

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

*October 29, 2019*

**I. INTRODUCTION**

Good Afternoon. I am Jainey Bavishi, the Mayor's Director for Resiliency. I would like to thank Chairperson Constantinides, Chairperson Brannan, and the other members of the Environmental Protection and Resiliency & Waterfront committees for the opportunity to speak today about the de Blasio Administration's work to adapt to climate change, which presents an existential threat to New York City and the 8.6 million New Yorkers who call this city home.

Today we commemorate the seventh anniversary of Hurricane Sandy – the deadliest and most destructive natural disaster in New York City's history. The storm left 44 New Yorkers dead, upended entire neighborhoods, and caused \$19 billion in damages and economic loss. It was a tragedy of an almost unimaginable scale.

In the aftermath of Sandy, it was clear that Federal assistance would be needed to help New York City recover and rebuild. As a result of appropriations passed in 2013, New York City received approximately \$15 billion in Federal funding for recovery and resiliency. These funds, along with roughly \$5 billion from City Capital, have enabled us to initiate dozens of programs and large-scale infrastructure projects to guard against climate threats.

This \$20 billion is our down payment – an investment to protect the people of New York City from the climate crisis. And while we have made significant progress with these funds, we are also facing a dynamic threat that is growing more menacing with each passing day. Because the climate will continue changing, resiliency must be viewed as a process, not an outcome.

In this testimony, I will detail this Administration's approach to climate change adaptation, focusing on the ways in which it improves upon the approach of the Bloomberg Administration. I will then summarize the progress we have made to build resiliency across the five boroughs. Finally, I will speak to our next phase of planning and the complexities of addressing a cross-cutting, and interjurisdictional issue that will continue to evolve for many decades to come.

**II. RESILIENCY PRINCIPLES**

New York City's approach to climate adaptation has its roots in the immediate aftermath of Sandy. In late 2012 and early 2013, the Bloomberg Administration worked at a furious pace to generate ideas for

potential resiliency projects. The long-term aspiration was to defend against another Sandy-like storm, but a key step along the way would be to convince Congress to allocate the absolute maximum amount of Federal recovery funds. In service of both of these goals, the Bloomberg Administration convened the Special Initiative on Recovery and Rebuilding and released “A Stronger, More Resilient New York”, also known as the “SIRR report.”

However, this report was released before the complexity of major projects was fully realized. Engineers and architects had not yet been hired to study individual project areas, and communities had not engaged for their feedback. As a result, the timelines that were proposed were aspirational, and the projects were conceptual in nature.

When Mayor de Blasio came into office in 2014, he re-committed to the initiatives proposed in SIRR as part of the 2015 OneNYC strategy. The vision laid out in OneNYC went beyond the Bloomberg approach in two ways: first, it added an equity and justice lens to our work, and second, it broadened our focus to include *all* of the threats posed by climate change.

The SIRR report focused on storm surge because it was a direct response to Hurricane Sandy. Over time, however, it became increasingly clear that that was not enough. We know that extreme heat, for example, kills more New Yorkers than any other extreme weather event—and temperatures keep rising. Meanwhile, we’re seeing more rainfall each year, and that rainfall is concentrated in more intense downpours.

Finally, we have to contend with the long term challenge of sea level rise, which could remake our streets into rivers even on sunny days and corrode the foundations of our buildings.

As we plan for all of these threats, we must consider several variables, including technical feasibility, neighborhood character, and quality of life. We have learned that building walls cannot be the only solution. In fact, building massive walls meant to save communities can instead isolate and destroy them.

Increasingly, cities around the world are grappling with the reality that concrete and steel cannot protect us completely. The standard of keeping every home and every road dry no matter the conditions is an impossible one. We must take a multi-layered approach, which is why we have strengthened the City’s building and zoning codes, and implemented significant programs to promote social resiliency, maximize flood insurance enrollment, and educate New Yorkers about risk.

Adapting to all of the threats posed by climate change requires action at multiple levels, from the individual household to the entire region. No one entity can do it alone, and there is no silver bullet solution.

### **III. PROGRESS TOWARD A MORE RESILIENT CITY**

I would now like to give a brief summary of the progress that has been made and the upcoming milestones that lay ahead.

It goes without saying that our progress is the product of a massive team effort directed by the Mayor’s Office of Resiliency, and implemented by nearly every City agency. We’re also in constant coordination with State and Federal partners, as well as dozens of community organizations and private and philanthropic partners, all of which are taking discrete actions to increase the city and the region’s overall resiliency.

Let me mention just a few accomplishments here:

- We have completed construction on several shorefront projects, including the 5.5 mile-long Rockaway Boardwalk, nearly 10 miles of new dunes across Staten Island and the Rockaway peninsula; and ecological restorations in Sunset Cove in Queens and Saw Mill Creek in Staten Island;
- The Build it Back Program, administered by our colleagues in the Mayor's Office of Housing Recovery Operations, has helped 12,500 families recover from Hurricane Sandy. Each and every one of these families will be measurably safer the next time a storm hits;
- We, along with our partners, have invested more than a billion dollars into hardening and storm proofing the City's infrastructure;
- We've invested billions of dollars to increase the resiliency of our schools, public housing and hospitals; and we've invested more than a hundred million in grants and loans for small businesses, which are the bedrock of so many communities;
- We have increased insurance policies among New Yorkers by 59% since 2012 through public awareness efforts;
- We have updated the City's emergency protocols, including new evacuation maps and response equipment;

We also are continuing to move forward with several complex, generational projects, which require careful planning, extensive community engagement, and several layers of engineering and environmental review before shovels can hit the ground.

I'm pleased to report that next year four major groundbreakings will take place across three boroughs. Construction will begin on the Staten Island Coastal Storm Risk Management Project, the Atlantic-side Rockaway Reformulation, the East Side Coastal Resiliency Project, and New York State's Living Breakwaters project.

Finally, I would like to illustrate the ways the de Blasio Administration is addressing the next generation of climate change threats with two brief examples:

- To combat extreme heat, we have launched Cool Neighborhoods NYC, a \$106 million program designed to keep New Yorkers safe and cool
- To combat extreme rainfall and the strain it places on our sewer system, we are doubling the size of New York City's nation-leading green infrastructure program by constructing 5,000 brand new curbside rain gardens

This summary is intended to provide the Council with a small sampling of the progress that has been made. My office is available to provide more in-depth information on any of these projects, or any of the City's many other resiliency efforts at your request.

#### **IV. LOOKING TO THE FUTURE**

We have learned many lessons over the past seven years, and we're already beginning to put them to use.

Before Hurricane Sandy, the complexities of adapting to climate change were largely theoretical. After the storm, we had very little time to grapple with difficult issues including land use, governance, prioritization, and an uncertain funding landscape.

Our approach focused on addressing the areas hit hardest by Hurricane Sandy and those at greatest risk from climate threats in the future. We moved ahead by advancing construction and implementing programs as soon as Federal funds were made available.

It quickly became clear that adapting New York City would require coordinating dozens of different entities with different jurisdictions, including the MTA, the Port Authority, the State DEC and DOT, utility providers, and the private property owners along New York City's waterfront. The U.S. Army Corps of Engineers, which plans, designs, and builds dams, canals, and flood protections all across the country, was also a major player and remains so today.

In 2013, President Obama directed the U.S. Army Corps of Engineers to study coastal resiliency in the region, and the Corps subsequently began the New York – New Jersey Harbor and Tributaries, or HATS, study in 2016. This study had an initial budget of \$3 million, which has since been increased to \$19.4 million after the complexities of the work become more apparent.

This study is incredibly important because it will provide the blueprint for the next round of coastal resiliency projects in New York City. Federal engineers, architects, and designers are doing a detailed analysis of site conditions in dozens of New York City neighborhoods and 25 counties in New York and New Jersey, including elevation analyses, feasibility studies, and environmental impact assessments. They are also holding community meetings to solicit feedback periodically throughout their process.

At present, the Corps has identified five different potential approaches. Most of these approaches contain constellations of dozens of individual land-based and water-based projects spread across New York City and the region, including projects the City has long advocated for such as land-based protections for Long Island City, and in-water storm surge barriers in Newtown Creek, the Gowanus Canal, and Jamaica Bay, including a Coney Island tie-off.

Next summer, the Corps will select the best approach and publicly announce their choice. At that point, we will have a new set of urgently-needed projects to work toward. We will also need to find funding for these projects, which does not currently exist.

One of the bills being considered today, *Introduction 1620*, would direct the City to develop a resiliency plan for New York City's coastal areas. We fully support the goals of this legislation and share the Council's interest in protecting our shoreline. However, we are concerned that advancing a City plan in parallel with the Federal plan could create confusion, waste taxpayer resources, and result in additional proposed projects that have no clear funding source.

Re-envisioning all of New York City's 520 miles of shoreline is a massive endeavor. We have three times more waterfront than the entire country of the Netherlands, and it's far more densely populated by residential and industrial uses.

As we learned from Hurricane Sandy, resiliency planning needs a strong foundation of community engagement and input. 38 out of the city's 59 community districts are coastal. Simultaneously engaging these communities on all the resiliency tools outlined in this bill, including largely untested approaches like strategic relocation, would be akin to conducting dozens of rezonings simultaneously. This effort would be completely unprecedented in New York City's history.

We believe the best strategy for future resiliency planning is to continue advocating for the Army Corps to finish their study as quickly as possible. At the same time, we will continue our efforts to address the full slate of other climate threats.

We're making important progress on that front. The City continues to work with local and regional governmental bodies to assist in identifying the region's at-risk infrastructure and the best ways to protect it. We're conducting a storm water study to identify where precipitation-based flooding occurs most frequently and how to address it. We also monitored air temperature in fourteen neighborhoods



throughout New York City over the last two summers to understand the drivers of high temperatures in the city.

The results of these efforts will continue to guide our response to climate change and help prioritize how we advance future projects. Unfortunately, unlike many European countries, the United States does not have a proactive Federal funding strategy for climate change adaptation. Here, money flows only after a disaster, which creates significant challenges for long-term planning and implementation.

## **V. INTRODUCTION 382 AND INTRODUCTION 1480**

I would now like to discuss the two other bills being heard today.

### ***Introduction 382***

*Introduction 382* would require the Office of Emergency Management to provide all property owners in the floodplain with information related to FEMA's new flood maps after they go into effect. The Administration supports the intent of the bill. However, since FEMA administers the creation of these maps and sets the rates for flood insurance nationwide, we believe they should issue these notifications. The Mayor's Office of Resiliency will formally request this of FEMA, along with the recommendation that any such notifications be issued *before* the maps go into effect to give New Yorkers time to prepare. We also ask that the Council consider complimenting FEMA notifications with a City-sponsored notification through Department of Finance mailings. Such a notification could explain FEMA's authority and direct recipients to FloodHelpNY.org, a user-friendly New York City-specific flood risk and flood education site.

### ***Introduction 1480***

*Introduction 1480* would create a marine debris disposal office. The Administration supports the intent of the bill and looks forward to discussing with Council the ways we can partner in cleaning up our waterways. To provide context, the City is the single-largest owner of shoreline - handling much of the debris that is not removed by the Army Corps, or private property owners. In the wake of Hurricane Sandy, our marine debris removal contract, maintained by DCAS, along with FEMA and NOAA grants, allowed the City to complete millions of dollars' worth of clean-up citywide.

## **VI. CONCLUSION**

To conclude my testimony, I would like to thank both committees for the opportunity to discuss the City's progress toward climate resiliency and the challenges that still lie ahead of us. We look forward to your questions.

Thank you.

**Testimony Before the New York City Council Committee on Environmental Protection and Committee on Resiliency and Waterfronts: 7th Anniversary of Hurricane Sandy**

**October 29, 2019**

Good afternoon. My name is Caroline Nagy, and I am the Deputy Director for Policy and Research at the Center for NYC Neighborhoods. I would like to thank Committee Chairs Constantinides and Brannan, as well as the members of the Environmental Protection and Resiliency and Waterfronts Committee for holding today's hearing.

**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 live in strong, thriving communities. Established by public and private partners, 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 90,000 homeowners. We have provided more than \$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 include the New York City Council, the New York City Department of Housing Preservation and Development, and the Office of the State Attorney General, along with other public and private funders.

**Serving Homeowners in NYC's Coastal Communities:**

In the wake of Hurricane Sandy, the Center quickly mobilized to serve homeowners impacted by the storm. In the seven years since Sandy, we have developed programming to move beyond disaster recovery to promote long-term climate resiliency.

***Disaster Recovery Services***

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. Our Sandy response included the following initiatives:

- *Building a network of homeowner services:* In 2013, with support from the Mayor's Fund to Advance New York City, the Center provided more than \$2 million in grant support to 19 housing counseling and legal services organizations, who served over 3,500 residents in the initial stages of recovery.
- *Build it Back homeowner counseling:* In 2014, with support from the Mayor's Office of Housing Recovery Operations (HRO), we leveraged this same network of non-profit legal services providers and housing counselors to provide counseling assistance to homeowners in the Build it Back program, helping thousands of homeowners with many of the challenges associated with

the housing recovery process, including avoiding foreclosure, dealing with unaffordable SBA loans, handling complex federal duplication of benefits requirements, negotiating with mortgage servicers on insurance, and for interested homeowners, navigating the acquisition process.

- *Temporary Housing Services:* The Center also partnered with the City and the non-profit faith-based sector to develop a first-of-its kind temporary housing program, which served 714 Sandy-affected homeowners undergoing long-term construction projects.

### ***Climate Resiliency Services***

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, increases 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 to help homeowners understand their home's flood risk and measures they can take to make their homes more resilient. 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.
- *Backwater Valves:* In addition to the home resiliency audits and counseling services, we provide free backwater valve installations for qualified homeowners in certain Brooklyn and Queens neighborhoods. Backwater valves help protect the home by preventing sewer backflow during a flood or heavy rain event, which can save homeowners thousands of dollars in property damage and clean-up as well as protects homeowners from the health hazards associated with having raw sewage enter the home.
- *Foreclosure Prevention and Homeowner Stabilization Services:* Along with these specialized services, the Center continues to offer high-quality 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.

### **Recommendations:**

Based on our experience serving thousands of homeowners in flood-prone neighborhoods in the seven years since Hurricane Sandy struck New York City, we respectfully submit the following recommendations:

**Support Int. 382-2018 and Flood Resiliency Outreach and Education**

Through our extensive work in communities living in flood-prone areas, we have found that community outreach and education is crucial to promoting flood resiliency and public safety. Therefore, we support Int. 382, which would require the Office of Emergency Management, in consultation with the Office of Recovery and Resiliency, to mail notifications to all property owners in the special flood hazard area of the New York City Flood Insurance Rate Map once it is updated. As the legislation calls on the City to include “any other information deemed useful” in the letter, we encourage the City to include information about FloodHelpNY.org and the resiliency services offered by the Center within the mailing.

We also recommend sending information on the flood maps and flood insurance to property owners who are outside of the special flood hazard area but within the moderate risk flood area known as the “X Zone.” These areas are also at risk of flooding and property owners in the X zone should be aware that a lower cost Preferred Risk flood insurance policy may be available to them.

Finally, while the legislation calls on the City to provide notice once the maps are updated, we believe further outreach and education is needed. Specifically, we support increased resources for community education campaigns, resiliency audits, and resiliency counseling in flood-prone neighborhoods. We have found that buy-in from informed community members is essential to the success of initiatives to promote climate resiliency. A robust outreach and education campaign, combined with individualized services for targeted homeowners, will ensure that homeowners are aware of their flood risk and can take steps to reduce it.

#### **Support Int. 1620-2019 and Ensure Community Involvement in the Planning Process**

Int. 1620 would implement a planning process to create a comprehensive, five-borough plan to address climate change, sea level rise, and sunny day flooding. We support this initiative and look forward to partnering with the City to share our recommendations for promoting flood resiliency for homeowners in flood-prone neighborhoods. We also urge the City to involve community members and organizations in disaster response planning and recovery efforts, giving particular attention to the linguistic and cultural needs of community members, as well as the needs of seniors and people with disabilities.

#### **Develop Affordable Financing Mechanisms for Home Resiliency Improvements**

A lack of affordable financing for flood resiliency retrofits is a major barrier for homeowners seeking to make their homes safer from flooding. We urge the City Council and the de Blasio administration to partner with us as we work to develop accessible, affordable financing mechanisms to reduce future damage, promote safe and livable neighborhoods, and lower flood insurance premiums.

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

**Riverkeeper Testimony on Intros 1620, 1480, and 382**  
**Tuesday, October 29, 2019; 1:00pm**  
**Paul Gallay, President and Riverkeeper**  
**Jessica Roff, Director of Advocacy and Engagement**  
**Michael Dulong, Senior Attorney**

Good afternoon Council Members Constantinides, Brannan, Koo, Levin, Gibson and Grodenchik. Thank you for introducing 1620, an incredibly important piece of legislation to create a comprehensive five borough plan to protect the entire shoreline from climate change, sea level rise, and sunny day flooding. Thank you, Members Constantinides and Ulrich, for introducing 1480, which will help rid our waters of derelict barges and boats and hold those who dump them responsible. And, we thank Member Ulrich for introducing 382 to inform landowners in the floodplain of their potential hazards and insurance requirements. Riverkeeper appreciates the opportunity to provide testimony on these critical laws.

**Riverkeeper Supports Passage of Intro 1620 and Hopes The Council Will Consider Adding Provisions to Guarantee Meaningful Public Participation and Comprehensive Resiliency Planning**

As we are all aware, there have been, and continue to be, a number of plans throughout New York City and the region to address some combination of climate change, sea level rise, and storm surge flooding. Both the city and state administrations have proposed plans and the federal Army Corps of Engineers is in the midst of a multi-million dollar study to propose multi-billion dollar structures throughout our area. Unfortunately, the processes by which these plans are advancing repeatedly fail to effectively include community voices, and the plans are either ad hoc or fail to address the depth and breadth of issues facing our region.

Boston is taking very positive, comprehensive action to combat climate change and its effects. Not only does Climate Ready Boston follow the trend of moving storm surge and sea level rise responses to shore-based defenses — including restored marshes, deployable floodwalls, elevated waterfront parks, plazas, berms, and wetland terraces. But it also includes adapting infrastructure, energy systems, sustainable development, multi-purpose green spaces, stormwater infrastructure, and engaging communities. And by creating responses with multiple benefits — such as recreational space that absorbs flooding, or transportation service upgrades that go along with resiliency upgrades — we also create a mechanism for greater community buy-in and overall more effective

systems. Climate Ready Boston recognizes both that changing climate happens on multiple levels and scales, and that residents, businesses, and communities all have the power to take action and be prepared.

Boston's five guiding resilience principles provide important insight when thinking about how we should frame our five-borough resiliency approach:

1. Generate multiple benefits.
2. Incorporate local involvement in design and decision making.
3. Create layers of protection by working at multiple scales.
4. Design in flexibility and adaptability.
5. Leverage building cycles.

And these five principles led Boston to reject in-water barriers in favor of a balanced plan with: better building codes, shoreline defenses like berms and living shorelines, elevating and hardening public structures and services, creation of salt marshes and other places for the water to go, construction of green infrastructure to store water and, generally, adaptation of an "architecture of accommodation."

It's critical that as we prepare for the future of NYC with all the threats from climate change and sea level rise, that we do it in such a fully comprehensive way. We've learned from the Army Corps' NY/NJ HATS Study that there are many unintended consequences when you're making big plans for big structures. The Corps has finally recognized that deflection or induced flooding from their large in-water barriers could be so problematic — both the actual flooding and the cost of mitigating against it — that they are seriously considering abandoning plans for certain of these structures. Such problems can be avoided by looking at the entire NYC region (and beyond) as a single entity — planning a thoroughly comprehensive strategy that has all boroughs and shorelines and communities represented.

A comprehensive approach to on-shore measures will also continue to support the vibrant eco-systems in the NYC waters as well as the water bodies themselves. Further, such plans will allow the existing sewage system to continue to function without threatening to pollute NYC communities with trapped toxic waters or stopping the continuous flushing of other types of waterborne contaminants. Intro 1620's methodology should also allow for the incorporation of the Long Term Control, MS4, and Green Infrastructure Plans throughout the city.

Community representation and participation must be transparent and an integral part of the process in order to succeed. We have to avoid duplicating situations like the East Side Resiliency Project planning fiasco, which is to say, that communities, community organizations, grassroots, and other issue-based organizations need to be fully incorporated into the process, up through decision-making, not brought along for the ride and then have plans switched at the eleventh hour.

And a comprehensive plan must also include community resilience work and support. In crisis after crisis we see that the best and most immediate responses are always local and community-based, and that the stronger the community social infrastructure is, the better prepared the community is to face a crisis, or worse, to respond to one.

Both our government and communities need to come together to figure out how to live with, and be surrounded by, the ever rising waters in our area. In 1953, Rotterdam began building a series of dams, barriers, and seawalls as part of a national project called Delta Works; five years ago they planned an upgrade, the Rotterdam Climate Proof Program. Arnoud Molenaar, who manages it, said, "Before, we saw the water as a problem. In the Netherlands, we focussed on how to prevent it from coming in. New York City focused on evacuation, how to get people out of the way. The most interesting thing is figuring out what's between these approaches: what to do with the water once it's there." Rotterdam is now experimenting with an architecture of accommodation.

As Mitch Waxman, the historian of the Newtown Creek Alliance said, "Wouldn't it make more sense to create oceanside topography that breaks up wave action, and that could eat up the energy of a storm surge, than it would be to build giant mechanisms which we are going to have to maintain and replace?" he says. About the Army Corps' approach to addressing storm surge with in-water barriers he said, "Unfortunately, we are taking a very American tack with this, which is building a machine to do something which nature would do better."

We urge the City Council, as part of the comprehensive five borough plan, to consider incorporating the kinds of creative, adaptive measures along our shorelines that Mr. Waxman references.

Riverkeeper does not support in-water barriers. Accordingly, we appreciate the council members specifically highlighting measures including rip rap, breakwaters, floodwalls, marshes, non-structural living shoreline options, and similar stabilization methods. Following Mr. Waxman's recommendations of multi-beneficial plans, there is one

in-water measure that should be incorporated into a five borough — and beyond — resiliency plan: off-shore wind.

Off-Shore Wind can mitigate storm impacts in addition to moving us from carbon intensive fossil fuel use to large scale, viable, renewable energy. University of Delaware studies have found that turbines - depending on numbers - can provide up to a 30 percent reduction of precipitation, decrease storm surge by up to 79%, and reduce peak wind speeds by up to 92 mph.

Therefore the city, at all levels of government, should be doing whatever it can to support increasing our off-shore wind commitment to increase our renewable energy share, decrease our reliance on dirty and dangerous fossil fuels, and increase storm resilience in all of these ways.

Riverkeeper also appreciates that Intro 1620 begins to tackle the hard questions that living with the water requires. By recognizing that "structural and non-structural risk reduction approaches" also means "strategic relocation programs removing structures from floodplains, wetlands preservation and restoration, densification on high ground, and any similar concepts." It is becoming clearer every day that there are places around this city where maintaining a presence will not be viable moving into a future with increasing sea level rise.

Riverkeeper appreciates the on-going work of the City Council to comprehensively address the growing threats of climate change, sea level rise, and sunny day flooding, while working with communities and community organizations. We fully support Intro 1620 and look forward to working together to implement this important law and to help protect NYC.

### **Riverkeeper Strongly Supports Passage of Intro 1480**

Riverkeeper supports Intro 1480, which would create a program to dispose of, or if appropriate, reuse marine debris left on public beaches. The program would require a plan to recycle the debris where possible. It is common for this type of debris to mar public beaches and other city-owned property, and it is also common for the marine debris, especially derelict barges and boats, to remain in city waterways or on other public lands.

Riverkeeper mounted a campaign in 2015 to have two derelict barges removed from the East River at Flushing Bay. The barges were loose and shifting, jeopardizing maritime



traffic. Large and small pieces of expanded polystyrene foam pollution were breaking off the barge. This foam pollution can be found in nearly every tributary, from miniscule particles to large, refrigerator-sized chunks of foam.

It became clear that a complicated legal framework would prevent swift removal of the barges. Working with state and local elected officials, then-Congressperson Joe Crowley, New York City and state agencies, we advocated for Army Corps to remove the navigational threat.

Again in 2017 we coordinated with New York State and City officials on removing an abandoned deck barge from the Upper East River near Whitestone. For years local community members and business owners had tried to get the abandoned barge removed after it had been dumped during the night. It was physically deteriorating, impeding navigation of the waterways and actively discharging copious amounts of polystyrene pollution.

Other smaller debris, such as marine garbage and even yachts have been stranded all over the city, in waters as diverse as the Bronx River and Jamaica Bay where boats have sunk into river beds. In other places, boats are unlawfully moored, and some abandoned, such as near the mouth of Newtown Creek.

It seems the intent of this bill is to remove debris not only left on public beaches, but also the debris that is stranded "in the water or along the shoreline." Intro 1480, Proposed New City Charter Section 20-f(3). It is essential that these areas be included in the bill so the barges, yachts, and other large items that may not land on public beaches could also be cleaned up. Moreover, expressly incorporating these areas would provide city officials authority to address these issues cheaply and efficiently before the debris rots, breaks down smaller, and affects a larger area of city shoreline. The investigation into the individuals responsible for the debris could also begin immediately. The first paragraph of proposed Section 20-f could be modified to add:

The mayor or such agency as the mayor shall designate shall establish a marine debris disposal office to monitor, recycle or dispose of marine debris left on public beaches and in the water or along the shoreline.

Thank you to Council Members Costa Constantinides and Eric Ulrich for recognizing the importance of removing marine debris and for pushing this bill forward. We fully support your efforts and urge the council to pass Intro 1480.

## **Riverkeeper Supports Intro 382 and Urges the Council to Modify the Bill to Extend Notice of Flood Hazards to All New York Landowners in the 500-Year Floodplain**

Today, seven years after Superstorm Sandy took the lives of at least 43 New Yorkers, most residents remain unaware of the extent of their flood risk. It is crucial to warn New Yorkers of the potential that their homes and businesses will flood so they can take precautions to protect themselves physically and protect their property financially. When the flood hazard area maps are finally set by the Federal Emergency Management Agency (FEMA), Intro 382 will provide notification to all property owners in the special flood hazard areas of their risk and flood insurance requirements. This notification will be crucial to protecting life and property, though it will not go far enough.

Sandy flooded a staggering 51 square miles of New York City, which is 17 percent of the City's total land mass. The previous FEMA flood maps had indicated that only 33 square miles of New York City might be inundated during a so-called 100-yr flood. The flooding affected the homes of 443,000 New Yorkers, not to mention the catastrophic impact it had on businesses and critical infrastructure, all totaling \$19 billion in damages. Only about 80% of people affected by Sandy flooding had flood insurance.

FEMA has proposed to update that woefully underestimated map, but its proposal would still cover an area much smaller than the true projected 100-year floodplain. To boot, the new maps would delineate only a fraction of the widely expanded flood plain area that we can expect in 2100 due to the impacts of climate change. If the maps are drawn and published in such a way as to allay the flooding concerns of communities who are "outside the line," those community members will be more likely to shelter in place during major storms, putting their lives at risk. Additionally, developers will be more likely to build in these areas, unnecessarily putting people and real estate in harm's way.

We respectfully request that the City Council modify the bill to inform by mail all of those New Yorkers in the 100- and 500-year floodplains of their potential risk, even though their financial requirements will differ according to the lines that will be drawn by FEMA. It is in the long-term interest of this city to inform all New Yorkers about their risk and insurance options.

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Thank you for your consideration of this testimony, and thank you for all you do to empower our communities, protect clean water, and build resiliency. Riverkeeper looks forward to continuing to work with the Council and other stakeholders to protect and restore our waterfronts and prepare our communities for climate change.

To: Councilmember Costa Constantinides, Chairman, Infrastructure Division, Committee on Environmental Protection, the New York City Council

Re: Regarding Invitation to Testify at Oversight Hearing: Seventh Anniversary of Superstorm Sandy

Ms. Samara Swanston, Esq., Counsel to the Environmental Protection Committee of the New York City Council, has kindly invited me to testify before the Council on proposed amendments to the administrative City of New York Int. No. 382 in relation to a special flood hazard area notification, and Int. No. 1670 climate change in relation to sea level rise, sunny day flooding, and their East Coast implications. While I regret that due to scheduling conflicts, I will be unable to attend the hearing in person, I respectfully submit a few comments in reference to these proposed amendments.

As a member of the New York Panel on Climate Change, associated with Columbia University and the Goddard Institute for Space Studies, I was lead author on the sea level rise chapter, and worked closely with Philip Orton and others on the coastal flooding chapter in the recently published NPCC 2019 report: *Advancing Tools and Methods for Flexible Adaptation Pathways and Science Policy Integration*. Rosenzweig, C. and Solecki, W. (eds). *Ann. New York Acad. Sci.* 1439.

With regard to proposed amendments to Int. No. 382, two points emerge—one of increased financial burdens to homeowners in newly-designated FEMA special flood hazard areas (SFHA), commonly known as the 1-in-100-year floodplain. Increased costs could arise due to implementing required upgraded flood protection measures to qualify for flood insurance and also higher flood insurance premiums. Many of the affected neighborhoods are in modest income working class neighborhoods where residents may have difficulties in meeting the new flood protection requirements. Another, often overlooked consideration is that actual flood hazards do not necessarily conform to map boundaries. Put simply, what flood protection insurance coverage is there available to homeowners who live outside the FEMA-designated SFHA, who nevertheless may find themselves flooded by some major storm event? What level of flood protection should they consider? Also, flood maps are not perfect. Flood models may not be able to predict exact flood drainage pathways and flood depths. Finally, existing FEMA flood maps do not yet fully account for flooding that results from both coastal storm surges and heavy rainfall. This is still an area of active research. Nor do the current FEMA flood maps account for future sea level rise. The NYC Flood Hazard Mapper (NYC Dept. of City Planning) shows areas potentially affected by the 100-year flood with future sea level rise in the 2020s, 2050s, 2080s and 2100, based on findings from the NPCC 2015 study: *Building the Knowledge Base for Climate Resiliency: New York City Panel on Climate Change 2015 Report*. C. Rosenzweig and W. Solecki, eds. *Annals of the New York Academy of Sciences* 1336. (It should be kept in mind that these maps are for informational purposes only, and should not be used for assessments of actual coastal hazards nor for meeting insurance requirements. They are based on model estimates that contain uncertainties and are subject to change as new information becomes available).

With regard to proposed amendments to Int. No. 1620, the proposed amendments represent an ambitious plan to protect the City's entire shoreline against future coastal hazards, including sea level rise, and even "sunny day" flooding—a problem already affecting a number of city neighborhoods, particularly around Jamaica Bay. The plan includes a whole array of "hard" and "soft" stabilization methods and other risk reduction approaches, including "strategic relocation", not only of structures, but presumably of occupants of these structures, as well. This latter approach, although implemented successfully in a few Staten Island neighborhoods after Sandy, is generally not popular today. Most coastal residents still prefer to remain in place and rebuild, although they may face increasing hardships in meeting FEMA's tighter flood protection requirements to qualify for flood insurance. Furthermore, increased frequency of sunny day, or tidal, flooding will increase far sooner than actual land submergence. A time may come when even the proposed suite of shoreline stabilization methods outlined in the proposed legislation, even if all are implemented, may not suffice against future sea level rise, especially for high end scenarios at high greenhouse gas emissions levels, toward the end of this century.

Furthermore, the story does not end in 2100. Because of the longevity of atmospheric carbon dioxide, temperatures stay warmer and sea level continues to rise even after we stabilize or reduce greenhouse gas emissions. In spite of a slight lowering of carbon dioxide within decades of ceasing further emissions, most of the carbon dioxide remains in the atmosphere and would take centuries to millennia to slowly dissipate. This, and slow heat penetration into the deep ocean, would cause sea level to continue rising well beyond 2100. Furthermore, during this extended period of sustained warmth, the losses of ice on Greenland and Antarctica will continue and could become quite substantial.

Because of the implications of enormous economic and societal consequences to New York City, we need to consider the possibility of high-end, although low probability scenarios in long-term coastal risk management. We should also consider land use zoning in future resiliency planning. It seems ill-advised to keep building high density structures in or near today's high flood-prone areas (which will expand landward with sea level rise) even although the building themselves conform to stricter flood-protection standards. What about nearby street or major transportation route access during major flood events? Will these new coastal high-rise areas become islands in a surrounding sea of floodwater? Perhaps it is also time to consider some unconventional future approaches such as increasing boat accessibility through waterfront re-development, constructing floating neighborhoods, multi-purpose levees as in the Netherlands, and replacing streets with canals.

**Swanston, Samara**

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**From:** Vivien Gornitz <vmg1@columbia.edu>  
**Sent:** Thursday, October 24, 2019 6:43 PM  
**To:** Swanston, Samara  
**Cc:** Rosenzweig, Cynthia; William Solecki; Philip Orton  
**Subject:** Re: Change in the date of the Superstorm Sandy Hearing  
**Attachments:** Oversight hearing Sandy.docx

Dear Ms. Swanston:

Thank you for your kind invitation to testify at the Oversight hearings on the new, amended administrative codes for strengthening the City's coastal resiliency planning. Please excuse the delay in responding. Although I cannot appear in person, due to a scheduling conflict, I respectfully send you my comments (please see attached file). I hope that these will be useful to you and your committee.

Sincerely,

Vivien Gornitz

On Wed, Oct 23, 2019 at 3:12 PM Swanston, Samara <[SSwanston@council.nyc.gov](mailto:SSwanston@council.nyc.gov)> wrote:

Hi Professor,

You can certainly forward your comments on the proposed legislation. Please send them as soon as possible.

It may also be possible for you to SKYPE in from your uptown location. Alternatively you may be able to testify after 1. For example you could testify as 2 or 3 pm. However whatever works for you, we need your input on these important bills. We have a short window to address this crisis and the sooner we enact legislation to address these issues, the better off we are likely to be.

Samara

**From:** Vivien Gornitz <vmg1@columbia.edu>  
**Sent:** Wednesday, October 23, 2019 2:34 PM  
**To:** Swanston, Samara <[SSwanston@council.nyc.gov](mailto:SSwanston@council.nyc.gov)>  
**Subject:** Re: Change in the date of the Superstorm Sandy Hearing

Dear Ms. Swanston:

Inasmuch as the hearings on amendments to bills concerning upgrades to New York City's resiliency program after Hurricane Sandy, it makes sense to hold these hearings on the anniversary of that fateful date. However, the new rescheduled date, October 29 at 1pm, presents a difficulty for me, since I am scheduled to give a talk on sea level rise at GISS at 11pm and may not be able to come downtown in time for the 1pm hearing. If in going over the proposed amendments, I have any further comments or suggestions, would it be possible for me to forward these to you via email instead? Please advise.

Sincerely,

Vivien Gornitz

On Wed, Oct 23, 2019 at 1:08 PM Swanston, Samara <[SSwanston@council.nyc.gov](mailto:SSwanston@council.nyc.gov)> wrote:

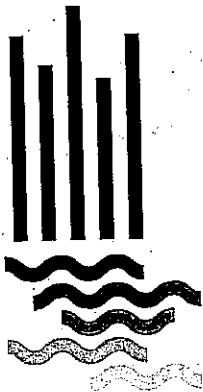
Hi Professor Gornitz,

I am Counsel to the Environmental Protection Committee of the New York City Council. We are holding a public hearing on Hurricane Sandy and its implications. We would love to have you testify before the Council regarding climate change, sea level rise, sunny day flooding and their East Coast implications.

**Due to certain Council Procedures, the hearing date has to be advanced one day, to October 29, 2019—the actual seventh anniversary of Superstorm Sandy.**

Please see the attached Special Invitation to testify before the Council. We will be introducing three bills relating to a Special Flood Hazard Area Notification, creation of a Marine Debris Disposal Office and a Five Borough Plan to Protect the Shoreline from Climate Change, Sea Level Rise and Sunny Day Flooding. I have enclosed two important bills. Even if you do not attend, we would appreciate comments on the bills. My land line is (212) 482-5471. Feel free to call me with any questions.

Very truly yours,

**Public Testimony****October 29, 2019****New York City Council Hearing (Committee on Resiliency and Waterfronts  
and Committee on Environmental Protection)****Re: Oversight – 7<sup>th</sup> Anniversary of Superstorm Sandy****Submitted by Karen Imas, Senior Program Director  
Waterfront Alliance**

Waterfront Alliance is a non-profit civic organization and coalition of more than 1,100 community and recreational groups, educational institutions, businesses, and other stakeholders. Our mission is to inspire and enable resilient, revitalized and accessible coastlines for all communities.

Our coasts are under threat from climate change, and we're already paying for it. Seven years after the devastation of Hurricane Sandy, progress has been made, but our region is still vulnerable to the increasing risks brought by climate change and sea level rise.

The New York City Panel on Climate Change's (NPCC) 2019 report offers a sobering new lens known as the Rapid Ice Melt scenario: the metropolitan region could experience 9.5 feet of sea level rise by the end of the century.

This year, the Waterfront Alliance convened a regional Resilience Task Force comprised of more than 300 stakeholders from the public and private sectors, ranging from grassroots community groups to engineers to financial services to government agencies, charged with building consensus and informing a campaign to adapt New York and New Jersey to sea level rise and coastal storms.

These are some of the things we are hearing - as we face climate change and increasing flood risk, we are simultaneously amidst an affordable housing crisis and increased demand for space. Much of our infrastructure is under stress and underfunded.

Significant portions of Coney Island, Rockaway, Red Hook, Howard Beach, East Harlem, East Inwood, Hunts Point, Port Morris, and Throgs Neck, many of which are primarily low-moderate income communities and communities of color, among others, are projected to be underwater on a regular basis before the end of the century and face disproportionate risk and social vulnerability.

And we know that the current value of properties within the floodplain is projected to rise to a staggering \$101 billion in Fiscal Year 2020 — an increase of 73 percent since FY 2010. The demands facing New York City's waterfront

communities today are not the same as they were 10 years ago or 20 years ago and we need to plan accordingly.

**A comprehensive lens, like Intro 1620, has never been more important. While some areas of New York City currently have adaptation or resiliency plans and have held extensive public processes, others are lacking.**

**That is why we urge support for Intro 1620, which calls for the creation of a comprehensive five borough plan. Last week, we circulated a Memo of Support to Council Members signed by 15 partner organizations advocating for more robust and equitable climate adaptation.**

We also support Intro 382 on the special flood hazard area notification.

We encourage the Council to consider a comprehensive, 5-borough planning approach that can help us to have a fuller understanding of and conversation about the trade-offs involved in resiliency planning. And we recommend that the plan consider the following:

- Is informed by the New York City Panel on Climate Change and regularly updated following an adaptive management cycle or as new projections and plans are developed;
- Clarifies the agencies responsible for key functions of resiliency governance;
- Is funded in the Budget. We recognize that it will take resources to ensure a sound community-based process;
- Prioritizes low-income communities and communities of color, and including green infrastructure in an equitable planning process and investment strategy.
- Builds off existing community-based and citywide plans; the Special Initiative for Rebuilding and Resiliency; Local Waterfront Revitalization Plans, and other relevant planning and design investigations, avoiding duplication;
- Is clear up-front about the limitations and possibilities for resiliency in all areas at flood risk;
- Considers a more comprehensive approach to rezoning, based on the multiple challenges and opportunities facing the city;
- Better positions the City to prepare for and respond quickly to federal funding opportunities as they arise;
- Identifies opportunities to incorporate resiliency into more general maintenance and capital projects (e.g. road replacement, bulkhead repair, etc.);
- Develops clear, accessible, and equitable targets for risk reduction (e.g. number of people at risk of flooding, number of people with low adaptive capacity living in the floodplain, amount of public infrastructure addressed).

As we work to reduce greenhouse gases and mitigate climate change in partnership with and support of the State of New York's historic climate legislation,



we must ensure that our coastal communities are wisely and resolutely prepared for the reality of sea level rise and the next big storm. A comprehensive plan can empower New York City to pursue the investments needed to build greater resilience to climate and disaster risks, and to access the funding and financing necessary to ensure that those investments come to fruition.

Thank you.

Lucy Koteen

## FOR THE RECORD

lucy.koteen@gmail.com

October 29, 2019

718-938-3935

**This proposed local law requires that the office of recovery and resiliency or such agency as the mayor shall designate shall develop a comprehensive five borough plan to protect the entire shoreline of New York city.**

We know that we must adapt to climate change and because of that there exists in New York City policies on resiliency, and a Resiliency and Recovery agency, and the city council recently declared a climate emergency.

Yet we see the opposite put into place in every borough of the City. Despite numerous science articles speaking about the reduction in the urban forest across the country and at the same time articles telling us about the necessity of mature trees as part of the solution to absorbing carbon and excess water, we are seeing large tree removal and earth removal throughout the city and these natural conditions replaced with concrete and asphalt.

For many articles about trees see the tree section at  
<https://sites.google.com/view/fortgreeneparkrenovation/home>

The climate emergency declared by the city council would have meaning if there were legislation accompanying it that demanded that every project, both land and building projects had to attach a study that showed how it would be in compliance with the resiliency policy. A project must show how it will benefit animals, birds and insects because to do so is to benefit humans.

An EIS must be mandatory and not an option. If it finds that an impact **can not** be mitigated, as they often do, then the project has to be adjusted until it shows a positive result or withdrawn all together.

We know that humans will have to migrate away from coasts to live, yet we see the Department of City Planning approving projects such as the Two Bridges project. A project that will create a wall along the East River blocking out light, air and views, generate heat and be filled with many empty apartments and in the end we can expect that taxpayers will have to bail out this river side development when it is flooded. There is no doubt that it will flood as will the Southern part of Manhattan. We should have passed a moratorium on building by the water and in the water years ago. We are no different than Houston, Texas that replaced earth and trees with concrete and suffered the consequences of severe flooding twice in two years. Any comprehensive plan must include retreat from the shoreline. It is insane to say we need to protect the shoreline and keep building structures that need to be protected. The way to protect the shoreline is with the natural environment to act as a sponge for water and wind absorption. There is no shame in outlawing the building of new structures by the water.

The number one protector against climate change are large trees yet all over NYC large trees are being removed from the parks and the shorelines and street trees are not protected from the rapacious developers that rule the City. Throughout the City a massive number of large trees are being cut down and the natural environment is being paved over. There is a wide pattern of abuse of the natural world in contradiction to city policy to increase resiliency and no agency or politician is doing anything to stop it.

[https://www1.nyc.gov/assets/orr/pdf/NYC\\_Climate\\_Resiliency\\_Design\\_Guidelines\\_v3-0.pdf](https://www1.nyc.gov/assets/orr/pdf/NYC_Climate_Resiliency_Design_Guidelines_v3-0.pdf)

<https://www1.nyc.gov/office-of-the-mayor/news/271-17/mayor-new-resiliency-guidelines-prepare-city-s-infrastructure-buildings-for>

There is a goal to increase tree canopy 30% by 2030 that is being ignored.

<http://citeseerx.ist.psu.edu/viewdoc/download?rep=rep1&type=pdf&doi=10.1.1.222.8693>

Here are some thoughts of how the council can promote environmental stewardship:

1. Hold a hearing that addresses the discrepancy between the stated policies and goals of the City and the actual projects that are put into place.
2. Enact legislation that demands that any project that alters the environment must go through the EIS process, be in compliance with SEQRA, and show that the project will do no harm to the environment and in fact will conform with the stated policies of the City. They can no longer state that a problem can not be mitigated. They must find a solution or alter the project.
3. Enact legislation that creates an agency that will protect the trees and the natural environment; that will act like a warden for the environment. If someone sees damage being done to a street tree or a park tree the agency can be contacted and they will immediately send out a tree protector to stop the damage. Tree damage is commonly seen in development areas and in parks.
4. Enact legislation that requires that any study or report undertaken by any agency must be placed on the website of that agency. There must be full transparency in the way that tax-payer money is used by agencies.
5. If Parks Forestry is removing trees it should only occur if a TREE RISK ASSESSMENT has been performed and that the tree is in imminent risk of injuring people or damage to property and utilities.

Any law enacted must be specific and it must be looked at by all agencies so that there is comprehensive agreement between agencies to prevent the usual situation of the right hand not knowing what the left hand is doing.



**New York City Council**  
**Committee on Resiliency and Waterfronts and Committee on Environmental Protection**  
**Hearing on Citywide Resiliency, Int. 1620-2019**  
**October 28, 2019**  
**Emily Walker, Director of Outreach and Programs**

Good afternoon, my name is Emily Walker, and I am the Director of Outreach and Programs at New Yorkers for Parks (NY4P). I would like to thank the City Council Committees on Resiliency and Waterfronts and Environmental Protection for holding this important hearing today.

On this day, the 7th anniversary of Superstorm Sandy, we believe the conversation about a citywide resiliency plan is of urgent importance. Additionally, with multiple resiliency projects in the pipeline now, we see a need for the City to plan for a comprehensive approach to protect the vulnerable coastline and waterfronts of the five boroughs. We therefore support the proposed Intro 1620, which would require a semi-regular, citywide comprehensive planning process for our entire shoreline. As evidenced by Sandy, water impacted all five boroughs of this city. We acknowledge that the City has to move forward with some expediency to initiate vitally-needed resiliency projects in Lower Manhattan, but we also know that water doesn't discriminate, and that the other stretches of our waterfront will require similar projects in the not-too-distant future.

We are concerned that the current resiliency plans moving forward in Lower Manhattan are being done with a piecemeal approach. This will mean that significant stretches of the waterfront will be closed for renovation and reconstruction at overlapping intervals, with a variety of City agencies overseeing these disparate projects. While those in the know are aware of the jurisdictional boundaries of these spaces, to the average New Yorker, they are waterfront parks and esplanades that will soon be taken offline for a number of years. We do not feel there has been sufficient interagency coordination of these projects, and we would hope that Intro 1620 would help address this issue moving forward.

Making our waterfront and coastline more resilient to future storms and sea level rise will require a great amount of interagency coordination and transparency, but it will also require a process to allow the public to provide input on any projects that move forward. Many of our waterfront communities are also frontline communities that are most vulnerable to climate change and long-term environmental justice issues. Engaging these New Yorkers early and often in any citywide resiliency planning will be key to getting it done right. We suggest that the City create a task force with five borough representation to help ensure that any future citywide resiliency planning is done in coordination with New Yorkers who represent the communities most impacted by climate change.

We also would ask the Council to consider the funding needed to truly implement a citywide resiliency plan for our waterfront. The cost of the East Side Coastal Resiliency Project alone is projected to be over \$1.4 billion. This is a tremendous amount of funding for just one small piece of our waterfront. Will the Office of Management and Budget fund these efforts in a five borough strategy, or will specific agencies be responsible for the funding needed to implement these projects moving forward? We believe this is an issue of equity, and significant funding must be allocated for the citywide resiliency projects that we know will be necessary to protect our coastal communities.

New Yorkers for Parks and the Municipal Art Society recently co-authored a report called “Bright Ideas”, in which we call for New York City to create a position for a Director of the Public Realm. Having this ombudsman-type role carved out to ensure that citywide development and planning happens in a thoughtful, equitable way would go a long way toward improving the efficacy of a proposal such as the one we are discussing today. A five borough resiliency plan will require a truly comprehensive strategy, and we suggest that the City take seriously the suggestion to create a role for this.

Finally, one of NY4P’s weightiest concerns relating to public open space and parks will always be the question of long-term maintenance. For too long, New York City has failed to dedicate permanent and meaningful funding for baselined, year-round maintenance and operations staff lines. We were encouraged by the investments made by the City in the FY20 budget, but we know many of those positions are still not permanent, and will not meet the sum of tremendous needs of our parks system. As we contemplate a citywide resiliency plan for our waterfront and coastline, we must also plan for baselined maintenance positions. Simply put, maintenance is a matter of protecting our capital investments, and we think any conversation about what will be billions of dollars in construction is a nonstarter without an appropriate, permanent commitment to more full-time maintenance and operations staff to help maintain these important public spaces.

Thank you very much for the opportunity to speak. I welcome any questions you may have.

###

*For over 100 years, New Yorkers for Parks (NY4P) has built, protected, and promoted parks and open spaces in New York City. Today, NY4P is the citywide independent organization championing quality parks and open spaces for all New Yorkers in all neighborhoods.  
[www.ny4p.org](http://www.ny4p.org)*



## New York City Environmental Justice Alliance

166A 22nd Street, Brooklyn, NY 11232 | [www.NYC-EJA.org](http://www.NYC-EJA.org)

On the ground – and at the table

### **New York City Environmental Justice Alliance testimony to the NYC Council Committee on Environmental Protection & Committee on Resiliency and Waterfronts on the 7th Anniversary of Superstorm Sandy**

October 29, 2019

My name is Jalisa Gilmore and I am here to testify in support of Intro 1620, the 5 Borough Resiliency Plan, on behalf of the New York City Environmental Justice Alliance (NYC-EJA). Founded in 1991, NYC-EJA is a non-profit citywide membership network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental justice. NYC-EJA empowers its member organizations to advocate for improved environmental conditions and against inequitable environmental burdens. Through our efforts, member organizations coalesce around specific common issues that threaten the ability of low-income and communities of color to thrive, and coordinate campaigns designed to affect City and State policies – including addressing climate change threats to the resilience of waterfront communities.

NYC-EJA member organizations represent environmental justice communities overburdened by flood hazards, proximity to waterfront industrial zones, lack of green and open spaces, air pollution caused by dirty industry clustered in their neighborhoods, and extreme heat events. Therefore, we understand first-hand the urgency of the climate crisis and the need for innovative climate adaptation strategies that can be incorporated into the 5 Borough Resiliency Plan. As NYC-EJA's Executive Director, Eddie Bautista and Council Member Brannon highlighted in today's op-ed, NYC isn't remotely ready for the next superstorm, there has not been nearly enough investment in the low income communities of colors in the outer-boroughs where the most vulnerable populations are. We would like to thank Council Members Constantinides, Brannon, Koo and Levin for introducing a plan that aims to protect all of NYC's boroughs from climate change, sea level rise, and sunny day flooding. There are a few considerations that we would like the City Council and the Mayor's Office of Resiliency to take into account as the plan moves forward.

NYC-EJA has long advocated for climate adaptation measures in New York City's industrial waterfront neighborhoods, given its vulnerability to climate change impacts and hazardous toxic exposures that may result in the event of severe weather. In 2010, NYC-EJA launched the Waterfront Justice Project, New York City's first citywide community resiliency campaign. NYC-EJA discovered that the Significant Maritime and Industrial Areas (SMIAs)—clusters of heavy industry along the waterfront— are all in hurricane storm surge zones, and in environmental justice communities. When considering how to protect NYC's shoreline, the 5 Borough Resiliency Plan should consider measures that also protect communities from the cumulative contamination exposure risks associated with clusters of heavy industrial uses in such vulnerable locations.

According to the NYC Panel on Climate Change, NYC is predicted to experience anywhere from 8 to 30 inches of sea level rise by the 2050s. The plan should consider both sea level rise and storm surge, alongside the FEMA Flood Insurance Rate Map when determining the community districts that should be evaluated for climate change resiliency adaptation measures to ensure that all the communities who will be impacted by climate change impacts are included.

Several waterfront communities were involved in post-Sandy community planning efforts and have not seen these plans fully implemented. The 5 Borough Resiliency plan should make sure to incorporate the research and community input resulting from processes such as the Hunts Point Resiliency, East Side Coastal Resiliency,

and East Harlem Resiliency. The plan should ensure that there is extensive community engagement with the communities that developed these plans.

Additionally, we are disappointed in the inequitable investments to date in climate adaptation and resiliency. For example, during the Hunts Point Resiliency process the Hunts Point Food Distribution Center only received a few million for a feasibility study, yet Mayor de Blasio has committed \$10 billion for protecting the financial district.

Furthermore, it is critical that the 5 Borough Resiliency Plan inform the US Army Corp of Engineers (USACE) New York and New Jersey Harbor and Tributaries Focus Area Feasibility Study to ensure that ecologically-grounded coastal protection and nature-based shoreline infrastructure are prioritized.

Lastly, we have also have questions that we would like considered as the plan moves forward. Such as why climate adaptation measures will only be evaluated for residential buildings no more than three stories in height? Which agency and/or office will be responsible for implementing the plan? And how will that entity ensure that the plan is complementary to the NYC Department of City's Planning's 2020 Comprehensive Waterfront Plan?

New York City government has not committed to equitably protecting waterfront communities from climate change, and we believe the 5 Borough Resiliency Plan is an opportunity to remedy this shortfall. NYC-EJA would like to thank the New York City Council for holding this oversight hearing on the 7th Anniversary of Superstorm Sandy and for the opportunity to testify.



**Testimony for NYC Council Committees on Resiliency and Waterfronts and Committee on Environmental Protection**

**Emily Nobel Maxwell, NYC Program Director, The Nature Conservancy in New York  
October 29, 2019**

Good afternoon Chairperson Brannan and members of the Committee on Resiliency and Waterfronts and Chairperson Constantinides and members of the Committee on Environmental Protection. My name is Emily Nobel Maxwell and I am the director of The Nature Conservancy's New York City program. The Nature Conservancy is the world's largest conservation organization, and our more than 600 scientists, located in all 50 U.S. states and 70 countries have been working to conserve the lands and waters on which all life depends. The Nature Conservancy runs urban conservation programs in dozens of cities in North America and globally. Our New York City program was one of the first urban programs and continues to be a leader in the Conservancy as we focus on the important role of nature in urban areas.

We have 90,000 members across New York State, including 35,000 in New York City. The Nature Conservancy's New York City Program promotes nature and environmental solutions to enhance the quality of life of all New Yorkers. We advance strategies that create a healthy, resilient, and sustainable urban environment and are committed to improving New York City's air, land, and water that sustain and support the people and nature of this great city.

**I am here today to express our support for Intro 1620, which calls for a comprehensive five borough plan to protect the entire shoreline from climate change, sea level rise, and sunny day flooding. We encourage the Committees to advance legislation that adapts to a future with more water with an array of approaches including strategic relocation, non-structural measures, and nature-based solutions. Plans to adapt our built environment must be complemented by efforts to increase community resiliency through enhanced social cohesion and disaster preparedness to an array of hazards.**

We have built our city up to the edge of the water. What was once wetlands, dunes, reefs, beaches, and mudflats is now a complex and important built-environment of roads, buildings, docks, and other infrastructure. More than \$100 billion dollars of real estate assets are currently in the floodplain.<sup>1</sup> Many wetlands will not be able to migrate landward to higher ground as sea level rises because roads, parking lots, and built structures will impede their path.<sup>2</sup> As a result of the transformation of our coastline, we are vulnerable. Nature can no longer serve as a protective buffer between water and people, their property, and critical infrastructure. Due to a changing climate, the vulnerability we face will continue to increase. The New York City Panel on Climate Change estimates that sea levels may increase by as much as six feet, coastal storms will be more frequent, and heavy rainfalls will increase by nearly 40% by the end of the century.<sup>3</sup> Flooding will be more common in the future, and we must decide as a city how we will adapt to this reality.

There is no comprehensive plan for how NYC will adapt to a future with more water. Individual plans to prepare portions of our shoreline exist, and in some cases these projects are becoming a reality. We applaud the city, state, and federal agencies, community members and organizations, and engineers and consultants who are advancing these efforts. Yet, these planning efforts are not equitably distributed across our city. For most of the 520 miles of shoreline there is no vision for a future with more water.

<sup>1</sup> New York City Comptroller. 2019. Safeguarding Our Shores: Protecting New York City's Coastal Communities from Climate Change

<sup>2</sup> Regional Plan Association. 2018. The New Shoreline: Integrating Community and Ecological Resilience around Tidal Wetlands.

<sup>3</sup> New York City Panel on Climate Change 2019 Report



There is no one-size-fits-all approach for how communities will adapt to a changing climate, and this is true for New York City's shoreline neighborhoods. We are encouraged to see that this legislation will require a plan to consider an array of approaches. Hardening our shorelines with seawalls and breakwaters only buys us time to adapt our way of life. Built defenses will eventually be overtopped by rising seas and larger storms. Therefore, we must limit new development in our floodplains where possible. We believe that for some of the most low-lying areas, where sunny day flooding is already a problem, the long-term solution is for communities to make the voluntary decision to relocate to higher, safer ground and to allow nature to return and act as a buffer between water and our communities. Strategic relocation or managed retreat is complicated and will not be easy, but it is better than an unmanaged retreat from the coast where residents abandon their homes and their communities without a plan or support. Measures must be put in place to ensure that the proposed solutions do not lead to unintended consequences such as the inequitable displacement of environmental justice communities or low-income, elderly, recent immigrant, and other vulnerable populations.

In cases where built structures (i.e., "hard and soft stabilization methods" as per the legislation) are the chosen approach, a "hybrid" design that combines both green and grey elements – such as restored marshes and mussel beds with sea walls and flood gates – can be a cost effective means to deliver flood protection and a suite of ecosystem benefits. The Nature Conservancy's *Urban Coastal Resilience* report demonstrated that a hybrid system in Howard Beach, Queens could mitigate nearly a quarter billion dollars of damages for a one-hundred-year storm.<sup>4</sup>

We support Intro 1620 and we would like to offer ways to improve this legislation.

- A comprehensive plan for the future of our shoreline will impact the lives of people and must be shaped by community voices. Meaningful stakeholder engagement efforts must be a part of these planning efforts. A new, comprehensive plan must respect the community-based planning that has already occurred in communities such as Hunts Point, the Lower East Side, and elsewhere.
- Built elements – green, grey, or hybrid - such beach nourishment, seawalls, living shorelines, and salt marshes are only one component of climate adaptation. A truly comprehensive plan will enhance social cohesion and improve governance to create community resilience and disaster preparedness.
- The planning efforts should extend beyond the current special flood hazard area and must consider future floodplains as predicted by the New York City Panel on Climate Change. We must plan for the range of storm and sea level rise conditions that are possible by the 2050s or 2100s, based on the best available science.
- Regarding the scope of the legislation, it is unclear why only "residential buildings not more than three stories in height" are considered. Residential buildings of all sizes, commercial, and industrial buildings are all at risk.
- A comprehensive plan to adapt to flooding will also consider the effects of more frequent heavy rains and how these events flood inland neighborhoods or exacerbate storm surge in coastal areas.
- Living with more water is only one reality of a changing climate. A multi-hazard approach will benefit the efficacy of this planning effort. Efforts to adapt our shorelines to flooding should integrate with efforts to manage heat, winter storms, and other hazards.

Climate change is a dire threat to our city. Our response is an opportunity. It is a chance for New Yorkers – some of the most creative minds – to envision a brighter future. It is an opportunity for communities to create safe neighborhoods, social cohesion, and an equitable future. It is an opportunity to build a city where people and nature can thrive. We offer our collaboration to advance this future.

Thank you for the opportunity to testify.

**Contact:**

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<sup>4</sup> <https://www.nature.org/en-us/newsroom/the-nature-conservancy-releases-innovative-urban-coastal-resilience-report-o/>





## Meeting of New York City Council Committees on Environmental Protection and Resiliency and Waterfronts

October 29, 2019

### Testimony By: Hunter Armstrong, Natural Areas Conservancy, Deputy Director of Development and Communications

The Natural Areas Conservancy is a nonprofit organization that was formed in 2012 with the goal of increasing the capacity of NYC Parks and its partners to restore and manage the 10,000 acres of forests, grasslands and wetlands under the agency's jurisdiction. Following in the footsteps of other successful park conservancies including the Central Park Conservancy and the Prospect Park Alliance, the Natural Areas Conservancy (NAC) does not exist to replicate or replace the work of NYC Parks, rather we raise private funds, hire expert staff and work to complement and amplify the work of NYC Parks.

I am not here to comment on the proposed legislation, but instead I want to emphasize that all waterfront planning efforts should include nature-based solutions and that New York City Council should prioritize wetlands in all legislation. On this 7th anniversary of Superstorm Sandy, it is important to remember the protective, resilient buffer that, when in place, healthy wetlands provided during the storm to nearby waterfront communities.

I also would like to inform the Committees on Environmental Protection and Resiliency and Waterfronts about the *Wetland Management Framework for New York City* – a strategy to protect New York City's wetlands that is currently in development by the Natural Areas Conservancy, NYC Parks and partners and due for release in early 2020. We look forward to working collaboratively with New York City agencies and non-governmental organizations to implement this plan.

### Overview of the 2020 Wetland Management Framework

In 2018, the NAC and NYC Parks released the *Forest Management Framework for New York City* (FMF), a 25-year plan to protect and conserve all 7,300 acres of large, wild forests in NYC Parks. A key part of the Play Fair advocacy campaign and then made possible by a \$4 million investment by New York City Council in the Fiscal Year 2020 budget, the *Forest Management Framework* is currently in its first year of implementation, and we look forward to reporting back to you on its progress.

The *Wetland Management Framework for New York City*, currently in development, will be structured similarly to the FMF and is intended to address threats to NYC Parks's 2,200 acres of saltwater and freshwater wetlands which are located in every borough. When we release the framework in 2020, we would welcome the opportunity to return and present our recommendations to these committees. Wetland management and restoration are vital to the health of New York City and should be a priority for New York City Council funding.

As Intro 1620 waterfront legislation recognizes, our wetlands are our first line of defense against storm surges, flooding and rising sea levels in many New York City communities, and they must be managed and sometimes restored to maintain their health and to allow them to function.

Additional benefits healthy wetlands provide are: wildlife habitat to protect biodiversity; water quality protection; and recreation for New Yorkers.

The goals of the Wetland Management Framework are to:

- Articulate a vision for no new net wetland loss and also to plan for new wetland areas
- Improve wetland health through watershed and stormwater management
- Fund restoration, management and stewardship
- Expand policy support and coordination

Currently, federal and state laws limit direct destruction of wetlands from filling and limit the development of most wetlands. Unavoidable direct impacts to wetlands require mitigation. Unfortunately, there are many weaknesses in the current legal framework, including: 1) inadequate wetland mitigation; 2) the regulations do not address ongoing loss or ensure future opportunities for conservation; 3) watershed impacts and stormwater runoff are not addressed; 4) incorrect tidal wetland maps do not account for sea level rise; 5) there is no protection for small and unmapped wetlands.

The *Wetland Management Framework* will propose multiple, nature-based approaches to restoration and management. Recommendations in the plan include:

- Restoration of lost salt marshes by 1) extending eroded marshes into the water as well as 2) removing fill when appropriate.
- Protecting and increasing the resiliency of existing marshes by restoring eroded marshes as well as removing marine debris.
- Allowing buffers for marsh migration to plan for rising sea levels by 1) acquisition, buy out or transfer of land to NYC Parks and 2) removing or modifying flooded hard surfaces.
- Protecting buffers and managing stormwater by requiring pre-treatment of stormwater discharge to water bodies

The majority of New York City's wetlands have been lost in the past century, and it is essential to our city's future that we reduce the threats to and maintain the health of our remaining wetlands.







FOR THE RECORD

**Statement of Statement of Adriana Espinoza  
Director, New York City Program  
New York League of Conservation Voters  
Committee on Resiliency and Waterfronts  
October 29, 2019**

Good afternoon. My name is Adriana Espinoza, and I am the Director of the New York City Program at the New York League of Conservation Voters (NYLCV). NYLCV represents over 31,000 members in New York City and we are committed to advancing a sustainability agenda that will make our people, our neighborhoods, and our economy healthier and more resilient. I'd like to thank Chairs Brannan and Constantinides for holding this important hearing.

Climate change is not a nebulous future threat. It's impact can already be seen and felt all around us. New York City and New York State have made great strides this year passing bills designed to address the root cause of climate change--emissions--but there is much more to be done to protect the people and communities from current and future impacts.

Even as we take action to address emissions, we must also recognize that our city is currently vulnerable to impacts of climate change, including extreme heat and flooding brought on by storm surge and sea level rise, the risks of which will only continue to escalate in the future.

To date, much of our resiliency work has been reactive and fragmented, relying on federal disaster response funds mobilized by devastation to help certain vulnerable neighborhoods recover and build back stronger. But in a city of islands, with 520 miles of coastline, this approach is inadequate. We need a comprehensive citywide approach to resilience.

NYLCV supports a comprehensive, citywide resiliency plan like Intro 1620, and joins our partners at the Waterfront Alliance in calling for an approach that:

- Is informed by the New York City Panel on Climate Change and regularly updated as new projections and plans are developed;
- Clarifies the agencies responsible for key functions of resiliency governance (communication, planning, implementation, maintenance);
- Is funded;
- Builds off existing community-based plans, the Special Initiative for Rebuilding and Resiliency, Local Waterfront Revitalization Plans, and other relevant planning and design investigations, avoiding duplication;
- Is upfront about the limitations and possibilities for resiliency in all areas at risk of flooding;
- Establishes flood districts and targets for flood risk reduction and long-term planning, based on logical hydrologic/topographic boundaries, including mechanisms for planning across state and municipal jurisdictional lines;

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**Statement of Statement of Adriana Espinoza  
Director, New York City Program  
New York League of Conservation Voters  
Committee on Resiliency and Waterfronts  
October 29, 2019**

- Considers a more comprehensive approach to rezoning, based on the multiple challenges and opportunities facing the city;
- Better positions the City to prepare for and respond quickly to federal funding opportunities as they arise;
- Identifies opportunities to incorporate resiliency into “dig once” policies for maintenance and capital projects;
- Prioritizes low-income communities and communities of color, including siting of green infrastructure with an equitable planning process and investment strategy; and
- Develops clear, accessible, and equitable targets for risk reduction.

Since our waterfront is home to so much critical infrastructure, from airports to power facilities to wastewater treatment plants, it is also important that the plan brings those relevant stakeholders into the planning process.

NYLCV is proud to have worked with the City Council over the years on policies that fight climate change and protect communities and we look forward to working with this committee on resiliency issues moving forward. Thank you for your time.

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**Testimony by UPROSE before the New York City Council Committee on Environmental Protection and Committee on Resiliency and Waterfronts on the 7<sup>th</sup> Anniversary of Superstorm Sandy on October 29, 2019.**

**Submitted by Summer Sandoval, Energy Democracy Coordinator at UPROSE.**

Thank you for the opportunity to submit testimony today on the 7<sup>th</sup> Anniversary of Superstorm Sandy. My name is Summer Sandoval and I am the Energy Democracy Coordinator at UPROSE. I am here today on behalf of UPROSE, to express our support for Intro 1620, the 5 Borough Resiliency Plan. Founded in 1966, UPROSE is Brooklyn’s oldest Latino community-based organization. UPROSE is an intergenerational, multi-racial, and nationally recognized organization that promotes sustainability and resiliency in Sunset Park, Brooklyn. We focus on climate justice and all of our work is rooted in the Just Transition model, such as our leadership in creating the first community solar system in New York.

We thank you for providing the space for us today to address coastal resiliency because it is an integral aspect of our pursuit for climate justice. Seven years ago, Superstorm Sandy hit the entire eastern seaboard from Florida to Maine. New York was one of the most significantly impacted states with \$19 billion in cost of damages, 44 deaths, and thousands of people displaced. For New York, Superstorm Sandy was a wake-up call for the existing and imminent threats of climate change, but the concern post-devastation soon dwindled to a secondary thought for many. Unfortunately, climate change is a very scary reality for environmental justice and frontline communities, many of which are still reconciling with post-Sandy recovery. Today is the recognition that a lot more work and engagement must go into making New York City more climate resilient and equitable.

Sunset Park is New York City’s largest Significant Maritime and Industrial Area (SMIA); it has 14 million square feet of industrial space. But, much of the industrial space is underutilized. The need for a comprehensive plan and vision for coastal resiliency and climate justice is past due. We have the industrial waterfront, and now we need the political will and support to use this







- A. Green waterfront and industrial core
- B. Green transportation and sustainable light industrial area
- C. Green manufacturing and design area (Industry City's rezoning area)
- D. Residential sustainability pilot

The GRID is aligned with all local, state, and federal policies that call for climate mitigation, adaptation, coastal resiliency, and sustainable job development. The GRID operationalizes plans such as the Sunset Park Brownfield Opportunity Area, NYC Climate Mobilization Act, the Climate Leadership and Community Protection Act, etc. as well as offer the necessary updates and amendments for the Sunset Park 197-A plan and Waterfront Revitalization Plan to integrate lessons learned from Superstorm Sandy and plan for the newest threats of climate change.

The GRID utilizes a holistic approach that analyzes local and regional needs and opportunities. The GRID identifies Sunset Park as an optimum location to implement the first GRID overlay. A Sunset Park GRID has the opportunity to catalyze regional climate engagement from eco-industrial jobs, green ports, sustainable manufacturing, and renewable energy. It is integral to create regional connections and systems that strengthens communication, resource sharing, and sustainable economic justice development.

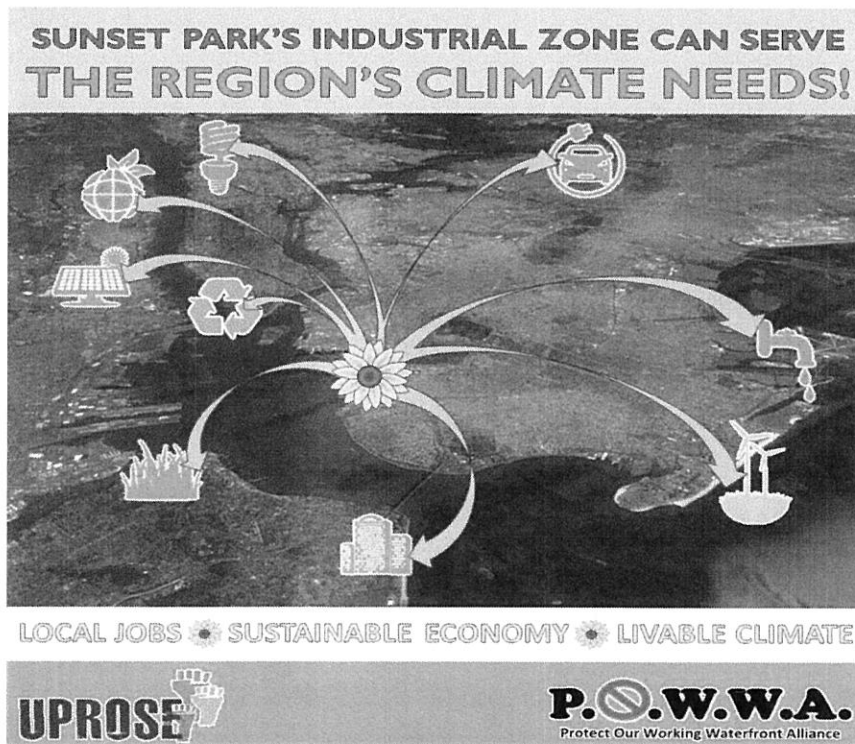


Figure 2. Sunset Park in regional climate needs context image





## **Industry City & Resiliency Challenges**

Contrary to the GRID, developers including Jamestown Properties have invaded Sunset Park's industrial waterfront with luxury commercial and retail uses in the form of Industry City. These types of developments are not only detrimental to the industrial character our working waterfronts, but also puts the Sunset Park community in harm's way. As a City, we need to be able to face these challenges by building a resilient waterfront. Neighborhoods such as Sunset Park are in the frontlines facing climate change head on. It is important as a community, we have the agency and resources to determine what a climate resilient industrial waterfront looks like.

Industry City's rezoning proposal would change the industrial waterfront for retail and commercial use. Along with expanding retail, Industry City also proposes to develop hotels and a school at the waterfront. These pose direct risks to the community that will be using these facilities since it is located in flood zones and brownfields. Industry City's proposal is not only disrupting social cohesion and eliminating well-paid working-class jobs, but also prevents us from moving forward with utilizing the industrial waterfront to prepare for climate change.

## **Offshore Wind**

Private developers such as Jamestown Properties, like to lead with the notion of creating something "innovative" on the industrial waterfront. But there is nothing "innovative" about gentrification, shortsighted profits, taking away well-paid working-class jobs, or putting frontline communities in harm's way by not using the industrial sector for resilient green industry. It is not responsible for developers to build schools, hotels, or luxury retail spaces along an industrial waterfront that is in the flood zone. UPROSE's work and advocacy supports eco-industrial developments such as offshore wind.

Offshore wind turbines in Sunset Park is more fitting than using the industrial waterfront for retail, hotels, or schools. It would make New York City a leader in building climate resiliency by creating clean energy in an area made for industrial use. Offshore wind turbines are not only a long-term viable answer for the future, but also for creating high-skilled work for local residents. According to Equinor, offshore wind turbines will bring 50-70 jobs to the community. The proposed 60-80 wind turbines will reduce 1.6 million tons of CO2 per year. New York City already has enough retail space, it is not a necessary development and will not help us prepare for future storms. Focus has to be directed in creating resilient shorelines which will better prepare us in the face of climate change.



## **Climate Leadership and Community Protection Act**

UPROSE, as Steering Committee members of NY Renews were part of the monumental passing of the Climate Leadership and Community Protection Act earlier this year, that lays the groundwork for addressing climate change and climate justice issues. The law is poised to be the most ambitious climate legislation in the country, which allows New York to be a leader in climate change. Within the state, New York City must be a leader in the state and create a way for local CLCPA implementation and investment that honors community-based planning.

The mandates in the CLCPA will help shift our energy systems and economy in a just and equitable process from an extractive one to a regenerative one that is aligned with the Just Transition Model. The enactment of the CLCPA will reduce economy-wide greenhouse gas emissions 85% by 2050 with net zero economy-wide emissions, and mandates 35% of benefits from clean energy and efficiency funding must go to marginalized communities and communities of color who are the frontlines of climate change. The CLCPA states we must increase our solar capacity by 250% by 2025 to achieve a 70% renewable energy portfolio by 2030. Offshore wind turbines are expected to power over 6 million homes. Working groups part of the Climate Action Council will oversee the plan to make NY fossil free by 2050.

The CLCPA is slated to create 150,000 new jobs. These jobs will be in the energy, industrial manufacturing and processing, technology, and green retrofit sectors. New York City must utilize and prepare its industrial sector and waterfronts to host many of these projected jobs by preserving industrial uses and supporting eco-industrial transitions for businesses. The GRID is a vision for climate jobs and coastal resiliency that can be operationalized by funding from CLCPA and in the future by the Green New Deal.

## **Green New Deal**

The goals of the Green New Deal are met by the enactment of the CLCPA, leading New York into more renewable energy while decarbonizing manufacturing industries. This is particularly important to industrial waterfronts such as Sunset Park. It would entail a more holistic approach to waterfront resiliency, with a just transition to green jobs for local residents, as well as ensuring the demand for clean energy goals.



The Sunset Park GRID proposal is also aligned with the Green New Deal and lays the groundwork for local implementation for coastal resiliency. The GRID is the perfect example that frontline communities have the climate solutions that meet all of their needs. GRID breaks the misconception that climate resiliency and economic development are mutually exclusive. Only by analyzing our systems in a comprehensive manner can we make informed and transformational decisions to protect our communities from climate change.

I would like to thank the New York City Council for holding this hearing and for the opportunity to testify. For more information, please see our full testimony and the GRID report: <http://bit.ly/2JxA9x8>

David Shuffler  
Youth Ministries for Peace and Justice, Inc.



**David Shuffler testimony to the NYC Council Committee on Environmental Protection & Committee on Resiliency and Waterfronts on the 7<sup>th</sup> Anniversary of Superstorm Sandy**

October 29, 2019

My name is David Shuffler and I am here to testify in support of Intro 1620, the 5 Borough Resiliency Plan, on behalf of Youth Ministries for Peace and Justice, Inc. (YMPJ) and the New York City Environmental Justice Alliance (NYC-EJA). The mission of Youth Ministries for Peace & Justice (YMPJ) is to rebuild the neighborhoods of Bronx River and Soundview/Bruckner Boulevard in the South Bronx by preparing community members to become prophetic voices for peace and justice.

Bronx River and Soundview/Bruckner is unique in many ways from other communities, but today I want to share how as an environmental justice community we are overburdened by flood hazards, proximity to waterfront industrial zones, lack of green and open spaces, air pollution caused by dirty industry clustered in their neighborhoods, and extreme heat events. Therefore, we understand first-hand the urgency of the climate crisis and the need for innovative climate adaptation strategies that can be incorporated into 5 Borough Resiliency Plan. We would like to thank Council Members Constantinides, Brannan, Koo and Levin for introducing a plan that aims to protect all of NYC's boroughs from climate change, sea level rise, and sunny day flooding. There are a few considerations that we would like the City Council and the Mayor's Office of Resiliency to take into account as the plan moves forward. The young people of YMPJ had the opportunity to take CM Levin on a tour of the Bronx River when he came to visit Concrete Plant Park with our local assemblyman Marcos Crespo.

NYC-EJA has long advocated for climate adaptation measures in New York City's industrial waterfront neighborhoods, given its vulnerability to climate change impacts and hazardous toxic exposures that may result in the event of severe weather. In 2010, NYC-EJA launched the Waterfront Justice Project, New York City's first citywide community resiliency campaign. The portion of the Bronx River that runs through our neighborhood is designated a Significant Maritime and Industrial Areas (SMIAs)—which means our waterfront is clustered with heavy industry—is in a hurricane storm surge zone, and is in an environmental justice community. When considering how to protect NYC's shoreline, the 5 Borough Resiliency Plan should consider measures that also protect communities from the cumulative contamination exposure risks associated with clusters of heavy industrial uses in such vulnerable locations.

According to the NYC Panel on Climate Change, NYC is predicted to experience anywhere from 8 to 30 inches of sea level rise by the 2050s. The plan should consider both sea level rise and storm surge, alongside the FEMA Flood Insurance Rate Map when determining the community districts that should be evaluated for climate change resiliency adaptation measures to ensure that all the communities who will be impacted by climate change impacts are included.

Several waterfront communities were involved in post-Sandy community planning efforts and have not seen these plans fully implemented. The 5 Borough Resiliency plan should make sure to incorporate the research and community input resulting from processes such as the Hunts Point Resiliency, East Side Coastal Resiliency, and East Harlem Resiliency. The plan should ensure that there is extensive community engagement with the communities that developed these plans.

It is critical that the 5 Borough Resiliency Plan inform the US Army Corp of Engineers (USACE) New York and New Jersey Harbor and Tributaries Focus Area Feasibility Study to ensure that ecologically-grounded coastal protection and nature-based shoreline infrastructure are prioritized.

Lastly, we have also have questions that we would like considered as the plan moves forward. Such as why climate adaptation measures will only be evaluated for residential buildings no more than three stories in height? Which agency and/or office will be responsible for implementing the plan? And how will that entity ensure that the plan is complementary to the NYC Department of City's Planning's 2020 Comprehensive Waterfront Plan?

New York City government has not committed to equitably protecting waterfront communities from climate change, and we believe the 5 Borough Resiliency Plan is an opportunity to remedy this shortfall. NYC-EJA would like to thank the New York City Council for holding this oversight hearing on the 7<sup>th</sup> Anniversary of Superstorm Sandy and for the opportunity to testify.





## Understanding the Need for DRYside Water Safety Training

Did you know that every 70 seconds a person dies due to drowning? Yes, that is roughly one person per minute around the world. And for every death, 5 more people are suffering life altering brain and spinal cord injuries due to water based accidents? Drownings and water based accidents are a global epidemic. And while those statistics are so disturbing, perhaps the most shocking of all is that 95% of those incidents actually never needed to have happened. They were preventable!

Here in NYC our waterfronts are being developed as never before in our life times, opening up the access to open water dramatically. This open access is wonderful for the person who understands that environment and has the skills to successfully navigate that. But for every one of those people, there are a hundred thousand more who do not have that knowledge or skills. As a result our drownings and water based accidents rates will sky rocket. In addition, we are being dramatically impacted by our water levels raising an inch per year. In 30 years, we will have a Sandy event *every* day at high tide! Our “super” storms are becoming more intense, not less.

How do we address this? City government is addressing our hard assets, land and building issues. But nothing is being done to help our most precious assets, our families. Our families need to understand that water safety and swimming skills are as important as buckling up your seatbelt when you get into an automobile. That indeed, **it is not one solution, but multi layered solutions** that are needed to bring NYC families aquatics IQ up to a level of safety.

Some of those solutions are simple, such as better signage at access points to water; use of technology to push water conditions to our cellphones; lifeguards on the beaches longer; media campaigns on public transportation; in social media and on billboards around the city; helping to make swimming lessons more accessible and affordable and what I want to specifically address here is **education through DRYside water safety training**.

On a practical basis, we understand that not everyone will learn how to swim. However, everyone can learn about the dangers that water represents both inside our own homes and outdoors in the many ways we encounter water. If we understand how water manifests in these different environments, we can make better decisions that will keep us safe in and around water.

For example, drowning is a leading cause of death for children ages 5 and younger; with most of those children dying in their very own homes. First thing that may come to your mind is that these deaths are the result of people with backyard pools that are not properly fenced in. But unsecured pools are not the only problem. Child drownings also happen in bath tubs, where parents get distracted and leave the child unsupervised or in the charge of a slightly older sibling, who should never be responsible for a younger sibling. Another common and seldom considered danger is toilet bowls. Who knew that throwing your toy into the toilet and then retrieving it could be so much fun? A toddler’s heaviest part of their body is their head. If they get upended, and no one sees them, they can not right themselves. It only takes 2 minutes and 2 inches of water for ANY of us to drown. Buckets are a similar problem.





Drowning disproportionately impacts children of color. The statistics show that drowning is the 2<sup>nd</sup> leading cause of death for children 14 and younger with children of color drowning 5 times more frequently in swimming pools and 3 times more in open water than their Caucasian peers.

And this is not just a problem with young children. Drowning is the 2<sup>nd</sup> leading cause of death for children 14 and younger and it continues to be a problem from mid-teens to adulthood.

Drowning is also a leading cause of death for children on the spectrum.

Teaching water safety training in ALL of the schools, public and private, is one of the best layers of protection we can provide to our families. As you know we had the recent tragic loss of two teenage boys who drown in the Rockaways and a youngster in a boating accident in the Hudson. Each year we lose several people in NYC who access our water when there are no life guards on the beach and we can't patrol the beaches 24/7. We can educate people to understand the danger of water and the risks they will take if they choose to go in it.

Water safety training is NOT a conversation we have only in the Summer. Now in the Fall, we are in the middle of hurricane season, making our ocean waters much rougher and more lethal. Also our air temperatures are warmer much longer, encouraging many of us to take advantage of another beautiful beach day. Of course there are no lifeguards on the beach. Even just wading knee deep in the water creates an opportunity for us to be knocked off our feet and dragged out to sea.

In the Winter, we need to help people understand the danger of ice and not going out on it. Each year, we drag several people, who have fallen through ice, out. Some do not survive. In the Spring, we have flooding and the need to understand when it is not safe to cross water.

Swim Strong Foundation has a DRYside training program that we have been teaching in about one dozen schools over the past several years. This program addresses water threats in our homes; at swimming pools, oceans, lakes, rivers, ponds and more. There is a pre quiz meant to assess current aquatics IQ; a post quiz to be given immediately after the presentation and a 6 month follow up quiz given to check for retention. Through the Q and A and sharing of students stories and personal experiences, the children are understanding water in a very different, meaningful way.

I am bringing this issue to you, the members of the Waterfronts Committee, so you do not overlook the need to include the protection of NYC greatest assets, our families, as you are shaping the city's response to being a premier, coastal city for the future.

No one goes to the water and expects a bad outcome. Swim Strong Foundation is already assisting with not only it's affordable in water programs; but also "***Know Before You Go***" our DRYside training for children and adults. TOGETHER, with your help, we can make a true difference in the safety of all our New York families.

**FOR THE RECORD**

**Testimony of the New York City Environmental Law & Justice Project**

**on**

**Int. No. 382: A Local Law to amend the administrative code of the city of New York, in relation to a special flood hazard area notification – Introduced by City Council Member Ulrich**

**and**

**Int. No. 1620: A Local Law to amend the administrative code of the city of New York, in relation to the creation of a comprehensive five borough plan to protect the entire shoreline from climate change, sea level rise and sunny day flooding – Introduced by City Council Members Constantinides, Brannan, Koo, Levin, Gibson and Grodenchik**

Presented on October 29, 2019

by

Joel Richard Kupferman, Esq.  
Executive Director

and

Barbara Franco-Olshansky, Esq., MPH  
Litigation and Advocacy Director

Dear Mr. Speaker, Honorable Members, and Dedicated Staff Members of the City Council:

The New York Environmental Law and Justice Project (“Project”) appreciates this opportunity to provide its initial set of comments on two matters currently being considered by the City Council: Int. No. 382: A Local Law to amend the administrative code of the city of New York, in relation to a special flood hazard area notification, introduced by City Council Member Ulrich, and Int. No. 1620: A Local Law to amend the administrative code of the city of New York, in relation to the creation of a comprehensive five borough plan to protect the entire shoreline from climate change, sea level rise and sunny day flooding, introduced by City Council Members Constantinides, Brannan, Koo, Levin, Gibson and Grodenchik.

As an initial matter, the Project notes that given the significant ambiguousness of the two bills we are only able to provide a broad analysis of the language set forth. To do anything else would require that we hypothesize which issues could be addressed—plainly an exercise in futility given how little is captured in the bills as they now stand.

Int. No. 1620

Structure of the bill: While the bill mentions “subsection (e) of section 4101 of the United States code”—see section (b)—it does not state the Title, Chapter, or Subchapter of the U.S. Code to which it refers. Presumably, this bill was intended to comport with several of the many federal requirements delineated in Title 42, The Public Health and Welfare, Chapter 50, National Flood Insurance, Subchapter III, Coordination of Flood Insurance with Land-Management Programs in Flood-Prone Areas, Section 4101, Identification of flood-prone areas. 42 U.S.C. §§4101,



et seq. Without such specification, however, there is no context for the requirements delineated in the bill.

The pertinent provision of the U.S. Code, 42 U.S.C. §4101, entitled "Identification of flood-prone areas," provides in pertinent part that: (1) the Administrator may identify and publish information on flood plain areas, including coastal areas that present special flood hazards, *see* subsection (a)(1) and (2); (2) the Administrator may accelerate the identification of risk zones within flood-prone areas, *see* subsection (b); (3) the heads of all federal agencies engaged in the identification or delineation of flood-risk zones, both independently and within the states, give the highest practicable priority in the allocation of manpower and other available resources to the identification and mapping of flood hazard areas and flood-risk zones, *see* subsection (c); (4) the Administrator shall submit to Congress a plan for bringing all communities containing flood-risk zones into full program status, *see* subsection (d); (5) the Administrator shall assess the need to revise and updates all floodplain areas and flood risk zones identified, delineated or established under this section every 5 years or more often as the Administrator deems necessary, *see* subsection (e); (6) the Administrator shall revise and update any floodplain areas and flood-risk zones upon the request from any state or local government stating that specific floodplain areas or flood-risk zones in the state or locality need revision or updating, so long as there exists sufficient technical data justifying the request submitted and the unit of government making the request agrees to provide funds in the amount determined by the Administrator, *see* subsection (f), and (7) the Administrator shall make flood insurance rate maps and related information available free of charge to the federal agencies engaging in lending, the state

agencies directly responsible for coordinating the national flood insurance program, and the appropriate representatives of communities participating in the national flood insurance program, and at a reasonable cost to all other persons. See subsection (g).

Given the requirements spelled out in this provision, it appears that Int. No. 1620 is intended to create a city agency—or allow the mayor to designate an agency—to develop a city-wide plan to protect all floodplain areas and flood risk zones in the five boroughs. While subsections (e) and (f) of Section 4101 authorize the Administrator to revise and update the maps of all floodplain areas and flood risk zones, and permit states and localities to ask for amendments of such maps if they can provide adequate technical bases for such amendments, Int. No. 1620 appears to hamstring state or local efforts by codifying, in advance of any analyses, that any state or local plan cannot conflict with proposals developed by the US Army Corps of Engineers as part of its Tributaries Focus Area Feasibility Study.

Other language and substantive issues: The definition section of the bill refers broadly to “stabilization methods” and “risk reduction approaches,” but fails to provide sufficient specificity with regard to the actions that fall within the parameters of these activities. This ambiguity is magnified by the catchall phrases at the end of each definition, e.g., “and any similar stabilization method,” and “any similar concepts.” Section 24-808(a).

Second, the lack of specificity with respect to which entity or entities will be permitted to participate in the development of the “comprehensive five borough plan to protect the entire shoreline of New York City,” Section 24-808(b), which will cover “all areas of the city within the special flood hazard area of the flood

insurance rate map,” appears to leave all discretion in creating and staffing the entity in the hands of the mayor alone, with no contemplation for the City Council’s or the public’s role in these matters.



## FOR THE RECORD

October 29, 2019

Dear Committee on Environmental Protection jointly with the Costa Constantinides, Chairperson Committee on Resiliency and Waterfronts Justin Brannan, Chairperson,

Re: in relation to a comprehensive five borough plan to protect the entire shoreline from climate change, sea level rise and sunny day flooding.

### CSO in Bushwick Inlet

The City needs to put more investment in green and grey infrastructure solutions that can reduce sewage overflow. Climate change is not just bringing rising tides and flooding to NY's shorelines, it is also bringing more rain. More rain means more sewage overflow and a greater hazard for those living, working and recreating on and near the waterways. Bushwick Inlet in Brooklyn is finally on track to build the long promised 27 acre waterfront park, but the City has yet to pursue a plan to reduce the amount of sewage overflow here. In fact there will actually be greater CSO in Bushwick Inlet and other parts of the East River as the result of recent plans that the City submitted and State approved. All these waterfront issues, from flooding to rising tides to marine debris and sewage overflow are inter-related and we desperately need to step up our efforts and pursue smart and community supported solutions.

Most sincerely,

Katherine Conkling Thompson  
Co-chair, Friends of Bushwick Inlet Park

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29

(PLEASE PRINT)

Name: Georgi Page-Smith

Address: 1620 Union St. Brooklyn, NY

I represent: 350 Brooklyn

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

21

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Lily Koteen

Address: 138 Lafayette St

I represent: Self

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

20

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: David Shuffler

Address: \_\_\_\_\_

I represent: YOUTH ministers for peace and justice

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms



**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Adriana Espinoza

Address: \_\_\_\_\_

I represent: NYLCV

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10.29.19

(PLEASE PRINT)

Name: Emily Walker

Address: 55 Broad St, 23rd Fl.

I represent: New Yorkers for Parks

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29/19

(PLEASE PRINT)

Name: Michael Deloach

Address: \_\_\_\_\_

I represent: NYC DEP

Address: Queens NY

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

**Appearance Card**

[ ]

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: \_\_\_\_\_

**(PLEASE PRINT)**

Name: Jaincy Banishi  
Address: 293 Broadway, New York, NY  
I represent: Mayor's office  
Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

**Appearance Card**

[ ]

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: 10/29/19

**(PLEASE PRINT)**

Name: Sheelah Feinberg  
Address: One Centre St  
I represent: NYC Dof  
Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

**Appearance Card**

[ ]

I intend to appear and speak on Int. No. 1670 Res. No. \_\_\_\_\_  
 in favor  in opposition  neutral

Date: 10/29/18

**(PLEASE PRINT)**

Name: Hunter Armstrong  
Address: 105 St Marks Place, Brooklyn NY 11211  
I represent: Natural Areas Conservancy  
Address: 1234 Fifth Avenue, NYC  
10029

Please complete this card and return to the Sergeant-at-Arms



**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Karen Imus

Address: \_\_\_\_\_

I represent: Waterfront Alliance

Address: 217 Water Street New York NY

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29/2019

(PLEASE PRINT)

Name: Michael McCann on behalf of Emily Maxwell / The Nature

Address: 3228<sup>th</sup> Ave New York NY 10001 Conservation

I represent: The Nature Conservancy

Address: 3228<sup>th</sup> Ave New York NY 10001

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Nate Grove - Chief of Waterfront Operations + Marine

Address: The Arsenal

I represent: NYC Parks

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms



THE COUNCIL  
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: CYNTHIA ROSENZWEIG

Address: NASA GISS

I represent: NEW YORK CITY PANEL ON CLIMATE

Address: 2880 BROADWAY CHANGE

THE COUNCIL  
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/28/19

(PLEASE PRINT)

Name: SHAWN SLEVIN

Address: 5715 47<sup>th</sup> Ave Woodside NY 11377

I represent: Swim Strong Foundation

Address: Same

THE COUNCIL  
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29/19

(PLEASE PRINT)

Name: Paul Galt Jalisa Gilmore Tessica Roll Mile Delong

Address: 462 36<sup>th</sup> St. Brooklyn

I represent: NYC Environmental Justice Alliance

Address: 20 Socon Roll, Brooklyn NY

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1620 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Summer Sandoval

Address: 462 36<sup>th</sup> St., Suite 3A

I represent: UPROSE

Address: "

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1480 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29/19

(PLEASE PRINT)

Name: Paul Gallay, Jessica Roff, Mike Dulong

Address: see below

I represent: Riverkeeper

Address: 20 Secor Road, Ossining NY

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/29/2019

(PLEASE PRINT)

Name: Helen Cheng

Address: 2900 Bedford Ave

I represent: NYS6 / Science + Resilience Institute

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms



850  
100

1694 700

# THE COUNCIL THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Caroline Nagy

Address: 55 Broad St 20th floor

I represent: Center for NYC Neighborhoods

Address: \_\_\_\_\_

▶ Please complete this card and return to the Sergeant-at-Arms ◀

# THE COUNCIL THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 10/6/99

(PLEASE PRINT)

Name: Rudy S. Giuliani

Address: \_\_\_\_\_

I represent: Office of Housing Recovery

Address: 250 Broadway

▶ Please complete this card and return to the Sergeant-at-Arms ◀

COMMITTEE ON

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: 10/29/19

(PLEASE PRINT)

Name: Philip Orton

Address: 340 E. 93<sup>rd</sup> St

I represent: myself - scientist

Address: I work at Stevens Institute of Technology

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Joel Kupferman

Address: 225 B'way 2625 NY NY

I represent: ENV. JUSTICE INITIATIVE / LAW PROJECT

Address: 11

Please complete this card and return to the Sergeant-at-Arms