



**Testimony of Christina Farrell, First Deputy Commissioner
New York City Emergency Management Department
Before the New York City Council Committees on Fire and Emergency Management and
Waterfronts and Resiliency April 11, 2022**

Good afternoon, Speaker Adams, Chairs Kagan and Ariola, and members of the committees. I am Christina Farrell, First Deputy Commissioner at NYC Emergency Management. I am here today to discuss storm preparedness from a citywide planning and public information perspective.

First, I want to briefly explain our role in city government and emergency response. New York City Emergency Management helps New Yorkers before, during, and after emergencies through preparedness, education, and response. The agency is responsible for coordinating citywide emergency planning and response for all types and sizes of emergencies. We are staffed by nearly 270 dedicated professionals with diverse backgrounds and areas of expertise, including individuals assigned from other City agencies. As the coordinating agency for the City of New York, Emergency Management functions as a general facilitator when it comes to emergency response: ensuring that resources are available for our sister agencies to complete their core competencies and serving New Yorkers in what can be their worst days with compassion and cultural sensitivity.

As we all know, every emergency can create new and unforeseen conditions. Emergency Management coordinates interagency planning efforts and is responsible for the development, maintenance, and oversight of about 150 planning documents for citywide response, including hazard-specific plans, such as the *New York City Coastal Storm Plan* and the *Flash Flood Emergency Plan*, or specific facets of an emergency, such as fuel management, restoring power, and feeding affected residents. These plans include citywide objectives for managing the incident, logistical resource needs and operations, templates for interagency coordination calls, and checklists for key tasks and actions, among other aspects. These plans include coordinated roles and responsibilities of key stakeholders — primarily City agencies but also utilities, non-profits and other levels of government agencies— for these events. Roles are formalized under the Citywide Incident Management System or CIMS, which assigns responsibilities to agencies based on their respective core competencies. In addition to working with our City agency partners, we remain in constant communication with the appropriate state and federal partners based on the emergency and have the ability to bring them in to our emergency planning calls, and into the Emergency Operations Center (EOC). The EOC is the central nervous system of a citywide emergency. This is where various groups of partners can meet, discuss issues, and troubleshoot problems.

While some of the actions the City takes are the same for both the *Coastal Storm Plan* and the *Flash Flood Emergency Plan*, they are very different events. Coastal storms can be tracked and assessed for multiple days allowing for longer time to make decisions, and if necessary, implement an evacuation order while it is still safe to be outside and traveling. Flash flooding creates a logistical challenge to this kind of advanced action, as the forecasting technology does not provide

enough time to warn of serious inundation, nor does it allow for neighborhood-specific forecasting. With this being said, NYCEM has learned a lot since Hurricane Ida and other recent storms. I want to briefly speak about the actions we've taken since Hurricane Ida struck and what we continue to work through.

Emergency Management continues to partner with the National Weather Service, and has contracted with a private forecasting service to get further insight into developing weather conditions and make informed decisions based on these consultations. Whenever the forecast indicates considerable or catastrophic flash flooding may impact New York City, Emergency Management works with the Mayor's Office to determine whether a declaration of a State of Emergency is necessary and to issue preparedness recommendations promptly, including guidance on preparing for heavy rain and possible power outages and moving to higher ground when possible. Travel bans also may be issued based on the predicted severity of a storm. The public is alerted to these emergency orders and City actions through mayoral press conferences, press releases, and amplification to local media sources, social media, Notify NYC (the City's free, official emergency communications program), through partner agencies, elected officials, community-based organization, private sector organizations, our Advanced Warning System-- which messages out to service providers for the disability, access, and functional needs communities-- and in some cases, through the Wireless Emergency Alert (WEA) system.

NYC Emergency Management also has enhanced its communications with more aggressive earlier warnings that includes increased public messaging about hazards that may affect the city. This messaging is scaled to storm severity; many of the messages are tailored for residents living in a basement or at ground level. Messaging begins with notifications that urge residents to prepare and increases in intensity based on the threat level. Messaging and actions are tied to both National Weather Service products and existing plan triggers. NYC Emergency Management has dedicated staff in the External Affairs and Community Engagement bureaus who work tirelessly to engage the public, elected officials, the private sector, community groups, and the media and to educate them on emergency preparedness. Prior to COVID-19, the agency regularly conducted more than 1,000 presentations and outreach events each year. As we slowly return to that level of engagement, it is more important than ever that we reach your constituents.

This is where we are asking for your help: As trusted messengers in your communities, we ask that you help us promote emergency preparedness and the Notify NYC program and its ability to provide free emergency alerts and updates in New Yorkers' preferred language and format. In fact, Notify NYC recently surpassed 1 million subscribers, which is a fantastic achievement; however, we know it isn't enough until all households in New York City are signed up for Notify NYC and receiving these critical updates, especially households in vulnerable communities and those with are non-English speakers. You can help us amplify that message and save lives. We welcome the opportunity to speak with your communities and provide you with the resources to keep them safe and prepared.

With that I want to discuss preconsidered Introduction 534-2022. As we discussed NYCEM is in the process of adapting our plans for flash flood emergencies thoughtfully and comprehensively. We are working diligently with our partners to adapt lessons learned from Hurricane Ida into our

citywide planning efforts. The development and implementation of evacuation plans required by this legislation would be extremely challenging, as the forecasting technology to predict extreme flooding at a neighborhood level with enough time to evacuate in a flash flood does not exist. We are still taking the necessary time to analyze every detail of this bill, but we will continue to review and work with the Council productively on this legislation.

Thank you for inviting me to testify today. I am happy to answer your questions.



**TESTIMONY OF THE MAYOR’S OFFICE OF CLIMATE AND ENVIRONMENTAL
JUSTICE BEFORE THE NEW YORK CITY COUNCIL
COMMITTEES ON RESILIENCY AND WATERFRONTS AND FIRE AND
EMERGENCY MANAGEMENT**

Monday, April 11, 2022

INTRODUCTION

Good morning. I am Kizzy Charles-Guzman, Executive Director of the Mayor’s Office of Climate and Environmental Justice. I would like to thank Chairs Kagan and Ariola, and the committee members of Resiliency and Waterfronts and Fire and Emergency Management for the opportunity to testify today. I began in this role just two months ago, and I am eager to work with you all as we prepare the city to meet the environmental needs of the coming decades.

We are joined by First Deputy Commissioner for the Office of Emergency Management, Christina Farrell, who will also provide testimony today. For questions today, I would like to acknowledge my colleagues, Deputy Directors Eric Wilson and Carrie Grassi from the Mayor’s Office of Climate and Environmental Justice, our colleagues at the Department of Environmental Protection, Chief Operating Officer Vincent Sapienza and Deputy Commissioner for Sustainability, Angela Licata, as well our colleagues from NYCHA, Shaan Mavani, Chief Asset and Capital Management Officer, and Joy Sinderbrand, Vice President of Recovery and Resiliency.

I’d like to begin today’s testimony by outlining the new configuration of the Mayor’s Office of Climate and Environmental Justice for this Council so that you are aware of the scope of this exciting new office. I am now responsible for ensuring that New York City is prepared to withstand and emerge stronger from the impacts of climate change; mitigate its greenhouse gas emissions; and address needed remediation and environmental coordination efforts from an equity and public health perspective. MOCEJ’s role is to lead the City’s strategic direction as it pertains to environmental sustainability and resiliency, with a focus on environmental justice, and to coordinate with agencies to implement this important work.

The City is preparing to adapt to a variety of climate hazards, including chronic conditions like heat, tidal flooding, and air pollution, as well as acute events such as coastal storm surge, extreme rainfall and power outages. We call this a “multi-hazard” approach, since it addresses *all* the climate threats that impact our city. This work has been in progress for more than a decade and includes hundreds of completed projects as well as important policy changes such as reforms to the Building Code and Zoning Resolution. While we are urgently working to address these multiple risks, my testimony today will focus on how we’re protecting New Yorkers from

intense rainfall from storms like Hurricanes Henri and Ida as well as coastal storms like Hurricane Sandy.

Our climate adaptation strategy also takes a multi-layered approach. This means that we are focused on establishing multiple layers of resiliency at different scales across the city to respond to the multiple hazards. As we have seen most recently with Hurricane Ida and recent historic storms, all these layers of support, such as green infrastructure, grid redundancy, coastal protection projects, emergency communication, Building Code and Zoning Resolution, and flood insurance are critical components of our system, and our work to develop and strengthen our infrastructure in response to climate change must move forward with urgency, funding, and partnership within all levels of government.

A STRATEGIC PERSPECTIVE

As we think about a broader vision for resiliency under the Adams administration, there are several strategic and coordinating plans that we're currently working on that will help New Yorkers make sense of how climate change impacts them and where we go from here.

Thanks to the Council's leadership in the last few years, our office will release a citywide Climate Adaptation plan pursuant to Local 122 of 2021. We will use localized climate projections from the New York City Panel on Climate Change and translate that data simply to explain how communities can expect to experience climate impacts, and the ways in which those impacts will be experienced unevenly due to historical and current inequities. We will also outline different neighborhood profiles and what types of strategies may be best suited for each of those profiles. For example, an inland neighborhood that experiences extreme precipitation may be best suited to certain strategies, policies, and programs as compared to a low-lying coastal neighborhood at risk of frequent nor'easters, or a neighborhood dealing with the impacts of extreme heat. Through this analysis, which we will also release online, our office will make citywide adaptation information more accessible and transparent as we seek to tackle the next generation of climate-readiness projects, plans, strategies, and actions.

Additionally, our office is undertaking the City's first comprehensive study of Environmental Justice, working toward the release of an Environmental Justice for All report, as required by Local Laws 60 and 64 of 2017. This work will analyze environmental and climate issues, and identify which communities are being disproportionately impacted by environmental burdens and which are not seeing the benefits of green investments made by the City. Taken together, our analyses will inform how the City will address activities that exacerbate environmental justice concerns and set the stage for a set of equitable climate mitigation and adaptation actions.

EXTREME RAINFALL

I'd like to turn my attention now to the topic of extreme rainfall. In the immediate aftermath of Hurricane Ida, the City outlined short and long-term actions to protect New Yorkers from future intense precipitation events. The resulting report, *The New Normal: Combatting Storm-Related Extreme Weather in New York City*, committed over \$2 billion in new capital funding and \$17 million in expense funding for fiscal year 2022. These funds are critical for mitigating stormwater flooding and supporting programs, science-based tools, and resilience capacity at our agencies. In addition, the City has also been actively advocating for and tracking additional funds from the state and federal governments to further strengthen this work.

While *The New Normal* was an important start to our Ida response, our Administration truly sees this as just a jumping off point. With that said, we are excited to develop and implement some key pieces mentioned in the report. Specifically, innovative cloudburst solutions, which are projects designed for heavy downpours that transform open space and streetscapes to absorb water where possible, and store excess water safely until the event passes to take pressure off the sewer system. To select priority neighborhoods for these important projects, the City is developing a data-driven framework, which considers feasibility, indicators of physical risk, such as topography, subsurface conditions, land use, and recent complaint and damages data, as well as socioeconomic factors, including income, demographics, and access to existing green space. The results of this work will be to implement cloudburst management projects in four neighborhoods. An interagency task force has been established to identify neighborhoods where cloudburst projects will be installed. The City is pursuing state and federal funding to implement additional projects.

In addition to the cloudburst work, we are also expanding NYCHA's green infrastructure program to seven new sites; adding new green infrastructure in parks; developing twenty new stormwater management playgrounds with the Trust for Public Land; and implementing three priority projects in the NYC Wetlands Management Framework in the Bronx and Queens.

We also know that there are areas that face unique risks and require special investments. For example, we know that many areas in Southeast Queens are particularly vulnerable to rainfall-based flooding. To address this vulnerability, DEP, along with DOT and DDC, is currently engaged in a massive, \$2.5 billion buildout of the sewer system there to alleviate flooding and improve the quality of life for residents and businesses.

The City is also leading the way with best practices managing the resiliency of our capital assets using the Climate Resiliency Design Guidelines. We're grateful for Council's partnership in incorporating these Guidelines into Local Law 41 of 2021, which promotes the use of resilient design methods for new public facilities and infrastructure so that they can withstand the more severe flooding we expect in the future. We are delighted that 23 City agencies are now participating in a pilot program and will begin designing and constructing dozens of new projects using the NYC Climate Resiliency Design Guidelines. Forty pilots were selected through a rigorous process that considered climate exposure, equity, and project scope. Over forty percent of projects being advanced under this program will be constructed in environmental justice areas, and we look forward to using the results of this pilot to inform the development of a resiliency score metric that will be applied across the entire capital plan starting in 2027. This Climate Resiliency Design Guidelines pilot program will help all City agencies identify the most effective and cost-efficient strategies to address future climate extremes. We will keep Council informed regarding our progress and look forward to your support as these findings emerge.

Even with these significant investments and policy efforts, we must recognize that we can never fully eliminate risk. Encouraging New Yorkers to protect their financial health with flood insurance is another important component of our strategy. We are continuing to advocate in Washington for reforms to the National Flood Insurance Program that would implement an affordability framework for low-and-moderate income households. Our office also continues to partner closely with FEMA to conduct neighborhood outreach and increase flood insurance enrollment and promote risk awareness through our partnership with the Center for New York City Neighborhoods and FloodHelpNY.

My team is also working with agencies trying to identify and develop opportunities to retrofit existing buildings. While our office does not implement or manage capital work, we were recently awarded FEMA funding to conduct a study of where and when backwater valves work best in the city. Our goal is to understand how this tool can benefit New Yorkers and how to develop a sustainable program that will reduce flooding in homes and businesses. We're also exploring ways to partner with different levels of government to support building owners and strengthen our existing building stock as it relates to retrofits. We look forward to working with Council as this backwater valve study progresses and we expect it to be complete by the end of this year or early next.

COASTAL STORMS

I now want to turn my attention to coastal storms.

Since Hurricane Sandy, we've made considerable strides on our coastal protection portfolio, partnering with different city, state, and federal agencies to complete several coastal resiliency projects. These efforts have included: wetlands restoration efforts in Queens and Staten Island, the Reconstructed Rockaway Boardwalk, a T-groin project in Sea Gate, Brooklyn, street raisings in Broad Channel, Queens, and Emergency Management's Interim Flood Protection Measures program, which now covers more than 50 sites across the city. Our achievements also include groundbreaking for the U.S. Army Corps of Engineers' Rockaways-Atlantic Shorefront project and the City's East Side Coastal Resiliency project. In May of this year we also anticipate reopening Asser Levy Playground, which is the first completed section of the East Side Coastal Resiliency project. Capital coastal protection projects, especially those in dense urban environments like ours, take many years of planning, contracting, and development. These are enormous achievements, providing critical protections to diverse communities that were devastated by Hurricane Sandy.

We're also continuing to advance many other coastal resiliency projects across the city, from Red Hook to Jamaica Bay to Staten Island. The Army Corps is expected to break ground this year on the South Shore of Staten Island Resiliency project, with the construction of a large interior drainage pond that will also serve to mitigate stormwater flooding in the area. Additionally, the City will break ground on the Howard Beach Raised Shoreline project, and the Brooklyn Bridge to Montgomery Coastal Resiliency project. Our agency partners are also advancing design work on the rest of the Raised Shoreline portfolio (Coney Island Creek, Mott Basin, Travis Avenue, and Mayberry) and the Red Hook Coastal Resiliency project.

As we approach the 10-year anniversary of Sandy, we are also eagerly awaiting a Tentatively Selected Plan for the Army Corps' New York-New Jersey Harbor and Tributaries Feasibility Study this summer, which will lay out an approach to coastal resiliency investments for the entire New York Harbor and lay the groundwork for a whole new set of coastal infrastructure projects moving forward. The Tentatively Selected Plan will be followed by a review period where the City and the public will have a chance to comment on the Army Corps' recommendation. Our Office will lead the City's effort to review and provide comprehensive comments on the Tentatively Selected Plan. The Corps will then take all comments, followed by further study, evaluation, and design, and finalize their recommendation in a Final Report that will be

completed by 2024. That Final Report will help the City advocate for the next phase of significant federal resiliency project investments.

I'd also like to reiterate that coastal infrastructure projects are just **one** of many layers of resiliency--they are not a panacea. As we think about our built environment, we must focus on both how and where we build, and how we're planning for the future.

With respect to the "how" -- one important tool in our toolbox is our Building Code. Last year, the Department of Buildings updated Appendix G of the Building Code, establishing stringent standards for the construction of all new and substantially rehabilitated structures in the floodplain. We will need to go even further to account for rapidly changing conditions that will lead to flooding that is both more frequent and extends outside of our current floodplain. To this end, our office is partnering with FEMA to develop Future Flood Risk Maps that go beyond the FEMA Flood Insurance Rate Maps, which are based only on historic flood risk information. Once finalized, these Future Flood Risk Maps will provide property-specific information about flood risk that incorporates sea level rise. Because buildings are constructed to last generations, we hope to see these Future Flood Risk Maps replace the use of the static Flood Insurance Rate Maps in the Building Code. We look forward to working with Council when you review future Building Code updates to ensure the city's building stock accounts for future flood conditions.

The "where" also matters tremendously as we think about climate change. In 2017, the Department of City Planning developed a designation of Special Coastal Risk Districts in the Zoning Resolution. After extensive community engagement, these Districts were created for neighborhoods that flood regularly from high tides and are projected to face daily tidal inundation. The zoning designation limits the density of future development to limit further growth of the residential population in those areas, while allowing the many current residents to make investments in their existing homes to make them safer. Broad Channel and Hamilton Beach, Queens, and sections of the East Shore of Staten Island, and a portion of Gerritsen Beach, Brooklyn are all examples of these districts.

Building on this work, this past December, the Department of City Planning released its Comprehensive Waterfront Plan and laid out a framework, firmly centered on equity, to help communities access and maintain stable housing given future climate risks. This framework is designed to help policy-makers make informed decisions about where and why to densify, maintain density, and where we may ultimately need to de-densify. The City envisions supporting communities with a comprehensive toolkit that could include the options of voluntary buyouts, resiliency audits, retrofit programs, and financial counseling for homeowners and renters to ensure housing stability as climate risks increase. We are current awaiting federal funding guidance to understand how we can prioritize these types of services for low-and-moderate income residents.

INTRO 76-2022

I also want to acknowledge Intro 76 regarding backwater valves. We are pleased that Council has taken an interest in this issue. The Law Department is reviewing the proposed legislation.

As I mentioned earlier, our office is currently working with DEP, NYCEM, and HPD to conduct a FEMA-funded backwater valve study to determine exactly where backwater valves will be

most effective. Backwater valves may be a low-cost retrofit that would benefit many New Yorkers, and in some cases, are already required by the plumbing code. The results of this backwater valve study will inform decisions relating to whether such a program would be feasible, and if so, the scale of a program, areas of prioritization, and direct community outreach by clearly delineating what types of buildings and locations would most benefit from backwater valves. It will also consider which agency may be the best implementation partner for this work.

CONCLUSION

While the City has made great strides towards a multi-hazard and multi-layered approach to resiliency, there's still much work to be done, and much of it can only be accomplished through the collaboration, partnership and funding from our federal and state partners. I am optimistic about our ability to meet these challenges rapidly and equitably for all New Yorkers.

We are coordinating closely with the Office of Management and Budget as well as other agencies to take full advantage of federal funds from the infrastructure bill and Ida relief bills and COVID-19 supplemental funds. The New York State Environmental Bond Act, if approved in November, could also provide critical funding for green infrastructure projects, stormwater management, coastal protection and rehabilitation, waterfront revitalization, and heat mitigation strategies.

In conclusion, I would like to thank the Committees on Resiliency and Waterfronts and Fire and Emergency Management for allowing me to testify here today. I look forward to your questions following my colleague's testimony and yield the floor now to my colleague, First Deputy Commissioner Farrell.



PUBLIC ADVOCATE FOR THE CITY OF NEW YORK

Jumaane D. Williams

**OPENING STATEMENT OF PUBLIC ADVOCATE JUMAANE D. WILLIAMS
AT THE HEARING OF THE
NYC COUNCIL'S COMMITTEE ON RESILIENCY & WATERFRONTS &
COMMITTEE ON FIRE & EMERGENCY MANAGEMENT -**

APRIL 11, 2022

As mentioned, my name is Jumaane D. Williams, I am Public Advocate for the City of New York. Thank you, Chairs Kagan and Ariola for holding a hearing today on Storm Preparedness that includes consideration of a proposed local law by myself with Councilwoman Carlina Rivera. Thank you for giving me an opportunity to speak a little bit today.

In the past decade, New Yorkers have been challenged by the hurricanes and floods that struck the New York City area leading to tragic consequences throughout the five boroughs. From the fires in Breezy Point, Queens to the Lower Manhattan Blackout to Hurricane Sandy in 2012 to the death traps created by Hurricane Ida in basement apartments throughout Queens in 2021, we must do better in protecting and preparing our residents, as well as our first responders. While New York City and the rest of the world grapple with the effects of climate change, we can put policies in place to prepare individuals who reside in flood zones.

We continue to talk about once-in-a-lifetime, once-in-a-hundred years storms as we now know. There will be much more than that. The horrors that I saw, in the City, during Hurricane Ida. Nothing is worse than losing lives that could have been prevented. What we saw was the loss of homes, especially in southeast Queens, that we could have prevented and the lives that were lost with preventive intentions and communications. Because we had enough information to let folks know what was going to happen. We also know the areas that are continually flooded. Many of these residents have been complaining for many, many years without movement or responses.

Councilwoman Rivera and I are proposing legislation that would codify a flash flood emergency evacuation plan for basement, and basically first floor apartments in buildings with multiple dwelling units. Additionally, a multi-agency outreach plan must be delineated and implemented, as well as a report must be provided to the Mayor, City Council, and the Public Advocate within two months after the occurrence.

There are many things that individuals and agencies can do in anticipation of a storm or a flood. The benefit of codifying that process will ensure that everyone becomes familiar with the process. For individuals and agencies alike, the process will become instinctual. Preparation is the key for maximizing best practices and minimizing tragedies. As mentioned, while everyone was impacted, unfortunately once again the most impacted were Black and Brown communities and communities of low-income.



PUBLIC ADVOCATE FOR THE CITY OF NEW YORK

Jumaane D. Williams

I look forward to hearing the testimony of the agencies and working with everyone involved to pass this legislation.

Thank you for your time and your consideration.



PUBLIC TESTIMONY OF WATERFRONT ALLIANCE

April 11, 2022

New York City Council Committee on Resiliency and Waterfronts

RE: Storm Oversight and Int. 0076

Submitted by Tyler Taba, Senior Manager for Climate Policy, Waterfront Alliance

Thank you, Chair Kagan and Council Members. My name is Tyler Taba, Senior Manager for Climate Policy at Waterfront Alliance, an alliance of more than 1,100 organizations, businesses, and individuals. Waterfront Alliance is the leader in waterfront revitalization, climate resilience, and advocacy for the New York-New Jersey Harbor region.

We are committed to sustainability and to mitigating the effects of climate change across the region's hundreds of miles of waterfront. We spearhead the Rise to Resilience coalition of 100+ groups advocating for policy related to climate resilience and we run the Waterfront Edge Design Guidelines (WEDG) program for promoting innovation in climate design.

Thank you for the opportunity to testify at today's hearing. Regarding storm preparedness, I would like to address the need for adequate funding levels in New York City's budget that reflect a commitment to overall climate preparedness. A climate resilient budget lays the foundation for storm preparedness, by making long-term investments in community engagement, green infrastructure, grey-infrastructure upgrades, and climate adaptation. These **pre-storm** investments are extremely important when we talk about preparedness.

NYC's preliminary budget proposal urges fiscal responsibility for New York City, but without proper investments in climate resilience and adaptation we will spend billions of dollars in recovery efforts following storms that we are unprepared for (like Sandy, Ida, and Henri). Storm preparedness means investing in protection upfront, by funding neighborhood planning efforts through the Five Borough Climate Adaptation Plan (Local Law 122), resiliency in NYCHA properties, enhancing resiliency retrofit programs, and expanding holistic green infrastructure solutions.

For starters, we must ensure that New York City understands where vulnerabilities exist at a hyper-local, community level through data collection, analysis, and neighborhood planning and engagement. This process has taken place in some neighborhoods already (i.e., Resilient Edgemere, East Side Coastal Resilience, Financial District and Seaport Climate Resilience Master Plan), but a coordinated, fully funded plan for citywide adaptation and resilience that



can be completed within a reasonable timeframe does not exist. Last year, the City Council passed Intro 1620, now Local Law 122, which establishes a Five Borough Climate Adaptation Plan to be led by the now-Mayor's Office of Climate and Environmental Justice (MOCEJ).

Local Law 122 has the potential to be the backbone for climate resiliency in New York City but only if adequately funding, sustained, and prioritized. More specifically, we strongly recommend the neighborhood planning component of this plan remain at the forefront of the city's holistic approach to advancing solutions that will allow the city to solve overlapping environmental, social and economic challenges simultaneously.

More specifically, neighborhood planning is a fundamental storm preparedness strategy. It allows communities to assess their risks at a hyper-local level; make decisions that make sense and best fit their needs; and ultimately position themselves to secure funding and resources for on the ground projects. This will be a long-term, ongoing process that must remain funded and sustained at the city level.

Along the same lines, New York City must be prepared to leverage the historic levels of federal funding that are being made available for resilience and adaptation projects. There is no single solution to climate change, especially along the 520 miles of diverse coastline in our city. Federal dollars provide an opportunity to jumpstart climate projects, where the city and state are unable to allocate adequate resources. Part of the process of leveraging federal funding is outlining clear and well thought out projects. For this reason, we encourage stronger collaboration among city agencies, lawmakers, and communities to plan and secure funding for innovative projects that protect areas most unprepared for the impacts of climate change.

I'd like to re-emphasize the importance of pre-storm investments. Every \$1 invested in mitigation yields \$6 in future loss reduction, according to the National Institute of Building Sciences. Storm preparedness means shifting our investments in climate resilience to proactive funding, rather than reactive. Fiscal responsibility does not mean shaving off funding today, to spend significantly more tomorrow. It means spending more today to save significantly more tomorrow.

In the near term, the City must prepare to respond to the upcoming release of the proposed designs for the New York–New Jersey Harbor and Tributaries Study (NYNJHATS) and what it means for our region. This project, led by the U.S Army Corps of Engineers (USACE), is a direct federal response to protecting the region from the next Hurricane Sandy. It could provide a historic opportunity to protect a significant portion of vulnerable coastline. In May, the Corps is set to release their tentatively selected plan for this massive infrastructure project. Certainly, the



project that is selected is highly important, and equally is the commitment to community engagement.

As the region is facing a confluence of heavier precipitation, sea level rise, and storm surge, multilayered solutions will be needed in the plan. The federal Water Resources Development Act (WRDA) includes language directing “the Corps to make all necessary efforts to engage community groups and incorporate impacts of low-frequency precipitation and sea level rise in the study.”

About two years ago, the Corps proposed, as part of several alternatives, a massive storm surge barrier as part of the NYNJHATS plan. Experts were concerned with this proposal, because it did not take a multi-hazard approach to climate risk (i.e., sea level rise, extreme precipitation, etc.).

The goal for this project is for the Corps to “investigate measures to manage future flood risk in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities, and reduce the economic costs and risks associated with flood and storm events.” Waterfront Alliance does not support a storm surge barrier, alone, for the Army Corps’ response to this goal.

Rise to Resilience has a longstanding history of communicating with the Army Corps on the need for robust community engagement. The Corps has historically struggled with their community engagement process, largely because they are limited in capacity to support meaningful public engagement necessary to develop a publicly supported plan. To date, the onus has been on USACE internal staff to conduct this engagement through public meetings, despite the agency’s limited resources to conduct this work. New York State and New York City are much better positioned to conduct outreach and drive input into the study and plan development.

Based on the timeline we have seen; we are calling for an extension of the Corp’s public engagement process. We encourage the Council to call the Army Corps for a hearing once the NYNJHATS proposal is introduced. New York City should coordinate strongly with the Corps to ensure that NYNJHATS works in tandem with, and complementary to, the efforts the city will undertake to develop and implement multiple climate hazard resilience projects in the most vulnerable communities.

Regarding Int. 0076, Waterfront Alliance supports the establishment of a program to provide financial assistance for purchasing and installing a backwater valve. Homeowners throughout



New York City have faced costly damages from sewer backups into their homes during storm and flood events. This poses major health risks as well, as damages to personal belongings, for residents in flood prone communities. Combined sewer system overflows occur once a week in NYC, on average.¹ Installation of backwater valves can protect residents, their finances, and property.

Affordable solutions for climate retrofits, like what is being proposed in this bill, are necessary to protect flood vulnerable communities. As mentioned earlier, there is no single solution to tackling climate change. Waterfront Alliance is supportive of increasing resilience and adaptation retrofits that address sea level rise and flooding concerns. This includes installation of green infrastructure, basement filling, home elevation, raising mechanicals, flood vents, and backwater valves. Not only do these retrofits protect residents, but they also save money by reducing damages during flood events. Residents also save money as these retrofits can reduce flood insurance rates.

In many cases, homeowners are unaware of retrofit programs. There are abundant resources for solar panel installation (and generally for mitigation retrofits), but the same can't be said for resilience retrofits. We encourage the City Council to consider outreach to communities, especially environmental justice communities, when rolling out these programs. Information should be shared in multiple languages to ensure residents understand how these retrofits are helpful.

In summary, New York City must view climate solutions through a holistic, comprehensive lens. City agencies and lawmakers need to speak with New Yorkers **before** disasters to discuss how they can be prepared for storms. Being physically out in the community is still the most effective way to support residents, understand their needs, and work together to find solutions. Where there is a way for homeowners and residents to be more resilient to climate change, an incentive or technical assistance program should follow. Climate solutions will include planning, funding, natural, and hard infrastructure. Like our coastline, they are unique and diverse.

Thank you for the opportunity to present on these topics. I look forward to continuing this conversation with you and to working with you to protect New York's people, infrastructure, and natural systems.

¹ <https://www.floodhelpny.org/en/mitigation/backwater-valve>



Testimony before the New York City Council Committee on Resiliency and Waterfronts: Providing financial assistance for the purchase and installation of backwater valves

April 11, 2022

Good afternoon. My name is Theodora Makris and I am a Senior Policy and Research Associate at the Center for NYC Neighborhoods. I would like to thank Committee Chair Ari Kagan and members of the Committee on Resiliency and Waterfronts for holding today's hearing to discuss the establishment of a backwater valve purchase and installation program.

About the Center

The Center for NYC Neighborhoods promotes and protects affordable homeownership in New York so that middle- and working-class families are able to build strong, thriving communities. Established by public and private partners including the City Council, the Center meets the diverse needs of homeowners throughout New York by offering free, high quality housing services. Since our founding in 2008, our network has assisted over 280,000 homeowners with matters ranging from foreclosure prevention, climate-related disaster recovery, flood insurance, and more. The Center also administers FloodHelpNY.org, a digital platform for educating New Yorkers on their flood risk, in partnership with the Mayor's Office of Climate and Environmental Justice.

Resiliency and climate adaptation at the Center

In the aftermath of Hurricane Sandy, the Center initiated a range of recovery programs to support impacted communities. We have since developed programs in anticipation of future climate disasters that prioritize and promote long-term resiliency and adaptation.

City-wide adaptation to NYC's increasing flood risk

FEMA's assessment of the 100-year floodplain projects that 183,000 residential units in New York City are at risk of flooding.¹ The same study found that by 2050, the number of people living in the 1% annual chance floodplain could more than double.

The New Normal: Combating Storm-Related Extreme Weather in New York City, a 2021 report published by the Extreme Weather Task Force, outlines the immediate need for substantial policies and protocols imperative to combating and adapting to the City's increasing flood risk.² Their assessment included a series of recommendations to enhance infrastructure to bolster individual and community resilience in the wake of severe rainfall and coastal flooding. Chief among their recommendations, the task force has advocated for:

- The immediate commencement of a study to examine the expansion of household backwater valve installations.
- Expanding backwater valve installations to the city's most vulnerable residential topologies to prevent sewer backups into private properties.
- Updating building codes for existing and new buildings to promote flood resilience by requiring backwater valves.
- Advancing legislation for a Flood-Safe Home Improvements Abatement for low-income homeowners, which would reduce property taxes for eligible 1-3 family homes for the cost of improvements made to increasing flood resilience, including but not limited to the addition of a backwater valve.

City government officials recognize the benefits of backwater valves; these devices have the potential to save property owners thousands of dollars in damage and clean up after a flood by preventing sewer backflow. Storm recovery can easily send a homeowner into financial distress, and a program dedicated to backwater valve installations will provide much needed relief to residents across New York City who are already contending with constant and more intense flooding.

Recommendations for backwater valve installation programs:

1. Avoid income caps wherever possible. While there is a great need for backwater valve products among coastal low- and middle-income homeowners, requiring detailed income documents from homeowners and tenants adds an additional burden of proof that many residents are unable to provide in a timely manner. This qualification overwhelmingly prohibits these residents from receiving services at a point when they need speedy assistance. Replacing income documentation with a more appropriate AMI cap of 160% is likely to capture the spectrum of homeowners in need of support.

¹ Info Brief: Flood Risk in NYC, <https://www1.nyc.gov/assets/planning/download/pdf/plans-studies/climate-resiliency/flood-risk-nyc-info-brief.pdf>, NYC Department of City Planning, 2016

² *The New Normal: Combating Extreme Storm-Related Weather in New York City*, <https://www1.nyc.gov/assets/orr/pdf/publications/WeatherReport.pdf>, Extreme Weather Task Force, 2021

2. Prioritize installations based on the history of backflow incidents collected by the NYC Department of Environmental Protection. Consulting these records is a useful and efficient method to determine which properties and neighborhoods would benefit from valve installation. Looking at historical sewer backflow incidents can inform the City's priority installation process.
3. Partner directly with plumbers and ensure they participate in program development. Plumbers can help identify risk factors and site information needed for efficient installations.
4. Ensure any construction program has robust and flexible emergency change policies. NYC's older housing stock presents a spectrum of site conditions, and in many cases, issues cannot be identified until an installation is already underway. Having a clear change order policy will allow plumbers to remediate issues efficiently, ensuring that homeowners are best served.

Disaster mitigation interventions are needed

On September 1st, 2021 The National Weather Service in New York declared the City's first flash flood emergency when the remnants of Hurricane Ida swept across the State. A historic three inches of rain fell per hour across the five boroughs, a record set only days earlier by Tropical Storm Henri. We are in a critical moment that requires bold, progressive and swift action in order to protect the structural integrity of our City's homes and buildings, and the people who reside within them. City-wide installation of backwater valves is one of several emergency interventions needed to mitigate the effects of severe flooding in our communities, and we implore the City Council to establish an installation program to protect household health, safety, and economic security.