



**TESTIMONY OF THE MAYOR’S OFFICE OF CLIMATE RESILIENCY  
BEFORE THE NEW YORK CITY COUNCIL  
COMMITTEES ON RESILIENCY AND WATERFRONTS AND HOUSING AND  
BUILDINGS**

*November 19, 2021*

Good morning. I am Jainey Bavishi, Director of the Mayor’s Office of Climate Resiliency. I would like to thank Chairs Brannan and Cornegy for the opportunity to testify today. I would also like to acknowledge my colleague Susanne DesRoches, Deputy Director for Infrastructure and Energy at the Mayor’s Office of Climate Resiliency and Mayor’s Office of Climate and Sustainability and Joseph Ackroyd, Assistant Commissioner for Technical Affairs and Code Delivery at the Department of Buildings who will join me in answering your questions.

As you know, the Mayor’s Office of Climate Resiliency is responsible for ensuring that New York City is prepared to withstand and emerge stronger from the impacts of climate change. Our role is to lead the City’s strategic direction and planning to prepare for extreme events and chronic impacts, and coordinate with agencies to implement this work.

Within our citywide resiliency portfolio, the City is preparing to adapt to a variety of climate hazards. Our climate adaptation strategy takes a multi-layered approach, focused on establishing multiple lines of defense at different scales across the city to respond to the multiple hazards. Some of these lines of defense include adapting neighborhoods, developing building-level protections, protecting critical infrastructure, and supporting businesses and residents. Today, my testimony will focus on the suite of strategies that we use to ensure housing resiliency on the waterfront, including how we are building for the future, what we are doing to manage climate impacts on our existing housing stock, opportunities to reform policy to advance resilient housing, and upcoming initiatives. I will also address the proposed legislation, Intro 2189-2020.

**Building for the Future**

I’d like to begin by addressing how we build for the future. Housing resiliency is supported by building code based on the best available science and engineering knowledge, which is why our office has partnered with the Department of Buildings to update Appendix G of the building code and establish stringent standards for the construction of all new and substantially rehabilitated structures in the flood plain. We will need to go even further to account for rapidly changing conditions that will lead to more flooding that is both more frequent and extends outside of our current floodplain. To this end, our office is also 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, we hope to use these Future

Flood Risk Maps as a regulatory tool that will inform the building code with property-specific information about flood risk that incorporates sea level rise. 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.

Our office is also delighted to share that twenty-three City capital agencies will begin designing and constructing dozens of new projects using the NYC Climate Resiliency Design Guidelines, which were developed by the Mayor's Office of Climate Resiliency using cutting-edge science and research. This ensures that projects constructed today will be prepared for worsening extreme weather decades into the future and can continue to provide critical services to New Yorkers. Soon, we will be announcing the projects that will be included in the pilot program required by Local Law 41. These projects were selected through a rigorous process that considered climate exposure, equity, and project scope. We look forward to using the results of this pilot to inform the broader city mandate around use of the Design Guidelines across the entire capital plan starting in 2026.

### **Managing the Impacts of Climate Change on Our Existing Housing Stock and With Communities**

Building code is a critical tool for dealing with future climate change impacts on new or substantially upgraded buildings, but in a growing City with over one million existing buildings, we must also consider how retrofits and upgrades will help us withstand and recover better from a hotter and wetter future. We must also think deeply about how to engage and problem-solve with the communities that will be most impacted by extreme weather. We have already started this work.

Following Hurricane Sandy, the City led three major retrofit efforts: 1) the Build It Back Program, which helped over 12,500 families recover from the impacts of the storm and return to their homes, 2) the HPD Sandy Multifamily Program, which completed repairs and resiliency retrofits serving nearly 20,000 units of multifamily housing, and 3) the \$3 billion NYCHA Sandy Recovery Program, which is upgrading and reinforcing 35 Sandy-impacted NYCHA developments. These programs and projects were ambitious and precedent-setting in their scope and impact, and also left us with many [lessons learned](#). Recently, NYCHA released its forward-looking [climate change adaptation plan](#) based on insights gained from the Hurricane Sandy recovery implementation, which will serve as a blueprint for future retrofits on NYCHA campuses.

After Hurricane Ida, the City also announced a series of commitments related to our built environment in the report titled *The New Normal: Combatting-Storm Related Extreme Weather in New York City*. As mentioned in the report, we will begin an interagency assessment of the City's housing stock so that we can develop and augment existing programs to increase climate risk awareness, reduce climate risk exposure, and provide retrofit and housing mobility assistance. While we are just beginning this process, this comprehensive housing analysis will help us understand the climate adaptation needs for millions of New York residents.

In the meantime, we are working with FEMA to conduct a 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. The results of this backwater valve study, which is on track to be completed next summer, will inform the scale of the City's installation program, areas of prioritization, and direct community outreach by clearly delineating what types of buildings and locations would most benefit from backwater valves.

We are also restarting and expanding a range of services through FloodHelpNY, including resiliency audits, financial counseling, and operational trainings for one-to-four family homes and vulnerable multi-family buildings. These services are critically important for helping homeowners and renters to understand their risks and the available mitigation options.

With that said, low-cost financing for retrofits is the biggest challenge we face when it comes to adapting our existing building stock, and support from all levels of government is essential to advance this priority because of the enormous scope and scale of the need.

### **Advocating for Policy Reform to Support Resilient Housing**

While we advance programs and policies to ensure the resiliency of our housing, we also remain focused on advocating for critical policy reforms at the state and federal levels. In particular, the City has been and will continue to advocate for reforms to the National Flood Insurance Program, including greater affordability, increased mitigation options, better communication and claims reform. In May, we testified to Congress and penned an op-ed in *The Hill* to highlight our platform in light of the changes FEMA is implementing through Risk Rating 2.0. Even as we advocate for these changes, we continue to do our part to raise awareness about flood risk and flood insurance, given that insurance is one of the most important financial resiliency tools for residents. Our partnership with the Center for New York City Neighborhoods and FloodHelpNY provides all New Yorkers with a resource to assess their flood risk based on their property location and to learn more about flood insurance enrollment. Since 2021, New York City has seen National Flood Insurance Program (NFIP) policies increase by approximately 50% citywide. This enrollment success is due in part to our extensive outreach and education work, including a \$1.1 million dollar outreach campaign with FEMA this past hurricane season.

At the State level, there are also tremendous policy opportunities. We hope to advance a flood risk disclosure mandate for real estate transactions to increase market transparency. Currently sellers in New York State can opt-out of disclosing a property's history, including the history of flooding and any flood insurance requirements by paying \$500. This opt-out reduces a buyer's understanding of the flood risks they face before they purchase a home and potential future costs due to flooding. Additionally, there are currently no obligations for landlords to provide flood risk and flood history information to tenants. Improving transparency of flood risk and flood insurance requirements can be easily solved with improved disclosure requirements. Legislation to strengthen the State's requirements for flood risk disclosure were introduced in both the New York Senate and Assembly earlier this year, and passed in the Senate. The City supports the passage of this bill in the year ahead.

### **Upcoming Initiatives on Resilient Housing**

We are continuing to build on and expand the efforts that I have described thus far to ensure the resiliency of New York City's housing. As we do this, we know that New Yorkers will experience the impacts from climate change unevenly. That is why in the draft goals and strategies of the [Comprehensive Waterfront Plan](#), which was released for public comment during the summer, and will be finalized by the end of the year, the Department of City Planning (DCP) introduced a Coastal Land Use Framework informed by the best available climate science. The aim of the framework is to support decision-making about future development and public investments in housing and infrastructure with an evolving understanding of flood risks. This framework will help promote housing stability in relation to climate risks by establishing different approaches to residential density based on the capacity for neighborhoods to adapt and withstand the impacts of climate change through the 2050s. These approaches include increasing residential density, maintaining permitted density and limiting future residential density. The Coastal Land Use Framework will build off work that DCP has already initiated, including the 2017 designation of Special Coastal Risk Districts. After extensive community engagement, Special Coastal Risk Districts were created for neighborhoods that flood regularly from high tides are projected to face daily tidal inundation. The zoning designation limits the density of future development to avoid further growth of the residential population in a highly vulnerable area, while allowing the many current residents to make investments in their existing homes to make them safer. Broad Channel and Hamilton Beach, Queens and the East Shore of Staten Island are all examples of these districts. The Coastal Land Use Framework presents a way to align future development and public investments in housing and infrastructure with our understanding of flood risk in neighborhoods.

The Comprehensive Waterfront Plan also acknowledges that there are areas of the city that face increasing exposure to chronic high tide flooding, and that the ability to maintain uninterrupted access to a decent, safe, and sanitary home may become compromised over time. This scenario requires the development of programs and services that support housing mobility, so that New Yorkers can choose to improve their housing stability by moving away from flood risk. Such programs and services related to flooding risk could include housing counseling, voluntary buyouts, housing search and moving assistance, estate planning, and down payment assistance. The City is actively pursuing federal resources to create programs and services for a set of housing mobility services that will specifically prioritize housing stability for low - and moderate-income households and support their ability to plan for and finance a future move. Together, housing mobility, financial counseling, resiliency audits, and retrofit programs are envisioned as a suite of solutions to support property owner and renter housing stability as climate risks increase.

### **Advancing a Citywide Resiliency Strategy**

As you can hear from my testimony, there are many different strategies and tools the City is employing to make our housing, buildings, communities, and residents more resilient. We look forward to delivering a comprehensive citywide Climate Adaptation Plan next year thanks to Council leadership on Intro 1620. This Plan will evaluate the impacts of the various climate hazards that New York City faces, incorporate the latest findings in climate science, and articulate and build consensus around a climate adaptation strategy. This is a significant step forward that will ensure continuous, strategic, and transparent leadership that helps the city become even more resilient to the threats caused by climate change.

## **Intro 2189-2021**

Regarding Intro 2189-2021, our office recognizes the intent of this bill and we understand that there are certainly cases where power lines above ground can cause outages for residents. In 2013, the Office of Long-term Planning and Sustainability, with support from Con Edison, released a report titled, *Utilization of Underground and Overhead Power Lines in the City of New York*. At that time, the study found undergrounding citywide to be prohibitively expensive. We understand that Con Edison recently started to underground power lines in some parts of the city and will be looking for support at their upcoming rate case to expand this work. We will be working closely with them on these future plans. We believe that exploration of where and how undergrounding would be useful and feasible should it be led by Con Edison based on their knowledge and expertise. While our office could support this in an advisory capacity, we do not have access to Con Edison's data and are not staffed to perform this study.

## **Conclusion**

In conclusion, I would like to thank the Committees on Resiliency and Waterfronts and Housing and Buildings for allowing me to testify here today. Resiliency strategies require the collaboration and partnership at all levels of government, and I look forward to joining my colleagues in answering your questions about housing resiliency along the waterfront.



**Testimony of Con Edison  
City Council Housing & Buildings and Resiliency & Waterfronts Committees  
Oversight Hearing re: State of Housing Resiliency along the Waterfront  
November 19, 2021**

- *Con Edison is committed to climate action and to building the grid of the future to withstand a changing climate and more extreme weather.*
- *The company is already undergrounding vulnerable power lines and planning to expand these investments in a major way with support from stakeholders.*

Introduction

Good morning. Thank you, Chairmen, and members of the Committees for the opportunity to provide comments today. My name is Shakira Wilson and I am a Vice President for Electric Operations for Con Edison. I am joined by my colleague, Kyle Kimball, Vice President of Government, Regional, and Community Affairs.

We are here today before this committee to share some of our experiences and respectfully offer some considerations to be taken when approaching the issue of undergrounding power lines in New York City.

Con Edison's expanded [Clean Energy Commitment](#) sets forth our vision to facilitate a net zero economy by 2050. Our commitment builds upon our past successes as a climate leader and boldly expands on that work by providing actionable metrics and targets. It is supported by five pillars – including one to build a resilient 22nd century electric grid that delivers 100% clean energy by 2040. As electrifying buildings and transportation make the grid even more integral to reaching our society's climate goals, the company will continue its resiliency programs which will include significant investment in undergrounding.

Resiliency Investments

Con Edison invests more than \$3B annually in its energy delivery systems to maintain its industry-leading reliability. Strategic undergrounding is one important tool in the suite of resiliency investments we are making to enhance our ability to recover from major storms and restore customers. Most of our electric system is underground--83% in New York City. Staten Island is 66% overhead, it is 22% in Queens, 20% in the Bronx, and 11% in Brooklyn.

Within a few years and with yours and the public's support we would like to have undergrounding projects throughout the City. We currently have a few undergrounding projects in various phases of implementation, including one in Middle Village, Queens, that has already started construction. We are also assessing a potential location in Staten Island. The goal of these projects is to assess the feasibility and costs of undergrounding portions of our overhead electric circuits and equipment that are especially prone to damage during major storms. We will take lessons learned, including the experience of our participating customers into consideration as we seek to expand our strategic undergrounding efforts into future capital plans. These plans are part of resiliency investments of more than \$2 billion over the next 10 years, that build on our [Climate Change Implementation Plan](#) released in early 2020.



## Considerations for Undergrounding

The main benefits to undergrounding overhead power lines is to reduce the quantity of customer outages from damaged poles, equipment and wires due to storms. Undergrounding can also benefit the entire system by minimizing the overall number of storm repairs thus allowing for improved crew utilization and dispatch. In addition, some members of the public may value aesthetic improvements to avoiding overhead poles and wires if all utilities underground their infrastructure. While there are clear benefits to undergrounding there are some challenges to be addressed. The largest being the costs that will arise from this work. All customers will bear the bill impact of the required incremental capital investment as well as the cost associated with the conversion of their own service connection from overhead to underground under present regulations. Underground cable is susceptible to flooding/salt intrusion and heat and more difficult to repair/maintain than overhead lines. Other considerations are the construction impact and coordination with street interferences and other utilities.

There are some things that can make undergrounding successful, and similar to the clean energy transition, we know we cannot do it alone and need support from a wide array of stakeholders.

### 1) Support for investments

Our most substantial challenge and our largest request of the Council and other stakeholders is to support our efforts to invest in resiliency. Undergrounding costs can be substantial but similar to mitigating climate change, the cost of inaction is significant. We recognize the future will entail competing priorities of how we pay for a changing climate and the transition to a more resilient overhead system. All of these investments will add to the customer bill impact along with a growing tax burden paid by customers.

### 2) Buy-in from customers

The success of our future undergrounding plans relies on customers willing to participate in the program. In some cases, if one or more customers does not want to participate along a line or spur, it can derail the project for everyone. There's also the issue of the cost to the customer equipment which currently cannot be recovered by socializing across all of our customer base.

### 3) Coordination with government and other utilities

And finally, general support from the City and other government leaders, including yourselves is key to success. Benchmarking other utility programs shows that buy-in from local government officials can help move these complex projects forward. Early engagement of important stakeholders is key. An enhanced and dedicated partnership with the municipality, in this case the City of New York, would be extremely beneficial to the expansion of these projects throughout the City. Also, other utility interferences and participation by the telecoms are important. There is City infrastructure including 5G on overhead poles that also needs to be considered. We cannot compel any telecommunications company in which we may share poles, to underground their infrastructure.

We look forward to continuing to work with the Council and other stakeholders to make our City more resilient. We are happy to answer any questions you may have.



**Testimony of Michael Dulong, Senior Attorney, Riverkeeper, Inc.**

**before the Committees on Housing and Buildings and  
Resiliency and Waterfronts**

**on**

**Climate Change and Flooding Issues for NYC's Housing Stock**

**November 19, 2021**

Thank you, Chairpersons Brannan and Corney and Members of the New York City Council Committees on Resiliency and Waterfronts and Housing and Buildings for your leadership to address housing resiliency and for the opportunity to testify today.

I'm Michael Dulong, a Senior Attorney for Riverkeeper. Riverkeeper is a member-supported watchdog organization dedicated to protecting and restoring the Hudson River from source to sea and safeguarding drinking water supplies, through advocacy rooted in community partnerships, science and law.

We appreciate your Committees' attention to the resiliency of New York City's residential buildings. The situation demands action. New York City is world renowned for its forward-looking planning and engineering, as exemplified through its unfiltered water supply. We now face an unprecedented challenge to plan for changes in climate conditions unlike anything we have ever seen. Like our predecessors, we should take the opportunity today to steward the city for the next century. That means planning for resiliency in the face of increased precipitation, rising sea level, and intense heat island effect.

**I. Millions of New Yorkers currently live in floodplains.**

Hurricanes Ida and Sandy proved that New York City residents are vulnerable to flooding both from increased precipitation as well as sea level rise and storm surge. In short, where natural systems like wetlands and free-flowing creeks once channeled and reduced storm energy, buildings and infrastructure now stand.

Fourteen people died as the remnants of Hurricane Ida dumped more than three inches of rain on New York City in less than an hour. Many of the flooded areas were in places that were once wetlands and flowing bodies of water. For instance, three people died on Peck Ave in an area where Kissena Creek used to run before it was filled in and developed. Similarly, Tibbetts



Brook overflowed onto the Major Deegan in an area it once naturally traversed. Other areas of the city where stormwater inundated homes were “bowls,” or low-lying basins surrounded by higher land. Two New Yorkers died in Hollis, Queens, where the immediate area was mostly impervious, and the sewer system capacity was insufficient to drain the excess water.

Similarly, during Sandy, “a staggering 51 square miles of New York City was flooded—17 percent of the city’s total land mass.”<sup>1</sup> Forty-three New Yorkers died. The flooding affected the homes of 443,000 people,<sup>2</sup> many of whom are low-income New Yorkers of color, not to mention the catastrophic impact it had on businesses and critical infrastructure, all totaling \$19 billion in damages for the city.<sup>3</sup> Most of the flooding damage was in known tidal floodplain areas. According to Rebuild by Design “1.3 million New York City residents live within or directly adjacent to the floodplain. By 2100, this number could rise to 2.2 million.” 56 percent of those within the floodplain today identify as non-white, and more than half are low income.<sup>4</sup>

## **II. New development is swelling the number of New Yorkers in harm’s way.**

During the past decade, thousands of new housing units have been built within the floodplain, and more are being planned. Many new developments were built or are planned directly on New York’s waterfront, including, but not limited to:

### **Bronx**

Bankside  
Bronx Point  
Fordham Landing

### **Brooklyn**

Domino Park  
Gowanus neighborhood rezoning  
Greenpoint Landing  
River Ring

### **Manhattan**

Towers at Two Bridges

### **Queens**

Astoria West

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<sup>1</sup> N.Y. City, A Stronger, More Resilient New York, at 13 (2013), *available at* [http://s-media.nyc.gov/agencies/sirr/SIRR\\_singles\\_Lo\\_res.pdf](http://s-media.nyc.gov/agencies/sirr/SIRR_singles_Lo_res.pdf).

<sup>2</sup> *Id.*

<sup>3</sup> David W. Chen, In New York, Drawing Flood Maps Is a ‘Game of Inches,’ N.Y. Times (Jan 7, 2018), *available at* <https://www.nytimes.com/2018/01/07/nyregion/new-york-city-flood-maps-fema.html>.

<sup>4</sup> Rebuild by Design, Who Lives in New York’s Floodplain, <http://rebuildbydesign.org/our-work/research/who-lives-in-nycs-floodplain> (last accessed Nov. 19, 2021).

Gantry Park development  
Hunter's Point South  
Special Flushing Waterfront District

Some of these projects have little or no flood protection. That is not the case for the River Ring project, which seeks to construct two residential towers in the floodplain on Williamsburg waterfront. In order to protect the property from storms, flooding and sea level rise, the developer seeks to construct breakwaters in the East River, a drastic measure that would protect only a small segment of New York's 520-mile shoreline. It is unclear whether this one-off storm barrier project will conform with forthcoming plans for broader city flood resiliency pursuant to the citywide climate adaptation plan.

**III. There is no existing plan to protect New York's 520-mile shoreline or the 1.1 million New Yorkers living in the floodplain.**

Intro 1620 requires the city to develop, by September 30, 2022, a climate adaptation plan. Passage of this legislation is a significant achievement, and one which Riverkeeper is greatly appreciative of. The plan will be wide ranging--and that is a good thing--as it will address not only sea level rise, tidal flooding and precipitation, but also heat island effect, etc. Due to its broad scope, the climate adaptation plan may not necessarily examine in detail the threat to residential properties or acknowledge ongoing and foreseeable floodplain and shoreline development. City Council members could work with the relevant agencies to make sure these impacts to housing are examined and highlighted in the plan.

The city's Zoning Code for Flood Resiliency pushes new buildings to be more flood resistant, but does not provide for community flood resiliency. In flooding events, it is likely that under the new zoning rules, new structures and their key infrastructure will survive inundation. However, the rules do not prepare communities for temporary, long-term, or repeated disruptions to local infrastructure, utilities, roads, and building access. Nor do they prepare for what happens when currently dry areas begin to flood on a yearly or monthly basis. Policy direction from the Council is warranted to fill these gaps.

When properties begin to experience climate change-related flooding, building owners naturally will seek either flood protections or bailouts. Flood protections are expensive and difficult to implement. For instance, even in the best case scenario where the city owns shoreline parkland property, the East Side Coastal Resiliency plan to protect 2.4 miles of shoreline will cost roughly \$1.5 billion, last only through 2050, and is facing significant community opposition. Where such solutions are unavailable, it is likely that the city will face multi-billion dollar requests for flood buyout programs.

**IV. We respectfully recommend four action items to address flood resiliency.**

Riverkeeper submits for your consideration the following four actions that Council members can take to improve climate resiliency for housing within the floodplain:

1. Work with relevant agencies to ensure that the forthcoming New York City climate adaptation plan required by Intro No. 1620-A examines and highlights the sea level rise and storm surge threat to residential properties and especially to new and forthcoming shoreline development projects.
2. To quantify the lack of resiliency for new residential development in floodplains, the climate adaptation plan could overlay a map the past 20 years of housing development projects and newly proposed development projects onto the city's new flooding maps.
3. Set zoning guidelines for community climate resilience, prohibiting new and significantly modified residential development in high-risk floodplain areas and developing stringent guidelines for design of major climate risk mitigation projects, such as in-water breakwaters.
4. Support the daylighting of flowing waters and protect wetlands for the safe management of stormwater and the reduction of tidal energy. Ready projects include the daylighting of Tibbetts Brook in the Bronx and Kissena Creek in Queens. In addition, we urge Council members to stop the development of the BJ's Shopping Center in Staten Island's Graniteville wetlands.

\* \* \*

Thank you for your consideration of Riverkeeper's testimony. We look forward to continuing to work with the you to ensure New Yorkers and their waters are protected against climate change impacts.

Contact:

Michael Dulong, Riverkeeper, Inc., 914.478.4501, [mdulong@riverkeeper.org](mailto:mdulong@riverkeeper.org)