

Testimony of
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before the
New York City Council
Committee on Transportation and Infrastructure
Committee on Resiliency and Waterfronts
Committee on Environmental Protection
Oversight Hearing
Sinkholes, Flooding and Heatwaves:
Infrastructure Challenges in the Face of Extreme Weather
August 16, 2022

Good morning, Chairs Kagan, Brooks-Powers, and Gennaro and Members of the committees on Transportation and Infrastructure, Resiliency and Waterfronts, and Environmental Protection. I am Rohit T. Aggarwala, the Commissioner of the New York City Department of Environmental Protection (DEP) and the City's Chief Climate Officer, in which capacity I oversee the Mayor's Office of Climate and Environmental Justice (MOCEJ). Thank you for the opportunity to speak today about the challenges the city's infrastructure faces from extreme weather events. I am joined today by Chief Operating Officer at DEP Vincent Sapienza, Senior Program Manager for Infrastructure at MOCEJ Erika Jozwiak, and my colleagues at DOT.

I'd like to start with a story. The main contours of it you know, but I think the specifics are highly instructive, so I'll ask you to bear with me.

Hurricane Henri arrived in New York on August 21, 2021. Henri set a record for the most intense rain event in the city's history, at 1.94 inches between 11pm and 12 midnight. Previously, the most intense rainstorm had been 1.76, in 2004. Prior to that, the record had been 1.58 inches per hour, in 1967. The records for hourly rainfall go back to 1943. Of course, as with all storms but particularly the violent, intense storms like Henri, rainfall was not uniform across the city.

New York's sewers are not designed to handle 1.94 inches of rainfall in one hour. It was not necessary. Prior to the 1970s, sewer standards were set by each borough president, which is one reason that unfortunately some parts of the city, especially Queens, have many sewers that are designed for only 1.5 inches or rain, or less. Today, our standard is 1.75 inches per hour, which we are currently re-

evaluating. When that amount of rain occurs, more water is attempting to enter the sewer than can fit inside of it. This increases the pressure on the sewer walls. A rain event like Henri is, quite literally, a pressure-test of the system. And what a pressure test does is find weaknesses, and turn them into leaks.

Underneath Radcliffe Avenue, the pressure test of Henri was likely having its first impact. Back in 1916, the Bronx Borough President had embraced a new technology for sewer construction, called Interlocking Vitrified Block. The sewer under Radcliffe Avenue was constructed of this material. The sewer had done its job well for more than a hundred years. But in retrospect, it seems likely that this particular design begins to get weakened when it is pressurized and water reaches the top of the sewer.

As we all know, only a few days later, Hurricane Ida shattered Henri's record, with 3.15 inches falling in Central Park between 9 and 10 pm. Ida's rainfall was most intense – up to 3.75 inches per hour -- in several parts of the city least able to handle it, especially the Bronx and Queens. Of course, the greatest impact of Ida was that 13 New Yorkers lost their lives. But, for our sewer infrastructure, it was another pressure test – with even greater levels of pressure than Henri had used.

During and the morning after Ida, of course, we saw the visible impacts of climate change on our infrastructure. Roads flooded, subways flooded, equipment and possessions destroyed. In our sewers, we began to see the impact of those two pressure-tests. DEP reports sinkholes in the Mayor's Management Report. From FY 2018 to FY 2021, the number of sinkholes – which includes everything from a mild depression in the roadway to what we saw on Radcliffe Avenue – had been declining, from 3,769 to 2,839. In FY22, the number shot up, to 3,920.

One of those was on Radcliffe Avenue. Weakened by the pressure tests of the two storms, the roof of the sewer had failed, and soil from above was seeping in and being washed away. Over time, the failure expanded to the point that a large amount of soil from above was falling in. The pressure of that failing soil, of course, also widened the hole in the roof of the sewer. DEP received a call that there was a street cave in at 1640 Radcliff Avenue. DEP responded quickly, alongside other city agencies. Happily no one was injured. DEP's response was appropriate. The collapsed length of sewer was repaired with 152-linear feet of reinforced concrete pipe. On either side of the collapse, the sewer was inspected. There was no visible weakening to the sewer on either side.

This summer, of course, the rains came again. Providing another pair of pressure tests to this sewer in the Bronx. On July 16, 2022, Morris Park experienced a storm which had a maximum rate of 1.88 inches in one hour. Then on morning of July 18, another storm that had a maximum of 1.64 in/hr. This July 18 storm highlights just how widely rainfall can vary across the city – Central Park received a total of 1.01 inches of rain, but the Fordham weather station in the Bronx recorded a total of 3.35 inches through the night.

These two pressure tests found, and expanded, another weakness in the interlocking vitrified block sewer, just down the street. DEP received notice from the Fire Department about a "street collapse" at about 4pm that day at 1613 Radcliffe Avenue. It seems that someone had called it into 911, rather than 311, in which case it would have gone first to the Department of Transportation. A DEP crew was onsite in less than an hour, and quickly was also accompanied by Con Edison, DOT, NYCEM, FDNY,

and NYPD. The reality is that once a cave in is underway, there is little that can be done to stop it except shut off the flow of water and wait. DEP engineers had sent a television scope down through a nearby manhole to see what was going on, and realized the sinkhole was going to get bigger before it stopped. While DEP cleared and secured the area, NYPD tow trucks moved cars away from the site – except, of course, one unfortunate white van that was too close to the edge to reach safely.

Ultimately, the sinkhole grew to 15 feet wide, by 58 feet long by 20 feet deep. The void also undermined a water main, and so water service to nearby homes was off for several hours until a repair was made. As we do whenever there is a major water main break, DEP established two water on the go stations to provide water to local residents while their water was out. Water was restored within a few hours.

All of the volume of soil from the sinkhole entered into the broken sewer, thereby blocking much of the normal wastewater flow. To avoid a major backup of sewage into homes, DEP staff quickly deployed large pumps to convey sewage around the broken pipe.

Over the course of the next five days, DEP staff and its contractors began removing soil from the sewer, which had been carried more than 200 feet downstream by the flow of sewage. Crews worked around the clock.

Unfortunately, while that work was ongoing, a cloudburst on July 21st – with a maximum intensity of 1.6 inches per hour -- generated runoff that exceeded the combined capacity of the partially-blocked sewer and the pumps that DEP had installed. Several homes on the block got water in their basements. DEP staff handed out claim forms to homeowners so that they can apply for compensation for damages. We prioritized getting our engineering report to the Comptroller's office, which has now been delivered, so that the Comptroller should now be able to process claims.

DEP ultimately replaced 157 feet of sewer that was impacted by the break and the cleanout.

The story of the Radcliff Avenue sinkhole demonstrates a number of key points about the intersection of climate change and infrastructure.

The first is that the impacts we are dealing with are exactly what has long been predicted. In 2000, the first report by NASA's Goddard Center described the likely effects of climate change on New York City. These were repeated in Mayor Bloomberg's PlaNYC in 2006. We knew then what was coming: more intense storms like Ida; more hurricanes, like Sandy; more heatwaves like the ones we have experienced all summer, and those that have set records this year in Europe, the Pacific Northwest, Texas, and South Asia. Drought, like the hundred-year drought Europe is enduring and the thousand-year drought that the drying up the Colorado River. Recently, New York State declared a drought watch for all of New York State outside of New York City and Westchester County. Thankfully, our massive reservoir system provides us greater ability to withstand dry periods like this summer – which, despite some violent short storms, is well below average rainfall. But it is entirely likely that at some point in the coming years and decades that New York City will face a serious drought, and that such likelihood is greater as a result of climate change.

All of this we knew was coming. Of course, when you're in a hole, the first thing to do is stop digging, which is why it is so important that we reduce our greenhouse gas emissions. As you know, that is a priority of the Adams Administration, and we are working hard to implement Local Law 97 and congestion pricing; expand electric vehicles; and undertake new projects such as NYCHA's recently-announced heat pump initiative, the Department of Sanitation's recent announcement about universal organics collection in Queens, and the Department of City Planning's Zero Carbon Zoning initiative.

And we are working hard to adapt to climate change, using a multi-layered approach. This means that we are focused on establishing multiple layers of resiliency at different scales across the city to respond to the multiple hazards. As we have seen, all these layers of support, such as green infrastructure, grid redundancy, coastal protection projects, emergency communication, Building Code and Zoning Resolution, and flood insurance are critical components of our system, and our work to develop and strengthen our infrastructure in response to climate change must move forward with urgency, funding, and partnership with government and individuals. We will do all this with a fierce commitment to environmental justice, and prioritizing the most vulnerable communities.

I'll highlight two programs at my agencies. At DEP we have invested dramatically in green infrastructure to help keep rainwater out of our sewers – with 11,000 rain gardens around the city, a network of ponds that capture stormwater called bluebelts, and a new regulation that requires private developers to design their properties to retain more stormwater onsite through porous pavement, green or blue roofs, or other approaches. With MOCEJ in the lead, the city has also issued Climate Resiliency Design Guidelines, updated in May 2022, to ensure that new public infrastructure can withstand the more extreme flooding and other weather events that we expect in the future. Anytime the city builds a library, school, pumping station, bridge, and more it should be designed with changing future conditions in mind.

And I'll move on by reiterating that extreme heat – not water -- is the deadliest climate hazard in New York City as well as in the United States. Each summer an estimated 370 New Yorkers die prematurely because of heat exposure. The lack of access to affordable home air conditioning is a significant risk factor. The impacts of extreme heat are not felt equally – Black, low-income New Yorkers face the greatest risk to extreme heat because of social and economic disparities stemming from racist housing policies such as redlining and unequal access to health care. Since 2017, the City has invested over \$100M towards Cool Neighborhoods, resulting in over 11,700 trees being planted in the highest heat vulnerable neighborhoods, over 11 million square feet of cool rooftops, and the launch of two programs aimed at strengthening community resilience through partnerships with community based organizations and community health workers.

The second thing Radcliffe Avenue demonstrates is that there are still going to be climate change impacts that take us by surprise. The sinkhole on Radcliffe Avenue would not have been easy to predict given what we know and the tools we currently have. That sewer's particular combination of materials and design was not appropriate to a world in which the sewer would be full and pressurized on a regular basis – which is what the last twelve month's many extreme storms have done. As a result, DEP is now planning to rebuild that stretch of sewer – 3,300 feet of it – by lining it with a new cured-in-place materials. That essentially means we'll be putting a new liner inside the existing sewer to make it

stronger. Work will begin in a few months on the new line. We are also going to be looking through our records – thousands of as-built drawings – to identify where there are other locations where the same design was used, and which can reasonably be expected to be weakened as well. At the moment, we don't think this design was used very long, and we haven't found another location that has it.

We have certainly been thinking about how we might have predicted that this particular sewer design would fail. Generally speaking, sinkholes (like water main breaks) occur fairly randomly, so they are hard to predict. Only when we can start to see a pattern can we make any predictions. Now we know we have one type of sewer was weak, and we may be able to consider what indicators might tell us in advance that we have further risk.

It's also important to note that the sewer did not fail because it is old. We rely on lots of old infrastructure – the Brooklyn Bridge is nearly 140 years old, for example. Sewers, particularly, are very long-lived assets; the city of Rome still has a few in service that are more than 2,000 years old. There are lots of other sewers – many much older than Radcliffe Avenue's – that we expect are going to have no structural issues whatsoever under our new normal conditions. So age is not a good indicator of risk.

Finding the weak spots – identifying where climate change causes the most acute risks to our infrastructure – will require learning, and only some of it can be predicted well in advance. We saw this also during Hurricane Sandy: while the flooding was predicted, the regional impacts on gasoline supplies was not. No one had noticed that refineries are all coastal, so that when a coastal storm happens, all of the refineries are out of service at once. After Sandy, of course, we've now done a lot more planning around climate change and supply chains. But it was a surprise lesson, just as Radcliffe Avenue was.

The third thing Radcliffe Avenue reminds us is that we will not be able to change our infrastructure as fast as the climate is changing. Adjusting to our new climate will take time, lots of money, difficult tradeoffs and potential controversy. We will have to give up things we like. We will have to put up with inconvenience. While it won't be easy, these projects are necessary to ensure that our children and grandchildren can enjoy the gifts of living in New York City. Making these investments is a delicate process that will require all hands on deck and a shared understanding of the challenges we face.

We are working hard to speed up the City's ability to change our infrastructure. First Deputy Mayor Lorraine Grillo has, as you know, an interagency project underway to streamline projects, with the participation of the Comptroller, the private sector, and labor. At DEP I have initiated an internal effort to identify and correct what slows our contracting and procurement processes. But the reality is that heavy construction takes time, and public engagement takes time, and sound planning takes time. So even if we operated under pandemic-like emergency processes, it would still take a long time to change our infrastructure.

And it will cost money. Infrastructure is expensive. We look forward to partnering with the City Council to ensure New York City receives its fair share of funds from the federal government and from the state. However, we should remember that New York City pays for the vast majority of its own

infrastructure investments. For water and sewer infrastructure, that is the water rate. Whatever level of protection we want, we must be willing to pay for it.

Finally, the failures on Radcliffe Avenue are a reminder that our new climate will require that New Yorkers play a role individually. For centuries, New York City has enjoyed a very mild climate. Aside from a few major hurricanes and some blizzards, New York does not have a history of earthquakes and wildfires like the west coast, tornados like the Midwest, or the mudslides and hurricanes that affect of the southeast and the Caribbean. New Yorkers generally assume that our infrastructure will work, regardless of the weather.

Our new climate is not as generous. Extreme storms like Ida gain intensity quickly; we often can't predict a cloudburst even an hour in advance. And because we cannot change our infrastructure as quickly as the climate is changing, New Yorkers cannot be as confident as before that our infrastructure will function as reliably as we expect in extreme conditions.

We need New Yorkers to take steps to protect themselves. Pay attention to weather reports. Plan to protect your property. Don't take risks, like going out in a violent storm. Don't put others in danger; if you don't think it's safe to be outside, don't decide that it is safe for a deliverista or a police officer. Don't keep valuables in your basement. Get flood insurance.

Since Ida, the City has taken a number of steps to help New Yorkers protect themselves in these new conditions. Our colleagues at NYCEM have enhanced our Notify NYC system, to let people know when cloudbursts are coming. Notifications are available in 14 languages, and messaging has been updated since Ida to focus on those living in basement apartments to alert them to move to higher ground when flash flooding is likely. More than a million New Yorkers are signed up, but we know we are not thoroughly reaching all communities in the City, especially those least connected to the government. We are working with organizations that are trusted by those communities to see how they can relay messages of warning.

Similarly, we recently launched Rainfall Ready, an effort that is very much short-term but is designed to help New Yorkers prevent death and reduce destruction from flooding. DEP issued a new map, available online, that identifies those properties around the City that we believe to be most susceptible to flooding. For the absolutely most susceptible properties, DEP has been offering inflatable water barriers to protect their properties. This is not a long-term solution; they require the homeowner to fill them up and install them, and take them down and store them after a rain event. But it's the kind of thing that both raises awareness and could reduce damage. We started our giveaway program just this past weekend.

I'll close here. There is so much more I could discuss: DEP's new data-driven approach to scheduled catch basin cleaning; the FloodNet sensor program that will install 500 sensors over the next 5 years to provide real-time, street-level flood information; the potential for funding from the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the potential New York State Environmental Bond Act. DEP is beginning to model how climate change will impact our water supply. The US Army Corps of Engineers just released their preferred option for how to protect all of New York harbor from coastal

inundation. Every week I convene the climate leads from more than 15 agencies to update each other on progress and provide assistance. There is a lot we are doing.

I want to thank the Council again for the opportunity to speak today and for your attention to this critical issue. The challenges that climate change is bringing cannot be avoided. I am confident that we can get through them if we work together, and do so wisely, and thoughtfully, but with the urgency that this climate emergency requires.

That is where I am particularly hopeful with this Council. We will be looking to you to advocate for this work in your communities, using your influence to lead your communities when we must accept change, sacrifices, and inconveniences necessary to protect ourselves and our children. I appreciate the Council's ongoing partnership in all that we do, and I look forward to continuing to work with you on this critical issue. My colleagues and I are happy to answer any questions that you have. I turn now to my colleagues at DOT, who will read their testimony.

**NYC Department of Transportation Testimony on Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather, before the City Council Committees on Transportation and Infrastructure, Resiliency and Waterfronts, and Environmental Protection
August 16, 2022**

Good morning Chairs and Members of the Committees on Transportation and Infrastructure, Resiliency and Waterfronts, and Environmental Protection. I am Vincent Maniscalco, Assistant Commissioner for Highway Inspection and Quality Assurance at New York City DOT and I am joined today by Leslie Wolf, Executive Director of Capital Program Planning. We are happy to join our colleagues, on behalf of Commissioner Rodriguez, to discuss the topics of sinkholes as well as the infrastructure challenges posed by extreme weather.

First, starting with sinkholes. Since 2009, all 311 sinkhole complaints are initially routed to DOT, and DOT staff have provided training to 311 operators in telling the differences between a cave-in, pothole, street excavation, depression or other street defect. Now, a DOT inspector makes the initial inspection to assess that the complaint is truly a cave-in or sinkhole, in which case we refer it to DEP, a utility, or another responsible party, to further investigate and correct the issue that is causing the cave-in, while making the site safe for the public in the meantime.

Cave-ins are caused when a void develops under the pavement, almost always caused by a water leak somewhere underground. Identifying and addressing the cause of a cave-in is crucial. While we understand this delay can be frustrating, repairs that do not address the root cause will quickly deteriorate and may even make the situation worse by adding more weight to the road.

Let me be clear: DOT is the owner of our City streets. We maintain and repair the pavement. And we have the responsibility, which we take very seriously, for ensuring that everyone who has a facility under the road, from pipes, to sewers, to conduits, to vaults, to building connections, is taking care of it appropriately. Our 170 inspectors are hard at work, around the clock, performing inspections, issuing corrective action requests, and enforcing the requirements of our permits, including the requirement to fully restore the roadway whenever an excavation has been performed.

Starting in 2014, after the tragic Park Avenue gas explosion in Harlem, we worked with DEP, Con Edison, and National Grid to establish a working group that meets monthly to review priority cave-in locations that may pose a risk to a gas line. As one part of this group's work, DEP and DOT take turns repairing any defect for which a clear responsible party cannot be identified, to make sure the needed repairs are done as quickly as possible.

When it comes to resiliency and preparing our infrastructure for a future of more extreme weather in the face of climate change, our agency testified in detail back in

April on our ongoing efforts, and that information is included again in my written testimony.

Following the passage of Local Law 41 of 2021, DOT now uses forward-looking climate data to evaluate resiliency elements for our capital project scopes. While currently in a pilot phase, this approach will expand to all capital projects over \$10 million in 2026. In our street reconstruction program, we are working with the Department of Design and Construction (DDC) to review all new projects using a resiliency scoring framework with the goal of including as many climate hazard mitigations as feasible. The DOT bridge program is also using this scoring framework in the scoping and design of its major reconstruction projects.

In addition, as part of the new Unified Stormwater Rule, we are working with DEP and DDC to manage more stormwater through practices like porous pavement and bioswales. In partnership with City Hall, DEP, Parks, and others, we are also exploring ways to manage stormwater beyond typical rain events through the newly-funded Cloudburst program, where initial studies are already underway.

In addition to its own projects, NYC DOT plays an important role in supporting large scale interagency coastal flood protection projects. These projects, generally coordinated through MOCEJ, protect an entire area or neighborhood. Large scale interagency projects usually involve at least some streets under our jurisdiction, and our agency works closely with the project team during the planning, design, and construction phases. NYC DOT also is responsible for critical operational activities on certain specific projects, including the maintenance and operation of deployable flood gates and other structures.

Interagency projects with substantial NYC DOT involvement include:

- East Side Coastal Resiliency
- Brooklyn Bridge Montgomery Coastal Resiliency
- Red Hook Coastal Resiliency
- Bellevue
- FiDi/Seaport Climate Resiliency Master Plan
- Battery Park City Authority resiliency initiatives
- U.S. Army Corps of Engineers (USACE) South Shore Staten Island coastal protection project
- USACE Rockaway/Jamaica Bay coastal protection projects
- USACE NYNJ HATS study

In an effort to develop a pipeline of more DOT-initiated projects to address climate hazards, DOT recently secured two planning grants. Cool Corridors is the first-ever heat mitigation proposal funded by FEMA's Building Resilient Infrastructure and Communities or "BRIC" grant to develop design guidelines and a benefit/cost methodology for heat resiliency in the right-of-way. In addition, as part of the Local Waterfront Revitalization Program, DOT received funding to develop strategies and a

design toolkit to address long-term adaptation to sea-level rise for waterfront streets ends.

When it comes to increased flooding, one roadway we know is of particular interest to stakeholders in Southeast Queens is Snake Road. This segment of Brookville Boulevard takes a meandering path between tidal wetlands to connect the Rockaway Peninsula and Nassau County's Five Towns to major arterials including the Cross Island Parkway and the Belt Parkway, and includes an MTA bus route, but is vulnerable to disruptive flooding from both coastal storms and regular high tides. DOT recently submitted a \$2.75 million funding request to FEMA's Hazard Mitigation Grant Program for a study to assess options to mitigate flooding, including raising or re-routing the road, while improving traffic safety and the ecological health of the wetlands.

Our streets and bridges are crucial to economic vitality, mobility, and quality of life for city residents, and DOT is committed to doing our part to prepare them for a future of more extreme weather, particularly for our underserved communities. Thank you for the opportunity to testify and we will now be happy to answer any questions along with our DEP colleagues.



PUBLIC TESTIMONY OF WATERFRONT ALLIANCE

August 16, 2022

New York City Council Committee on Resiliency and Waterfronts, Committee on Environmental Protection, and Committee on Transportation and Infrastructure Oversight Hearing RE: Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather

Submitted by Cortney Koenig Worrall, President and CEO, Waterfront Alliance

Thank you, Chairs Kagan, Gennaro, and Brooks-Powers and Council Members, for hosting this oversight hearing today. I am Cortney Koenig Worrall, President and CEO of the Waterfront Alliance, an alliance of more than 1,100 organizations, businesses, and individuals. Waterfront Alliance is the leader in waterfront revitalization, climate resilience, and advocacy for the New York-New Jersey Harbor region.

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

Thank you for the opportunity to testify at today. New York City, as one of the oldest cities in the country, must grapple with the challenge of maintaining and upgrading its aging infrastructure to serve a rapidly changing climate.

Climate change poses unprecedented risks to much of our outdated infrastructure, some of which has already been displayed by major flood events like Hurricanes Sandy, Henri, Ida, as well as from unnamed storms such as those this June that delayed public transit on major train lines for hours. In addition, nuisance (or "every day") flooding is reaching some parts of the city every month at high tide. For today's testimony, I would like to focus on three categories of adaptation approaches: (1) citywide and neighborhoods scale, (2) critical infrastructure scale, and (3) individual building scale.

- There are several reports, plans, and projects that are slated to come out in the next few months, many of which are legislatively mandated. We encourage city agencies to push for options for these plans and reports to communicate with each other and intersect where it makes sense, rather than be siloed and independent. We recommend the city conduct a transparent overview of the series of planning efforts and reports coming out over the next few months and years and coordinate this effort among agencies, elected officials, and funding opportunities to ensure there is a



comprehensive and coordinated planning process across the five boroughs. We are ready to support and push for legislation that streamlines and consolidates reporting requirements.

- It is imperative that the city develop a strategic plan across agencies to leverage the historic federal and state infrastructure funding opportunities for climate resilience, such as the Infrastructure Investment and Jobs Act (IIJA), the New York - New Jersey Watershed Protection Act, the recently passed Inflation Reduction Act, and hopefully the New York State Bond Act if it passes. This is a pivotal moment presenting more funding opportunities than ever before.
- Many of the recent challenges the city has faced from flooding can be attributed to aging, poorly maintained, or construction-delayed projects. Streamlining DEP's administrative processes that lead to project delivery must be prioritized as an internal climate resilience priority within the agency.
- Waterfront Alliance and many of our partners, including the Rise to Resilience Coalition, call for the prioritization of green infrastructure as a climate solution wherever it is possible. All green infrastructure requires a long-term and ongoing maintenance commitment for it to function as designed. DEP and other agencies must develop full life cycle analyses and strategies for all infrastructure and coordinate maintenance plans for city climate infrastructure emphasizing the unique needs of green infrastructure.
- Given the current extreme drought we are facing, DEP and other agencies must also include tree maintenance, including the maintaining and watering of existing trees in parks, medians, and other non-forested parts of the built environment, as part of green infrastructure maintenance.
- In the same way that building-by-building investments are used to promote increased energy efficient and reduced carbon emissions (i.e., rooftop solar, white roofs, phasing out gas in new buildings, etc.), we must incentivize and fund individual building retrofits to make sure individual buildings are resilient to heat, water, and intense storms.
- The Waterfront Alliance strongly supports Intro 0076, which would require DEP to establish a program to provide financial assistance for the purchase and installation of backwater valves.
- Waterfront Alliance encourages the City Council to consider expanding resilience retrofits through programs like New York City Housing Preservation and Development's (NYCHPD) HomeFix program. HomeFix provides access to affordable low- or no-interest and potentially forgivable loans for home repairs related to heating, plumbing, sidewalks/paving, accessibility measures to help seniors, energy efficiency upgrades, and more.

Finally, we have heard today about the challenges for our infrastructure in the face of more extreme weather events - sinkholes, flooding, heatwaves, and more. All of these challenges and Waterfront Alliance's calls to action have one thing in common. They require robust and nimble capacity and administrative capacity within each city agency that is grounded in the best technical and administrative



expertise among agency and department staff. The time for administrative excellence in the face of great challenge is now. Scrutinizing systems, policies, and internal bureaucracies within city government for project delivery must be the top priority of the city and must be improved in the coming year. The ability of the city to get done what it needs to get done and leverage, right now, the state and federal dollars we are unlikely to see again for a decade or more, is the key to New York City's future.

Full Detailed Testimony

Citywide and Neighborhood Scale Infrastructure

Waterfront Alliance has proudly been at the forefront of advocacy for comprehensive planning. In order to build and improve infrastructure to face climate threats, the city needs to know where it is most needed. It is therefore crucial that New York City understands where vulnerabilities exist at the hyper-local, community-level through data collection, analysis, and neighborhood planning and engagement. This process has taken place in some neighborhoods already (i.e., Resilient Edgemere, East Side Coastal Resilience, Financial District and Seaport Climate Resilience Master Plan), but a coordinated, fully funded plan for citywide adaptation and resilience that can be completed within a reasonable timeframe does not exist.

There are several reports, plans, and projects that are slated to come out in the next few months, many of which are legislatively mandated. We encourage city agencies to push for options for these plans and reports to communicate with each other and intersect where it makes sense, rather than be siloed and independent. Waterfront Alliance is ready to support such efforts and spearhead any efforts that would legislatively consolidate analyses and reporting requirements.

As a first step, we recommend that the Mayor's Office of Climate and Environmental Justice (MOCEJ) develop a transparent overview of the series of planning efforts and reports coming out over the next few months and years. This effort should aim to inform the public about the City's vision for climate impacts and environmental justice by pulling together pieces from major plans like PlaNYC, AdaptNYC, Environmental Justice for All Report, and the Comprehensive Waterfront Plan. We encourage the city to coordinate this effort among agencies, elected officials, and funding opportunities to ensure there is a comprehensive and coordinated planning process across the five boroughs.

There has been great progress by various city agencies to understand climate vulnerabilities at the citywide and neighborhood level with initiatives like New York City Department of Health's Heat Vulnerability Index (HVI), New York City Department of Planning's Flood Hazard Mapper, and New York City Department of Environmental Protection's Cloudburst Management Plan. Waterfront Alliance calls for the city to coordinate these plans, reports, and project together in one effort to bring tangible, shovel-ready projects to fruition - especially in the highest risk neighborhoods.



Just last week, the United States Army Corps of Engineers (USACE) announced their tentatively selected plan (TSP) for the New York-New Jersey Harbor and Tributaries Study (NYNJHATS). Their selection of Alternative 3B would bring several shoreline-based measures and sea gates along the waterfronts of several neighborhoods, including Coney Island, the North Shore of Staten Island, East Harlem, Gowanus, Flushing, and Far Rockaway. Waterfront Alliance is pleased to see USACE move away from a storm surge barrier to shoreline-based projects that include natural and nature-based features across several neighborhoods. It is important to understand that the various shoreline-based projects will require extensive coordination with existing plans, projects, and developments at the local, state, and federal level.

For example, the TSP proposes a Gowanus Canal sea gate. How would this gate affect the existing rezoning and developments in Gowanus? How will it affect Gowanus' combined sewer overflow (CSO) retention tank project that involves the New York City Department of Environmental Protection (NYCDEP), the New York State Department of Environmental Conservation (NYSDEC), and the United States Environmental Protection Agency (US EPA) now that USACE is coming in? Such alignment is necessary in East Harlem which is home to the \$227 million Harlem River Greenway project; the western tip of Manhattan with the \$221 million South Battery Park City Resiliency Project; and other places where USACE and local projects might intersect.

Systemic Infrastructure

In addition to citywide comprehensive planning, we must not forget the immense challenge of building resilience into the systemic infrastructure of the city that keep the city moving and functioning. This includes MTA infrastructure; roads and bridges; Con Edison power plants; broadband connection; and maritime industry infrastructure that keeps the supply chain intact. This infrastructure must be resilient to the impacts of sea level rise, storm surge, precipitation, and extreme heat.

This massive investment to bring systems up to the most climate resilient standards, is a financial challenge. It is imperative that the city develop a strategic plan across agencies to leverage the historic federal and state infrastructure funding opportunities, such as the Infrastructure Investment and Jobs Act (IIJA), the New York - New Jersey Watershed Protection Act, the recently passed Inflation Reduction Act, and hopefully the New York State Bond Act if it passes. Waterfront Alliance has been working with partners across New York to advance the Watershed Protection Act, which would authorize \$50 million a year in federal funds to support flood management, community access to waterfronts, environmental education, and more.

The American Society of Civil Engineers recently released their 2022 report card on the state of New York's infrastructure, where they evaluate the condition and performance of infrastructure and assign a letter grade based on the physical condition and needed investments for improvement. New York scores a "C" on the report card, barely clearing the national average grade of a "C-." These findings



signal the opportunity we have to think innovatively and creatively about climate resilient infrastructure upgrades, while creating thousands of good paying, green jobs.

This is a pivotal moment presenting more funding opportunities than ever before.

Department of Environmental Protection

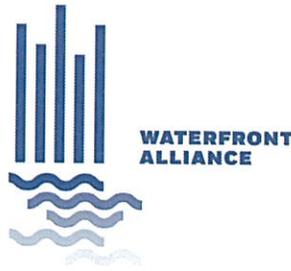
The Department of Environmental Protection (DEP) is a key agency in the city's ability to deliver projects, bringing climate resilience to neighborhoods and the city overall. At a basic level, DEP must fund and get infrastructure into the ground. At its heart DEP is a capital construction agency, and any delays in DEP ability to fund and construct infrastructure will delay the city's response to climate change. Many of the recent challenges the city has faced from flooding can be attributed to aging, poorly maintained, or construction-delayed projects. Streamlining DEP's administrative processes that lead to project delivery must be prioritized as an internal climate resilience priority within the agency. We believe all processes that ultimately lead to construction must be fully analyzed and then streamlined within the coming year. Administrative process analysis and streamlining is consistent with an administration commitment to "getting things done."

Waterfront Alliance and many of our partners, including the Rise to Resilience Coalition, call for the prioritization of green infrastructure as a climate solution wherever it is possible. All green infrastructure requires a long-term and ongoing maintenance commitment for it to function as designed. DEP and other agencies must develop full life cycle analyses and strategies for all infrastructure and coordinate maintenance plans for all city climate infrastructure while emphasizing the unique needs of green infrastructure. Given the current extreme drought we are facing, DEP and other agencies must also include tree maintenance, including the maintaining and watering of existing trees in parks, medians, and other parts of the built environment, as part of green infrastructure maintenance.

Climate projections tell us that cities face threats from more heat and more water in the near future. Sea level rise, hurricanes, precipitation, and extreme heat events will become more frequent and intense over the next several decades. Extreme weather events in the past couple of years alone have demonstrated vulnerabilities in our critical infrastructure systems.

Building-Scale and Residential Retrofits

Individual building level investments are also a critical part of the city's infrastructure strategy. In the same way that building-by-building investments are used to promote increased energy efficient and reduced carbon emissions (i.e., rooftop solar, white roofs, phasing out gas in new buildings, etc.), we must incentivize and fund individual building retrofits to make sure individual buildings are resilient to heat, water, and intense storms.



Last year, the City's own Extreme Weather Task Force released a report outlining a series of policies and protocols to adapt and combat New York City's growing flood risks. *The New Normal: Combatting Storm Related Extreme Weather in New York City* report identifies two priority enhancements to household infrastructure. One of these efforts is to offer sandbags to residents well before a storm, which is a process that NYCDEP started in early July. The next priority is to immediately commence a study to examine the expansion of household backwater valve installations and to expand backwater valve installations to the city's most vulnerable residential topologies to prevent sewer backups into private properties.

At a previous City Council oversight hearing in April, Waterfront Alliance testified in support of Intro 0076, which would require DEP to establish a program to provide financial assistance for the purchase and installation of backwater valves. The Waterfront Alliance strongly supports this bill. Backwater valves have the potential to save property owners thousands of dollars in damage and clean-up after a flood by preventing sewer backflow. Storm recovery can easily send homeowners into financial distress. A program dedicated to financial assistance for backwater valve installations can provide much needed relief to residents across New York City who are already contending with constant and more intense flooding.

Waterfront Alliance recommends that Intro 0076 prioritize installations based on the history of backflow incidents collected by DEP to determine which properties and neighborhoods would benefit from valve installation. Looking at historical sewer backflow incidents can inform the City's priority installation process. Moreover, we recommend that this program avoid income gaps where possible. Requiring detailed income documents from homeowners and tenants adds an additional burden of proof that many residents are unable to provide in a timely manner. Replacing income documentation with a more appropriate AMI cap of 160% is likely to capture the spectrum of homeowners in need of support. We also recommend that DEP partner directly with plumbers to ensure their participation in program development and to ensure any construction program has a flexible emergency change policy. Thank you to those of you who are already sponsors of the bill. For those who are not, we encourage you to meet with Council Member Brannon's office to discuss the effort and sign in support.

Backwater valves are just one example of building level, homeowner retrofits we should be exploring. Waterfront Alliance encourages the City Council to consider expanding resilience retrofits through programs like New York City Housing Preservation and Development's (NYCHPD) HomeFix program. HomeFix provides access to affordable low- or no-interest and potentially forgivable loans for home repairs related to heating, plumbing, sidewalks/paving, accessibility measures to help seniors, energy efficiency upgrades, and more. Since launching in November 2019, the HomeFix program has received an overwhelming amount of interest. The program is currently not accepting new applications because of the high demand, which highlights to necessity and demand for building-level upgrades. Any homeowner retrofit program must be tied to an incentive program that not only promotes widespread adoption, but also equity. We recommend the city analyze opportunities for funding and expanding this program through the many federal and state funding opportunities that exist.



Conclusion

We have heard today about the challenges for our infrastructure in the face of more extreme weather events - sinkholes, flooding, heatwaves, and more. All of these challenges and Waterfront Alliance's calls to action have one thing in common. They require robust and nimble administrative capacity within each city agency that is grounded in the best technical and administrative expertise among agency and department staff. The time for administrative excellence in the face of great challenge is now. Scrutinizing for improvement the systems, policies, and internal bureaucracies within city government must be the top priority of the city and must be improved in the coming year. The ability of the city to get done what it needs to get done and leverage, right now, the state and federal dollars we are unlikely to see again for a decade or more, is the key to New York City's future.

Climate resilience requires holistic solutions - what we invest in now will save the city millions or possibly billions in the future. Without action, we will continue to see lives lost, infrastructure degrade, and natural ecosystems lost forever.

Waterfront Alliance stands ready to partner with you to meet these challenges head on. I appreciate the opportunity to testify before you all today, and I would encourage you to read our full testimony after today's hearing.



August 16, 2022

Founders

Vernice Miller-Travis
Peggy M. Shepard
Chuck Sutton

**Testimony of Lonnie J. Portis, Environmental Policy and Advocacy
Coordinator at WE ACT for Environmental Justice**

Board of Directors

Chair
Jeff Jones

**To the New York City Council Committee on Transportation and
Infrastructure, Committee on Environmental Protection & Committee on
Resiliency and Waterfronts**

Secretary

Nancy E. Anderson, Ph.D.

**Regarding Sinkholes, Flooding and Heatwaves: Infrastructure Challenges
in the Face of Extreme Weather.**

Treasurer

Ken P. Mak

Dear Committee Chairs Selvena N. Brooks-Powers, James Gennaro and Ari Kagan and Committees on Transportation and Infrastructure; Environmental Protection; and Resiliency and Waterfronts:

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Lakeisha M. Aquino
Peter Bokor
Dennis Derryck, Ph.D.
David Evans, Ph.D.
Abiola Fasehun, Esq.
Eric A Goldstein, Esq.
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Dart Westphal

Thank you for the opportunity to testify on the deadly, disproportionate impact of heatwaves in New York City. I am Lonnie J. Portis the Environmental Policy and Advocacy Coordinator at WE ACT for Environmental Justice. WE ACT has been a leading voice in extreme heat mitigation efforts for years.

Because of climate change, New York City summers are getting hotter and the heat is lasting longer. We also know these hotter summers have resulted in environmental injustice, because [50 percent of the heat-related deaths in New York City are Black/African American people](#), even though [they make up only 25 percent of the city's population](#). We know this is not a coincidence or an accident. The legacy of former racist housing policies and programs – like [redlining](#) – extends far beyond housing segregation and promoted disinvestment in communities of color. The impact can be seen today in minority neighborhoods' access to health care, poorer educational opportunities, and increased risk of climate change, as many of these areas are more prone to flooding and extreme heat.

Executive Director

Peggy M. Shepard

**WE ACT urges the City Council to implement policies and programs that
prioritize environmental justice and equitable distribution of resources to
mitigate the negative and deadly impacts of extreme heat.**

At the beginning of summer WE ACT released its [2022 Extreme Heat Policy Agenda](#) [www.weact.org/heat], which includes policy and strategy recommendations to proactively prepare New Yorkers for rising temperatures and mitigate the corresponding health risks. Attached to this testimony is a list of objectives and corresponding recommendations from our 2022 Extreme Heat Policy Agenda.



Our recommendations are focused on three major areas of action:

1. **Enhancing communication, awareness and preparedness.** In order to protect vulnerable populations from extreme heat, the City must improve and expand communication with communities. Initiatives to raise awareness should focus on: defining extreme heat; describing the health risks and vulnerability; identifying inequalities and disparities; and providing information about available programs (e.g. cooling centers and Low Income Home Energy Assistance Program).
2. **Promoting and strengthening affordable cooling options.** The City must promote and enroll as many New Yorkers in New York State's Low Income Home Energy Assistance Program (LIHEAP)'s Cooling Benefits Program. WE ACT has been and will continue to advocate at the state and federal levels for more funding to LIHEAP and that the Cooling Benefits Program be expanded to cover the costs of summer energy bills to reduce the energy burden of low and middle income households. The City should also encourage the use of and improve the amenities offered by New York City's Cooling Centers Program which should include outdoor cooling spaces.
3. **Increasing greenspace and green infrastructure.** The City must prioritize installing green infrastructure in heat-vulnerable neighborhoods. Green space helps cool a neighborhood. Less green space in a neighborhood is associated with a greater risk of death during heat waves. For example, of the 700+ green roofs in New York City, over 300 lie in midtown and downtown Manhattan while the rest are spread through sporadically throughout the city.

I want to thank the committee chairs for having a timely oversight hearing on such an important topic and I am looking forward to working with the City Council and city agencies on implementing WE ACT's extreme heat policy agenda.

Lonnie J. Portis

Environmental Policy and Advocacy Coordinator

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EXTREME HEAT POLICY AGENDA

APPENDIX

List of objectives and corresponding recommendations.

- 1. Expand LIHEAP to increase access to air conditioners and reduce the economic burden of electricity use for vulnerable populations.**
 - a. Allocate more funding to the LIHEAP program to subsidize summer utility bills.
 - b. Expand LIHEAP program to finance energy efficiency retrofits.
 - c. Increase the number of staff at OTDA assigned to LIHEAP
- 2. Advocate for legislative action in the City Council to mitigate extreme heat impacts.**
 - a. Support legislation to codify cooling centers in NYC.
 - b. Introduce bills that survey the level of green roof and solar roof penetration in environmental justice and heat vulnerable communities
- 3. Coordinate emergency planning strategies during extreme heat events to prevent power outages and promote safety.**
 - a. Preemptively set minimum temperatures for larger buildings to reduce energy loads.
 - b. Establish a maximum indoor temperature threshold for facilities that house heat vulnerable populations
 - c. Securing electricity for the most vulnerable customers
 - d. Improve the delivery of portable generators..
 - e. Support heat vulnerable communities in participatory visioning processes with Community Boards to develop plans for resilience to extreme heat.
 - f. Develop community-led neighborhood-specific heat action plans to protect vulnerable populations during extreme heat events.
- 4. Encourage the use of and improve the amenities offered by cooling centers.**
 - a. Develop and strengthen neighborhood-specific communication plans that promote the use of cooling centers.
 - b. Improve cooling center services to create a safer and more enjoyable environment.
 - c. Install and upgrade cooling systems in public school buildings throughout the City.
- 5. Design and implement new City and State protocols to protect vulnerable populations from heat-related health illnesses**
 - a. Provide additional funding for NYCHA to protect vulnerable residents and improve building efficiency.
 - b. Increase the collection of heat-related health data, analyze cumulative impacts, and share the findings with the EJ Advisory Board
- 6. Implement and expand channels of communication with vulnerable populations to increase awareness of extreme heat impacts.**
 - a. Expand and permanently fund the Be a Buddy Program
 - b. Develop a partnership between the Mayor's Office of Emergency Management and local television and radio stations.
 - c. Strengthen partnerships with faith communities.
 - d. Require the announcement of extreme heat emergencies through the emergency broadcast system.
- 7. Implement green design techniques and increase renewable energy production to promote natural cooling and reduce NYC's carbon footprint**
 - a. Plant vegetation and expand green spaces in neighborhoods with high heat vulnerability to reduce the urban heat island effect.
 - b. Advocate for equitable distribution of green roofs.
 - c. Increase research and investment in renewable energy sources.
 - d. Advocate for increased tree planting in East Harlem.



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August 16, 2022

Oral Testimony Sonal Jessel

Director of Policy WE ACT for Environmental Justice

To the New York City Council Committee on Environmental Protection & Committee on Transportation and Infrastructure & Committee on Resiliency and Waterfronts

Oversight - Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather.

Good Afternoon Chair Gennaro, Chair Brooks-Powers, Chair Kagan, and other Council Members. Thank you for the opportunity to testify today.

My name is Sonal Jessel, and I'm the Director of Policy at WE ACT for Environmental Justice, and a member of the New York State Climate Justice Working Group. Over the past 34 years, WE ACT has been combating environmental racism in Northern Manhattan. I myself have received my master's in public health from Columbia University with a focus on climate change and health. WE ACT has been leading advocacy, research and community organizing work on extreme heat for many years. We have been very involved in almost all City planning efforts on extreme heat and we have conducted research on the topic for over a decade, including the famous Harlem Heat study which found that people's apartment homes stay hot even when the external temperature drops at night.

More Americans die from extreme heat every year than from any other extreme weather event. The burden of extreme heat most harms communities of color and low-income communities, such as Harlem, which WE ACT represents. The New York City Department of Health (DOHMH) found that between 2000-2012, ~50% of heat-related deaths were Black/African American people. This inequity comes from decades of environmentally racist policies and programs like redlining, such as the lack of trees and poorly maintained housing. WE ACT's Heat, Health, and Equity Initiative (HHEI) addresses extreme heat through community-driven policy advocacy that will better prepare our communities to stay safe and combat the heat.

Notably, our initiative seeks energy security for vulnerable populations, both at home and around the city, because access to cooling is necessary for avoiding heat illness. Using AC is the best method for preventing heat-related illness and death. However, low-income households are also less likely to use their AC's due to high electricity bills, maintenance defects, and difficulty



navigating bureaucracy of utility companies. The DOH found that for 100% of in-home heat-related deaths in 2018 happened to people who either didn't have an AC or had an AC that was not turned on.

Chair Kagan mentioned the New York State's Low-Income Home Energy Assistance Program (LIHEAP). LIHEAP is a vital policy for ensuring low-income residents have access to home cooling, and WE ACT is working hard to improve the program. The program ended over one month early this year because funding ran out. We were cut one month short in getting our community members signed up for this life-saving program and we believe the State must increase funding next year in response. Clearly, if the funds were exhausted so quickly, people are massively in need of help staying cool.

Right now, we have over 400,000 customers in New York City that are experiencing crippling utility debt. Summer electricity bills spike 20-30% per month because people are using ACs to stay safe from the heat. Extensive research has found that utility debt leads people to forego healthy food and medication to pay their bills. And even more seriously, families can be barred from moving or unjustly lose their children to social services if they have an arrearage. Utility debt has violent impacts on families, and we must act quickly to help.

As mentioned before, LIHEAP is a federally funded program that provides energy assistance for income-qualified households. LIHEAP funds are allocated at the State-level. New York State is given over \$340 million per year for the program. Most of the funding goes towards assisting households with affording adequate heating (51%), rather than cooling assistance (4%). For the summer months, LIHEAP currently only covers the cost of a household to buy one AC up to \$800 value every 5 years. This program is woefully insufficient because even though a household may have an AC, they will not run it due to the bill cost. In other States, LIHEAP subsidizes people's electricity bills in the summertime. With the spike in funding for LIHEAP over the past few years, and more funding coming down the pipeline from the federal government, we must force New York State to change their program and fund summer utility bills. This is a simple ask that many have been advocating for a long time. We need our Council Members and NYS DEP to pressure Governor Hochul and the Office of Temporary Disability and Assistance to make this much needed change for 2023 and make the change permanent. New York City does not get its fair share of LIHEAP funds when we do not get funding for summer utility bill assistance. We also need our Council Members to work with our federal representatives to ensure New York State gets their fair share of funding from HHS.



WE ACT's extreme heat initiative is working to achieve sustainable cooling for all, because like heating, cooling should not be considered a luxury, it must be considered a human right.

Sincerely,

Sonal Jessel
Director of Policy
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August 16, 2022

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Executive Director

Peggy M. Shepard

Testimony of Annie Carforo, Climate Justice Campaigns Manager

To the New York City Council Committee on Transportation and Infrastructure, Committee on Environmental Protection & Committee on Resiliency and Waterfronts

Regarding Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather.

Dear Committee Chairs Selvena N. Brooks-Powers, James Gennaro and Ari Kagan and Committees on Transportation and Infrastructure; Environmental Protection; and Resiliency and Waterfronts:

WE ACT for Environmental Justice, an organization based in Harlem, has been fighting environmental racism at the city, state, and federal levels for more than 30 years. We recognize and fight to remedy the negative cumulative impacts of unjust policies that have plagued communities of color for decades.

Thank you for the opportunity to testify on the disproportionate impact of flooding in New York City. I am Annie Carforo the Climate Justice Campaigns Manager at WE ACT for Environmental Justice (WE ACT). I lead a group of community members in emergency preparedness for extreme weather events caused by the climate crisis.

Hurricane Sandy was supposed to be a wakeup call for New York City, a low-lying coastal city to prepare for rising sea levels and increasing storm frequency and intensity. Since 2012, there has been plenty of talk, but little action. Last year, our city was hit by three record breaking storms, and the flooding caused by Hurricane Ida killed 13 New Yorkers and 44 people across the region.

It is abundantly clear that we are behind when it comes to fortifying our city against sea level rise, adapting to wetter, stronger storms and preparing our communities for the changing climate.

WE ACT strongly urges The City to:



- **Prioritize the implementation of green infrastructure and resiliency projects in neighborhoods that have a history of disinvestment while mitigating housing displacement.**
- **Push for the various resiliency plans, reports and projects to communicate with each other and intersect where it makes sense, rather than be siloed and independent.**
- **Increase transparency when it comes to infrastructure projects funding, timelines, goals and status.**
- **Dedicate more resources to meaningful and robust community outreach throughout the entire length of a project’s timeline.**
- **Ensure Department of Environmental Protection (DEP) and other agencies develop full life cycle analysis and strategies for all infrastructure and coordinate maintenance plans for city climate infrastructure emphasizing the unique needs of green infrastructure.**

We must be proactive rather than reactive when it comes to the changing climate, and it is abundantly clear we are not ready for what is to come. Over the past few years, New York City has invested ample time and resources into understanding and planning for our flood risk. The [Stormwater Management Plan](#) (revised Feb 2022), the [Stormwater Resiliency Plan](#) in 2021, the [New York City Comprehensive Waterfront Plan](#) in 2021, the [New Normal: Combating Storm-Related Extreme Weather in NYC](#) report, [Cloudburst Resiliency Planning](#) Study, [Climate Resiliency Design Guidelines](#), and countless pilot programs, the list goes on. This research, reporting and planning is important - it has given us an accurate and specific understanding of street level flood risk across the five boroughs. However, as Council Member Nantasha Williams said in her questioning, during the oversight hearing, “How many studies and pilots do we need to spend money on to look at problems we know exist before we implement a solution”?

Actions speak louder than words. We have enough information we need to start investing in green and resilient infrastructure to help mitigate flood impacts in the most vulnerable neighborhoods. If New York City is serious about environmental justice, we cannot repeat the same inequities when it comes to investments for climate adaptation. After Hurricane Sandy, Lower Manhattan got a lot of attention and became part of a disaster preparation plan for the city. East Harlem was left out of multibillion-dollar flood plans, leaving its residents vulnerable .

Lower Manhattan is receiving its first floodgate, while East Harlem still does not have a completed waterfront. Communities in East New York and Southeast Queens have been dealing with flooding for *decades* and little



progress has been made. The lack of urgency to prioritize underinvested communities *first* to improve their resilience to extreme weather events – that are only going to get worse – is deepening climate injustice in New York City.

WE ACT has been tracking the progress of the work going on at the waterfront and we were excited to hear an update recently – from New York City Economic Development Corporation (NYCEDC) at a Community Board 11 meeting – on the Harlem River Manhattan Greenway, 107th St Pier and East River Esplanade projects. However, we were concerned about the gap in the project from East 107th to East 114th Street which we have been told has no funding. (NYC Department of Parks and Recreation has recently confirmed that the gap between East 114-118th Streets is under their jurisdiction and is designed and funded.)



We strongly urge these committees to ensure East Harlem is not let down again and that revitalization of the East 107th-114th Streets segment of the waterfront is properly funded.

When we think about infrastructure in the face of extreme weather, we almost always think about physical infrastructure. There is a strong need to think about social infrastructure: housing security, food security, health,



safety, and community. Over the past year, WE ACT has been working closely with community members and local emergency preparedness organizations in Northern Manhattan on a community led planning process to help residents prepare for extreme weather events, namely extreme heat, fluvial and coastal flooding. What is abundantly clear from this process is that investments in communities that have faced decades of disinvestments must not displace long term residents. Investments in social infrastructure is equally important and City Council can champion equitable resiliency measures.

Sincerely,

Annie Carforo

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August 16, 2022

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Testimony of Caleb Smith, Cecil-Corbin Mark Fellow at WE ACT for Environmental Justice

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To the New York City Council Committee on Transportation and Infrastructure, Committee on Environmental Protection & Committee on Resiliency and Waterfronts

Secretary

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Regarding Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather.

Treasurer

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WE ACT for Environmental Justice, an organization based in Harlem, has been fighting environmental racism at the city, state, and federal levels for more than 30 years. We recognize and fight to remedy the negative cumulative impacts of unjust policies that have plagued communities of color for decades.

As New York City continues to strengthen its response to climate change, infrastructure investments in Northern Manhattan's heat vulnerable and flood prone neighborhoods must be prioritized.

Executive Director

Peggy M. Shepard

We urge the council to invest in the safety of our communities by installing street trees, solar, cool, and green roofs, as well as permeable surfaces. Protect public health for all New Yorkers by acting swiftly to expand the use of these technologies.

While all of New York City experiences the Urban Heat Island Effect caused by the density of impermeable surfaces that absorb heat, neighborhoods like East Harlem are subject to a hyper-local urban heat island effect, exposing these residents to [temperatures as much as 10 degrees hotter than the City average](#). It is also well documented and known to many city agencies that East Harlem is vulnerable to flooding from extreme rain, sea level rise, and storm surge. Residents have been consistently vocal about flooded streets during strong rain. Large areas of the neighborhood sit directly in a high-risk flood zone, according to [flood maps](#) from the Federal Emergency Management Agency.



The most at-risk areas have residents that are majority Black and Latinx and represent some of the poorest in New York City. This is just one of the ways communities of color tangibly feel the legacy of racist policies like redlining. Such policies that have discouraged investment in communities of color have resulted in a lack of tree coverage, disparities in generational wealth, and poor building maintenance; All of which render both the inhabitants and the built environment ill-equipped to withstand extreme weather events that will only become more severe and frequent as climate change persists.

Comprehensively bolstering vulnerable communities against flooding and extreme heat requires that the appropriate resources are poured into tree planting, permeable surfaces, as well as solar, cool, and green roof installations. An equitable, fiscally responsible, and resilient New York cannot exist without ensuring frontline communities receive these investments that are long since overdue.

Green Infrastructure Solutions

There are several co-benefits that come with the expansion of green infrastructure projects. An expansive and equitably dispersed **urban tree canopy** brings with it a multitude of public health benefits that are necessary to combat the cumulative impacts environmental justice communities face. To start, neighborhoods with more trees provide respite from extreme heat for all. Residents without air conditioning in particular may be safer from heat stress outdoors as studies have recorded that indoor temperature and humidity during heat waves rise and stabilize while ambient temperatures cool more rapidly. Cooling options that take stress off our energy grid and reduce greenhouse gas emissions are increasingly important as we work toward our climate goals. Additionally, street trees promote active transport, facilitating thermal comfort for pedestrians and cyclists on shaded streets. This is especially important for seniors, pregnant people, young children, and people with certain health conditions who are more vulnerable to heat related illnesses. Lastly, communities of color are disproportionately exposed to air pollution contaminants. Vegetation helps filter [particulate matter pollution and reduces the risks of ground level ozone](#).

Green roofs offer similar benefits, except their cooling effect is aimed directly at the buildings on which they are installed. By shading the roof and deflecting radiation from the sun that would otherwise heat the building, green roofs reduce the amount of energy needed to cool it. Both



street trees and green roofs expand the surface area of permeable surfaces which allow for better drainage and mitigation of flooding events.

Solar roofs support energy efficiency since photovoltaic panels absorb the radiation instead of the building while generating electricity, helping to reduce the energy load during times of high demand. Extreme heat events will become more frequent and severe, and to prevent blackouts and brownouts when people are trying to cool down in their homes, renewable energy generation must be more accessible in heat vulnerable neighborhoods.

Permeable, reflective, or light-colored surfaces are also an emerging tool for climate adaptation. They lower surface temperatures and slow the pooling of water during storm events. The strategic deployment of cool and permeable pavements (where feasible) must be explored to deliver the best health outcomes for heat and flood vulnerable New Yorkers.

There are current bills, supported by WE ACT that lay the groundwork for the growth of these climate mitigation tools:

- [Int 0495-2022](#) – Requiring DOT to conduct a pilot project on the use of cool pavement.
- [Int 0574-2022](#) – Cool pavements pilot program.
- [Int 0420-2022](#) – Fees for the installation of solar power energy systems.
- [Int 0102-2022](#) – Requiring the department of environmental protection to post a map of green roofs online.
- [Int 0239-2022](#) – Education and outreach regarding solar and green roof requirements.
- [Int 0233-2022](#) – Requiring the DOE to conduct a study on the feasibility of installing green roofs on schools.

With average annual daily maximum summer temperatures at JFK rising [0.5 degrees every decade](#), and over 50 NYCHA developments [at risk of flooding by 2080](#), we need urgent intervention. According to the most recent [IPCC Report](#), “the level of risk will depend on concurrent nearterm trends in vulnerability, exposure, level of socioeconomic development and adaptation.” It is in your hands to reduce the inevitable, exacerbating climate risks for frontline communities. The path forward must include green infrastructure, renewable energy, and porous surfaces.

Directing infrastructure projects that make use of these technologies to low income neighborhoods first and foremost is not only the most equitable option, but also the most cost-effective. Research conducted by the [Smart](#)



[Surfaces Coalition](#) demonstrated the cost-to-benefit ratio for implementing these technologies in low income neighborhoods was consistently favorable across five cities, accounting for energy, financial incentive, stormwater, health, climate resilience, and employment benefits.

Sincerely,

Caleb Smith

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**Open Plans' Director of Public Space Advocacy, Jackson Chabot's, Testimony for
Transportation and Infrastructure Committee Hearing**

Aug. 16th, 2022

Good afternoon, my name is Jackson Chabot, and I am the Director of Public Space Advocacy at Open Plans, an over 20-year-old non-profit dedicated to safe and livable streets. As our climate changes, the safety and livability of our streets will increasingly depend on resilience against severe weather events. Recent heat waves underscore this escalating need; adaptation to our public spaces will be vital.

Statistics show the danger; according to environmental justice leader WE Act, an average of 130 New Yorkers die yearly from heat-related causes. Additionally, there were approximately 644 hospitalizations or ER visits due to extreme heat exposure in 2021.

The fact is that extreme weather is deadly, especially for the most vulnerable New Yorkers. According to We Act, "In part due to historical and current patterns of racial discrimination and segregation, concentrated poverty, and public and private disinvestment, populations in New York City that are already vulnerable to poor health outcomes are also overburdened with higher death and illness rates from extreme heat."

Due to the same disinvestment, these communities are also some of the most car-dependent in the five boroughs. As a result, driving exacerbates the global climate crisis while also leading to local environmental suffering, including poor air quality and hotter streets. It's a vicious cycle.

We recommend three immediate actions:

First, we urge the City to use sanitation reform to combat the effects of severe weather. During flash flooding, loose trash can clog storm drains and quickly flood neighborhoods. Just last year, Tropical Storm Elsa dumped a tremendous amount of rain in a short period of time, leaving many New Yorkers scrambling to pull loose trash from their street drains in an attempt to prevent flooding, which we've seen can be deadly. Additionally, composting can reduce New York's overall volume of food waste. According to City Limits, "food waste is a major contributor to climate change due to its emission of methane, which has 26 times the warming power of CO2." Open Plans fully supports the trash containerization pilot program and the administration's launch of universal composting. These programs can be powerful tools for climate resilience, and we eagerly anticipate the expansion of both.

Second, we must reform the curb and reallocate street space for people-centered purposes. Asphalt attracts and traps heat; we know that blocks with trees and abundant green space are several degrees cooler than their sparse counterparts. A climate-resilient NYC must decenter cars and private vehicles storage for green space. Bioswales and tree beds help prevent

flooding, and community gardens transform urban heat islands into oases and provide space for community.

Finally, and most consequentially, we know that vehicles and driving make our world warmer. In the United States, approximately 33% of our carbon emissions come from transportation. As a city, we must act now by providing incentives for people to choose other modes of transportation, such as free OMNY cards for government workers and improving bus service in subway transit deserts, while also implementing congestion pricing ASAP and significantly reducing the number of parking placards in circulation.

We need action now; we cannot wait for the next storm to exacerbate our infrastructure challenges and leave our neighbors vulnerable to extreme heat, flooding, cold, and so much more. We have the tools to adapt New York City and keep all of us safe.

QueensLink: Testimony for Committee on Transportation and Infrastructure. 8/16/22

I would like to thank the committee on Transportation and Infrastructure for the opportunity to speak.

Hello, my name is Paul Trust and I am Advocacy Liaison for QueensLink, the proposal to reactivate the Rockaway Branch as an M train subway extension running from Rego Park down to the Rockaways. QueensLink represents the latest push in advocating for what has been a 60 year attempt to reactivate the Rockaway Branch. The last time there was momentum regarding reactivation was back in 2013, not coincidentally after Hurricane Sandy. At that time South Queens representatives such as Hakeem Jeffries, Greg Meeks, Phil Goldfeder, and other powerful allies like Jerry Nadler advocated for this cause, knowing reactivation represented the wishes of their constituents to effectively confront the challenges they face with regards to climate change and the need for better transportation, one that has the potential to take tens of thousands of cars off the road.

South Queens is a transit desert, with some of the longest commutes in the country. This however does not need to be the case. There is a 3.2 mile pre-existing right of way, owned by the city that, through subway reactivation, will not only make South and Central Queens more resilient to the effects of climate change, but introduce a faster alternative for people to get to and from jobs, schools, visit family, and allow tourists to enjoy some of the cities best destinations in a way that does not involve cars.

QueensLink believes subway reactivation is the best proposal for this valuable city-owned transit asset, one with the greatest potential ridership that would best cater to the needs of underserved communities in S Queens. These communities are among the most vulnerable to climate change. The MTA's own Sketch Assessment, released in 2019, proved that subway reactivation is possible. The study also mentioned that where the right of way is wide enough, both park and trains can coexist. Knowing this, the QueensLink proposal incorporates both rails PLUS trails. It is our belief that if this right of way was used exclusively as a linear park, as some are advocating for, this would kill any possibility for future reactivation, would not provide transit equity and upward momentum for S. Queens and undermine our city's attempt to meet its current and future transit and climate needs.

Earlier this month, Queenslink sent a letter signed by 15 lawmakers at the city, state and federal levels, including council members Ariola, Brooks-Powers and Holden currently in attendance, to the mayor and governor's desk requesting that an EIS, or Environmental Impact Statement, be conducted on the line. An EIS will answer many questions touched upon in the MTA's sketch assessment, including concerns expressed by those who live alongside the ROW. For example, an EIS will include an in-depth study on noise mitigation, as well as conducting community outreach. An EIS is the same step that the IBX is currently in the early phases of undergoing. As Rockaway reactivation was included as one of the proposals under consideration in the MTA's recently released 20 Year Needs Assessment, we feel the time is now to conduct the EIS. Conducting an EIS was also listed in the 'next steps' section of the MTA's sketch assessment on the right of way. It is our strong belief that if 1.2 billion can be set aside for a Van Wyck expansion that will do nothing to improve traffic flow, or help NYS meet its 2030 climate goals, then setting aside 1 to 2 million dollars to conduct an EIS on Rockaway reactivation is a worthwhile investment.

Central and South Queens is car culture, much of which is out of necessity because residents lack viable mass transit alternatives. A Rockaway Branch subway reactivation has the potential to significantly alleviate traffic on parallel roadways like Woodhaven Boulevard and the VanWyk, make our roads safer for everyone, whether traveling by bike, car, or walking, improve climate resiliency for South Queens, add up to 33 acres of park and trail space alongside and underneath the tracks, as well as provide transit equity for underserved communities. It is worth mentioning reactivation will also diminish car pollution that enters our sewer system and inevitably works its way to Jamaica Bay.

In conclusion, although it's been 60 years of talk and little action, the time is now to make history. The desire is there, our climate challenges are real, and our population growth demands real investment in better mass transit, not just stopgap measures. We hope you will join us in our cause of advocating for the MTA to conduct an EIS on the Rockaway Beach Branch.

Thank you for your time.

Paul Trust
Advocacy Liaison
QueensLink

From: Allegra N. LeGrande <allegrande@gmail.com>
Sent: Thursday, August 18, 2022 3:33 PM
To: Testimony
Subject: [EXTERNAL] Testimony for 08/16/22 Oversight - Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather

Testimony for 08/16/22 **Oversight - Sinkholes, Flooding and Heatwaves: Infrastructure Challenges in the Face of Extreme Weather**

From Allegra N. LeGrande, PhD ; resident of Inwood, Upper Manhattan ; parent of school aged children ; professional climate scientist

INPUT

- I did not receive solicitations for commentary from my professional affiliations as a climate change researcher. Whose commentary is being sought? I suggest a broader solicitation for professional commentary from the many research institutions in the NY Metro.

MANAGED RETREAT

- Some places should not have further development. We should adapt. There is no way around 1.5degC of warming at this point — we must adapt by building and living in places less vulnerable to flooding and extreme heat. (There have been several Columbia / NYC Panel on Climate Change workshops on this topic.)

FLOODING

- Stop using the terms “100-year” and “500-year” flood plain since these terms may be confused with the return period of a certain level of flooding. In addition, these probability distribution functions (PDF’s) have little meaning in a rapidly changing climate such as ours.
- Consider flooding from extreme precipitation *separately* from sea level rise (storm surge) coastal flooding. City messaging is confusing and poor on this point.

- Consider allowing expensive insurance premiums in flood zones to discourage building there ; do not work to incentivize building in high risk areas by artificially deflating insurance cost ; provide framework for paid scrutiny of EDC / DCP with socio-economic fairness, environmentally sound, and climate change mitigation as principal goals of independent group

EXTREME PRECIPITATION

- Expand down-scaled simulations of extreme precipitation for the NY Metro (right now its 95% one group doing this modeling... we should have more folks doing this)
- Augment current method of extreme rain prediction (statistical or AI/ML downscaling)
- =>Develop a forward NY Metropolitan area *REGIONAL CLIMATE MODEL* to be driven by a coupled global climate model; this will require long-term institutional support
- Consider daylighting buried creeks and rivers (e.g., Tibbetts brook in The Bronx) to leverage natural drainage systems to avoid surface flooding

- Low lying Areas are already known — place flood gauges with monitoring capabilities (i.e., a large sign with depth indicators plus a camera or other monitoring system)
- Determine maximum drainage capacity for surface streets
- Create high resolution surface hydrology models of NYC streets
- Create a plan for regularly cleaning drainage, sewers, etc.
- Replace impermeable surfaces with permeable (drainable chat/gravel surfaces not blacktop)
- Use models to determine best methods to augment surface drainage capacity
- Develop a framework for considering extreme precipitation and fund regular updates (~2 years or after each flood event meeting 1% or 0.2% flood risk level)
- Increase drainage capacity to cover the 0.2% rainfall for 2080's for NY regional model
- Install awnings over subway entrances and vents raise these above local topography minima
- Close subway stations BEFORE they flood

- Install emergency exits for ground level and below apartments

EXTREME HEAT

- Forbid the use of building materials that augment extreme heat. (Recycled rubber materials like commonly used for turf surfaces, track surfaces, playground surfaces) Discourage any dark bare soil surfaces
- Be conscientious that air conditioning may put strain on the electric grid, so seek out redundancy for cooling methods
- Provide subsidies for geothermal HVAC systems (e.g., Knox Hall @ Columbia) that are less energy intensive than electric A/C
- Reduce the standard deviation of temperatures across blocks (i.e., blocks with excess heat should be targeted for cooling by increasing tree cover, eliminating heat sources such as ICE internal combustion engine vehicles, black top, building roof color / greenroof)
- Encourage passive means of dealing with extreme heat such as shady respite centers with water sprayers in parks

- Fully staff life guards and NYC pools; add staffed temporary pools or shaded water features to each neighborhood
- Leave NYC Pools opened during all months that the temperature rises above 80F
- Install ventilation fans for subway stations whose temperatures exceed 110F.

- Install ventilation fans in buildings, especially spaces just below the roof. Paint roofs light colors. Install green roofs where possible
- Reduce car traffic on high heat days.
- Atmospheric chemistry:: establish ozone days when ICE are disallowed to operate at peak times

COASTAL STORM SURGE

- Put PARKLAND not buildings in the 0.2% year 2050 coastal flood area

- Consider MANAGED RETREAT as a development strategy

- Do not use reflective sea walls along water ways; create break waters, soft edges, etc.
- Set expiration dates on 1% and 0.2% flood risk maps from predicted sea level rise related and fund regular updates (~5 years or after each flood event meeting 1% or 0.2% flood risk level). In this document, and all future documents, create an acronym to identify “which” flood zone text refers to— e.g., never report “1%”, instead say “1% FEMA15” to resolve ambiguity.

ENVIRONMENTAL JUSTICE in Land Use

- Consider socio-economic risk for maximum development by demographic measures (race, gender, income, education, etc.) and consider whether climate risk is disproportionately held by a particular demographic
- Add provisions to estimate the full cost of a flood event should the zoned areas be developed for equal or greater density ; determine and publish ALL entities that bear this cost and at what fraction

- Compare the income of taxes generated by the maximum allowable property development to the tax payer exposure to damages generated by a 1% and 0.2% flood given NPCC3-90 scenario over the building lifetime; determine amount of time required for cross over

LAND USE::

- Explicitly Consider managed retreat scenario for Land Use : not maintaining or increasing density, but decreasing density
- Consider changing low density, high flood risk places into parkland, wetlands, dunes, and other resilient space ; provide ample funding for this change to encourage movement to safer elevations

ULURP:

- Consider climate change risk in all of its facets for CEQR/SEQRA— surface air temperature changes, atmospheric chemistry changes, extreme precipitation changes, drought risk changes — in each EAS/EIS for each block. Do not relegate climate risk to a

single chapter/task item (e.g., climate risk is not limited to chapter 15 ghg).

- For commercial and R4+ zones, alter RWCDs year to use (e.g.,) 2080s and 2100s flood risk to reflect the longer lifetimes of these buildings. Justify chosen scenario year with defensible building lifetime.

Round up in time to the estimated lifetime of a building for sea level rise base year. Provide this measure with a new acronym (climate-aware RWCDs given NPCC3 90% high probability flood: CA-RWCDs-NPCC3_90)

- Provide common units for expressing risk including “today’s” dollar exposure to risk given a maximum development scenario plus a 1% and 0.2% flood event, link to common reporting tool below.

- Provide the carbon footprint per person per building block today and in the maximum development scenario, put into context of overall NYC, NYC 2030 (and future) goals, US overall, developed nations overall, and link to reporting tool below.

- Provide independent panels to consider climate risk of zoning decisions separately from economic development potential ; publish findings/opinions in peer-reviewed journals; provide a quantitative determination of financial risk held by both the public and private sectors for each block given a CA-RWCDS-NPCC90 scenario
- Redesign NPCC2/3 ArcGis page to include the extreme scenario of West Antarctic Ice Sheet Collapse as per NPCC3. (9.5') Plan and report 1% and 0.2% flood risk for the 'high' scenario otherwise (6.25' by 2100). Cite the relevant scenario. E.g., instead of saying "approximately 28 inches of sea level rise by the 2050s", be specific and accurate. E.G. 2050s sea level rise of 30 inches (NPCC2_90).
- Use the most pessimistic forecast for storm surge and flood risk. This includes considering flood risk (e.g., KatRisk) maps from the private insurance sector that may be more extensive than FEMA maps.
- Consider alterations that raise the density of a block separately from improvements of existing structures.

- Set more strict standards for new construction of higher density
 - Provide a criteria to evaluate the EIS/EAS for climate risk accuracy and report this as uncertainty bounds in point 1. Provide a failure criterion (accuracy falls below a threshold of e.g., 66%) to trigger a complete re-evaluation by an independent, outside, funded third party
-

From: Allie Ryan <allieryan10@gmail.com>
Sent: Thursday, August 18, 2022 2:39 PM
To: Testimony
Subject: [EXTERNAL] Testimony for T2022-1834, 8/16 Joint Committees Oversight Hearing

Thank you for hosting an oversight hearing about flooding, heatwaves and pot holes and their effects on New Yorkers. Almost 700 mature trees have been chopped down in East River Park since December 2021. Earlier this month several neighbors measured temperatures around the area of East River Park. The few spots of grassy shade were cooler. There are severe public health consequences to making our neighborhood hotter and drier, which is what has happened now that we have lost almost 700 trees.

For example on August 9th at the track and field at 6th St. temperatures ranged from 80 F in tall thick grass in partial shade to 157F at the artificial turf field at the running track in full sun. Under the grove of mature trees in the park, it was still hot 90 - 95F, but cooler than the reported air temperature in the city.

What can be done now?

The City needs to follow through and plant and nurture trees in presently empty tree pits as well as in our parks, specifically Tompkins Square Park, where at least six mature trees over a couple hundreds years old have naturally fallen down over the past couple years.

The City promised to plant trees in the street tree pits in part to make up for the inability to use East River Park.

Secondly, Stop Chopping Down Trees in East River Park. In 2019 City Council negotiated to keep 42% open while closing 58% of East River Park. Right now at the most 30% of East River Park is open to the public. Why? My city Councilmember campaigns for a new job instead of questioning DDC and the Parks Dept to honor the 2019 City Council negotiated 42% open parkland.

To learn more about the increased high temperatures in Lower Manhattan and especially at East River Park:

<https://eastriverparkaction.org/2022/08/09/hot-and-hotter/>

Sincerely,

Allie Ryan
Resident of City Council District 2

Testimony Tuesday August 16th.
Oversight Hearing

Good afternoon. I completely support Carol Johnson's testimony. I am Jennifer Hadlock a resident of El Barrio East Harlem on Pleasant Avenue for over 12 years. I am a member of WE ACT.

I love the neighborhood and I worry about who will be displaced as so-called improvements happen. I have fought for better tenant protections and hope the Council on Environment Protection and Waterways and Resiliency and Transportation recognizes the connections and need for coordination in order that the greener economy does not hurt those already most harmed—mostly poor and low-income people of color.

However, I have observed the flooding in the streets when it rains, the puddles sometimes stay for days, this then creates challenges for our many older and disabled neighbors. Plus in the winter it freezes and we basically live with that for the season.

I walk by the river almost every day.

I would love for the walkway to not have sink holes and danger zones. I worry when it gets fixed will the neighborhood change?

When the Second Avenue subway comes I am sure I and many neighbors will use it. But at what cost to the neighborhood will it be? It seems the removal of the pathmark was a beginning.

When even the McDonalds left 125th St and now that shiny new building is there. What is coming? We need street trees, rain gardens, bioswales, green roofs but centering not displacing the residents.

When I moved to the city I purposefully tried to find a place that I, as a white woman, wouldn't add to the gentrification and displacement. I chose Italian Pleasant Ave.

The mall opened the month I moved in. People feared that would completely transform things.

Not all change has to mean displacement but please be thinking about that as this moves forward. Thank you

My name is Manuel Caughman. I have been working on environmental issues in Southeast Queens especially groundwater for over twenty years I have worked on projects such as, the cleanup of the Westside Corporation Superfund Site, the Brooklyn Queens Aquifer Feasibility Study and was appointed by Mayor Michael Bloomberg to the Jamaica Bay Task Force. The rising water table is an issue that seriously needs to be addressed. Climate change and increased storms such as hurricanes Sandy and Ida has compounded the situation tremendously. As a matter of fact the U.S. Geological Survey (USGS) predicts the water table will rise between 3 – 6 feet in the next five years.

I will give you a brief history of how we got to this point. For over 100 years (1896-1996) the former Jamaica Water Supply Company (JWS) supplied water to the South East Queens area of New York City from 69 groundwater wells located throughout the service district. At its peak, JWS provided approximately 60 million gallons of water per day. In the early 2000s JWS began shutting down some wells because of saltwater intrusion and the contamination of the groundwater. The groundwater levels began to rise. Former Department of Environmental Protection Commissioner Emily Lloyd, testified before the City Council in 2007 and stated “that the water table had raised to the level of approximately 30 feet closer to the surface since the closing of the wells”, and resulted in groundwater flooding at Parson – Archer Subway, York College, Allen Senior Home, Intermediate School 8, the Carter Senior Housing and many homes in the area. This has burdened our homeowners with additional expenses for pumps and utilities. If this situation is not addressed properly it will continue to get worse. This could be a subject for environmental justice concerns.

The Department of Environmental Protection (DEP) has been working to come up with solutions to the rising water table.

DEP had a plan to use Station 6 in S.E. Queens to purify between 8-12 million gallons of water per day. This would have eliminated the groundwater flooding at York College and the surrounding area. To me this would be the best solution.

DEP is currently in negotiation with USGS to measure groundwater levels throughout the City.

DEP is also looking into the possibility of daylighting Twin Ponds, Beaver Creek and Baisley Pond to lower the water table.

In summary with global warming, rising sea levels and climate change we have to seriously think about the protection of our infrastructure. The rising water table and saltwater intrusion could play havoc on our way of life. Presently we have sewers that are below the water table we all know what salt does to concrete. Although it has not been established it is believed that salt water was a contributing factor to the collapse of the Condominium in Florida where many lives were lost. Numerous homes and other structures have to contend with mold and have abandoned the use of their basements and parking garages because of groundwater intrusion. Station 6 is a shovel ready project the only thing missing is proper funding. On behalf of the residents of S.E. Queens I am asking this Committee and the City Council for overdue help to address this problem.

Thanks,

Manuel Caughman

Community Liaison for

Assemblywoman Alicia Hyndman

**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: Aug 16, 2022

(PLEASE PRINT)

Name: Rose Uscianowski

Address: Benziger Ave, St, NY

I represent: Transportation Alternatives

Address: 111 John St

**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: Cortney Worrall

Address: 256 W. 36th St #11, NY NY

I represent: Waterfront Alliance

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: _____

(PLEASE PRINT)

Name: Jackson Chabot

Address: 7th Ave, BK, NY 11215

I represent: Open Plans

Address: 377 Broadway

**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: 8/16/22

(PLEASE PRINT)

Name: Lonnie J. Portis

Address: _____

I represent: WE ACT for Environmental Justice

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: _____

(PLEASE PRINT)

Name: Vincent Sapienza

Address: NYC DEP Lefrak City

I represent: NYC DEP

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: _____

(PLEASE PRINT)

Name: RIT AGGARWALA, DEP COMMISSIONER

Address: 59-17 JUNCTION BLVD

I represent: NYC DEP

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: _____

(PLEASE PRINT)

Name: Erika Jozwiak

Address: Senior Program Manager, Infrastructure

I represent: MOCEJ

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: _____

(PLEASE PRINT)

Name: LESLIE WOLF

Address: _____

I represent: NYC DOT, EXEC DIR. OF CAPITAL PROGRAM PLANNING

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: _____

(PLEASE PRINT)

Name: VINCENT MANISCALCO

Address: DOT ASSISTANT COMMISSIONER

I represent: _____

Address: _____