

TESTIMONY OF

MAYOR'S OFFICE OF HOUSING RECOVERY OPERATIONS

BEFORE THE NEW YORK CITY COUNCIL

COMMITTEE ON ENVIRONMENTAL PROTECTION

April 12, 2018

Good Afternoon Chairperson Constantinides and members of the Committee on Environmental Protection. I am Amy Peterson, Director of the Mayor's Office of Housing Recovery Operations. Thank you for inviting me to testify today.

Through the City's Hurricane Sandy Housing Recovery Program, Build It Back, the City has prioritized helping homeowners remain in their affordable long-standing waterfront communities – ensuring that these New Yorkers have the resources necessary to recover and make their homes and communities more resilient.

Within the City's hardest hit waterfront communities, Build It Back is rebuilding and elevating approximately 1,375 homes to today's stringent regulations for flood compliance. Another 6,675 homeowners with moderate Sandy damage have been assisted with repair and reimbursement - helping neighborhoods that were not in the floodplain when Sandy hit and

homeowners who did not have flood insurance. Approximately 250 homes are being acquired through a combination of buy-out and acquisition programs.

Build It Back provided multiple ways for homeowners to repair and rebuild their homes, including the direct management of construction projects by the City ("City-managed construction"). Over the last few years, the City has brought on additional resources to ensure that we can get this work done, from partnering with the Building and Construction trades unions to expand construction capacity in 2015 to adding our new modular program in 2017. As a result of this concerted effort the City has completed 97 percent of City-managed construction projects, and 90 percent of all construction projects, including homeowner managed construction. We are working on the last elevations and rebuilds including: the new modular program – an innovative program expanding contractor capacity and speeding the duration of construction for each home; community-based projects including groups of attached homes in Coney Island and new infrastructure in the Sheepshead Bay Courts; and our most complex and challenging elevations and rebuilds throughout Queens.

Overall, Build It Back, through its Single Family Program, is helping 8,300 homeowners and landlords of 1-4 unit homes, housing a total of 12,500 families. Build It Back has served over 99 percent of these homeowners by starting construction, reimbursement of repairs, or acquisition of their homes. For 93 percent of homeowners, Build It Back has completed construction, reimbursement, and acquisition of homes. Build It Back distributed over \$133 million in reimbursement checks to over 6,100 families.

Build It Back construction partner HPD has also accelerated relief to multifamily households, benefiting more than 19,600 households in 143 developments through repair, resiliency, and reimbursement services.

Funded by the US Department of Housing and Urban Development (HUD), the Build It Back single family program is funded by \$2.2 billion in federal Community Development Block Grant Disaster Recovery (CDBG-DR) dollars and overseen by the Mayor's Office of Housing Recovery Operations (HRO) in coordination with the Department of Housing Preservation and Development (HPD) and the Department of Design and Construction (DDC). Community Development Block Grant disaster recovery funds (CDBG-DR) provide assistance to homeowners after all other forms of disaster assistance have been exhausted.

Hurricane Sandy impacted neighborhoods outside FEMA's 100-year floodplain in 2012. As a result, Build It Back's repair and reimbursement program provided much needed support for homeowners who didn't have flood insurance, many of whom were outside the floodplain. About half of the housing flooded by Sandy was outside of FEMA's 100-year floodplain and of those in the floodplain less than 50 percent of housing had flood insurance. Two-thirds of Build It Back homeowners receiving repair and reimbursement lived outside FEMA's 100-year floodplain in 2012. Only one-quarter of Build It Back homeowners receiving reimbursement and repair received National Flood Insurance Program (NFIP) payments. For this reason, the City encourages residents to purchase flood coverage.

In 2014, Build It Back dedicated funding to provide rental assistance to homeowners displaced by construction so they are not burdened with existing mortgage payments and additional rental payments while their homes are being elevated or rebuilt. The Program expanded its services to include comprehensive relocation assistance partnering with the Center for New York City Neighborhoods (CNYCN) and New York Disaster Interfaith Services (NYDIS). Services were designed to help address barriers to securing temporary housing including large multigenerational families, specific physical or mobility needs, and pet-friendly units. Nearly 1,100 homeowners have received assistance with temporary housing and relocation and 83 percent of homeowners were temporarily relocated within their original community or borough.

Hurricane Sandy was an unprecedented storm for New York City. Build It Back began with key policy decisions that drove subsequent successes and challenges. The City prioritized keeping families in their homes and neighborhoods, and prioritized homeowner choice in the process. The resulting program design and implementation have been driven by many factors including: the unique nature of housing and site conditions in New York City, specifically the communities most impacted by Hurricane Sandy in Southern Brooklyn, Southern Queens, and the East and South Shores of Staten Island; an ever evolving regulatory environment from 2013 to today ranging from post-Sandy changes to building codes and flood map requirements; the need to complete thousands of single-family home construction projects in the busiest construction market in decades; and the complexities of providing relief within the federal disaster funding framework.

We have learned so much collectively over the last five years about what it takes to elevate and rebuild homes in these communities, about the importance of clear communication on how different federal programs (from flood insurance to SBA loans to HUD funded programs) can assist homeowners during their recovery, and about the impact of neighborhood resiliency planning. This is why we believe the joint City Council and Mayoral Sandy Recovery Task Force is such an important effort for the City. With your partnership, we will lay out the principles and best practices for future recovery efforts, with a focus on preparedness, technical assistance for building owners, and community engagement.

The transformation in these neighborhoods is remarkable. I would welcome the opportunity to take the committee on a tour.

I'm happy to take your questions.



**TESTIMONY OF THE MAYOR'S OFFICE
BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON
ENVIRONMENTAL PROTECTION**

Thursday, April 12, 2018

I. INTRODUCTION

Good afternoon. My name is Daniel Zarrilli, and I am the Mayor's Senior Director for Climate Policy and Programs and the City's Chief Resilience Officer. I want to thank Chairperson Constantinides and members of the committee for this opportunity to speak about the progress the de Blasio Administration has made as a global leader in the fight against climate change.

Today, I will briefly describe the history of the City's actions to address climate change, a description of the team that leads the City's climate program, and an overview of the three main themes of our current work, before turning it over to my colleagues.

II. A LEGACY OF CLIMATE ACTION

First, a bit of history. New York City first formed an office of long-term planning and sustainability in 2006 to develop a strategic plan that included climate action for the first time. That plan, known as plaNYC, was released in 2007 and shaped the City's actions to address future threats in a number of ways.

In October 2012, the impacts of Hurricane Sandy brought home the reality that climate risks were much more immediate than many had thought. And the risks are not limited to hurricanes. Rising seas, more heat, and stronger storms threaten as well. In response, in June 2013 the City released its first comprehensive climate resiliency plan to supplement its climate actions and set forth a detailed risk assessment and new initiatives, launching an over \$20 billion program to prepare New York City for a future with climate change.

III. ONE NEW YORK: THE PLAN FOR A STRONG AND JUST CITY

When the de Blasio administration came into office, that legacy informed our work, and we knew that we had to expand on it as well. In April 2015, Mayor de Blasio released the ground-breaking *One New York: The Plan for a Strong and Just City* (OneNYC), a strategic plan for inclusive growth and climate action. OneNYC, supported by our partnership with 100 Resilient Cities, addressed the challenges that we face as a city with growing population, an inequality crisis, aging infrastructure, as well as the risks of climate change.

What was previously known as the office of long-term planning and sustainability is now operating as the Climate Policy and Programs (CPP) team, charged with delivering the sustainability and resiliency portions of OneNYC, with a new focus on equity.

IV. THE THREE PILLARS OF NYC'S CLIMATE LEADERSHIP

Today, we are continuing to deliver on the commitments of OneNYC. This team, with direct reporting to the First Deputy Mayor, is leading the Administration's efforts to deepen our climate work, fill the void of leadership left by Washington DC, and deliver results for New Yorkers. Our team's current climate actions can best be summed up in three themes: sustainability, resiliency, and accountability.

Sustainability

Our climate mitigation—or sustainability—work is focused on reducing our contribution to climate change by cutting our greenhouse gas emissions as fast as possible. This work is led by Mark Chambers and the Mayor's

Office of Sustainability (MOS), the mandate of which is to make New York City the most sustainable big city in the world and a global leader in the fight against climate change.

To accomplish this goal the MOS team is working to keep the city on track to meet our goal to reduce greenhouse gases 80 percent by 2050 (80x50), an effort we recently accelerated to align with the Paris Agreement's 1.5 Celsius stretch goal. We have already achieved a 15% reduction. Getting to 80x50 means making our buildings, the largest source of GHGs in the city, much more energy efficient, expanding renewable energy options, sending zero waste to landfills by 2030, and improving our air quality. Mark will speak more about this work.

Resiliency

Our climate adaptation—or resiliency—work focuses on adapting the city to risks of climate change, such as rising seas, more frequent and intense storms, and extreme heat. This work is led by Jainey Bavishi and the Mayor's Office of Recovery and Resiliency (ORR). ORR's specific mandate is to ensure that the city's neighborhoods, economy, and public services are prepared to withstand and emerge stronger from the impacts of climate change and other 21st century threats.

To accomplish this goal the ORR team is working with many agencies to deliver on the city's over \$20 billion resiliency investment program and institutionalizing resiliency into city operations broadly. Jainey will speak more about this work.

Accountability

And finally, New York City is bringing this fight straight to the fossil fuel companies that caused this climate crisis in the first place with their decades-long campaign of deception and denial about the risks caused by burning fossil fuels. We're doing this in two ways:

1. We are divesting our pension funds of approximately \$5 billion in fossil fuel reserve owners, by 2022.
2. And we have filed suit against the five investor-owned fossil fuel companies (Exxon-Mobil, Chevron, Conoco-Phillips, BP, and Shell) most responsible for climate change and are seeking damages to pay for preparing the city for the impacts of climate change.

IV. GLOBAL LEADERSHIP

All of this work not only benefits New Yorkers, it also serves as a model to other cities around the nation and the world. Through networks such as the C40 Climate Leadership Group, 100 Resilient Cities, and others, we are demonstrating the ways in which we can combat climate change, and working with other cities to scale up effective solutions.

IV. CONCLUSION

As you'll continue to hear today, this team is making significant strides, across the entire administration and in partnership with the City Council and many stakeholders, on the necessary actions to prepare New York City for the future. We have achieved much, and have been recognized with significant awards. And we have much more to do before we'll ever be satisfied.

I would like to again thank the Council and the members of Environmental Protection Committee for your close partnership and shared commitment to our climate goals. We look forward to continuing to work with you as we build a more resilient and sustainable New York.

Now let me turn it over to Mark and Jainey to describe these efforts in more detail before we open up for questions.

Thank you.

Daniel Zarrilli
Senior Director for Climate Policy and Programs
Chief Resilience Officer

**TESTIMONY OF THE MAYOR'S OFFICE OF SUSTAINABILITY
BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON
ENVIRONMENTAL PROTECTION**

Thursday, April 12, 2018

I. INTRODUCTION

Good afternoon. My name is Mark Chambers and I am Director for the Mayor's Office of Sustainability (MOS). Similar to my colleagues, I want to thank Chairperson Constantinides and members of the committee for this opportunity to discuss the work of MOS. The Council and this Committee have been invaluable partners over the years, so thank you again.

II. THE MOST SUSTAINABLE BIG CITY IN AMERICA

MOS' charge is to ensure New York City is the most sustainable big city in the world. Our work at MOS is grounded in the belief that environmental sustainability, environmental justice and economic sustainability for our residents must walk hand in hand. We recognize that to become the most sustainable big city in the world, we have to be conscientious of the resources we consume and the structures we build – and where we build them. We have to act with urgency while innovating, because of the unique conditions of our density and our island home. And most importantly, we recognize we have to do things on a bolder scale than ever before because the challenges are greater than ever before.

As Dan mentioned, we have known for years that we have to address the existential crisis of climate change. Across the globe, greenhouse gas (GHG) emissions are growing at an unprecedented rate, causing a rise in average global temperature and changes to climate patterns. The hurricanes that devastated the Gulf and Caribbean and the wild fires in the American West have showed us the terrible cost of our warming planet. We had hoped we could depend on Washington for leadership but sadly we cannot. President Trump's decision to pull the United States out of the Paris Climate Agreement last year, simply put, was a failure in moral leadership on one of the most significant challenges facing humanity.

Even before failure in Washington, we understood the risk posed by climate change and were already taking action to reduce our emissions 80 percent by 2050. Then in April of last year, Mayor de Blasio signed Executive Order 26 committing New York City to the principles of the Paris Agreement, and its stretch goal to limit global temperature rise to 1.5 degrees Celsius. Hundreds of other U.S. cities and institutions followed suit sending a profound signal to the world that the majority of Americans will not retreat from this existential fight.

III. THE PATH TO 1.5° Celsius

The success of the Paris Agreement hinges — now more than ever — on the involvement of cities like New York to put their resources, innovation, and leadership into play. Please allow me to briefly outline some of the progress the de Blasio Administration has made on the sustainability front. As I'm sure Jaaney will reiterate in her remarks, everything you'll hear today about our accomplishments is the sum of efforts by numerous City agencies, community organizations and advocates as well as private and philanthropic partners.

So on to our progress:

Our greenhouse gas emissions are down significantly. Since 2005, GHGs have decreased citywide by approximately 15 percent despite significant growth of the city's population and economy. Per capita GHG emissions in 2015 was an average of 6.1 metric tons of carbon dioxide equivalent per capita, significantly lower than the American average of 19 metric tons per capita. Part of this can be attributed to the nearly \$500 million the City is spending on energy efficiency and private buildings.

Our buildings are greener. The energy used in the city’s building stock is the largest contributor of GHGs. The City is cutting GHGs in its own buildings by investing in high-value energy efficiency projects. These projects are expected to yield more than \$67 million in avoided annual energy costs and approximately 176,000 metric tons of avoided GHG emissions, the equivalent of taking almost 38,000 cars off the road. The City has also contributed roughly \$16 million for energy efficiency projects in private buildings. This year, the NYC Retrofit Accelerator launched a new High Performance Retrofit Track to assist private buildings with retrofits over the next 10-15 years, which are expected reduce GHGs 40-60 percent. And the NYC Carbon Challenge is working with more than 100 companies and organizations that have voluntarily committed to reducing their GHG 30-50 percent. To date, participants have cut emissions by close to 600,000 metric tons of carbon dioxide are collectively saving nearly \$190 million annually in lower energy costs.

Solar installations have increased six-fold since Mayor de Blasio took office. Part of this increase is a result of Solarize NYC, our program to expand access to clean, reliable, and affordable solar power for all New Yorkers by reducing market barriers for solar and attracting more solar energy companies to the city. Solarize NYC has active campaigns in Harlem and Brownsville, with more partnerships on the way. The first official campaign was announced in 2017 and featured a solar campaign partnership with WEACT for Environmental Justice called “Solar Uptown Now,” which is centered in Harlem. More recently, Solarize Nehemiah launched a group purchasing campaign for rooftop solar for the Nehemiah Homes in Brownsville, Brooklyn.

We’re rapidly expanding access to Electric Vehicles (EVs). In 2015, the City decided to lead by example with the launch of NYC Clean Fleet, which included the commitment to create the largest municipal electric vehicle fleet in the United States with the goal of cutting municipal vehicle emissions in half by 2025, scaling up to an 80% reduction by 2035. By the end of 2017, the City had already procured 1030 out of the 2000 EV sedans it committed to integrate in its fleet by 2025.

In 2017, Mayor de Blasio announced the City's ambitious goal of having electric vehicles comprise 20% of new vehicle registrations citywide by 2025. To support this goal, the City has invested in creating EV fast charging hubs to be developed in collaboration with Con Edison. These fast charging hubs will be scaled up to a total of 50 locations citywide by 2020, and accompanied by 100 curbside parking spots to provide access to multi-hour charging.

We’re sending less waste to landfills than ever before. Organic waste like food scraps, soiled paper, and yard waste generate methane gas, a harmful GHG and this waste accounts for one-third of everything New Yorkers throw away. E-wastes in our landfills leach heavy metals and can compromise our ecosystem. To address this, the City’s organics collection program is now the largest in country, serving more than 3.3 million residents, and our e-waste program has recycled more than 15 million pounds of electronic waste since 2015.

New York City’s air is the cleanest in 5 decades. New York City’s air quality is the cleanest it has been in 50 years but we’re still redoubling our effort to ensure our air only gets cleaner by helping buildings choose cleaner energy sources through our Green Buildings and Solarize NYC programs.

IV. 2018 PRIORITIES

Over the course of year, we will continue to act with urgency and boldness to in our effort make New York City the most sustainable big city in the world. But our success depends in large part on deepening our partnership with the Council and this committee. We are interested in working with the Council to pass energy efficiency mandates for large buildings, as well as exploring ideas to further expand access to solar and EVs and reducing single-use plastics.

VI. CONCLUSION

In conclusion, I would like to thank the Committee for the opportunity to discuss MOS’s portfolio and the progress we have made in ensuring that our air is cleaner, our energy is greener, and that we are sending less waste to

landfills. Fulfilling our climate agenda is no easy task and we look forward to deepening our partnership with the Council in that effort.

I will now turn the floor over to Jainey Bavishi to update the committee on the City's resiliency work.

Thank you.

Mark Chambers

Director of the Mayor's Office of Sustainability

**TESTIMONY OF THE MAYOR'S OFFICE OF RECOVERY AND RESILIENCY
BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON
ENVIRONMENTAL PROTECTION**

Thursday, April 12, 2018

I. INTRODUCTION

Good afternoon. I am Jainey Bavishi, the Mayor's Director for Recovery and Resiliency. I want to thank Chairperson Constantinides and the members of the Committee for this opportunity to speak about the work and the accomplishments of the Mayor's Office of Recovery and Resiliency (ORR) and the complimentary role my office plays to MOS' climate sustainability work.

Five years ago, Hurricane Sandy devastated New York City with unprecedented force. It was the worst natural disaster we've ever faced, made worse by climate change. As we assessed the damage, it was clear that we could not just plan to simply recover from the storm. Instead, we used that moment to not only address the risks of 'another Sandy', but to broaden our approach to the chronic risks of climate change.

In May of 2014, Mayor Bill de Blasio established ORR to lead the effort to build a stronger, more resilient New York. ORR spearheads an over \$20 billion OneNYC resiliency program to ensure that the city's neighborhoods, economy, and public services will be ready to withstand and emerge stronger from the impacts of climate change.

II. OUR RESILIENT CITY

Since its creation, ORR has been at the forefront of the global resiliency movement that is changing the way cities respond to climate change. As Dan mentioned, in April 2015, Mayor de Blasio released OneNYC. Not only was the document groundbreaking in its focus on becoming the fairest city in America, it was also the first resiliency plan of any city on the planet.

Guiding the City's resiliency agenda is the Administration's commitment to using the best available science to inform policy. The New York City Panel on Climate Change (NPCC), an independent body of leading climate scientists, advises the Mayor on the latest localized climate change projections. Because of the increases in global temperatures as result of the burning of fossil fuels and other greenhouse gases, the NPCC projects:

- By the 2050s, average New York City temperatures are projected to increase between 4.1°F and 5.7°F.
- Annual precipitation is projected to increase between 4 and 11 percent.
- Sea levels are projected to rise between 11 inches and 21 inches, *on top of a foot of sea level rise that we have already witnessed since 1900.*

What this means is that extreme events, like flooding and heat waves, are becoming more frequent and more intense – and that a similar Sandy-like event in 2050 could cause \$90 billion in damage – compared to Sandy's \$19 billion.

With these climate facts in mind, something in short supply in Washington, we're making bold and innovative investments in preparedness and resiliency that make sense for today and tomorrow. As additional changes in the climate begin to materialize and sea level rise accelerates, different options might become more practical or perhaps even absolutely imperative. That's why we're investing in such a way so as not to preclude future actions we may need to take as climate risks evolve.

I'd like to *briefly* describe the City's progress with our OneNYC resiliency plan – comprised of a multilayered approach to neighborhoods, buildings, infrastructure, and coastal defense. Needless to say our resiliency work to date is the product of a massive team effort, led out of the Mayor's Office, and implemented by nearly every City agency, and includes State and Federal agencies, as well as a myriad of community organizations and private and philanthropic partners.

Our city is safer and more resilient than it was before Hurricane Sandy – and much more is coming.

Our neighborhoods are more resilient. Tens of thousands of households are benefitting from investments in our single family, multifamily and public housing stock. Building and zoning codes have been upgraded. Every school damaged during Sandy was up and running in record time and we continue to make significant progress with making our schools more resilient. We've provided \$54 million to hundreds of local small businesses to assist in the recovery from Sandy; and launched Business Prep and RISE: NYC to support their long-term resiliency. And last year, we released Cool Neighborhoods NYC – a comprehensive strategy to mitigate the drivers of extreme heat and protect the most vulnerable New Yorkers from the impacts of extreme heat.

Our buildings standards are smarter. We upgraded the city's building codes, including sixteen new local laws to account for vulnerabilities related to extreme weather and climate change. Additionally FEMA, in partnership with the City, is drafting new, more precise flood insurance maps that will more accurately communicate risk and keep premiums affordable. The City is working with FEMA to create a second map product reflecting future conditions that account for climate change. This will assist us in making coastlines more resilient and climate-ready, while keeping flood insurance affordable for those who need it.

Our infrastructure is better protected. This includes upgraded traffic infrastructure, hardened telecommunications systems, new green infrastructure, and we continue to fortify our wastewater treatment plants, all of which ensure vital public services continue during and after emergencies. And DEP investments ensure uninterrupted access to high-quality drinking water, including a new backup water siphon to Staten Island. We also released preliminary climate resiliency design guidelines which provide direction to engineers and designers on how to incorporate resilience considerations into all capital projects.

Our coastal defenses are being implemented and our stormwater management efforts are stronger. This includes a new Rockaway Boardwalk with integrated coastal protections, completed t-groins in Sea Gate, and nearly ten miles of new dunes across the Rockaway peninsula and in Staten Island. Construction is underway on new sewer infrastructure in Southeast Queens and expanded bluebelts in Staten Island to reduce the impacts of flooding. And we're looking forward to breaking ground on the \$760 million East Side Coastal Resiliency Project next spring.

III. THE YEARS AHEAD

Over the course of 2018, the ORR team will continue building New York City's resilience to the impacts of climate change. The City has some of the brightest and most dedicated people working everyday on behalf our residents. But we can't do it alone. So much of what we do depends on the experiences of communities directly affected by climate change as well as local and global resilience experts. Our success also depends on our partnership with the Council and this committee to help foster a culture of resilience in New York City, one that is grounded in the lessons of Hurricane Sandy but is ultimately geared to addressing the broader risk of climate change we face. For example, how we manage storm water and how we use land will be critical to how we weather future storms. I look forward to having these conversations with the Council.

IV. CONCLUSION

As I conclude my testimony, I would like to thank the committee for this opportunity. Building urban resilience in the age of climate change is a long-term process; we will always need to innovate and adapt to account for changes in rising temperatures and seas. Success will look different at different point in our future but it will always demand democratic partnership and collaboration across actors at all levels of society. We thank the committee for its

dedication to this issue and look forward to working with the Council as we continue to protect our city from the risks of climate change.

I will now turn the floor over to Amy Peterson from the Housing Recovery Office to update the committees on the progress of Build It Back's and the City's housing recovery and resiliency efforts.

Thank you.

Jainey Bavishi

Director of the Mayor's Office of Recovery and Resiliency

LISA DICAPRIO STATEMENT FOR APRIL 12, 2018 CITY COUNCIL COMMITTEE ON ENVIRONMENTAL PROTECTION OVERSIGHT HEARING ON RECOVERY AND RESILIENCY

My name is Lisa DiCaprio. I am a professor of Social Sciences at NYU where I teach courses on sustainability.

Thank you for the opportunity to speak at this oversight hearing on recovery and resiliency.

In his January 7, 2018 New York Times article on the implications and politicization of the new FEMA flood maps for NYC, David Chen notes that New York, with its 520 miles of coastline, "has more residents living in high-risk flood zones than any other city in the country" and "the pace of development along the water has only increased" since Superstorm Sandy. (See: David W. Chen, "In New York, Drawing Flood Maps is a 'Game of Inches,'" New York Times, January 7, 2018, <https://www.nytimes.com/2018/01/07/nyregion/new-york-city-flood-maps-fema.html>)

Are the Waterfront Edge Design Guidelines (WEDG) adequate, given new scientific studies about the relentless rise of our oceans, which will only accelerate in the future? (For these guidelines, see: <http://wedg.waterfrontalliance.org>)

The Climate Central Surging Seas Risk Zone Map illustrates how NYC will be flooded at different levels of sea level rise: https://ss2.climatecentral.org/#12/40.8616/-73.7440?show=satellite&projections=0-K14_RCP85-SLR&level=5&unit=feet&pois=hide

We should be especially alarmed by the current and projected days of sunny day, high-tide flooding.

This phenomenon, as New York Times reporter Justin Gillis explained in his September 3, 2016 article, "Flooding of Coast, Caused by Global Warming, Has Already Begun," (see: <https://www.nytimes.com/2016/09/04/science/flooding-of-coast-caused-by-global-warming-has-already-begun.html>), is now real and not just a theoretical possibility:

"For decades, as the global warming created by human emissions caused land ice to melt and ocean water to expand, scientists warned that the accelerating rise of the sea would eventually imperil the United States' coastline. Now, those warnings are no longer theoretical: The inundation of the coast has begun. The sea has crept up to the point that a high tide and a brisk wind are all it takes to send water pouring into streets and homes."

A new National Oceanic and Atmospheric Administration (NOAA) report on sunny-day, high tide flooding is detailed in a March 28, 2018 Washington Post article by Jason Samnow, "Federal report: High-tide flooding could happen 'every other day' by late this century." By 2050, according to this report's projections, "...high-tide flooding will occur between 50 and 250 days per year along the East Coast depending on the [greenhouse gas] emissions scenario." Aldrin Caldas, senior climate scientist at the Union of Concerned Scientists is quoted as saying, "Just imagine seeing streets (and property)

flooded every other day. That gives a completely new meaning to the term 'nuisance flooding.' Or actually, it completely obliterates the concept, as flooding would become much more than a nuisance, but a rather serious problem requiring significant resources and innovative policies." (See: https://www.washingtonpost.com/news/capital-weather-gang/wp/2018/03/28/federal-report-high-tide-flooding-could-happen-every-other-day-by-late-this-century/?utm_term=.7f23c71c28d8)

In NYC, sunny day, high-tide flooding is already affecting several low-lying communities in Queens that surround Jamaica Bay, as described in Nathan Kensinger's October 12, 2017 article, "In Queens, chronic flooding and sea-level rise go hand in hand." These neighborhoods include Hamilton Beach, Broad Channel, and Howard Beach. (See: <https://ny.curbed.com/2017/10/12/16462790/queens-climate-change-jamaica-bay-flooding-photos>)

What is the status of the current resiliency projects for these communities, which include a new storm surge berm, street raising, and bulkhead projects? According to projections of sea level rise made by the New York City Panel on Climate Change, certain areas of Hamilton Beach and Broad Channel may experience tidal flooding on a daily basis. Are the current resiliency projects adequate given these predictions? Or, are they simply providing the illusion of protection? (The specific locations of these projects are indicated on the website of the Mayor's Office of Recovery and Resiliency: <https://maps.nyc.gov/resiliency>)

Related to this question, is NYC sufficiently prioritizing planning and the allocation of resources for resiliency initiatives or relocation, if necessary, for our existing communities at risk?

**Comments on the Mission, Work and Achievements of the Mayor's Office of Sustainability
Before the Committee on Environmental Protection
April 12, 2018**

The Real Estate Board of New York (REBNY), representing over 17,000 owners, developers, managers and brokers of real property in New York City welcomes the opportunity to provide comments on the mission, work and achievements of the Mayor's Office of Sustainability.

The Mayor's Office of Sustainability's mission is to "create a city where the air is clean, the streets are green and where our 8.5 million residents produce zero waste and zero carbon."¹ Given this context, New York is making good progress. New York State has the lowest rate of greenhouse (GHG) emissions among all states in the country², and New York City's GHG emission per capita is among the lowest of large cities in the world.³ From 2005-2014, GHG emissions from New York City's buildings decreased by 12% due to owners - including many REBNY members - taking on retrofits that make economic sense and building leading-edge sustainable structures.⁴ REBNY and our membership certainly understand and appreciate the threats imposed by climate change.

It is this appreciation of contributing toward a cleaner and greener city that leads REBNY and our members to work closely with Mayor's Office of Sustainability to promote sustainability and energy efficiency awareness among the larger real estate community.

For example, REBNY collaborated with Mayor's Office of Sustainability - along with the Building Owners and Managers Association of New York and the Urban Green Council - to launch Sustainability Boot Camp in 2016 to train managers, superintendents, operators and engineers in best building operations practices to achieve maximum energy efficiency. Over 800 building professionals in multi-family residential and commercial buildings from more than 90 organizations, including nearly 200 New York City Housing Authority staff members, participated in the program to learn key strategies and work practices needed to transition to green building operations.

But ensuring that building operations staff are knowledgeable about sustainable practices is only one factor in promoting a greener and greater New York. Building tenants, who typically make up 40 to 60 percent of a commercial building's total energy consumption need to be educated as well. That is why REBNY partnered with the Mayor's Office of Sustainability to launch the NYC Carbon Challenge for Commercial Owners and Tenants in February 2017 with a common goal to identify strategies for the coordinated implementation of energy efficiency projects and the reduction of GHG emissions from their buildings by 30% or more, within the next ten years. REBNY is currently exploring ways to further engage tenants to adopt energy efficiency measures within leased spaces during critical lease negotiation opportunities.

REBNY and our members also participated in the 80x50 Technical Working Group that was spearheaded by the Mayor's Office of Sustainability. The process culminated in April 2016 with the issuance of the Working Group's Progress Report outlining nearly 100 Energy Conservation Measures across various building typologies.

¹ "About - Mayor's Office of Sustainability" <http://www1.nyc.gov/site/sustainability/about/about.page> City of New York, Mayor's Office of Sustainability. Accessed 11 April 2018

² "Rankings: Total Energy Consumed per Capita, 2015" <https://www.eia.gov/state/rankings/> Independent Statistics & Analysis, U.S. Energy Information Administration. Accessed 11 April 2018.

³ Compilation of data from *One City Built to Last Technical Working Group Report*, NYC Mayor's Office; *C40, LONDON LEGGI 2014*; *Los Angeles Climate Action Report 2013*; *Seattle GHG Inventories*; and *Chicago 2015 GHG Emissions Inventory*

⁴ City of New York (2016), *One City Built to Last Technical Working Group Report*, Retrieved from http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/TWGreport_04212016.pdf Retrieved 11 April 2018

These efforts are prime examples of the Mayor's Office of Sustainability convening and collaborating ability to ensure that New York City is on a greener and greater path toward sustainability. But with this ability comes the responsibility to ensure that practical policies are put forward that promote, rather than deter, the achievement of other important policy goals.

The City of New York is proposing an ambitious path to limit fossil fuel and whole building energy consumption limit according to building type. This effort was embodied in Intro 1745 of the City Council's 2014-17 session which ended a few months ago. At present, we expect the bill to be re-introduced in the City Council for the 2018-21 Council session. The effort is well-intentioned in its goal to help New York City achieve GHG emissions reduction of 80 percent by 2050 but, we hope that the bill is the start of the conversation. Because achieving the fossil fuel limits that Intro 1745 requires necessitates major retrofit investments in primarily multi-family residential buildings - including affordable housing - across the city and in virtually every neighborhood.

Moreover, the bill bases its fossil fuel targets upon Energy Use Intensity (EUI), a blunt metric that does not measure energy efficiency and does not take into account building density – a fact that even the Mayor's Office of Sustainability acknowledges in prior testimony before the City Council.⁵ Basing energy efficiency on EUI will benefit unoccupied buildings while penalizing more densely occupied environments regardless of how energy efficient the building is. The continued reliance upon EUI could adversely impact our city's efforts to build affordable housing and create jobs by discouraging density that would result in high EUIs.

REBNY and our members have enjoyed a productive working relationship with the Mayor's Office of Sustainability since its inception and looks forward to engaging with it to address how the major retrofit investments called for by Intro 1745 could be absorbed by smaller or family-based residential building owners. Or, in the alternative, we look forward to working with the Office to seek other paths to long-term GHG reductions.

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Contact:

Carl Hum
General Counsel and Senior Vice President
(212) 616-5233
chum@rebny.com

⁵ *Hearing before the Committee on Environmental Protection, New York City Council, April 27, 2017, (Statement by John Lee, Deputy Director of the Mayor's Office of Sustainability)*

Testimony of Catherine McVay Hughes
The New York City Council Committee on Environmental Protection
Oversight Hearing on The Mission, Work and Accomplishments of
The Mayor's Office of Sustainability and The Office of Recovery and Resiliency
Thursday, April 12, 2018 1:00 PM -- 250 Broadway, Committee Rm, 16th Floor

Good afternoon, Chair Constantinides and Council Members Espinal, Levin, Menchaca, Richards, Ulrich and Yeger. Thank you for the opportunity to testify. My name is Catherine McVay Hughes. I served 20 years on Manhattan Community Board One, half that time as Chair or Vice-Chair. After Superstorm Sandy, I was appointed Co-chair of the NY Rising Community Reconstruction Program for Southern Manhattan. I am a founding member of CB1's "Manhattan Tip" Resiliency Task Force and a Steering member of the NY Harbor Regional Storm Surge Barrier Working Group (SSWG). I speak as a 30-year downtown resident, proud of what we have built and re-built in Lower Manhattan and deeply concerned that this investment made by our City, our State and our entire country is in grave danger from the threats of climate change, extreme weather and rising sea levels.

2017 was the costliest year ever for weather and climate disasters in the United States totaling \$306 billion – according to a recent National Oceanographic and Atmospheric Administration report. Last year had 16 weather events that each topped a billion dollars in damage, including a string of hurricanes (\$125B Harvey, \$90B Maria, \$50B Hurricane Irma) and Western wildfires (California \$18B).

Moody's, a major credit rating agency, added climate to credit risks and now warns cities to address their climate exposure or face rating downgrades. Climate risk in portfolios is something that investors are increasingly focusing on. In January of this year, over 450 financial leaders representing \$27 trillion in assets assembled for the Investor Summit on Climate Risk at the United Nations, convened by Ceres.

The future of the Federal Emergency Management Agency (FEMA) and its National Flood Insurance Program is uncertain and FEMA's flood insurance premiums to rise this year – "The National Flood Insurance Program provides coverage for 5 million policyholders nationwide but must be reauthorized periodically. Now slated to expire at the end of July [2018], the program is currently more than \$25 billion in debt." (US News/AP, 04/01/18)^j We do not know if or how much the federal government will assist in rebuilding our communities. Without assurances that there is a federal program in place to cover extensive damages and without a comprehensive implemented resiliency program, the cost of doing business will rise and some investors may not want to take the risk – eventually leading to economic decay where those who can afford to will move out and leave behind those who cannot afford to move, as increased nuisance flooding and extreme weather increases in frequency, size and damage. Some folks already struggle to cover the cost of FEMA flood insurance.

Hurricane Sandy Recovery Task Forceⁱⁱ – status update. The members of this task force were to be appointed by the Mayor and the City Council Speaker within 120 days of the enactment of this local law. This deadline has already passed. In addition, the task force was to submit to the Mayor and the Speaker a report no later than 12 months. It should include an update on the Lower Manhattan Coastal Resiliency (LMCR) Project which includes CB1's segment south of Brooklyn Bridge including the historic South Street Seaport and Financial District. FiDi is the fourth largest business district in the country and where one out of every 18 jobs citywide jobs is located. LMCR is in the planning phase with a Budget Total = TBD and a Completion Date TBD.

Constructing a layered defense of local sea walls and Regional NY Harbor Storm Surge Barrier System would address future storm surges – a 20-25-foot-high off-shore storm surge barrier system:

1. Would avoid the complex hydrogeologic, built infrastructure and social infrastructure issues faced by the current dual-purpose SIRR and RBD projects
2. Could protect the Metro Area for the next 100 years, allowing for long term change
3. Would protect far more communities than the current SIRR and RBD projects for the same \$20 billion cost, about the cost of one \$19 Billion Sandy type storm

“The Social Justice Case for a Metropolitan NY-NJ Regional Storm Surge Barrier System” has been demonstrated in Environmental Law in New York: Developments in Federal and State Law.ⁱⁱⁱ Low- and middle-income communities and communities of color suffered more from Sandy and its aftermath than wealthier neighborhoods. The same communities also experienced slower and less effective rebuilding efforts. The “Circle of Protection” defends diverse income and racial groups at lower cost, and with better outcomes, than local community-based barriers such as are currently planned. The Regional Surge Barrier is one of five alternatives currently being considered by US Army Corps of Engineers NY-NJ Harbor and Tributaries (HATS) Coastal Storm Risk Management Feasibility Study. Alternative #2 has the perimeter defenses only addressing sea level rise and building a regional storm surge barrier system to address the threat of storm surge. This would shorten the coast line and provide comprehensive protection for the entire region. Both the Storm Surge Barrier Working Group and National Institute of Coastal Harbor Infrastructure are advocating for serious consideration of offshore surge barriers as part of the layered defense system. For these reasons it is imperative that the Corps include Alternative 2 in the Tentatively Selected Plan.

Mayor's Management Report (MMR)^{iv} – the City must track the financial cost of climate change and add indicators to capture sea level rise, energy use and greenhouse gas emissions. The 372-page Preliminary 2018 MMR annual report was released in February 2018 and fails to reflect the City’s targets and goals to meet its C40 Commitment by 2020 and its “80 by 2050” target. This document needs to be updated to include indexes that are annually measured and publicly shared, so that progress can be monitored and evaluated going forward. Also, Local Law 22 of 2008 requires a 30 percent reduction in citywide greenhouse gas emissions by 2030 and requires annual inventory and analysis of greenhouse gas emissions by City government emissions by 2017. For example, The Inventory of New York City Greenhouse Gas Emissions in 2015^v was published in April 2017. There should be a 2017 Summary in the 2018 MMR that updates the Inventory’s page 7 Fig. 1: New York City Energy Consumption and Greenhouse Gas Emissions and Fig. 2: Energy, GHG Emissions, and Economic Indicators.

Affiliations (for purposes of disclosure): Catherine McVay Hughes is a member of the Board of the Battery Park City Authority, Earth Institute at Columbia University Advisory Board, CERES Presidents Council, Lower Manhattan Development Corporation, The Trust for Governors Island, South Street Seaport Museum and WTC Scientific Technical Advisory Committee. She holds an MBA from the Wharton School of Business and a Bachelor of Science degree in Civil Engineering from Princeton University.

ⁱ <https://www.usnews.com/news/best-states/new-jersey/articles/2018-04-01/fema-flood-insurance-premiums-to-rise-this-year>

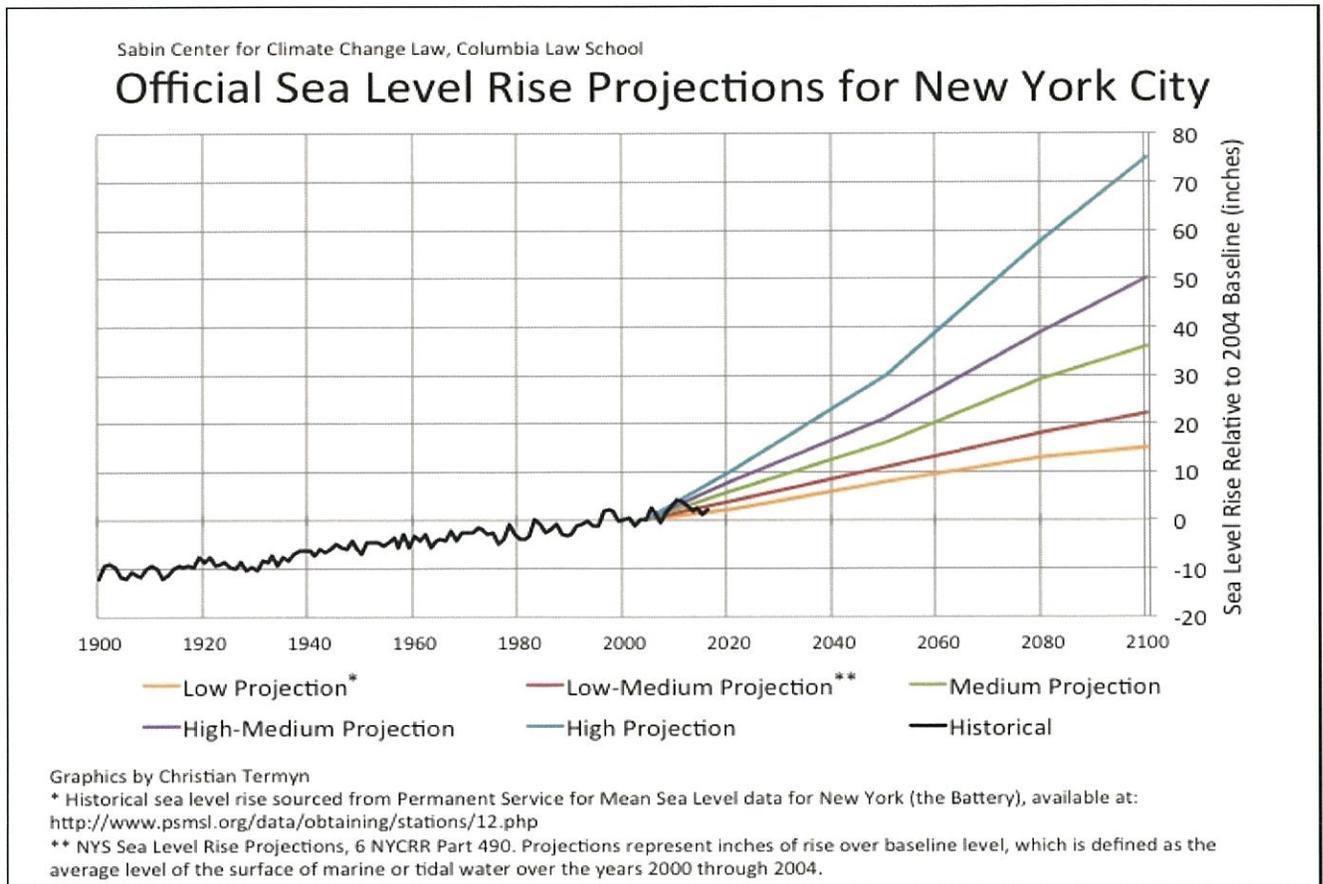
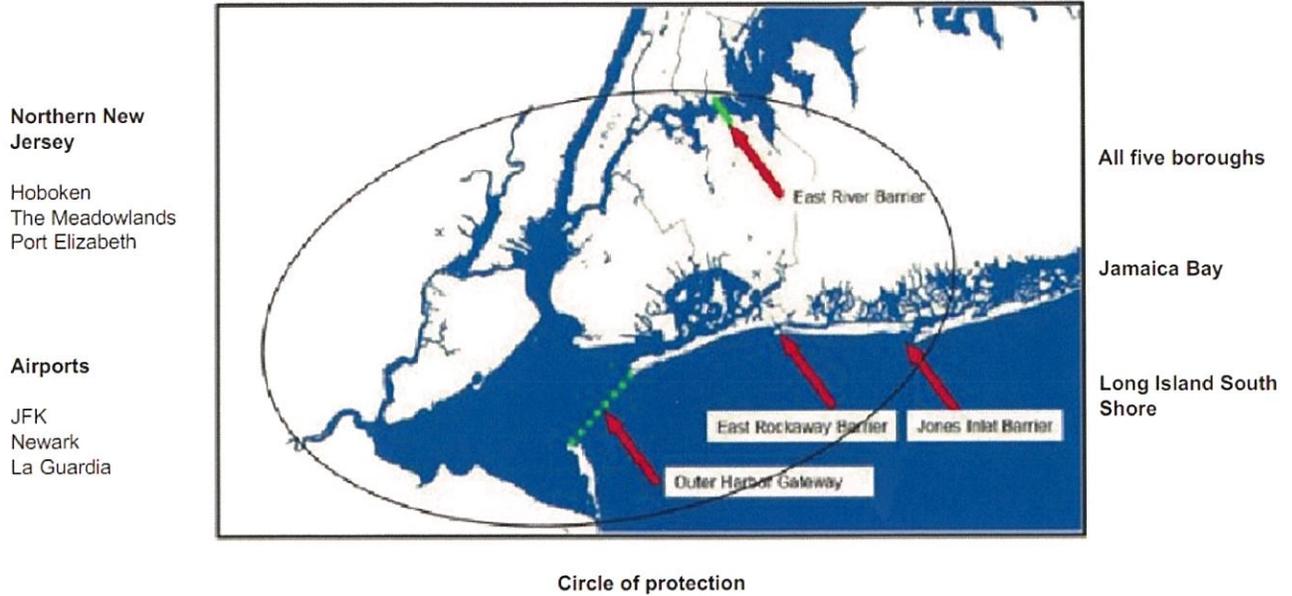
ⁱⁱ Int. 1720-2017, passed unanimously by City Council in October 2017 and enacted on November 17, 2017, <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3163963&GUID=E67E93F0-B9A4-477C-A18A-56E4D86891D4>

ⁱⁱⁱ Malcolm J. Bowman, William B. Golden, Catherine McVay Hughes, Christopher Sellers, and Robert D. Yaro; Volume 29, No. 04, April 2018

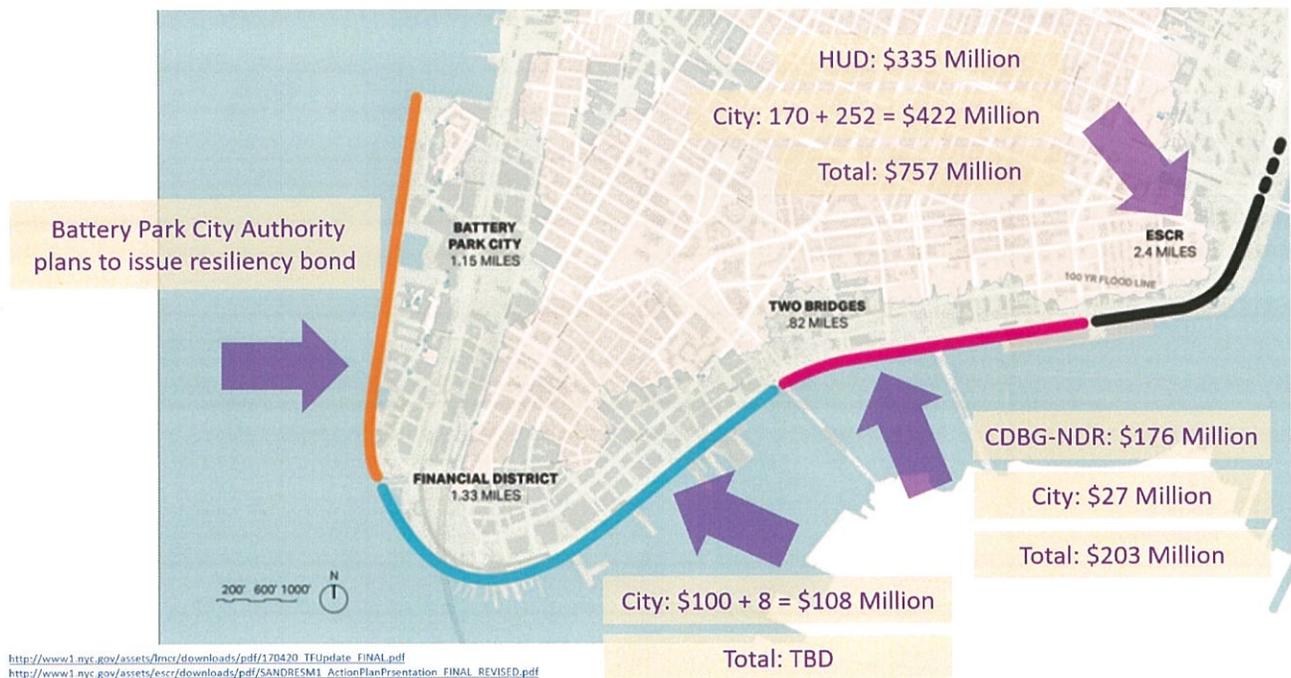
^{iv} MMR is mandated by the City Charter, serves as a public account of the performance of City agencies, measuring whether they are delivering services efficiently, effectively and expeditiously. The MMR also reflect the City's values and priorities. http://www1.nyc.gov/assets/operations/downloads/pdf/pmmr2018/2018_pmmr.pdf

^v https://www.dec.ny.gov/docs/administration_pdf/nycghg.pdf

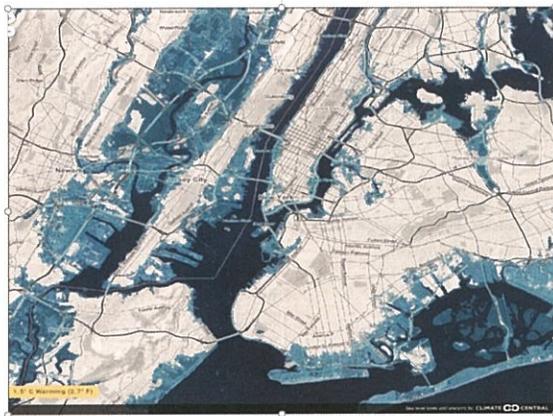
Protecting the Region from Future Storm Surge Disasters



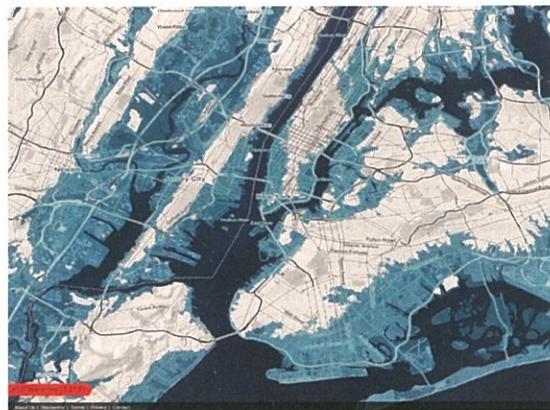
Resiliency Projects and Funding – Lower Manhattan



Which Post-2100 sea level rise will we lock in?



Warming
1.5 degrees C (2.7 degrees F)



Warming
4.0 degrees C (7.2 degrees F)

Climate Central, Surging Map Choices

<https://choices.climatecentral.org/#12/40.7124/-74.0010?compare=temperatures&carbon-end-yr=2100&scenario=a=warming-4&scenario-b=warming-1.5>; “Warming of 4°C (7.2°F) is close to our current path, would represent a breakdown in efforts, and corresponds to 8.9 m (29.2 ft) of locked-in global sea level rise. The span from 2-4 °C covers the likely range of possible outcomes from global climate talks at COP21 in Paris.”



**Comments of Environmental Defense Fund before the
NYC Council Committee on Environmental Protection: Oversight Hearing –
The Mission, Work and Accomplishments of The Mayor’s Office of Sustainability
and The Office of Recovery and Resiliency**

April 11, 2018

Good afternoon, Chair Constantinides and Council Members. My name is Isabelle Silverman and I am a Senior Fellow at Environmental Defense Fund (EDF). Thank you for the opportunity to testify.

EDF is a not-for-profit, non-partisan, international environmental organization with headquarters in New York City. With over two million members, more than 35,000 of which are New York City residents, we work to advance market-based policy to address the world’s greatest environmental challenges.

Over the past few years, EDF has worked closely with the Mayor’s Office of Sustainability on several important sustainability issues such as the Clean Heat initiative, the Retrofit Accelerator, the Mayor’s carbon challenge, large building retrofit mandates, electric vehicles and other energy and environmental issues. We appreciate the productive working relationship and open dialogue we have with the Mayor’s Office of Sustainability and are encouraged by the discipline and focus behind their efforts. EDF supports the Mayor’s Office of Sustainability’s work and wants to see them succeed in achieving the City’s goal of reducing greenhouse gas emissions by 80x50.

Importance of Adequate Staffing and Funding

As per New York City’s reports, 1.5 deg C Aligning New York City with the Paris Climate Agreement, and New York City’s Roadmap to 80x50, the Mayor’s Office of Sustainability has been declared the lead agency for the vast majority of “key actions” that will help move us towards the 80x50 goal. Implementing and overseeing the different key actions and programmatic goals will be challenging to say the least and will require resources beyond what is currently allocated.



The City should take every step to make sure the Mayor's Office of Sustainability is adequately staffed and funded to advance the daunting task of decarbonizing the City over the next 30 years. Major collaboration and coordination across various city agencies, which is a key function of the Mayor's Office of Sustainability, will be necessary to achieve the City's ambitious goals.

At the same time, the Mayor's Office of Sustainability will need to stay at the forefront of upcoming sustainability issues and opportunities. We only have 32 years to get this right and avoid costly, major sea level rises. Without adequate funding and staffing, MOS' success will be hampered.

Mayor's Management Report

The City should include MOS's performance in the Mayor's Management Report (MMR). It should analyze MOS' and other city agencies' performance and progress towards the City's 80x50 goal. The Preliminary MMR of February 2018 is neither reporting on MOS' performance, nor on ongoing "key actions" to achieve the 80x50 greenhouse gas emissions goal.

The City should also track the financial costs to the City of New York of rising temperatures, extreme weather events and rising sea levels on an ongoing basis.

Thank you for the opportunity to offer comment before the Environmental Committee today. EDF is available to answer any questions you might have.

Isabelle Silverman
Senior Fellow
EDF
(917) 445-6385



Testimony of Patrick Houston and Pete Sikora to the New York City
Council Environmental Protection Committee Oversight Hearing on the
Mayor's Office of Sustainability

April 12th, 2018

Thank you for allowing us to testify. Patrick Houston is the Climate & Inequality Campaign Organizer and Pete Sikora is the Climate & Inequality Campaigns Director for New York Communities for Change.

Inequality and climate change are the two great moral crises of our time. They are deeply intertwined.

At the city level, NYCC is focused on the city's top source of climate pollution and greatest job creation opportunity – outside of direct spending to create jobs – which is cleaning up large #DirtyBuildings. Buildings like Trump Tower and Kushner's 666 Fifth Ave are only 2% of the city's buildings but are almost half of the city's climate pollution footprint.

New York City as a whole currently generates about 50 million ~~mega~~^{metric} tons of CO2 equivalent. Large buildings over 25,000 square feet, that 2% of buildings, generate roughly 20 – 25 million ~~mega~~^{metric} tons of CO2 equivalent pollution.

That's more pollution than most countries.

As you know, the Administration has a wonderful analysis of the problem in OneNYC, which follows on PlanNYC. The key is follow-through.

The Council passed and the Mayor enacted law committing NYC to at least 80% reductions in climate pollution by 2050. The City is also committed to the goals of the Paris climate agreement, which are at least 80x50 pollution cuts.

The city has bound itself to act but the problem is that the Mayor's plan for addressing nearly half of the city's climate pollution problem is *hugely insufficient* in terms of climate and air pollution reductions. It also does not include good jobs labor standards. Even worse, it would lead to widespread MCI rent hikes in rent-regulated housing, which about 2 million New Yorkers depend on.

To be precise on the pollution impact, the Mayor's plan for large buildings would cut pollution city-wide by 7% by 2030 (if all buildings complied). But those large buildings are nearly 50% of the city's climate pollution. The Mayor's proposal would not lead to large scale energy efficiency upgrades. Since it doesn't require large scale upgrades except in a limited number of

residential buildings, it therefore does not create the economic activity needed. NYC would not get the good jobs that would employ thousands of people primarily from moderate and low income communities of color – and a sustainable multi-decade wave of hiring and employment into good, career track union jobs.

In addition, because it only sets up a standard through 2030, it creates a big problem down the road because large buildings have multi-decade capital cycles. For example, consider a boiler. Owners replace boilers every, say 25-30 years. If the city only sets a standard for 2030 and does not set a standard for 2050, then building owners over the next 12 years will put in boilers that are only compliant with that limited 2030 standard. The problem then becomes going back and trying to fix or upgrade a perfectly good boiler to a much higher standard. (let us be clear that is a simplifying analogy on capital cycles and boiler upgrades. It's a little more complex in reality, but that is a big basic problem)

Instead, the city should set both interim standards and an enforceable 2050 standard which would give building owners certainty in future capital planning. If given the time to adjust, building owners can make the appropriate multi-decade plans, integrating high energy efficiency into their capital decision-making. That's the right approach.

In other words, the city should not kick the can down the road, making the problem harder to solve in the future. The city should lock in a smooth glide path to 80x50.

To his credit, Councilmember Constantinides, in contrast, introduced a substantially stronger plan in last year's Intro 1745. 1745, by our expert's analysis, generates almost 13% climate pollution cuts in the city by 2030. That's double the Mayor's plan. Crucially, it hits the minimal speed and depth needed to hit the 80x50 goals through 2030.

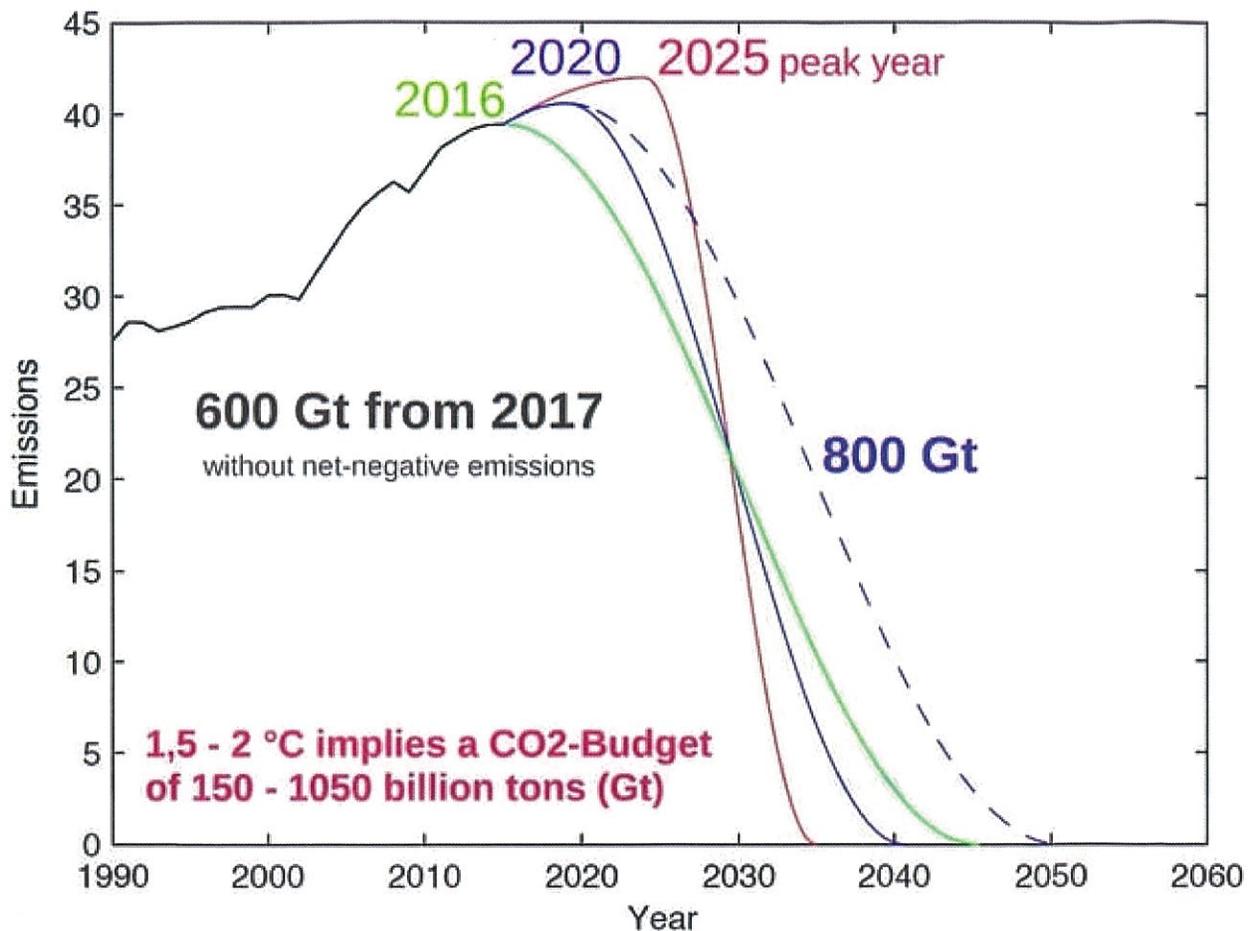
Unfortunately, Intro 1745 does not include that crucial – and much deeper – 2050 standard. It needs a 2050 standard that achieves the city's goals and locks in that smooth glide path. By analogy, if you want to travel 100 miles in 10 days, you need to go 10 miles a day. Going to 2030 is like the first 3 days of that trip. By analogy, the Mayor's plan goes 5 miles a day those first three days and then stop. Intro 1745 is substantially better: it goes 10 miles a day those first three days, but then it also stops.

The Mayor's plan and Intro 1745 also both unfortunately – and to our grave concern – would lead to rent hikes in rent-regulated housing. Displacement and homelessness are a crisis. Affordability is perhaps our city's top public policy problem. The last thing that legislation to cut climate and air pollution should do is put people out of their homes. It is our hope that any bill introduced on this topic fixes this problem. New York State must overhaul the state's rent laws, which are unfortunately out of the city's control. MOS should not push legislation that contradicts and frustrates the Mayor's stated affordability goals.

NYC must also ensure that good labor standards to produce good jobs and high quality work should be part of any final legislation or package of legislation and budget items.

This oversight forum shines a spotlight on a fundamental failing at MOS: the lack of a even a plan or proposal, much less finalized law, to reach 80x50. That's impossible without dealing with large #DirtyBuildings That ought to be at the top of MOS agenda.

Finally, we want to highlight the speed and depth of the climate problem in this chart:



Worldwide, we must slash pollution extremely fast. The longer the city delays on large buildings, the steeper that decline must become. It gets harder year by year of delay. At some point, and that point is coming fast, it becomes functionally impossible and we blow right past 2 degrees of increase worldwide, with catastrophic results for our city and – more broadly – human civilization.

It is time for New York City to become the world's climate and jobs leader by requiring large #DirtyBuildings to slash their climate and air pollution at a speed and depth that matches the city's own law and the Paris agreement.

Let's be a real leader and take on climate change and inequality by creating the jobs we need.

Thank you Chairperson Constantinides and members of the Committee for holding this important oversight hearing and for your proposals, and your close attention to this issue.



The City of New York
Manhattan Community Board 1
Anthony Notaro, Jr. CHAIRPERSON | Lucian Reynolds DISTRICT MANAGER

New York City Council
Committee on Environmental Protection
Oversight - The Mission, Work and Accomplishments of The Mayor's Office of
Sustainability and The Office of Recovery and Resiliency
Testimony by Diana Switaj, Director of Planning & Land Use
250 Broadway, Committee Rm, 16th Fl
Thursday, April 12, 2018, 1:00PM

Good Afternoon. My name is Diana Switaj, Director of Planning and Land Use at Manhattan Community Board 1 (CB1) whose district includes most of Manhattan below Canal Street and south of the Brooklyn Bridge, as well as Ellis, Governors and Liberty Islands. Thank you for holding this important hearing today and inviting testimony on sustainability and resiliency.

CB 1 commends the many years of leadership from the City Council in tackling greenhouse gas emissions from our buildings, the largest source of the city's carbon emissions. Intro 1745 of 2017 is a bold and innovative step towards cutting carbon emissions and reaffirmed New York City's leadership on tackling climate change. We look forward to the Council reintroducing and passing this bill, a critical step in the holistic approach to addressing sustainability and resiliency.

Lower Manhattan continues to be one of America's largest business districts and our residential population is one of the fastest growing in the whole city. Our district is only 1.5 square miles but it has a huge impact on the city and regional economies. In 2013 Lower Manhattan had a gross economic output of over \$62 billion dollars and generated an estimated \$2.4 billion dollars in city tax revenues (Downtown Alliance). Our district remains a resilient place that more and more people want to live, work and visit. We have a lot of work to do to assure that these powerful growth trends result in a district that is protected and livable for all.

At a height of seven feet, Community District 1 experienced one of the highest inundation levels in Manhattan during Superstorm Sandy in October 2012. Two people in our district drowned and the storm resulted in billions of dollars of damage to infrastructure, housing and commercial property and utilities. As we approach the sixth anniversary of Superstorm Sandy, the board is concerned about both the short-term and long-term time frames as Lower Manhattan remains largely unprotected. We face an increasing potential for suffering extreme weather events and subsequent damage to Lower Manhattan, and low-lying areas across the City.

CB1 has worked collaboratively with City, State and Federal representatives since October 2012, when Sandy devastated our community. We thank the City for the funds it has already contributed towards resiliency in Lower Manhattan. The Lower Manhattan Coastal Resiliency (LMCR) project is underway, but there is a substantial funding shortfall. CB1 maintains that it is critical to fully finance the LMCR project and ensure that our district is protected in the future. It is unclear from where the required funding will come, and we urge the City to find ways of securing additional funding sources for the construction of a more resilient Lower Manhattan.

As the LMCR project goes on through initial analysis and preliminary design stages, more is uncovered that adds challenge to an already monumental task. Not only is Lower Manhattan surrounded by water on three sides, but all of the edges have been built out on landfill presenting unique vulnerability and challenges. The Office of Recovery and Resiliency (ORR) team is uncovering more complexity in protecting Lower Manhattan that was ever imagined and this will lead to greater challenges, cost and commitment.

CB1 also commends the Mayor's Office of Sustainability and the Mayor's Office of Recovery & Resiliency on the work they have done thus far to analyze the problem and begin to formulate a plan; both for the long-term and more recently for intermediate measures. This is a herculean task that has never before been attempted. However, every year since Sandy that the City doesn't endure a hurricane feels like a narrow miss and eventually our luck will run out. We must all work together to ensure that creative and effective sustainability and resiliency measures are put in place to protect Lower Manhattan, and the entire City, now and in perpetuity.

I am a Professor Emerita at Rutgers University, a marine biologist specializing in estuaries. I would like to comment on impacts of various shoreline structures on marine life.

Natural shorelines provide the best habitat for marine life. **Salt marshes**, found mostly in Brooklyn, Queens and Staten Island provide excellent habitat for fishes and other aquatic biota, as well as birds and other wildlife (Weis and Butler, 2009). Salt marshes also provide important ecosystem services to humans, such as absorbing pollutants (e.g. toxic metals, nitrogen which is responsible for eutrophication and low oxygen, and carbon dioxide, largely responsible for climate change). Marshes also protect (to a degree) nearby residences from storm surge and winds.

Enhanced salt marshes would not have protected NYC adequately from Hurricane Sandy, and there are efforts underway to increase the amount of hardened or armored shorelines, which are less conducive to healthy coastal ecosystems. Associated with shoreline modification is loss of intertidal and shallow subtidal habitats and ecosystem function. But not all modified shorelines are equivalent. The Hudson River Sustainable Shorelines Project (HRSSP), coordinated by NYSDEC works to protect and conserve the Hudson River Estuary and provide scientific advice for management options for preserving important ecological functions of the upper parts of the Estuary (Blair and Hauser 2015). The Waterfront Edge Design Guidelines tool has been developed by the Waterfront Alliance to promote ecological options for healthy shorelines and encourage resiliency (WEDG 2014).

Living shorelines – These are hybrid structures, often placed in eroding marshes, with marshes reinforced with rocks or stone or oyster reefs at the seaward side of a marsh. They are suitable in some areas, but not in areas of high energy. Living shorelines of all kinds are discussed in a recent volume by Bilkovic et al. (2017).

Rip-rap or breakwater – A meta-analysis by Gitman et al. (2016) found that seawalls supported 23% lower biodiversity and 45% fewer organisms than unvegetated natural shorelines. In contrast, biodiversity and abundance supported by rip-rap or breakwater shorelines were not different from natural shorelines.

Bulkheads or seawalls – a traditional way of armoring urban shorelines which cause the greatest loss of biological structure and function. However, it is possible to include texture and structure on the seaward surface of a seawall which will encourage settling of invertebrate species. Such a seawall modification has recently been done in the city of Seattle WA (Cordell et al. 2017).

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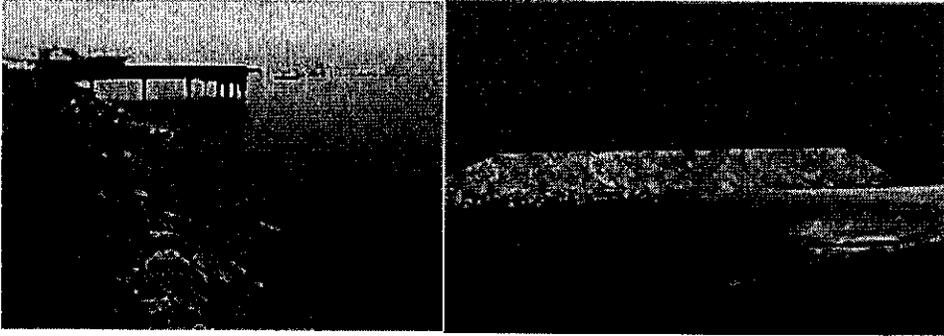
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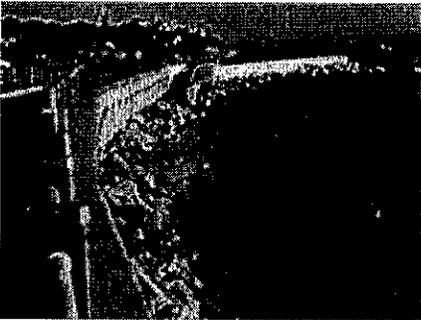
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Marsh, living shoreline



Rip-rap, breakwater



Seawall



**Testimony Before the New York City Council Committee on Environmental Protection:
The Mission, Work and Accomplishments of The Mayor’s Office of Sustainability
and the Office of Recovery and Resiliency.**

April 12, 2018

Good afternoon. My name is Rachel Eve Stein, and I am the Deputy Director for Sustainability and Resiliency at the Center for NYC Neighborhoods. I would like to thank Committee Chair Constantinides and the members of the Environmental Protection Committee for holding today’s hearing on the Mayor’s Office of Sustainability and the Office of Recovery and Resiliency.

About the Center for NYC Neighborhoods

The Center 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 State by offering free, high quality housing services. Since our founding in 2008, our network has assisted over 55,000 homeowners. We have provided approximately \$33 million in direct grants to community-based partners, and we have been able to leverage this funding to oversee another \$30 million in indirect funding support. Major funding sources for this work includes the New York City Council, the Governor’s Office of Storm Recovery, and the Office of the New York State Attorney General, along with other public and private funders.

Serving Homeowners in NYC’s Coastal Communities

The Center’s focus on flood resiliency, disaster recovery, and long term sustainability stems from our homeowner recovery efforts following Hurricane Sandy. When Sandy struck, our homeowner services expertise and strong relationships with community groups in impacted neighborhoods allowed us to respond quickly and focus on both the short- and long-term needs of homeowners.

Over the last three years, we have expanded the Center’s climate resiliency resources and programs for homeowners. Today, we offer the following services:

Flood Insurance Information

FloodHelpNY.org is a first-of-its-kind web platform that engages and informs homeowners about how they can protect their homes from rising sea levels and how to lower their flood insurance rates, increase literacy of flood insurance and resiliency issues, and connects them to related tools and services from the Center.

Resiliency Audits and Counseling

For qualifying homeowners, we also offer resiliency audits and counseling through the Residential Technical Assistance Pilot Program. To participate, homeowners must meet income thresholds and live in one of the following NY Rising neighborhoods: Canarsie, Gravesend, Bensonhurst, Bergen Beach, Georgetown, Marine Park, Mill Basin, Mill Island, Red Hook. Recently, we expanded to include Coney Island, Brighton Beach, Sea Gate, Manhattan Beach, Gerritsen Beach Sheepshead Bay, Rockaway East, Howard Beach, and lower Manhattan. Eligible homeowners receive a free home resiliency audit and elevation certificate, altogether valued at about \$1800. The homeowners are then scheduled for a housing counseling session at a nearby community-based organization to discuss flood insurance options and financing for resiliency retrofits. Flood insurance and home resiliency retrofits are highly technical and complicated topics, which is why the free expert assistance provided through this program is invaluable to homeowners. We thank all of the City Council members who helped us understand the needs of their constituents and have been crucial to getting the word out about services. We look forward to working with you all on future events.

Backwater Valves

In addition to the home resiliency audits and counseling services, we are expanding our services to provide free backwater valve installations for qualified homeowners in Coney Island, Brighton Beach, Sea Gate, Manhattan Beach, Gerritsen Beach, Sheepshead Bay, and Howard Beach. Backwater valves help reduce flood damage by preventing sewer backflow, which can save homeowners thousands of dollars in property damage and clean-up. We will be offering this service in Canarsie, Howard Beach, Sheepshead Bay, Gerritsen Beach, Coney Island, Brighton Beach, Manhattan Beach, and Seagate.

Foreclosure Prevention and Homeowner Stabilization Services

Along with these specialized services, the Center continues to offer high-quality foreclosure prevention housing counseling and legal services to homeowners throughout the five boroughs of New York City. Thanks to the generous support of City Council, we also provide specialized service for senior homeowners, including estate planning and scam prevention. These services can be accessed by calling 311 or by calling our Homeowner Hub at 646-786-0888.

Our Reflections on the Office of Sustainability and ORR

Our partnership with the Mayor's Office of Recovery and Resiliency (ORR) has been essential to the success of our FloodHelpNY services. Their marketing and outreach support has helped us reach our audience of coastal communities. They were crucial to the success of our Home Resiliency Audit. ORR provided technical assistance throughout the design phase and have continued to give us expert guidance as we design the Residential Backwater Valve Installation Program.

We are committed to supporting the City's 80 x 50 energy reduction goals through our energy sustainability programming. Last year, the Center was awarded funding from NYSERDA for the Community Energy Engagement Program (CEEP), which provides New Yorkers with technical and financial guidance to implement energy efficiency and renewable energy retrofitting projects. The Center has coordinated with the Mayor's Office of Sustainability (MOS) to ensure both homeowners *and* multifamily building owners get the support they need to make cost-saving and energy-saving retrofits.

To that end, we send multifamily leads to their Retrofit Accelerator program, and they direct homeowners to us. We think engaging homeowners is critical to the City's energy reduction goals. Our work so far in the Community Energy Engagement Program tells us that homeowners are in a unique position to adopt energy retrofits because they have control over the structure and use of their property, but face a number of technical and financial barriers. We are dedicated to overcoming these barriers with New York homeowners, and hope to work with MOS on this endeavor.

Thank you very much for the opportunity to testify today. We look forward to working with you to promote resiliency while preserving affordability in our flood prone neighborhoods.

Rev. Gabriella Velardi-Ward
40 Wolkoff Lane
Staten Island, New York 10303
April 11, 2018

City Council Environmental Committee
250 Broadway
New York, New York 10007

Ladies, gentlemen and members of the *City Council Committee on the Environment*,
Thank you for this opportunity to speak before you today. My name is Gabriella Velardi – Ward and I live across the street from the Graniteville Wetlands Forest and it is my home and that of my neighbors that are in jeopardy of being flooded out when this 27.8-acre forest is cut down and the Vernal wetlands are filled in.

I am familiar with the good work the Mayor's Office on Sustainability has done in the past and I have been reading of all of the good work that the Mayor's Office and the Office of Recovery and Resiliency is planning in the future.

However, times have changed, and we have learned that sustainability, alone, is not effective. It has failed, because we have not done enough, fast enough. So, now we must seek resiliency as a last resort. I applaud your desire and political will to prioritize resiliency, *if* resiliency also means *prevention of flooding*, before it occurs and does not mean after the fact resiliency, after the damage is done resiliency, after peoples' lives are destroyed resiliency.

Today I am here to represent the Environmental Justice Community of Graniteville, Staten Island. In the last few years, Staten Island has lost much of its natural resilience that is wetlands, marshes and forests to so called development. And now, Graniteville is in danger of losing *its* natural resiliency, the Graniteville Wetland Forest, which if not stopped, will become the South Avenue Retail Project. The Graniteville wetland forest saved this community during Hurricanes Irene and Sandy. We were not flooded while others down the road were flooded because their wetlands were destroyed. If we lose this wetland forest, which absorbs rising tides and torrential rain, our property and maybe even our lives will be destroyed.

There have been many environmental groups, government agencies and universities who have said as much. The NY/NJ Baykeeper has warned us of this danger. The Natural Resources Defense Council has warned of this danger. FEMA, CEQR and even City Planning have warned us of flooding in the North West corner of Staten Island and in the Community of Graniteville.

So, let me ask, why is it that New York City has approved the destruction of this free and natural resilient buffer against disaster, the Graniteville wetland forest? Why is it that New York City has allowed the destabilization of this Environmental Justice Community in the name of profits? Why is it that this

toxically overburdened Environmental Justice community is going to lose the only resiliency it has, natural or otherwise. Why is it that no one seems to care if Graniteville is flooded in the coming years? And be assured, it is not a matter of if we are flooded; it is a matter of when we are flooded.

Why is it that no one cares that the loss of the only open green space we have, the wetland forest, will leave us defenseless in the face of increasing pollution and rising tides? Why is it that no one cares that profits of large corporations are prioritized over the lives of people? Why is it that all of this is ok because it is legal? *And then let us ask why is this happening in an area that is majority black and brown people?*

The days of development with a view of the water or on wetlands *are gone*. Climate Change is not going to happen in 50 years. Climate change is happening now and will only get worse. I applauded the prioritization of sustainability coming from the Mayor's Office over 20 years ago. The decrease in our carbon footprint is laudable. LEED was meant to encourage developers to put sustainability first. It did not work. We did not do enough, early enough or fast enough. Here we are experiencing climate chaos and we must take the necessary measures to try to protect life and property now, because we failed to do enough, back then.

We still, foolishly I'm afraid, are relying on our own invention alone, human made methods of protection which do not work in the long run. Walls only force the rising waters to move toward and destroy other locations. And walls ultimately break down with the constant wave action of oceans and other bodies of water. Some are beginning to learn that ultimately the means of protection are natural, what nature provided us, wetlands, both tidal and fresh water, oyster beds, forests and marshes.

NYC has 520 miles of coastline that must be protected. We need to acknowledge that nature has the best system of protection. We must protect the wetlands that still exist. We must create new wetlands, marshes and oyster beds. We must leave the forests alone. Have we learned anything from all of the severe hurricanes we had last year?

There must be regulation to prohibit the construction of anything, public or private, on wetlands, no grandfathering in, no exceptions and no approval of Environmental Impact Statements without serious consideration of climate change, and the damage the project will cause to people's lives. There can be no "pro forma" approvals, any longer. We need to take these steps if we are to do more than perhaps survive. We can no longer have out of control development and growth. In the human body, out of control growth is called cancer. Are we humans acting like a cancer spreading throughout the earth, forcing the inhabitants of small islands to relocate because the oceans are rising and swallowing up the land? And let me remind all of us in NYC, that *Staten Island is a small island!*

Property rights cannot be sacrosanct, when those rights destroy people's lives! How do we stop the madness? How do we get off this runaway train? Let's heed the warnings and act to protect the vulnerable of this city, no matter who they are or where they live, by saving our wetlands, marshes and forests. Let us act to prevent flooding in Graniteville. Let's act to protect our natural resilience.

Thank you,
Rev. Gabriella Velardi-Ward
Coordinator of the Coalition for Wetlands and Forests
April 12, 2018

Background: I worked for NYC Department of Parks and Recreation, Capital Projects Division for 23 years, as an architectural designer and as a Construction Supervisor. In the late 1990s, I represented the Parks Department on the Mayor's Office of Construction for Sustainable Construction. We were formulating policy for NYC Capital Projects that ended in the requirement to follow LEED (Leadership in Energy and Environmental Design)

Addendum: At this point, New York City no longer has jurisdiction over the future of the Graniteville wetland forest. The only thing the city had jurisdiction over was the de-mapping paper streets, the rezoning of the land and allowing boring samples to be taken.

However, New York City still can condemn the Graniteville Forest and Wetlands and under Eminent Domain acquire this property for a Public Park and provide the current owner with fair market value for an undeveloped site.

NYC Council Committee on Environmental Protection: Oversight Hearing Passive House and Storm Surge Barriers

There are two issues I consider to be most important to address: the **Passive House Standard** and **Storm Surge Barriers**.

International Passive House is the energy-saving gold standard for new construction and retrofits around the world. **International Passive House Resolutions were passed by every community Board in Manhattan** and signed as a Borough Board Resolution by Gail Brewer. Brooklyn also issued a formal Borough-wide Resolution.

Seventy-two percent of New York City Carbon Emissions is caused by buildings. Mayor de Blasio launched a One City Built to Last in 2014 and a Retrofit Accelerator Program in 2015, it is unclear whether the City is in track to the promised 80% reduction in greenhouse gases by 2050. **A Proposed Stretch Code, being explored by NYSERDA, directly calls for the implementation of the Passive House Standard in the State Residential Code.** This is a step in a positive direction and an opportunity for the Environmental Protection Committee to take an initiative in this matter for NYC.

As regards **Storm Surge Barriers**, there are currently **two competing initiatives**. There is a **localized perimeter defense policy**—which seeks to address both sea level rise and storm surge by means of local barriers and land-based high barrier walls. The alternate proposes **a regional system of offshore storm surge barriers**, plus modest local coastline protection to resist the relentless rise of sea level over the decades ahead.

Ultimately, **both interlocking systems are needed**— the **Storm Surge Barrier recommends defense technologies to completely stop all the storm surges from destroying our cities again for up to 100 years.** The local approach focuses intensive resources on critical areas of coastline while the offshore surge barriers protect extensive regional areas of hundreds of linear miles of coastline. The destruction of a hurricane or major wind storm can come at any time, the effects of sea-level rise will take many years to develop and will require specific solutions for each locality.

Whatever the expense of the Storm Surge Barrier, the **failure to build this protection for our Hudson region could result in dire loss of life and property with any major storm.** What did we learn from Superstorm Sandy? Flood barriers have been constructed to provide necessary protection, safety and security in the Netherlands, London, New Orleans, the Elder River, St. Petersburg, New Bedford, Providence, Stamford, Venice, and York, UK Such projects are vital insurance against tremendous loss.

A final point— the dialog around climate change and protecting the environment has become polarized and distorted. Much of **the work of the Environmental Protection Committee will be to build fact-based public understanding and to enact legislation in the spirit of the best scientific knowledge of our time, and to serve the public good.**

Bob Schneck, Member of Manhattan Community Board 1



The North Shore Waterfront Conservancy of Staten Island, Inc.
P.O. Box 140502
Staten Island, New York 10314

April 11, 2018

NYC Council Environmental Protection Committee
250 Broadway
New York, New York. 10007

Reference: The Mayor's Office of Sustainability and The Mayor's Office of Resilience & Recovery

On behalf of the North Shore Waterfront Conservancy of Staten Island, Inc., (NSWC or NSWCSI) and the waterfront and Environmental Justice Communities on Staten Island's North Shore that we advocate on behalf of.

Thank you for the opportunity to submit our comments in today's hearing on the Mayor's Office of Sustainability and The Mayor's Office of Resilience and Recovery. We have been waiting for some time to see what kind of Climate Change plans these offices have come up with for the North Shore of Staten Island. We have even tried to reach out to them on several occasions only to be put off.

When you live near a flood prone contaminated waterfront and in communities with poor storm water drainage and no storm water containment areas. The reality of your vulnerability makes you ask what is next? One of several questions that you would like answers to sooner rather than later. If you were to look at their website then you see plenty of smiling faces even some of color, however, if you read the content of their documents you will quickly realize that there is very little to smile about if you are living on the North Shore of Staten Island. Sustainability has disappeared from the City's vocabulary and what was left in its place states that the City is looking towards Resiliency and Recovery.
<http://www1.nyc.gov/site/orr/index.page>

However, the City's definition of Resiliency is much different than ours, when we speak of Resiliency, we are speaking of using natural resources wetlands and forests like the Graniteville Tree Swamp in Graniteville, Staten Island as a natural buffer against the effects of Climate Change.

In truth, we were expecting great things from the Mayor's Office of Sustainability and The Mayor's Office of Resiliency and Recovery. We were expecting plans that would include their ability to acquire private properties in EJ communities on the North Shore of Staten Island that contained forests and wetlands that would be turned over to NYC Parks to help with combating the effects of Climate Change in communities that are overburden by hard surfaces from industrial uses and overdevelopment that have crammed people into areas with little to no green open spaces. Communities that can't avoid the toxicities from New Jersey's Industrial waterfront or for that matter that of our own. We were expecting a City government that would use Eminent Domain to acquire privately owned properties to which the EJ communities have identified as being vital to their existence for public uses.

We were expecting to receive reefs made of oysters or mussels combined with manmade features that provide buffers to slow down the tides and wakes of the Panamax vessels from further eroding the shorelines. Buffers that will slow down the storm surges and flood waters long enough for our people to make their way upland to safety.

Of course, there is no mention of what the City plans to do with the contaminated waterfront properties and if these sites are not properly remediated, they will carry back the tainted flood waters towards the North Shore EJ communities. The same vulnerable communities and people that you talk about a lot but have done so little to protect in the here and now

When we think of Recovery, we are thinking of sifting through the wreckage of where our homes and communities use to be looking for family, friends, pets and whatever can be salvaged of our lives that have been destroyed.

When the City speaks of Resiliency and Recovery, they are already talking about the people and the communities that will come after we have gone. After we have been pushed out of our homes, communities and off the island and out of New York altogether, because we can no longer afford to stay. Their Recovery is rebuilding and building for a whole new group of people that can afford to place their homes on stilts and own buildings where the first floors can be flooded and that have breakaway walls.
http://www1.nyc.gov/assets/orr/images/content/header/ORR_ClimateResiliencyDesignGuidelines_PRELIMINARY_4_21_2017.pdf

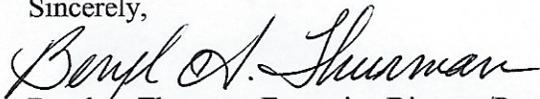
They have already buried us and moved on to the new gentrified residents and communities that they plan to build for in our absence. While the Mayor claims equity and fairness, the contradictions are astonishing.

At present though in keeping up with the process and to go through the motions. We are sure that at some point they would like us to attend meetings so that we can sign off on our death sentences and agree to the destruction of our homes and life as we know it, hard as this life may be. Because New York is known to take a great deal from those that that have the least and it gives very little in return.

We are not pleased at all that so much time has passed with no tangible results to show for it in combating the effects of Climate Change in the existing Staten Island North Shore EJ communities.

Thank you for your time and consideration.

Sincerely,



Beryl A. Thurman, Executive Director/President
NSWC

<http://sinorthshorerresilience.org/>

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Address: 245 W 29TH ST

I represent: NEW YORK PASSIVE HOUSE

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Name: Isabelle Silverman

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I represent: EDF Env. Defense Fund

Address: 257 PAS

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I represent: MANHATTAN CBI

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Name: Rachel Eisenstein

Address: 17 Battery Pl suite 728

I represent: Center for NYC Neighborhoods

Address: _____

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Name: Andreas Benzing

Address: NY PH

I represent: _____

Address: _____

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Name: DANIELA DEB...

Address: 2030th Avenue Way 94th Fl

I represent: MAYORS OFFICE

Address: _____

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Name: Judith Weis

Address: 170 WGA Apt. 12 N

I represent: _____

Address: _____

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Name: Margarita Eremeyev

Address: 515 W 226th St

I represent: _____

Address: _____

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Date: 4/12/18

(PLEASE PRINT)

Name: REV. Gabriella Velardi - Ward

Address: 40 Walkoff Lane, ST 10303

I represent: Coalition for Wetlands & Forests

Address: 40 Walkoff Lane, ST 10303

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Name: Lisa O.C.

Address: 325 West 97th Street

I represent: 47th St

Address: _____

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Name: MARK CHAMBERS

Address: 253 BROADWAY

I represent: MAYORS OFFICE

Address: 253 BROADWAY

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THE CITY OF NEW YORK**

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Name: Susanne DesRoches

Address: 253 BROADWAY 14th FL

I represent: MAYORS OFFICE

Address: _____

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Name: Jainey Banishi

Address: 253 Broadway 14th Floor

I represent: Mayor's Office

Address: 253 Broadway 14th Floor

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Name: JOHN LEE

Address: 253 BWAY

I represent: NYC MAYOR'S OFFICE

Address: 253 BWAY

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Name: Pete Sikora or Patrick Houston

Address: 1 Metrotech North Brooklyn NY

I represent: New York Communities for Change

Address: _____

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Name: Molay Catherine Hughes

Address: _____

I represent: SSWE

Address: Lower Manhattan

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