relevant programs. The policies, processes, and available benefits will be incorporated into individual program policies and procedures where relevant, and the RARAP and ORPs will be available on the City's CDBG-DR website. The City's procedures will consider and address the needs of persons with disabilities.

At a minimum, the RARAP and program policies and procedures will incorporate consideration of and compliance with the following:

- Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (URA), as amended (49 CFR Part 24);
- Section 104(d) of the Housing and Community Development Act of 1974, as amended (42 USC 5304(d)); and
- The waivers described in the HUD Notice.

Eminent Domain

CDBG-DR funds may not be used to support any federal, State, or local projects that seek to use the power of eminent domain, unless eminent domain is employed only for a public use. Public use shall not be construed to include economic development that primarily benefits private entities. At this time, none of the City's proposed programs contemplate the use of eminent domain.

Unjustified Discriminatory Impact

The City recognizes its obligation to provide equitable treatment and meaningful involvement of all persons, regardless of race, color, national origin, or income, when developing and implementing City policies and programs, particularly those related to addressing environmental hazards. When identifying programs to fund, the City considered the impacts caused by Ida, the needs that resulted, and how to equitably address those needs while also affirmatively furthering the City's fair housing objectives. Accordingly, the programs in this Action Plan have been selected to:

- Provide relief to those impacted by the storm, with a focus on preventing the economic displacement of lower-income homeowners, and tenants that may occupy rental units in

their homes, that may be forced to relocate due to increasing and recurrent flood-related costs;
- Protect the City's affordable housing stock, both publicly- and privately-owned, with a particular focus on vulnerable populations such as seniors; and
- In cases where resiliency improvements cannot yet be made due to the need for legislative changes and further study (e.g., basement apartments), direct funds to efforts to protect vulnerable populations until more permanent mitigation work can be undertaken.

Going forward, the City will take affirmative steps to ensure its programs will not have an unjustified or unintentional discriminatory impact. These steps may include, but are not limited to:
- Having City staff and agencies responsible for fair housing concerns review eligibility criteria before finalizing,
- Advertising the programs in various local and ethnic media sources,
- Working with local community groups who regularly work with and represent such populations as well as persons with disabilities, and
- Ensuring intake staff are properly trained and resourced to work with people with limited English proficiency and disabilities, and that auxiliary aids and other services will be made available when necessary.

The City will monitor applications as they're completed and approved and will make adjustments if it finds unjustified impacts. For programs involving subrecipients, the City will work closely with the provider organizations to implement similar policies.

On a more holistic level, NYCOMB and the agencies receiving funding are working closely with the Mayor's Office of Climate and Environmental Justice to ensure all projects and programs advance the City's climate and environmental justice goals.

Protection of People and Property

Given the lessons learned from Ida, particularly how quickly rain events can become deadly, the City specifically selected programs focused on protecting people and property.

Elevation Standards

For new construction, reconstruction, rehabilitation of substantial damage, or rehabilitation that results in substantial improvement of structures principally for residential use located in the 1% annual (or 100-year) floodplain, the City must follow the HUD requirements described below.

Table 3-1: Structure Type-Elevation Requirement

Structure Type	Elevation Requirement
Located in the 100-year floodplain (1% annual chance)	
Primarily residential	Must be elevated with the lowest floor, including the basement, at least two (2) feet above the 1% annual chance floodplain elevation (base flood elevation).

Structure Type	Elevation Requirement
Located in the 100-year floodplain (1% annual chance)	
Mixed-use structures with no dwelling units and no residents below 2 feet above base flood elevation	Must be elevated or floodproofed in accordance with FEMA floodproofing standards at 44 CFR 60.3(c)(3)(ii) or a successor standard up to at least 2 feet above base flood elevation.
Non-residential structures including infrastructure	Must be elevated or floodproofed in accordance with FEMA floodproofing standards at 44 CFR 60.3(c)(3)(ii) or a successor standard up to at least 2 feet above base flood elevation.
Critical Actions, which are sites for which even a slight chance of flooding would be too great, because it might result in loss of life, injury to persons or damage to property." Critical Actions include hospitals, nursing homes, emergency shelters, police stations, utilities, etc.)	Must be elevated or floodproofed (in accordance with FEMA floodproofing standards at 44 CFR 60.3(c)(2)-(3) or successor standard) to the higher of the 500-year floodplain elevation or three feet above the 100-year floodplain elevation. If the 500-year floodplain is unavailable, the structure must be elevated or floodproofed at least three feet above the 100-year floodplain elevation.
Located in the 500-year floodplain (0.2 percent annual chance)	
Critical Actions	Must be elevated or floodproofed (in accordance with FEMA floodproofing standards at 44 CFR 60.3(c)(2)-(3) or successor standard) to the higher of the 500-year floodplain elevation or three feet above the 100-year floodplain elevation.

Exceptions

Use of an alternative, FEMA-approved flood standard instead of the elevation requirements described above may be allowable when all of the following conditions apply:

- CDBG–DR funds are used as the non-federal match for FEMA assistance:
- The FEMA-assisted activity, for which CDBG–DR funds will be used as match, commenced before HUD's obligation of CDBG–DR funds to the City (May 31, 2022); and
- The City has determined and documented that the implementation costs of the required CDBG–DR elevation or floodproofing requirements are not "reasonable costs" as that term is defined in the applicable cost principles at 2 CFR § 200.404.

Cost Reasonableness and Documentation

The cost to elevate properties can vary significantly and is dependent upon several factors, including, but not limited to, the number of feet a property must be elevated and the location, size, and age of the property. In some cases, it may be more expedient or cost-effective to pursue alternatives such as demolition and reconstruction, buyouts, or infrastructure improvements to reduce flood risk for an entire area. The City's policies and procedures will discuss how projects shall be evaluated for elevation and how elevation costs will be reasonably determined relative to other alternatives. For each property considered for elevation, the City (and any related subrecipients) will document decisions to elevate structures.

Activities subject to elevation requirements will comply with applicable federal accessibility mandates and with applicable state and local codes and standards for floodplain management.

Flood Insurance Requirements

The City and assisted property owners must comply with all flood insurance requirements, which generally apply to properties located in a Special Flood Hazard Area (SFHA). The Special Flood Hazard Area is the area expected to be inundated by a 100-year flood, also thought of as an area that has a one percent or greater chance of experiencing a flood in any single year. SFHAs are shown on federal flood maps, known as Flood Insurance Rate Maps, as shaded areas labeled with the letter "A" or "V" sometimes followed by a number or letter.

The flood insurance requirements create obligations for both the City and program beneficiaries, primarily related to the purchase and maintenance of flood insurance and notification requirements when assisted properties are sold. The requirements and how they may apply to each party are described below.

Please read this entire section to understand all the requirements that may apply to assistance provided under this grant. Additionally, please note the flood insurance requirements apply regardless of the amount of assistance provided; as long as funds are used for repair, reconstruction, rehabilitation, restoration, etc. of a property in a SFHA, the insurance requirements are triggered. Applicants of programs funded with CDBG-DR will be counseled on these requirements during the application process and will be required to certify they understand and will comply with them upon award.

The City's policies and procedures for complying with insurance requirements will describe how the City will ensure all property owners, including the City itself, comply with these requirements.

Mandatory Purchase of Flood Insurance

Citation: Section 102(a) of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4012a)
Requirement: Mandates the purchase of flood insurance protection for any HUD-assisted property within a Special Flood Hazard Area.
What this Means: The City (or its designated subrecipients) will conduct a floodplain review for any property proposed for CDBG-DR funding. If the property is in the 100-year floodplain and the owners receives HUD-funded assistance for the repair, replacement, or restoration of the property, the owner must obtain and maintain flood insurance in the amount and duration prescribed by FEMA's National Flood Insurance Program.

The City acknowledges that this requirement applies to City-owned properties as well and will abide by the requirement.

Prohibition on Providing Assistance in Certain Circumstances

Citation: Section 582 of the National Flood Insurance Reform Act of 1994, as amended, (42 U.S.C. 5154a)
Requirement: Prohibits providing flood disaster assistance (including any loan assistance payment) to a person for the repair, replacement, or restoration for damage to any personal, residential, or commercial property if that person at any time has received Federal flood disaster assistance that was

conditioned on the person first having obtained flood insurance under applicable Federal law and the person has subsequently failed to obtain and maintain flood insurance on such property as required.

What this Means: When the City (or its designated subrecipients) conducts a floodplain review for properties proposed for CDBG-DR funding, it will also research whether the property has received assistance related to previous disasters (e.g., Hurricanes Irene and Sandy). Additionally, as part of the program application process, the City will collect information on whether the property had an active flood insurance policy.

If the property owner previously received flood disaster assistance, was required to purchase flood insurance, and failed to obtain and maintain flood insurance, the City will not approve any federally-funded flood disaster assistance for the property.

If the City is unable to determine whether the property owner previously received flood disaster assistance for that property, the owner will be required to sign an affidavit certifying he/she/they were not required to purchase insurance.

Citation: Section IV.E.2.b. of 87 FR 31636
Requirement: Prohibits providing flood disaster assistance (including any loan assistance payment) for the rehabilitation/reconstruction of a house if:

- The combined household income of the property owner is greater than 120% of AMI;
- The property was located in a floodplain at the time of the disaster; and
- The property owner did not obtain flood insurance for the damaged property, even if the property owner was not required to obtain and maintain such insurance.

What this Means: When the City (or its designated subrecipients) processes an application for assistance, the City will also require information to document the property owner's household income. If the property was located in a SFHA at the time of the disaster, the property owner did not have an active flood insurance policy, and the property owner's household income is above the 120% AMI limit in effect at the time the application is being processed, the City will not approve any federally-funded flood disaster assistance for the property.

The chart below displays the 120% AMI thresholds currently in effect. The City will update this chart when HUD releases new information. However, updates to this chart will be considered a technical amendment only and will not constitute a substantial amendment to the Action Plan.

Table 3-2: 120% Area Median Income Limits by Household Size

Household Size	120% AMI
1	$112,080
2	$128,160
3	$144,120
4	$160,080
5	$172,920
6	$185,760
7	$198,600
8	$211,320

Source: NYC Department of Housing Preservation and Development Area Median Income webpage https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page.

Requirement to Maintain Flood Insurance; Requirement for City to Monitor Compliance

Citation: Section 102(a) of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4012a); Section 582 of the National Flood Insurance Reform Act of 1994, as amended, (42 U.S.C. 5154a)

Requirement: Owners of properties located in SFHAs who receive flood disaster assistance for the repair, replacement, or restoration for damage to any personal, residential, or commercial property must maintain flood insurance in the amount and duration prescribed by FEMA's National Flood Insurance Program. Failure to comply with this requirement may exclude the property owner from receiving assistance following future flood events.

What this Means: While the Flood Disaster Protection Act obligates recipients of flood disaster assistance whose properties are in a SFHA to purchase and maintain flood insurance, the National Flood Insurance Reform Act a) requires the City to monitor beneficiaries' compliance with this requirement and b) prohibits future federally-funded flood disaster assistance if the owner fails to comply. If a recipient of CDBG-DR-funded flood assistance under this allocation or previous allocations is required to purchase and maintain flood insurance for a property but fails to do so and the property is damaged in a future flood disaster, the property owner will be ineligible for federally-funded assistance, *including assistance provided through the FEMA Individual Assistance program*.

Notification Requirements

Citation: Section 582 of the National Flood Insurance Reform Act of 1994, as amended, (42 U.S.C. 5154a)

Requirement: Property owners receiving disaster assistance that triggers the flood insurance purchase requirement have a statutory responsibility to a) notify any transferee of the requirements to obtain and maintain flood insurance and to maintain such written notification in the documents evidencing the transfer of the property. The transferring owner may be liable if he or she fails to do so. A grantee or subrecipient receiving CDBG-DR funds must notify property owners of their responsibilities under Section 582.

What this Means: If a property owner receives CDBG-DR-funded flood disaster assistance for the repair, replacement, or restoration of damage to any personal, residential, or commercial property in an SFHA and the owner subsequently sells or otherwise transfers the property, the owner must notify any new owners of the requirement to obtain and maintain flood insurance. This notification must be made in writing as part of the property transfer process. If a recipient fails to notify transferees of this requirement (or fails to document this notification), the property owner may be liable for disaster assistance provided to the new property owner in the future. *This requirement supersedes any state or local law(s) that may exempt property owners from notifying transferees of flood damage*.

Construction Standards

The HUD Notice instituted minimum construction standards based on the level and type of assistance provided. The City will comply with these standards where applicable.

The City will require quality inspections, code compliance inspections, and site inspections on all projects. Additionally, as a global leader in the fight against climate change, the City will ensure all CDBG-DR-funded projects will emphasize high-quality, durable, sustainable, and energy efficient construction methods and materials.

New Construction, Reconstruction, or Rehabilitation of Substantially Damaged Residential Buildings

- Construction must meet an industry-recognized Green and Resilient Building Standard that has achieved certification under any of the following:
  - ENERGY STAR (Certified Homes or Multifamily High-Rise);
  - Enterprise Green Communities;
  - LEED;
  - ICC-700 National Green Building Standard Green+ Resilience;
  - Living Building Challenge; or
  - Any other equivalent comprehensive green building program acceptable to HUD.
- Additionally, construction must achieve a minimum energy efficiency standard including any of the following:
  - ENERGY STAR (Certified Homes or Multifamily High-Rise);
  - DOE Zero Energy Ready Home;
  - EarthCraft House, EarthCraft Multifamily;
  - Passive House Institute Passive Building or EnerPHit certification from the Passive House Institute US (PHIUS), International Passive House Association;
  - GreenpointRated New Home, Greenpoint Rated Existing Home (Whole House or Whole Building label);
  - Earth Advantage New Homes; or
  - Any other equivalent energy efficiency standard acceptable to HUD.

Non-Substantially Damaged Residential Buildings

The City must follow the guidelines specified in the HUD CPD Green Building Retrofit Checklist to the extent practicable. Additionally, the City must:

- Use mold resistant products when replacing surfaces such as drywall; and
- Purchase and install ENERGY STAR-labeled, WaterSense-labeled, or Federal Energy Management Program (FEMP)-designated products or appliances when it's necessary and reasonable to replace older or obsolete products as part of the rehabilitation work.

For infrastructure projects, the City will require, to the extent practicable, implementation of the City's Climate Resiliency Design Guidelines.

The City's policies and procedures will describe how the City will review all projects to ensure all costs are necessary and reasonable to meet the desired outcomes.

Contractors' Standards

The City's guiding principles regarding contractor standards are as follows:

- The City recognizes the importance of private sector businesses in providing goods and services to meet the needs of program beneficiaries.
- Full and open competition will ensure that construction costs are reasonable and consistent with market costs.
- The City is committed to addressing historic disparities in City contracting and providing minority- and women-owned businesses increased opportunities.

Contractor Requirements

The City's recovery programs will incorporate best practices of construction standards for all construction contractors. Specific contractor standards will be detailed in each program's policies and procedures and will consider, at a minimum, the type of work being performed, cost reasonableness, review and approval processes for change orders, addressing poor quality work, and warranties for covered work.

Portal Registration

To do business with the City, contractors must create and maintain accounts in two City portals:

- Payee Information Portal (PIP): Vendors must be registered in PIP in order to be reimbursed for eligible expenses;
- Procurement and Sourcing Solutions Portal (PASSPort): Contractor registration in PASSPort will allow vendors to complete required vendor disclosures, find and respond to contracting opportunities, sign contracts upon contract award, and much more. Please note, however, that solicitations for goods and services intended to be funded with CDBG-DR will also be advertised on the City's CDBG-DR website.

The City takes all necessary affirmative steps to assure that minority- and women-owned businesses are used when possible.

Warranties

Every construction program funded with CDBG-DR will require a warranty period post-construction. Each program's policies and procedures and, where applicable, application and award materials will identify the warranties applicable to the work provided under the particular program. Additionally, the City will create a schedule by which it will periodically update beneficiaries on the status/expiration of the warranty. These policies and procedures will be posted on the City's CDBG-DR website.

Fraud, Poor Workmanship, and Associated Issues

Agencies administering construction or construction-related work are subject to NYC Comptroller's Directive 7, which requires agencies to establish an Engineering Audit Office (EAO) that meets the following criteria:

- Reports directly to the agency head or a formally-assigned deputy;
- Is fully segregated from any operational units (i.e., the unit(s) administering the program(s) through which work is performed); and
- Is staffed by New York State-licensed Professional Engineers, Registered Architects, or employees having appropriate construction and/or audit experience.

Each EAO is tasked with auditing the work performed and payment requests prior to the City issuing payment to the contractor. Full details of the auditing process are described in Directive 7 and include, but are not limited to:

- Performing field visits to ensure that the payment requests are justified and to evaluate the quality and progress of the work in question.
- Ensuring change orders are reasonable, consistent with both the contract and/or the change order terms, and adequately documented.
- Timing field visits to discover errors, flawed construction, and other problems before their detection would be precluded by subsequent activity. In general, field visits are expected

to occur at the completion of important work phases including that of major structural components, equipment installation, and substantial completion. (In the case of consultant or other related contracts, reviews would take place at the submission of schematics, preliminary drawings, or the submission of draft final reports.)

- Confirming required permits, licenses, and insurance was obtained prior to starting work.
- Monitoring for compliance with applicable labor laws.
- Performing spot checks for accuracy of prices, quantities, and calculations.
- Confirming the quality and minimum specifications of materials purchased.
- Determining if liquidated damages were necessary and, if so, confirming they were addressed pursuant to the contract terms.

If the City finds questionable, incomplete, or unsatisfactory work, it will withhold payment for the relevant work. Contractors will have the ability to appeal an agency's EAO ruling by submitting additional documentation and/or correct the deficiency. In certain circumstances, the City may need to procure a different contractor to satisfactorily complete the work scope.

Additionally, NYC Administrative Code § 6-132 requires that contractors and subcontractors with a City contract in excess of one hundred thousand dollars ($100,000) are required to post a notice, in a prominent and accessible place on any site where work pursuant to such contract or subcontract is performed, containing information about

- how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality, or corruption arising out of or in connection with such contract or subcontract, and
- the rights and remedies afforded to its employees under the Administrative Code for lawfully reporting allegations of fraud, false claims, criminality, etc.

In addition to the procedures identified above, property owners receiving CDBG-DR-funded construction assistance that are not satisfied with the quality of the work performed may file complaints with the agency administering the relevant program. The City will thoroughly investigate and respond to each complaint. If, after completing the complaint process, the property owner is still not satisfied with the work, the owner may pursue an appeal using the appeals process identified for the respective program.

Section 3 of the Housing and Urban Development Act of 1968

Section 3 of the Housing and Urban Development Act of 1968, as amended, requires that recipients of HUD assistance, including the City, its designated subrecipients, contractors, and subcontractors working on construction or construction-related projects provide, to the greatest extent feasible

- training and employment opportunities for low- and very low-income area residents, particularly residents of public housing and residents receiving subsidized housing assistance; and
- contract opportunities for the performance of work by local businesses owned by and/or employing low-income residents.

To comply with Section 3 and to meet the City's Section 3 goals, the City will ensure agencies receiving CDBG-DR funds for construction implement the following minimum procedures:

- Work with the City's Section 3 Coordinator to implement best practices during program design.
- Ensure Section 3 requirements are thoroughly covered and discussed in procurement documents and at pre-bid meetings.
- Incorporate Section 3 requirements into all covered contracts.
- Set selected contractors up for success by thoroughly discussing the City's expectations, explaining required Section 3 reports, etc.
- Connecting contractors with Section 3 residents, other low- and moderate-income applicants, and City Workforce Development programs as appropriate.
- Build the capacity of stakeholders, including subrecipients and contractors, to meet Section 3 standards through technical assistance, tools, and guidance.

Preparedness, Mitigation, and Resilience

Climate change is the city's biggest environmental threat. While New York City is a global leader in fighting the causes and impacts of climate change, in the wake of Ida, it is clear we must go even further. As rising greenhouse gas emissions accelerate climate change, New Yorkers should expect more frequent and extreme rainfall events that can produce volumes of stormwater the city's infrastructure was never designed to handle. Resilience is defined as a community's ability to minimize damage and recover quickly from extreme events and changing conditions, including natural hazard risks. The City is making important investments to improve resiliency including in the areas described below.

Emphasize High Quality Design, Durability, Energy Efficiency, Sustainability, and Mold Resistance

Flood resilient construction reduces potential damages from flooding and can lower flood insurance premiums. New buildings in the floodplain are required to meet flood resilient standards. Existing buildings can reduce their risk by retrofitting or rebuilding to meet these standards, or can take partial, short-term measures to address safety concerns.

City Capital projects must abide by the City's Climate Resiliency Design Guidelines, through which all new projects and substantial improvements will assess risks to climate hazards in the context of the project's purpose, asset type, site location, and funding, and then determine the appropriate resilient design strategies. Implementing the Guidelines will result in more resilient City facilities that will protect the City's public investments into the future.

Support Adoption and Enforcement of Modern and Resilient Building Codes and Make Land Use Decisions to Reduce Future Natural Hazard Risks

The City's Building Code contains rigorous flood resilient design requirements within the coastal floodplain, but not in inland areas. The City will identify building and zoning code strategies that promote flood resilience in upland locations subject to increasing stormwater floods and continue to improve regulations governing coastal flood risk. Proposed actions might include:

- Requiring backwater valves;
- Requiring sump pump installation;

- Increasing mandatory permeable surface requirements;
- Integrating sea level rise into the City's building code; and
- Studying and suggesting ways to make basement apartments safer.

Establish and Support Recovery Efforts by Funding Feasible, Cost-Effective Measures That Will Make Communities More Resilient Against a Future Disaster

The City is (or may):

- Exploring the use of tax abatements to help low-income homeowners and small building owners cover costs related to making buildings more flood resistant.
- Pursuing multiple financing tools and incentives for retrofitting existing buildings to withstand future weather extremes.
- Continuing the integration of Bluebelts and wetlands to naturally handle precipitation, provide open green space for their communities, and foster diverse habitat for wildlife.
- Expanding stream daylighting, which is a process by which buried rivers and sewers are uncovered and routed above ground again. Through this process, bodies of water that currently drain into city sewers are re-routed into safer water collection areas.
- Expanding the City's "cloudburst" infrastructure network.

Increase Awareness of the Hazards in the City

The most impactful, immediate step we can take is making sure New Yorkers understand our new reality. As we have seen with blizzards, City actions can impact residents' behavior by encouraging more New Yorkers to stay off the roads, prepare their homes, and evacuate as needed. Through this Action Plan, the City is demonstrating its commitment to preparing people, especially in vulnerable areas, before storms arrive. This will mean earlier warnings, encouraging residents to sign up for warnings in foreign languages, more evacuations when necessary and appropriate, and improving citywide models of combined flood risk.

Additionally, the City will work with partners at FEMA, New York State, and the Center for New York City Neighborhoods (CNYCN) to enhance the flood insurance outreach campaign, FloodHelpNY.org. This site is a resource for flood insurance and flood risk mitigation strategies customized for owners and renters in 1-4 family buildings. The City will make a concerted effort to reach out to property owners in inland areas that have not historically flooded.

Promote Sound, Sustainable Long-Term Recovery Planning Informed by a Post-Disaster Evaluation of Natural Hazard Risks

The City will undertake numerous planning efforts including, but not limited to, the following:

- Creating a database of subgrade spaces, including those that may be used as basement apartments, so that the City can quickly and proactively alert property owners and tenants of potential flood risk.
- Expanding the City's network of street flooding sensors designed to better understand the frequency, severity, and impact of flooding in New York City.
- Exploring methods for improving the City's post-disaster response, canvassing, and housing recovery efforts.
- Investigating the impact of climate hazards on public facilities such as libraries, senior centers, recreation centers, etc. The City will analyze and develop recommendations about how critical assets and programs can be upgraded, repaired, and made more resilient.

Broadband Infrastructure in Housing

The City recognizes access to the internet is essential for full participation in our city and economy and is committed to closing this digital divide for City residents. The HUD Notice requires that CDBG-DR-funded assistance for the substantial rehabilitation, reconstruction, or new construction of a building with more than four rental units must include the installation of broadband infrastructure, except if the City documents that:

- The location of the new construction or substantial rehabilitation makes the installation of broadband infrastructure infeasible,
- The cost of installing broadband infrastructure would result in a fundamental alteration in the nature of its program or activity, or in an undue financial burden, or
- The structure of the housing to be substantially rehabilitated makes the installation of broadband infrastructure infeasible.

The City will follow the requirements of the HUD Notice where applicable. In cases where the requirement is not triggered, the City will review all residential construction projects for broadband access and may consider installing infrastructure where feasible and reasonable.

Cost-Effectiveness

The City's policies and procedures will incorporate an assessment of the cost-effectiveness of each program or activity funded with CDBG-DR funds. Policies and procedures also will establish the criteria for determining when the cost of the rehabilitation or reconstruction of the property will not be cost-effective relative to other means of assisting the property owner.

For infrastructure projects, the City will also consider the following:

- What the risks and estimated damages would be to the neighboring residents, surrounding properties, etc. if the project were not implemented;
- Whether the project would be rendered obsolete by a longer-term project currently in the City's pipeline;
- How effective the City anticipates the project will be at addressing the problem its intended to alleviate; and
- The cost of future maintenance needs necessary to maintain the project's useful life.

Duplication of Benefits

Background

It is common for multiple sources of funds to be used to address disaster recovery needs. The Robert T. Stafford Disaster Relief and Emergency Assistance Act requires that any federal "program providing financial assistance to persons, business concerns, or other entities suffering losses as a result of a major disaster or emergency, shall assure that no such person, business concern, or other entity will receive such assistance with respect to any part of such loss as to which he has received financial assistance under any other program or from insurance or any other source" (42 U.S.C. 5155(a)). As a federal disaster assistance program, CDBG-DR grantees must ensure that CDBG-DR funds are used to supplement insurance and other forms of disaster assistance, not to supplant or duplicate other assistance.

A duplication of benefit (DOB) occurs when a beneficiary receives assistance from multiple sources for a cumulative amount that exceeds the total need for a particular recovery purpose (for example, a property owner receives $325,000 to reconstruct a property that only costs $300,000 to reconstruct). When a DOB occurs, the recipient of the duplicative assistance is required to return the funds to the appropriate program.

As the CDBG-DR grantee, the City must ensure that CDBG-DR assistance to disaster victims does not duplicate benefits available to that person for the same purpose from another source. Accordingly, for each applicant/recipient of CDBG-DR assistance, the City must perform a DOB analysis to confirm that no other funds are available to meet the need for which the CDBG-DR funds will be provided.

DOB Analysis

Each program will adopt a method of performing a DOB analysis appropriate to the specific program. A general framework is provided below:

1. Assess the applicant's total need.
2. Identify all sources of provided assistance, including funding amounts and intended purposes. When identifying sources, the City must also identify reasonably anticipated assistance, such as insurance proceeds that have not yet been received *or that have not been claimed*. When performing the DOB analysis, the City must consider funding the applicant could have received by acting in a reasonable manner. In other words, the City will count towards the assistance provided funds the applicant would have been entitled to but opted not to apply for.
3. Determine which assistance is not duplicative of the CDBG-DR award and exclude it from the benefit calculation. Non-duplicative assistance includes:
    a. Funds awarded for a different purpose or for a general, non-specific purpose.
    b. Funds for the same purpose, but different eligible use.
    c. Funds not available to the applicant.
    d. Private (non-governmental) loans, which includes loans that are made by a commercial lending facility, etc. Since private loans are not provided under a governmental program, they do not need to be considered as potentially duplicative assistance.
    e. Other assets or lines of credit. This includes, but is not limited to, checking or savings accounts, stocks, bonds, mutual funds, pension or retirement benefits, credit cards, mortgages or lines of credit, and life insurance. (However, such assets may be considered when determining whether to award a grant to an applicant if prioritizing awards based on income/need.)
4. Determine the unmet need that is eligible for CDBG-DR assistance.
5. Calculate the CDBG-DR award by deducting all duplicative assistance from the total unmet need.

Once the level of CDBG-DR assistance has been determined and the City provides the award, the City must ensure the funds were used only for the purposes for which they were provided. For example, if

the City awards a grant or loan to rehabilitate a property, the City must monitor expenditure of the funds to ensure they were used strictly for that purpose.

The City recognizes that disaster recovery assistance needs are calculated at a point in time, and that a subsequent change in an applicant's circumstances can affect that applicant's remaining unmet need. Such changes in circumstance include subsequent disasters, vandalism or theft of materials, contractor fraud, an increase in the cost of materials and/labor, and changes in local zoning laws or building codes. If such circumstances occur after the CDBG-DR assistance has been calculated or awarded, an applicant or awardee can submit a request for additional funding within program maximum assistance limits. If the applicant can demonstrate a change in circumstances, the City will consider reevaluating the award calculation, contingent upon funding availability, the number of outstanding applications, etc.

The City agency administering the program through which the applicant is served will perform the initial DOB analysis using the best reasonably available data from FEMA, SBA, the National Flood Insurance Program, insurers, etc. Applicants will be required to provide additional information necessary to conduct this review.

In the event the City uncovers a DOB, the City will either withhold the value of the duplication from future payment requests, or the applicant will be required to repay the funds to the City. Such a payment would be considered CDBG-DR program income and would be returned to the CDBG-DR program.

4. Proposed Use of Funds

Overview

As described throughout this document, the City of New York consulted with various parties to ensure the City's planned uses of funds are responsive to identified needs and consistent with other recovery efforts. Within the eligibility criteria of the grant, the City has prioritized the use of CDBG-DR funds for programs intended to benefit the City's most vulnerable populations and to mitigate loss of life and property in the future.

The CDBG-DR grant for Ida recovery is subject to various spending thresholds and caps as described below.

- At least $150,378,400 must primarily benefit the HUD-identified most impacted and distressed (MID) areas of the Bronx, Brooklyn, Queens, and Staten Island.
- At least $131,581,100 must benefit low- and moderate-income (LMI) persons or areas.
- At least $24,518,000 must be spent on mitigation activities that "increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters."
- No more than $28,195,950 may be used for public services activities.
- No more than $28,195,950 may be used for planning activities.
- No more than $9,398,650 can be spent on administrative activities.

These caps are not mutually exclusive as a single project can meet multiple criteria. For example, the Resiliency Improvements in Single-Family Housing program described in this section is expected to benefit the MID areas, low- and moderate-income homeowners, and make properties more resilient to future disasters.

The programs proposed for funding include activities related to housing, infrastructure, economic revitalization, public services, planning, and grant administration. Funded activities include:

- Financial counseling and flood insurance assistance for small homeowners and renters;
- Restoring public housing developments and creating more resilient properties;
- Subsidizing resiliency improvements in single-family housing, including the installation of backwater valves where warranted to reduce the likelihood of raw sewage backups;
- Adding resilient community spaces in affordable housing;
- Increasing local commercial districts' capacity to respond to disasters;
- Expanding the city's green infrastructure network;
- Conducting outreach and increasing awareness of hazards, with a particular focus on vulnerable communities; and
- Planning for recovery and resiliency.

Program Budget

Programs	Allocation	Expected Benefit to Low- and Moderate-Income Persons	Expected Benefit to MID Areas
Housing	*123,200,000*	*110,460,000*	*117,495,239*
Flood Insurance and Financial Counseling	1,000,000	510,000	800,000
Public Housing Restoration and Resiliency Program	88,200,000	88,200,000	87,695,239
Resiliency Improvements in Single-Family Housing	25,000,000	12,750,000	20,000,000
Resilient Community Spaces in Affordable Housing	9,000,000	9,000,000	9,000,000
Infrastructure			
Green Infrastructure Expansion	30,000,000	30,000,000	30,000,000
Economic Recovery			
Capacity Building for Emergency Response in Local Commercial Districts	450,000	229,500	360,000
Public Services			
Elevated Hazard Awareness and Community Outreach	6,716,000	3,814,850	4,862,000
Planning			
Planning for Recovery and Resiliency	20,369,000	N/A	5,348,812
Total Non-Administrative Programs	*180,735,000*	*144,504,350* 80%	*158,066,051* 87%
Administration			
CDBG-DR Administration	7,238,000	5,787,050	6,330,163
Total	**187,973,000**	**150,291,400**	**164,396,214**

Connection to Unmet Need

The City's impact and needs assessment identified six areas of need that could be addressed with CDBG-DR funds. These areas include:

- Protecting the structures and occupants of single-family homes and basement apartments;
- Preventing sewer backups in private homes;
- Restoring and upgrading public housing;
- Ensuring City residents, including those with limited English proficiency, are aware of potential hazards and how to protect themselves and their properties;
- Expanding green infrastructure to capture stormwater, protect properties, and make the city more resilient to future disasters; and

- Gathering data and factoring resiliency and mitigation considerations into planning efforts.

Each program entry in this section explains in detail how the proposed programs address the specific needs listed above.

Leveraging Funds

As previously outlined, CDBG-DR funds are intended be utilized to address unmet needs that remain after other eligible sources of funds have been used. By its very nature, the CDBG-DR program is well-suited to leverage other funding sources. To maximize the impact of the grant, and as part of the City's Duplication of Benefits review process, the City will continue to identify additional sources of assistance. Specific sources include, but are not limited to, the following:

- FEMA Individual Assistance
- FEMA Public Assistance and 406 Mitigation
- FEMA Hazard Mitigation Grant Program
- FEMA Increased Cost of Compliance Program
- FEMA Building Resilient Infrastructure and Communities Program
- FEMA Flood Mitigation Assistance Program
- Small Business Assistance Disaster Loan
- New York City Tax Levy
- New York City Capital Funds
- Community Development Block Grant Entitlement Funds
- Community Development Block Grant – Disaster Recovery Hurricane Sandy Allocation
- Community Development Block Grant - National Disaster Resilience (NDR)
- Infrastructure Investment and Jobs Act

Program Partners

The New York City Mayor's Office of Management and Budget (OMB) is the lead agency and Responsible Entity for the City's Community Development Block Grant programs, both Entitlement and Disaster Recovery. However, implementing the programs proposed in this plan will be a coordinated effort among numerous City agencies, contractors, and, in some cases, subrecipients. Based on information known at this time, the City has identified in each program entry which agency partners and subrecipients are expected to be involved in the respective program.

OMB will execute agreements with all subrecipients. In addition to evaluating the capacity of each organization to carry out their scope of work, the City will provide technical assistance and training to ensure the successful implementation of the program(s) through closeout.

Distribution of Funds

The programs identified in this Action Plan are not entitlement programs and are subject to available funding. Additionally, programs will operate on a reimbursement, rather than advance, basis. Funds will not be provided directly to beneficiaries. For example, if CDBG-DR funds are used for rehabilitation in private housing, the City will directly pay the vendor performing the work.

Further details on how funds will be distributed and awarded can be found in each program entry.

Program Income

Certain activities funded with CDBG-DR have the potential to generate program income (PI), which is income that is directly generated from the use of CDBG-DR funds. The City does not anticipate generating any PI through the activities proposed in this Action Plan. However, the City will establish and follow policies and procedures to properly record and use any PI generated in compliance with the CDBG regulations at 24 CFR § 570.504 and Section III.E.1.a. of the HUD Notice.

The HUD Notice allows grantees to choose whether PI generated by the use of CDBG-DR funds will be returned to the CDBG-DR program or to the City's CDBG Entitlement program. For the time being, any PI generated with grant funds will continue to be used for disaster recovery-related purposes. The City may identify changes to this policy during a future Action Plan amendment.

Resale or Recapture

The HUD Notice requires grantees to establish resale and recapture provisions for certain activities, such as those involving new construction of housing for low- and moderate-income households. At this time, the City does not expect to fund any activities for which such resale and recapture provisions would be appropriate. If the City were to establish such rules, this would constitute a substantial Action Plan amendment for which a 30-day public comment period would be announced.

Environmental Review

The City will meet the applicable environmental review requirements before using or committing funds for each activity.

NYCOMB is the Responsible Entity for CDBG-DR funds. NYCOMB will prepare, or assist partners with preparing, environmental reviews under 24 CFR Part 58 and, where applicable, complete the Request for Release of Funds and certification process. The City may only obligate and draw down funds from the line of credit for an activity after environmental review obligations have been completed. The City's CDBG-DR website will make environmental reviews available for public comment, where applicable, and will host archived reviews for all programs.

Monitoring

The City, through the CDBG-DR Administration program and the required Internal Audit function, will conduct routine monitoring of funded agencies, subrecipients, and contractors to ensure compliance with applicable requirements. The direct and indirect objectives of the City's monitoring activities are:

- To ensure that programs are carried out in accordance with all applicable City, State, and Federal requirements, particularly the CDBG regulations and HUD Federal Register notices;
- To prevent and/or identify instances of waste, fraud, or mismanagement of funds;
- To ensure the entity administering the program has sufficient capacity to do so in an effective, efficient, and timely manner;
- To identify areas for technical assistance;
- To identify best practices that can be duplicated in other programs; and

- To assess NYCOMB's own effectiveness in meeting the needs of entities administering funded programs.

The City's CD monitorings will include, but are not limited to, reviewing compliance within the areas identified below.

- National Objective and Eligibility
- Financial Management
- Procurement
- Labor Standards
- Civil Rights, Accessibility, and Section 504 Compliance
- Duplication of Benefits
- Subrecipient Management & Oversight
- Environmental Review
- Real Property Requirements
- Relocation and Displacement
- Program Performance and Timeliness
- Program Income
- File Management
- Equipment Management

Program Details

Housing

Flood Insurance & Financial Counseling

Program Partners

- NYC Department of Housing Preservation and Development (HPD)
- Mayor's Office of Climate & Environmental Justice (MOCEJ)
- Subrecipient: Center for New York City Neighborhoods (CNYCN)

Eligibility Category	National Objective
Public Services: Housing Counseling	Limited Clientele: Income Survey

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$1,000,000	$800,000	$0	$510,000

Program Description

Many homes that suffered damaged during PTC Ida were not in flood zones and therefore homeowners were not required to hold flood insurance. Meanwhile, homeowners with financial resources are better suited to recover on their own and not need as much assistance from the City, state, and federal governments after a storm.

Through the Flood Insurance & Financial Counseling Program, the City will expand its flood insurance marketing campaign and offer in-home engineering inspections, elevation certificates, and financial counseling sessions for property owners in neighborhoods at-risk from flooding. CDBG-DR funds may be used to pay for inspections, counseling, marketing materials, and program administration.

This program, through increased enrollment in flood insurance, would benefit homeowners by better preparing them to recover from a flood, both through the provision of financial assistance and by offering peace of mind, and potentially lowering their flood insurance premiums. The program would also reduce future recovery costs incurred by governmental entities.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

PTC Ida highlighted the lack of flood insurance held by homeowners as an unmet need. This is particularly true in inland areas of the outer boroughs, where there are many 1-4 family homes at increasing risk of flooding due to climate change.

Benefit to Most Impacted and Distressed Areas

The City expects this program will primarily benefit owners of single-family homes. Based on where these properties are located, the City estimates most beneficiaries (approximately 80%) will be located in the MID areas. Additionally, the City will prioritize assistance for property owners at risk from both coastal flooding and from extreme rain events. The City's recently released Stormwater Flood Maps may be used to determine target areas.

Eligibility Criteria and Maximum Assistance

The program will provide varying levels of assistance to homeowners of any income level, but at least 51.0% of beneficiaries must be from LMI households. The program will offer in-kind assistance to beneficiaries; thus, no maximum assistance cap is warranted.

Method of Distribution

This program will be administered by HPD and MOCEJ. CDBG-DR funds will reimburse the subrecipient, Center for New York City Neighborhoods, for the services it provides.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	December 31, 2025

Proposed Accomplishments

The City expects this program will assist 175-225 homeowners over the life of the program.

Public Housing Restoration and Resiliency Program

Program Partners

- NYC Department of Housing Preservation and Development (HPD)
- Subrecipient: New York City Housing Authority (NYCHA)

Eligibility Category	National Objective
Public Housing Modernization	Low- and Moderate-Income Housing

Initiative	Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
Elevator Resiliency Improvements	$2,000,000	$1,523,810	$2,000,000	$2,000,000
Flood Door Installation	$200,000	$171,429	$200,000	$200,000
NYCHA Significantly Damaged Developments (SDD)	$86,000,000	$86,000,000	$71,387,276	$86,000,000
FEMA Match	*$30,483,617*	*$30,483,617*	*$15,870,893*	*$30,483,617*
Mitigation	*$55,516,383*	*$55,516,383*	*$55,516,383*	*$55,516,383*
Total	**$88,200,000**	**$87,695,239**	**$73,587,276**	**$88,200,000**

Program Description

Through the Public Housing Restoration and Resiliency Program, the City will use CDBG-DR funds for three projects that will benefit current and future NYCHA residents. Each project will benefit different geographic areas, though all will benefit NYCHA properties.

Elevator Resiliency Improvements

During the summer months, periods of excessive heat and heavier load on the electrical grid cause frequent dips in voltage, which can lead to power outages. NYCHA residents can lose access to elevator service when these outages occur, endangering the most vulnerable residents such as senior citizens and those with limited mobility. NYCHA will use CDBG-DR funds to install Alternating Voltage Regulators (AVR), which regulate low voltage conditions to acceptable elevator operating levels. With the addition of AVRs, power outages and possible damage to equipment and electrical systems will be avoided, furthering safe housing for vulnerable populations.

Flood Door Installation

Significant rainfall – 1 inch of rain or more per hour – can lead to flooding in sub-grade boiler rooms and damage to heating infrastructure at NYCHA developments. This damage can cause loss of heat and hot water for residents. NYCHA has identified seven developments in areas susceptible to aerial flooding where it will install exterior flood doors at boiler room entry points. By reducing this risk, NYCHA can ensure their residents' access to basic amenities is not jeopardized.

NYCHA Significantly Damaged Developments

Over 200 NYCHA buildings were impacted by Ida, but 12 developments suffered particularly significant damage. The City proposes to use CDBG-DR funds to cover the following costs:

- Preliminary estimates suggest restoration work at these 12 developments alone will cost approximately $156 million, with another $158 million in mitigation work. The City expects the FEMA Public Assistance (PA) program and flood insurance proceeds to cover the bulk

of these costs, but NYCHA will be expected to cover approximately 10%, about $30.5 million. New York State *may* cover a portion of NYCHA's share, but that has yet to be confirmed. CDBG-DR funds would be used to cover only the unmet need portion of NYCHA's cost share not covered by another funding source.

- In addition to restoration and FEMA-approved mitigation work, NYCHA has also identified over $100 million in mitigation projects that would increase resilience to disasters at these 12 developments. CDBG-DR funds would cover additional mitigation work not included in FEMA-approved scope. For example, NYCHA would leverage FEMA funding related to replacing storm-damaged plumbing and heating systems by using CDBG-DR funds to replace plumbing risers that distribute water, steam, or gas throughout the building.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

- The Elevator Resiliency Improvements initiative qualifies as standalone mitigation as it will increase resilience to extreme heat, which the City has identified as a significant risk in its Hazard Mitigation Plan.
- The Flood Door Installation activity primarily qualifies as stand-alone mitigation as it will increase resilience to future flooding events.
- The Severely Damaged Developments initiative will solely benefit the 12 developments most impacted by Ida. Approximately $14.6 million will be used for restoration work, while the remainder (approximately $71.4 million) will be used to make the properties more resilient to future disasters. Please note, CDBG-DR funds will only be used if FEMA 406 Mitigation funds are exhausted and/or unavailable, and all funding will be subject to the City's Duplication of Benefits review process.

Benefit to Most Impacted and Distressed Areas

Approximately 99% of the program allocation will be used to benefit the MID areas.

Site	Borough
Elevator Resiliency Improvements	
Bronx River Addition**	Bronx
Claremont Parkway-Franklin Ave**	Bronx
College Ave-East 165th Street	Bronx
Davidson	Bronx
East 152nd Street-Courtlandt Ave**	Bronx
Glebe Ave-Westchester Ave**	Bronx
Middletown Plaza**	Bronx
Mitchel**	Bronx
Morrisania Air Rights**	Bronx
Randall Ave-Balcom Avenue**	Bronx
Twin Parks East (Site 9)**	Bronx
Union Ave-East 163rd Street**	Bronx
W. Tremont Ave-Sedgwick Ave	Bronx
Borinquen Plaza I**	Brooklyn
Garvey (Group A)**	Brooklyn
Haber**	Brooklyn
Kingsborough Extension**	Brooklyn

Site	Borough
Reid Apartments**	Brooklyn
Roosevelt I	Brooklyn
Stuyvesant Gardens II**	Brooklyn
Surfside Gardens	Brooklyn
Van Dyke II**	Brooklyn
Vandalia Avenue**	Brooklyn
Woodson**	Brooklyn
Baruch Houses Addition	Manhattan
Bethune Gardens	Manhattan
Brown	Manhattan
Chelsea Addition	Manhattan
Corsi Houses**	Manhattan
Harborview Terrace**	Manhattan
LaGuardia Addition**	Manhattan
LES I Infill	Manhattan
Marshall Plaza**	Manhattan
Meltzer Tower**	Manhattan
Morris Park*	Manhattan
Robbins Plaza**	Manhattan
Thomas Apartments**	Manhattan
UPACA 5	Manhattan
UPACA 6	Manhattan
White**	Manhattan
Conlon Lihfe Towers**	Queens
International Tower**	Queens
Leavitt Street-34th Avenue	Queens
Shelton House**	Queens
Cassidy-Lafayette**	Staten Island
New Lane Area**	Staten Island
Flood Door Installation	
Claremont Rehabs Group 2	Bronx
Sackwern	Bronx
Union Consolidated 822 East 167th Street	Bronx
Union Consolidated 839 Rev James Polite	Bronx
Union Consolidated 875 Rev James Polite	Bronx
Wyckoff Gardens**	Brooklyn
89 / 99 Avenue C (LES V)	Manhattan

Site	Borough
Severely Damaged Developments	
1471 Watson	Bronx
Bronx River Houses	Bronx
Butler	Bronx
Claremont Rehab 4	Bronx
McKinley	Bronx
Moore	Bronx
Sotomayor	Bronx
Webster	Bronx
Ingersoll	Brooklyn
Latimer**	Queens
Leavitt - 34th Avenue	Queens
Woodside**	Queens

*Senior Citizens Home
**Senior Center

Eligibility Criteria and Maximum Assistance

As a provider of housing for low-income renters, NYCHA and its developments are eligible for CDBG-DR funds. Maximum assistance for each site will be determined in part by future FEMA eligibility determinations and cost reasonableness determinations.

Method of Distribution

The City will reimburse NYCHA for expenses incurred for eligible projects. OMB and HPD will review reimbursement requests for eligibility, cost reasonableness, and compliance with applicable requirements.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	June 30, 2028

Proposed Accomplishments

Project	Number of Units Assisted	Number of Properties Assisted
Elevator Resiliency Improvements	12,453	46
Flood Door Installation	1,496	7
FEMA Public Assistance Cost Share & Mitigation	10,707	12

Resiliency Improvements in Single-Family Housing

Program Partners

- NYC Department of Housing Preservation and Development (HPD)

Eligibility Category	National Objective
Rehabilitation: Single- and Multi-Unit Residential	Low- and Moderate-Income Housing Urgent Need

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$25,000,000	$20,000,000	$25,000,000	$12,750,000

Program Description

The City proposes to operate a rehabilitation grant program that would provide resiliency improvements in single family (1-4 units) homes where the owner lives on-site. CDBG-DR funds will pay for the cost of the resiliency improvements, associated work required by federal regulations, and for staff to carry out the program.

The City is still working on program design for this activity. Accordingly, the information provided here is tentative and subject to change. Once exact benefits, criteria, etc. have been confirmed, the City will issue a substantial amendment and provide the public an opportunity to comment on the changes.

The program's potential work scope may include activities such as:

- Installing backwater valves and/or sump pumps;
- Elevating critical systems and equipment (e.g., furnace) above the floodplain;
- Energy efficiency improvements; and
- Enhancing the building envelope.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

This program is primarily focused on reducing or eliminating the negative impacts of future flood events. Accordingly, it is best described as standalone mitigation. However, although CDBG-DR funds will not be used to repair damage caused by the storm, the program is intended to reduce or eliminate similar damage to single-family housing that was experienced during PTC Ida.

Benefit to Most Impacted and Distressed Areas

At this time, the City has not determined whether properties in Manhattan will be eligible for assistance. However, based on where single-family housing is located throughout the City, particularly housing affordable to low- to middle-income households, the City estimates most beneficiaries (approximately 80%) will be located in the MID areas.

Eligibility Criteria and Maximum Assistance

The City anticipates assistance will be limited to homeowners whose incomes do not exceed 165% AMI. However, the program will prioritize LMI households (up to 80% AMI) to the extent possible, with at least 51% of the funds expected to benefit LMI households. Additionally, the City is contemplating other factors for prioritization such as seniors or household members with a qualifying disability as a means to promote safe housing for vulnerable populations.

Awards for resiliency work are capped at $200,000 per home and will factor for housing size and repair need.

Criteria to surpass maximum amount: CDBG-DR awards may go above the threshold when necessary to perform additional work related to:

- lead-based paint assessments and remediation,
- federal accessibility standards, and
- addressing code violations or other hazardous conditions identified during an inspection when necessary and reasonable.

Method of Distribution

Once criteria have been established and the substantial amendment process has been completed, the City will conduct an outreach and public notice campaign. The initial application period will be open for six (6) months with pools of applicants considered in two-month tranches. The application process may be reopened at the discretion of the City.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	June 30, 2028

Proposed Accomplishments

The City expects the program will benefit between 100 and 150 households over the life of the program.

Resilient Community Spaces in Affordable Housing

Program Partners

- NYC Department of Housing Preservation and Development (HPD)

Eligibility Category	National Objective
Public Facilities & Improvements: Other	Limited Clientele: Presumed Benefit Low- and Moderate-Income Area

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$9,000,000	$9,000,000	$9,000,000	$9,000,000

Program Description

Two low-income senior housing properties will be selected to serve as Net Positive Community Resiliency Hubs. The hubs will provide safe refuge to residents and communities during emergencies and assist in response and recovery by supporting the City's emergency operations and outreach activities, as well as mitigation.

The selected properties, which are part of the Senior Affordable Rental Apartments (SARA) program, will be located in low- and moderate-income neighborhoods that are subject to current and future flood risk. SARA projects contain highly vulnerable populations and often people with limited mobility. These buildings are natural loci of expanded community benefit because they contain both community space and social services.

Buildings will be built to higher efficiency and resiliency standards (e.g., incorporating green roofs and/or other green infrastructure such as water retention plazas and planted community spaces). While exact interventions would be tailored to each project, funds would cover design, construction, and enhanced resiliency measures.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

Assisted sites will provide access to meet unmet preparedness, response, and recovery needs in communities subject to flooding. During Ida, several of the City's hurricane evacuation sites were flooded themselves due to the inland nature of the flooding. In addition to ensuring the safety of building residents, sites could be used as evacuation centers for potential non-coastal flooding events.

Benefit to Most Impacted and Distressed Areas

HPD has not yet selected the two sites that will receive funding. However, sites under consideration are located in the Bronx, Brooklyn, and Queens. Projects will provide multiple benefits to residents and the surrounding communities across all phases of a disaster lifecycle, including flood mitigation, safe refuge, and space for response and recovery activities.

When sites have been selected, the City will issue a substantial amendment subject to a 30-day public comment period.

Eligibility Criteria and Maximum Assistance

SARA buildings in LMI neighborhoods. Assistance is expected to be $4.5 million per site.

Method of Distribution

HPD will administer this program. City staff administering the activity will be paid with CDBG-DR funds. Contractors will be reimbursed as work on this program is performed.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	December 31, 2028

Proposed Accomplishments

The program outcome will be two community resiliency hubs in vulnerable LMI neighborhoods. The exact number of beneficiaries will be determined once the sites are selected and will be based on the number of residents of the buildings and the population of the neighborhoods.

Infrastructure

Green Infrastructure Expansion

Program Partners

- NYC Department of Environmental Protection (DEP)
- NYC Department of Parks and Recreation (Parks)
- Subrecipient: New York City Housing Authority (NYCHA)

Eligibility Category	National Objective
Public Facilities & Improvements: Flood Drainage Improvements	Low- and Moderate-Income Housing Low- and Moderate-Income Areas

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$30,000,000	$30,000,000	$30,000,000	$30,000,000

Program Description

Green Infrastructure (GI) describes an array of practices that use or mimic natural systems to manage stormwater runoff. GI systems collect stormwater from streets, sidewalks, and other hard surfaces before it can enter the sewer system or cause local flooding. By reducing the amount of stormwater that flows into the sewers, GI helps prevent sewer overflows and backups and improves the health of local waterways.

In New York City, green infrastructure takes many shapes and forms including but not limited to:

- **Rain gardens** are planted areas in the sidewalk that are designed to collect and manage stormwater. Rain gardens are vegetated or landscaped depressions designed to promote infiltration of stormwater runoff into the underlying soil.
- **Stormwater green streets**, like rain gardens, are planted areas designed to collect and manage stormwater. However, green streets are typically constructed in the roadway, are usually larger than rain gardens, and have varying lengths, widths, and soil depths based on the characteristics of the existing roadway.
- **Infiltration basins** are designed to store rainwater beneath a surface that closely mimics its surroundings, like grass or concrete. They are similar in functionality to rain gardens in that they capture stormwater, yet they maintain the look and feel of the existing sidewalk. Basins hold the water so that it can be collected and released into the surrounding ground at a slower rate.
- **Green roofs** are made of a top vegetative layer that grows in an engineered soil, which sits on a drainage layer. A green roof can be intensive, with thicker soils that support a wide variety of plants, or extensive, covered in only a light layer of soil and minimal vegetation.
- **Blue roofs** are designed without vegetation solely to detain stormwater. Weirs at the roof drain inlets create temporary ponding and gradually release stormwater.
- **Subsurface detention systems** with infiltration capability provide temporary storage of stormwater runoff underground. These systems have an open-bottom and can incorporate perforated pipe and stormwater chambers for added detention volume. Systems are primarily designed with a gravel bed that stores water until it can infiltrate into the ground.

- **Permeable paving** is a range of materials and techniques, such as permeable pavers or porous concrete, which allow water to seep in between the paving materials and be absorbed into the ground. Permeable paving can be used instead of traditional impermeable concrete or asphalt.
- **"Cloudburst projects"** employ a combination of GI and grey infrastructure to absorb, store, and transfer stormwater to minimize flooding from cloudburst events, which are sudden, heavy downpours in a short amount of time. Cloudburst projects may also feature special community amenities and open spaces for use by the public.

Through this program, the City proposes to use CDBG-DR funds to expand the City's GI network in areas impacted by PTC Ida. Softening the landscape and providing more stormwater storage will provide a first line of defense during large precipitation events and will allow the City's grey infrastructure (e.g., sewers and water treatment facilities) to operate more efficiently. Allocating CDBG-DR funds to this activity will allow the City to expand its GI network more quickly than anticipated, and to ensure that GI projects that will benefit low- and moderate-income areas or households will be prioritized.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

This program is primarily focused on reducing or eliminating the negative impacts of future flood events. Accordingly, it is best described as standalone mitigation. However, the City will prioritize Ida-impacted areas. Although funds will not be repairing damage caused by the storm, the program is intended to reduce the inland flooding and sewer backups seen during PTC Ida.

Benefit to Most Impacted and Distressed Areas

The City is still reviewing proposed projects to determine where CDBG-DR-funded GI projects will take place and what method will be used. However, the City will prioritize sites based on the following priorities:

- Projects in and around NYCHA developments;
- Projects that will benefit a low- and moderate-income area (e.g., GI projects at a local park that serves an LMI community); and
- Areas that saw significant flooding during PTC Ida.

Eligibility Criteria and Maximum Assistance

The City will use CDBG-DR funds for GI projects that provide a benefit to LMI persons, either through the Low/Mod Housing or Low/Mod Area national objective. Each GI project is expected to cost approximately $1 million per site, but actual assistance will be determined based on the particular needs of and what is cost effective for each site.

Method of Distribution

N/A – The program will be administered by City staff and NYCHA staff. Payments will be made to competitively bid contractors based upon work performed and costs incurred.

Please note the City may begin the environmental review process prior to the execution of the CDBG-DR grant agreement. The City intends to reimburse itself with CDBG-DR funds for eligible expenses once grant funds become available.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	December 31, 2028

Proposed Accomplishments

The City expects to complete 25-30 projects over the life of the CDBG-DR grant. The City will estimate the number of beneficiaries as sites are selected.

Economic Recovery

Capacity Building for Emergency Response in Local Commercial Districts

Program Partners

- NYC Department of Small Business Services (SBS)
- Subrecipients: To be determined

Eligibility Category	National Objective
Capacity Building for Nonprofit Organizations	Low- and Moderate-Income Area

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$450,000	$360,000	$0	$229,500

Program Description

After disasters, community-based development organizations (CBDOs) are often on the front lines, helping to coordinate emergency relief to impacted small businesses. With CDBG-DR funds, SBS will provide technical assistance to CBDOs to implement disaster preparedness measures to enhance organizations' abilities to effectively support economic recovery in their communities following disasters. Technical assistance may include business outreach plans, crises communication, post-disaster planning preparation, and best practices on engaging businesses for disaster preparation.

CBDOs also require additional support post-disaster as they are not only serving as a critical link between businesses and local emergency relief but recovering their own internal operations. As such, CBDOs will also receive assistance creating and implementing internal business continuity plans to ensure they can adequately respond to post-disaster community needs with reduced interruption to their operations.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

This program would mitigate the impacts of future disasters, suffering and hardship by ensuring CBDOs continue operations and provide aid, resources, and the status of emergency programs directly to the business community.

Benefit to Most Impacted and Distressed Areas

This proposed program would strengthen the emergency preparedness of CBDOs responsible for executing commercial revitalization activities benefitting low- to moderate-income communities in the Bronx, Brooklyn, Queens, and Staten Island.

SBS will target program participants who serve LMI areas facing substantial hazard risks as identified in New York City's Hazard Mitigation Plan including storm-related extreme weather, coastal flooding, and extreme heat.

Eligibility Criteria and Maximum Assistance

The expected maximum annual cost is $150,000 and the estimated annual benefit per community-based development organization (CBDO) is $5,000. At least 51% of CBDOs benefitting from the program must represent LMI areas in the city.

Method of Distribution

SBS will administer this program. The agency will bring on a capacity-building vendor as a competitively procured contractor or a subrecipient to provide services, and the provider will be reimbursed with CDBG-DR funds.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	December 31, 2025

Proposed Accomplishments

It is anticipated that 25-30 organizations will participate in workshops, individual consultations, and other engagements over the three-year program.

Public Services

Elevated Hazard Awareness and Community Outreach

PROGRAM PARTNERS

- New York City Emergency Management (NYCEM)

Eligibility Category	National Objective
Public Services: Other	Low- and Moderate-Income Area Urgent Need

Initiative	Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
NotifyNYC	$6,000,000	$4,488,000		$3,521,400
Immigration Outreach Specialist	$216,000			
Weather Monitoring	$500,000	$374,000	$500,000	$293,450
Total	**$6,716,000**	**$4,862,000**	**$500,000**	**$3,814,850**

PROGRAM DESCRIPTION

The below projects and associated staff will focus on critical gaps including; public awareness and access to public warning messaging; language access and availability of key services provided by the City; and the overall ability for the public to be prepared for weather events such as PTC Ida.

Notify NYC

Notify NYC is the City of New York's free emergency alert program, available in 12 languages in addition to English. Although the program has more than 1 million subscribers, very few are signed-up to receive alerts in languages other than English. To encourage more residents to sign up for the program in foreign languages, NYCEM will conduct outreach including, but not limited to, mailing multilingual Notify NYC promotional cards to all New Yorkers once/year for three years, increasing advertising in ethnic media, and development of new creative to support this outreach.

Immigration Outreach Specialist

NYCEM will hire an Immigration Outreach Specialist to provide outreach and education to people with limited English proficiency. Efforts will specifically focus on the risks of flooding, coastal storms, and the steps New Yorkers can take to be prepared. As immigrant communities were disproportionally affected both by Hurricanes Sandy and PTC Ida, this position will be crucial in making sure the most vulnerable communities in NYC are prepared for the next emergency. This position will work in concert with the city-wide mailing and other advertising efforts.

Weather Monitoring

In advance of and during extreme weather events, the City consults with the National Weather Service (NWS) multiple times per day. As a national service, though, NWS may be inundated with requests for guidance and information. In order to receive hazardous weather forecasts and guidance as early as possible and that are tailored to New York City, CDBG-DR funds will pay for a contract with an additional weather service. This "second opinion" will provide a new data set by which the City can more rapidly and accurately alert residents to storms and other alerts.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

Each project derives from an unmet need highlighted by Ida.

Benefit to Most Impacted and Distressed Areas

While all five boroughs will benefit from this program, two of the three projects are intended to benefit groups identified as most impacted by Ida: immigrants and people with limited English proficiency.

Eligibility Criteria and Maximum Assistance

N/A – The City is not offering direct grants/assistance through this program

Method of Distribution

NYCEM will administer this program. City staff will be paid with CDBG-DR funds through City payroll while contractors will be reimbursed as work on this program is performed.

Program Schedule

Estimated Start Date	Estimated End Date
January 1, 2023	December 31, 2028

Please note that services described under this program may begin prior to the execution of the CDBG-DR grant agreement. The City intends to reimburse itself with CDBG-DR funds for eligible expenses once grant funds become available. However, in no case will services begin prior to the completion of the required environmental review(s).

Proposed Accomplishments

The City's entire population, over 8 million people, will benefit from this activity.

Planning

Planning for Recovery and Resiliency

PROGRAM PARTNERS

- NYC Department of City Planning (DCP)
- NYC Department of Housing Preservation and Development (HPD)
- NYC Mayor's Office of Climate & Environmental Justice (MOCEJ)
- NYC Mayor's Office of Operations (Operations)
- NYC Office of Emergency Management (NYCEM)
- NYC Office of Technology and Innovation (OTI)
- Subrecipient: New York City Housing Authority (NYCHA)

Eligibility Category	National Objective
Planning	Not Applicable for Planning Activities

Initiative	Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
Resiliency in Basement Apartment Conversions	$400,000	$299,200	$400,000	N/A
Evacuation Modeling	$1,000,000			N/A
Geothermal Feasibility Study	$400,000		$400,000	N/A
Post-Disaster Housing Recovery Program Analysis	$1,069,000	$799,612	$1,069,000	N/A
3DUnderground Database	$10,000,000			N/A
Future and Real Time Impact Assessments	$1,000,000		$1,000,000	N/A
Canvassing Operations Study	$1,000,000			N/A
Disaster Recovery IT System	$1,500,000			N/A
Neighborhood Studies	$4,000,000	$4,000,000	$4,000,000	N/A
Total	**$20,369,000**	**$5,098,812**	**$6,869,000**	**N/A**

PROGRAM DESCRIPTION

Planning is a critical component of all recovery and resiliency efforts. The City has allocated CDBG-DR funds to a mix of planning activities related to the City's long-term goals:

- Preventing, minimizing, and responding to damage to residential properties;
- Identifying areas most susceptible to flooding;
- Better implementation of disaster recovery programs; and
- Incorporating resiliency into future City development.

Preventing, minimizing, and responding to damage to residential properties

Resiliency in Basement Apartment Conversions

The Basement Apartment Flood Mitigation Study will be an 18- to 24-month project to ensure future mitigation and conversion investments related to basement apartments are data-driven and efficient

based on current climate risks. The study will, among other tasks, examine the factors that contribute to subterranean flooding in 1-4 family homes (e.g., extreme rainfall, topography, impermeable surfaces, insufficient drainage networks).

CDBG-DR funds will be used to conduct surveys, collect data, and analyze stormwater flood maps to identify areas suitable for a future basement legalization program. Additionally, the initiative will develop recommendations and, where applicable, provide preliminary designs for a range of flood hazard mitigation solutions that include, for example, short- and long-term design solutions for homes and safety scope items to mitigate risk to life and safety.

Importantly, this study will also aim to provide cost estimates for recommended flood hazard mitigation methods and identify potential resources for homeowners to help them finance resiliency measures including both public and private incentives, grants, or loan products.

Evacuation Modeling

One of the main lessons learned from PTC Ida is that, in the lead up to extreme storms, the City must be able to quickly implement evacuation strategies, with a particular focus on vulnerable populations such as those residing in basement apartments and people with limited proficiency in English. To address this need, NYCEM will conduct an evacuation modeling study to improve the City's ability to plan for and carry out emergency operations for vulnerable New Yorkers. This effort would include an evaluation of existing planning assumptions, current emergency plans, and lessons learned from relevant events. Deliverables will focus on a behavioral analysis of populations with access and functional needs, including those living in basement apartments, and modes of evacuation during flood events. Modeling different scenarios will inform modifications to planning assumptions for the City's operational emergency plans.

Geothermal Feasibility Study

The Geothermal Feasibility Study will address an unmet need for mitigation at eight NYCHA developments. NYCHA is evaluating locations for a demonstration project that would connect multiple buildings to a single geothermal heat pump system, creating a "district" that relies on shared heat pump infrastructure to maximize environmental benefits. The study would evaluate innovative technology that could reduce strain on existing infrastructure, making NYCHA properties less susceptible to failure of critical utilities.

This project will target eight NYCHA Developments, five of which are in Most Impacted and Distressed Areas:

- *Bronx*: East 173rd Street-Vyse Avenue, Stebbins Avenue-Hewitt Place, and Union Avenue-East 166th Street
- *Brooklyn*: Howard Avenue-Park Place
- *Manhattan*: King Towers, Lower East Side II, and Wagner
- *Staten Island:* Stapleton

Post-Disaster Housing Recovery Program Analysis

NYCEM will use CDBG-DR funds to evaluate post-disaster housing operations and funding following a range of different disaster events at different scales. The study will conduct research on disaster recovery programs implemented for housing repair (for 1-4 family units and multi-family), including temporary and permanent housing solutions following different disasters and outcomes/solutions

implemented. Part of this analysis would include working with stakeholders from City agencies and non-profit organizations on current housing recovery capabilities. Finally, the initiative will result in a housing recovery playbook (standard operating procedure) to operationalize the accepted recommendations from the summary report to be integrated into the City's larger Coastal Storm Plan.

Identifying areas most susceptible to flooding

3DUnderground Database

The Office of Operations will use CDBG-DR funds to create a highly secure, 3D data sharing platform for the underground built and natural environment. The study will involve standardizing and centralizing infrastructure asset data and digitizing soil boring records. Upon completion of the project, the City would have critical data necessary to:

- Conduct proactive analysis of critical infrastructure systems and stormwater modeling to predict where a flooding event is most likely to damage critical infrastructure;
- Improve its reactive emergency response capacities; and
- Better manage the City's assets and improve capital project scoping and delivery by knowing in advance where projects have the potential to disrupt underground utilities.

Future and Real Time Impact Assessments

This project will develop a customized, NYC-specific forecast tool and dataset that incorporates publicly available and private weather station/sensor data. The intent of this project is to better track predicted and real-time flood events including both the extent of flooding throughout the city and depth of flooding in individual locations. Data would be monitored leading up to, during, and after severe weather events. This would include live-updating maps that can overlay with critical infrastructure and impacted areas. Once the tool is developed and validated, the City would use this information during flood events to better direct emergency response such as deploying emergency resources and messaging. Post-cast data would also be available to immediately determine where flooding has occurred to better prioritize recovery operations including, but not limited to, debris removal, distribution of water pumps, towing damaged vehicles, building inspectors, canvassers, etc.

Better implementation of disaster recovery programs

Canvassing Operations Study

There is no substitute for local, community-based outreach when preparing for and recovering from disasters. Following storms such as PTC Ida, the City canvasses areas to assess the needs of affected communities and connect them with recovery resources. These are critical operations to make sure that the most underserved communities receive services and are able to begin recovery efforts immediately, leading to a quicker recovery overall. The City will use CDBG-DR funds to

- Review existing canvassing plans and capabilities;
- Create a citywide operational canvassing plan that leverages agency knowledge and capabilities to unify existing resources within known City, state, and federal agencies;
- Evaluate existing and develop new data collection and management tools that streamline information coordination and create universal metrics and key indicators; and
- Develop and present training and conduct exercises in support of this new plan.

Disaster Recovery IT System

This project will create and implement a Disaster Recovery Information Technology (IT) System to be used citywide by multiple agencies. The goal of this project will be to use lessons learned from past disasters to upgrade City IT systems to track information such as post-disaster assistance and benefits, disaster response, construction management, and disaster grant management.

CDBG-DR funds will pay for City staff and/or contractors to develop a system that integrates data between City agencies and houses all necessary documentation required for an audit, federal monitoring, etc. This system would be rapidly deployable in small disasters but also be scalable after a larger disaster such as Ida.

Incorporating resiliency into future City development

Neighborhood Studies

The City will conduct area-wide planning studies that will focus on identifying resiliency opportunities for stormwater collection, mobility, and other public improvements, in addition to examining underlying vulnerabilities at the neighborhood level.

Studies will analyze existing conditions and yield holistic plans for capital investments, the adoption of climate adaptation plans, and land use changes in target areas. Land use changes may include plans to retrofit buildings, to facilitate new resilient development, and/or to create accessible open space, community facilities, and transportation improvements, as examples.

Studies will target areas where stormwater or other storm-related conditions are expected to worsen due to climate change if preventative measures are not identified and put into place. Many of these areas have high population densities and see regular flooding from storms, which impact streets, businesses, community facilities, religious facilities, and homes. The project sets out to holistically address ongoing issues faced by these communities, such as poor-quality housing, recurrent flooding, and limited access to retail, services, and jobs.

Tieback to Disaster/Unmet Needs or Qualification as Standalone Mitigation

The speed with which PTC Ida hit the City revealed several areas where increased planning efforts are sorely needed including:

- Determining which properties have sub-grade space, including illegal basement conversions, to improve evacuation efforts, prevent equipment or utility failure, and improve housing quality for tens of thousands of residents;
- Developing standing post-disaster recovery plans and systems so recovery efforts can begin immediately;
- Building a means to track, in real-time, the extent to which flooding is occurring throughout the City, which will result in faster response times by emergency personnel;
- Expanding the areas where the City will analyze opportunities for area-wide resiliency improvements; and
- Explore innovative methods to increase energy efficiency of City-owned properties, particularly large residential properties that can place a substantial strain on the City's electrical grid.

Planning for Recovery and Resiliency projects will lay the groundwork to address unmet recovery and mitigation needs for public infrastructure.

Benefit to Most Impacted and Distressed Areas

Planning activities will target the outer boroughs.

Eligibility Criteria and Maximum Assistance

N/A

Method of Distribution

Multiple agencies will receive funds through this program. City staff will be paid with CDBG-DR funds through City payroll while contractors will be reimbursed as work on these programs is performed.

Program Schedule

Estimated Start Date	Estimated End Date
01/01/2023	12/31/2028

Proposed Accomplishments

N/A – the City is not required to quantify accomplishments for Planning activities.

Administration

CDBG-DR Administration

Program Partners

- NYC Mayor's Office of Management and Budget (NYCOMB)
- NYC Office of Emergency Management (NYCEM)

Eligibility Category	National Objective
Administration	Not Applicable for Planning Activities

Proposed Budget	Estimated Benefit to MID Areas	Estimated Mitigation Funding	Estimated Low/Mod Benefit
$7,238,000	$6,330,163	$0	$5,787,050

Program Description

This function involves the planning, management, and citizen participation necessary to formulate, implement, and evaluate the City's Community Development Program. These activities include:

- Preparing and implementing the Disaster Recovery program, including publishing public notices, holding public hearings, etc.;
- Developing and maintaining the CDBG-DR Action Plan;
- Preparing Quarterly Performance Reports;
- Maintaining the CDBG-DR website;
- Processing requests for CDBG-DR reimbursement;
- Preparing Environmental Reviews;
- Monitoring City agencies, subrecipients, and contractors;
- Overseeing resiliency projects;
- Liaising with HUD and other Federal departments; and
- Compiling and maintaining necessary records demonstrating compliance with Federal requirements such as fair housing, relocation, labor standards, equal opportunity, etc.

Benefit to Most Impacted and Distressed Areas

As stated in the HUD Notice, grantees may include administrative costs when calculating the benefit to the MID areas. Since the City projects approximately 87% of the grant's *non-administrative* costs will benefit the MID areas, the City assumes 87% of the amount allocated to CDBG-DR Administration will also benefit the MID areas.

Eligibility Criteria and Maximum Assistance

N/A

Method of Distribution

City staff will be paid with CDBG-DR funds through City payroll while contractors will be reimbursed as work on these programs is performed.

Program Schedule

Estimated Start Date	Estimated End Date
01/01/2023	12/31/2028

Please note that services described under this program may begin prior to the execution of the CDBG-DR grant agreement. The City intends to reimburse itself with CDBG-DR funds for eligible expenses once grant funds become available. However, in no case will services begin prior to the completion of the required environmental review(s).

Proposed Accomplishments

N/A – the City is not required to quantify accomplishments for Administration activities.

5. Appendix

Certifications

Each grantee receiving an allocation under Public Law 117-43 must make the following certifications with its action plan:

a. The City certifies that it has in effect and is following a residential anti-displacement and relocation assistance plan (RARAP) in connection with any activity assisted with CDBG-DR grant funds that fulfills the requirements of Section 104(d), 24 CFR part 42, and 24 CFR part 570, as amended by waivers and alternative requirements.

b. The City certifies its compliance with restrictions on lobbying required by 24 CFR part 87, together with disclosure forms, if required by part 87.

c. The City certifies that the action plan for disaster recovery is authorized under state and local law (as applicable) and that the City, and any entity or entities designated by the grantee, and any contractor, subrecipient, or designated public agency carrying out an activity with CDBG-DR funds, possess(es) the legal authority to carry out the program for which it is seeking funding, in accordance with applicable HUD regulations as modified by waivers and alternative requirements.

d. The City certifies that activities to be undertaken with CDBG-DR funds are consistent with its action plan.

e. The City certifies that it will comply with the acquisition and relocation requirements of the URA, as amended, and implementing regulations at 49 CFR part 24, as such requirements may be modified by waivers or alternative requirements.

f. The City certifies that it will comply with Section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) and implementing regulations at 24 CFR part 75.

g. The City certifies that it is following a detailed citizen participation plan that satisfies the requirements of 24 CFR 91.115 or 91.105 (except as provided for in waivers and alternative requirements).

h. The City certifies that it is complying with each of the following criteria:

(1) Funds will be used solely for necessary expenses related to disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization, and mitigation in the most impacted and distressed areas for which the President declared a major disaster pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5121 et seq.).

(2) With respect to activities expected to be assisted with CDBG-DR funds, the action plan has been developed so as to give the maximum feasible priority to activities that will benefit low- and moderate-income families.

(3) The aggregate use of CDBG-DR funds shall principally benefit low- and moderate-income families in a manner that ensures that at least 70 percent (or another percentage permitted by HUD in a waiver) of the grant amount is expended for activities that benefit such persons.

(4) The City will not attempt to recover any capital costs of public improvements assisted with CDBG-DR grant funds, by assessing any amount against properties owned and occupied by persons of low- and moderate-income, including any fee charged or assessment made as a condition of obtaining access to such public improvements, unless: (a) Disaster recovery grant funds are used to pay the proportion of such fee or assessment that relates to the capital costs of such public improvements that are financed from revenue sources other than under this title; or (b) for purposes of assessing any amount against properties owned and occupied by persons of moderate income, the grantee certifies to the Secretary that it lacks sufficient CDBG funds (in any form) to comply with the requirements of clause (a).

i. The City certifies that the grant will be conducted and administered in conformity with title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), the Fair Housing Act (42 U.S.C. 3601-3619), and implementing regulations, and that it will affirmatively further fair housing. An Indian tribe grantee certifies that the grant will be conducted and administered in conformity with the Indian Civil Rights Act.

j. The City certifies that it has adopted and is enforcing the following policies:

(1) A policy prohibiting the use of excessive force by law enforcement agencies within its jurisdiction against any individuals engaged in nonviolent civil rights demonstrations; and

(2) A policy of enforcing applicable state and local laws against physically barring entrance to or exit from a facility or location that is the subject of such nonviolent civil rights demonstrations within its jurisdiction.

k. The City certifies that it (and any subrecipient or administering entity) currently has or will develop and maintain the capacity to carry out disaster recovery activities in a timely manner and that the grantee has reviewed the requirements applicable to the use of grant funds.

l. The City certifies to the accuracy of its Financial Management and Grant Compliance Certification Requirements, or other recent certification submission, if approved by HUD, and related supporting documentation as provided in section III.A.1. of the Consolidated Notice and the grantee's implementation plan and related submissions to HUD as provided in section III.A.2. of the Consolidated Notice.

m. The City certifies that it will not use CDBG-DR funds for any activity in an area identified as flood prone for land use or hazard mitigation planning purposes by the state, local, or tribal government or delineated as a Special Flood Hazard Area (or 100-year floodplain) in

FEMA's most current flood advisory maps, unless it also ensures that the action is designed or modified to minimize harm to or within the floodplain, in accordance with Executive Order 11988 and 24 CFR part 55. The relevant data source for this provision is the state, local, and tribal government land use regulations and hazard mitigation plans and the latest-issued FEMA data or guidance, which includes advisory data (such as Advisory Base Flood Elevations) or preliminary and final Flood Insurance Rate Maps.

n. The City certifies that its activities concerning lead-based paint will comply with the requirements of 24 CFR part 35, subparts A, B, J, K, and R.

o. The City certifies that it will comply with environmental requirements at 24 CFR part 58.

p. The City certifies that it will comply with the provisions of title I of the HCDA and with other applicable laws.

The City acknowledges that any person who knowingly makes a false claim or statement to HUD may be subject to civil or criminal penalties under 18 U.S.C. 287, 1001, and 31 U.S.C. 3729.

Waivers

Modification of Prohibition on Flood Disaster Assistance for Households Above 120% of AMI for Failure to Obtain Flood Insurance

The Consolidated Notice, at Section IV.E.2.b., imposes a prohibition on the reconstruction or rehabilitation of a home in a floodplain if the homeowner did not have a flood insurance policy in effect at the time Ida hit *and* the household income is above 120% AMI. While the City understands the intent behind this prohibition, the City requests the applicable household income limit be raised to 165% of AMI to be consistent with many of the City's other affordable housing programs. The City considers this waiver is warranted given the higher cost of living in New York City and the threat of displacement for even middle-income homeowners based on the impacts of climate change. As flood insurance rates increase and sea levels rise, environmental conditions have the potential to permanently displace working- and middle-class New Yorkers from their neighborhoods.

Summary and Response to Public Comments

The City received feedback on the NYC CDBG-DR Hurricane Action Ida Plan by email and at a virtual public hearing held on September 14, 2022. Below is a summary of the comments and City responses to each.

Comment: The City received two comments suggesting the City direct more or all CDBG-DR funding to maintaining and expanding the existing sewer system and catch basins.
City Response: The current design standard for sewers is 1.75 inches/hour and the City continues to invest in expanding the sewer system and catch basins. While the sewers will continue to serve as the backbone of NYC's drainage system, in many areas they cannot be built larger than they already are. Therefore, the City is simultaneously investing in a citywide network of blue and green infrastructure to intercept stormwater before it reaches the sewer system. While the City is making significant investment in sewers and blue and green infrastructure, these additional federal funds will benefit underinvested areas, including areas of public housing.

Comment: The City received one comment suggesting the City implement a voluntary buyout program for homeowners in areas vulnerable to flooding.
City Response: For New Yorkers living in high-risk flood areas, the City is actively pursuing federal and state resources to develop programs and services that support equitable, voluntary housing mobility. The City's primary goals are to prevent long-term displacement caused by flooding and provide New Yorkers living in flood-prone areas with the resources for a future move. As the City works with state and federal partners to secure these resources, it continues to evaluate and explore a series of housing mobility services, including housing counseling, down payment assistance, rental assistance, real estate brokerage services, estate planning, and moving assistance, and flood insurance.

The City will prioritize the needs of low- and moderate-income households to secure stable and safe future housing. In addition, we will continue to plan for and build more sustainable, resilient neighborhoods citywide, to keep all New Yorkers healthy and safe in the face of climate change.

Comment: The City received two comments suggesting the City offer direct monetary assistance for home repairs such as basement restoration.
City Response: While the City does not propose to use its CDBG-DR allocation to fund outstanding repairs, the City's Housing Recovery Office is operating a Hurricane Ida Supplemental Funding Program that may cover certain repairs and mitigation work. The application period for this program has been extended through October 3, 2022. Interested parties are encouraged to contact HRO for more information.

Looking forward, programs such as Resiliency in Single-Family Housing and the Resiliency in Basement Apartments study are intended to identify and implement measures that will help alleviate the need for future repairs.

Comment: The City received one comment suggesting the Flood Insurance & Financial Counseling program provide homeowners with resiliency audits and elevation certificates, and that the City should assist homeowners applying for other relief programs and provide financial assistance for the flood insurance premiums.
City Response: The City is committed to supporting and expanding FloodHelpNY, which provides resources and information to New Yorkers about the importance of flood insurance, which remains the best financial tool to help residents and businesses rebuild and repair after a flood.

The Flood Insurance & Financial Counseling Program will offer elevation certificates, as well as in-home engineering inspections and financial counseling sessions, to property owners in neighborhoods at-risk from flooding. CDBG-DR funds may be used to pay for inspections, counseling, marketing materials, and program administration.

Given the importance of flood insurance as a tool to support financial resiliency of New Yorkers, the City remains committed to advocating for policies and programs – like FloodHelpNY – that help preserve the affordability of flood insurance for all New Yorkers. Additionally, the City continues to advocate for federal legislative reforms to the National Flood Insurance Program (NFIP), a federally-run means-tested affordability program administered by FEMA, which aims to ensure flood insurance remains accessible for all households, including those in New York City.

Comment: The City received one comment suggesting the City work with the State to again reopen the Ida Relief Fund for Excluded New Yorkers.
City Response: The City is committed to supporting all of its residents, including undocumented immigrants. For more information about resources available to immigrants in New York City, please see the Mayor's Office of Immigrant Affairs.

The Ida Relief Fund for Excluded New Yorkers, which was a State program, accepted applications until April 29, 2022. For more information about other resources available from New York State, please see the New York State Office for New Americans (ONA). For any immigrant in need of assistance, or to connect with ONA's programs, call the New Americans Hotline at 1-800-566-7636.

Comment: The City additionally received one comment suggesting the City's outreach and education in target neighborhoods be performed by culturally competent organizations that speak the appropriate language(s).
City Response: The City recognizes its obligation to conduct adequate outreach and education that ensures eligible applicants in targeted neighborhoods, regardless of language or ethnicity, are provided an opportunity to apply for assistance. The Elevated Hazard Awareness & Community Outreach program includes the hiring of an Immigration Outreach Specialist to provide outreach and education to people with limited English proficiency, with a particular focus on the risks of flooding, coastal storms, and the steps New Yorkers can take to be prepared. The City will also work with community-based organizations to advertise its resiliency programs, both federally- and City-funded, as details are finalized. Specific outreach methods will be identified in future Action Plan amendments.

Comment: The City received one comment recommending that the City grant homeowner applicants/beneficiaries of DR-funded programs amnesty from code enforcement efforts and tenants residing in the homes of program applicants amnesty from eviction.
City Response: HPD, as one of the City agencies with code enforcement jurisdiction over certain buildings in the City, is committed to taking into account the effect of any external events on the damage of a property when considering code enforcement activity. However, in cases where such activity may be necessary to protect the health and safety of tenants, the City will pursue the necessary enforcement activity.

Comment: The City received one comment recommending that the Resiliency Improvements in Single-Family Housing program allow funds to address deferred maintenance and health hazards (e.g., mold, lead-based paint).
City Response: The City expects that many properties require deferred maintenance work that is not specifically related to resiliency efforts. The City currently operates various programs to address health hazard and deferred maintenance issues. As the City further defines the program, it will continue to consider this comment. When the program is developed, the City will issue a substantial amendment to this Action Plan, if necessary, which substantial amendment would be subject to another 30-day public comment period.

Comment: The City received two comments recommending that the Resiliency Improvements in Single-Family Housing program explicitly allow 2- to 4-unit properties to be served.
City Response: The program description for the Resiliency Improvements in Single-Family Housing program already allows for 2- to 4-unit properties to be served. As the City further defines the program criteria, it will continue to consider this comment and may revise the name of the program to more

clearly reflect such criteria. When the exact eligibility criteria for the program is developed, the City will issue a substantial amendment to this Action Plan, if necessary, and substantial amendment would be subject to another 30-day public comment period.

Comment: The City received one comment recommending that funds should be used to make repairs and resiliency improvements in basement apartments, not just for the basement study and not just for "whole home" solutions.
City Response: The City currently operates programs to address general repair needs of 1-4 family homes including those with legal basement apartments. As the City further defines the program, it will continue to consider this comment. When the program is developed, the City will issue a substantial amendment to this Action Plan, if necessary, and substantial amendment would be subject to another 30-day public comment period.

Comment: The City received one comment recommending that programs limited to persons/households of specific income should streamline applications by allowing the use of "proxy documentation" (e.g., seniors who receive federal assistance or state/city tax exemptions should automatically be eligible).
City Response: The City agrees that application processes should be streamlined to the extent possible. As the City further defines program criteria, the City will balance this consideration with its obligation to ensure applicants submit necessary documentation demonstrating they meet HUD eligibility criteria.

Comment: The City received three comments in support of the 3D Underground database.
City Response: The City thanks the commenters for their messages of support.

Data Sources/Methodology

Data Sources

To derive the data used in this Action Plan, the City developed an Ida Damaged Building Composite dataset, which combines information from more than 20 different sources and presents a unique count of buildings impacted by PTC Ida. For each building in New York City, the dataset includes:

- Information on property and land use including but not limited to: topography, neighborhood demographic characteristics, number of units (if applicable), building age, and housing and building code information; and
- Data related to Ida's impact, such as localized rainfall accumulation and flood damage indicators.

Land Use Data

Administrative datasets provided essential information on New York City land, building, and households. Key sources include:

- Building Footprints from NYC Office of Technology and Innovation.
- MapPLUTO land use information from the NYC Department of City Planning
- American Community Survey (ACS) from the U.S. Census Bureau
- Social Vulnerability Index (SVI) from the U.S. Centers for Disease Control and Prevention (CDC)

- Housing Maintenance Code Violations from the NYC Department of Housing Preservation and Development

Ida Impact Data

The City faced several challenges when attempting to quantify Ida's impact. While the City collects an abundance of information during and after emergency events, there is no standard definition of impact or a central data repository of damage. Additionally, unlike coastal flooding, where damage is typically visible from aerial images or the street, damage from inland flooding may not be easily visible from the exterior. Without visual assessments, alternative approaches to identifying damage and estimating impacts are needed. Finally, damage estimates may be impacted by the issues described in the Data Limitations section of this chapter. As described throughout this Action Plan, the City's proposed uses of CDBG-DR funds, particularly for planning efforts, are intended to provide data-driven estimates of damage that result from future disasters.

The City estimated Ida impacts by considering various indicators of storm damage and utility disruption. These data include:

- **Resident-reported damage:** The City directed residents to report damage via the Severe Weather Damage Assessment Tool and 311 service requests. In addition, the Mayor's Public Engagement Unit collected damage reports through canvassing efforts. While resident-reported damage is not a verified source of damage, the analysis treats all indicators equally as a signal of damage.
- **Verified damage and disruptions:**
    - Utility providers reported outages directly to the City.
    - Federal insurance and disaster recovery programs require physical damage assessments in the claim and grant application process and, as a matter of practice, provide aggregated information to City partners.

From this data, the City created damage indicators that reflect the following conditions:

- Health and housing issues: building vacates, mold, plumbing disruptions, paint and plaster problems, floor and stair damage, repair requests, and debris removal requests.
- Water and flooding issues: sewer and sewage complaints, and reports of water leaks.
- Utility disruption: electric and gas outages.
- Claims and awards: approved claims from the National Flood Insurance Program (NFIP) and FEMA Individual Assistance (IA) and FEMA Public Assistance (PA) programs.

Data Limitations

Incomplete Data

Although the Ida Damage Building Composite dataset compiles an abundance of information, additional data could expand analysis and provide a deeper understanding of damage and hazard risk. The lack of an Ida inundation model limits the study of street level conditions and increases reliance on weather station data. Improved data collection on flood depth and rate would heighten awareness of local conditions in an inland flood and inform stormwater modeling and resiliency planning. More widely deployed sensors are a promising measurement tool that could augment traditional methods like field observations of high-water marks from seed or stain lines.

With few exceptions, data regarding the financial cost of flood damages and repair at the building level are not yet widely available to the City. While FEMA is able to provide detailed information on assistance provided through NFIP and FEMA IA, the City and federal governments were still in the process of completing the necessary data sharing agreements when this Action Plan was published. Additionally, the citywide repair cost estimates do not provide insight into the total economic impact or revenue loss due to PTC Ida.

Data Bias

Since the mid-2010s, several researchers have documented differences in 311 reporting behaviors based on neighborhood income and resident demographics. These differences can lead to bias in data, which overestimates the conditions of some groups and underestimates others. In the context of PTC Ida, the real or perceived risk of reporting impact from PTC Ida may be more significant for New Yorkers who are undocumented or residents living in unauthorized housing units, leading to underreporting of damage.

However, the severity of the event may mitigate typical bias patterns in 311 data. More threatening life and safety issues result in more active use of 311 by residents of lower income or socioeconomic status neighborhoods than higher income residents, due in part to limited resources to solve the issues. Additionally, by design, the analysis included a range of indicators independent of resident action (e.g., tonnage removed by the Department of Sanitation by Community District), further reducing reporting behavior bias in damage estimates.

Other Reports and Data Sources Referenced in the Action Plan

- American Community Survey, U.S. Census Bureau
- NYC Civic Engagement Commission Population and Languages of the Limited English Proficient (LEP) Speakers by Community District via NYC OpenData
- NYC Department of City Planning: NYC's Floodplain by the Numbers, October 2020
- NYC Department of City Planning: Zoning for Coastal Flood Resiliency, May 2019
- NYC Department of Environmental Protection: Rainfall Ready NYC Action Plan, July 2022
- NYC Department of Homeless Services Daily Shelter Report via NYC OpenData
- NYC Emergency Management: NYC's Risk Landscape: A Guide to Hazard Mitigation, May 2019
- NYC Mayor's Office of Resiliency: New York City Stormwater Resiliency Plan, May 2021
- NYC Office of the Chief Housing Officer: Housing Our Neighbors: A Blueprint for Housing and Homelessness, June 2022
- NYC Office of the Deputy Mayor for Housing and Economic Development: Where We Live NYC: Confronting segregation and taking action to advance opportunity for all, October 2020
- NYC Office of the Deputy Mayor of Administration, in collaboration with the Department of Environmental Protection and NYC Emergency Management: The New Normal: Combating Storm-Related Extreme Weather in New York City, October 2021
- Office of the New York State Comptroller: New York City Restaurant, Retail, and Recreation Sectors Still Face Uphill Recovery, January 2022

Federally Used Acronyms

AMI	Area Median Income
CBDO	Community Based Development Organization
CDBG	Community Development Block Grant
CDBG-DR	Community Development Block Grant- Disaster Recovery
CFR	Code of Federal Regulations
CO	Certifying Officer
CP	Participation
DOB	Duplication of Benefits
DRGR	Disaster Recovery and Grant Reporting System
FEMA	Federal Emergency Management Agency
HCD Act	Housing and Community Development Act of 1974, as amended
HMGP	Hazard Mitigation Grant Program
IA	(FEMA) Individual Assistance
LIHTC	Low-Income Housing Tax Credit
LMI	Low and moderate-income
NFIP	National Flood Insurance Program
PA	(FEMA) Public Assistance
RE	Responsible Entity
RFP	Request for Proposals
SBA	U.S. Small Business Administration
SFHA	Special Flood Hazard Area
UGLG	Unit of general local government
URA	Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended
USACE	U.S. Army Corps of Engineers