Mayor's Office of Climate & Environmental Justice

Testimony of

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Commissioner

New York City Department of Environmental Protection

before the

New York City Council

Committee on Resiliency and Waterfronts

Committee on Transportation and Infrastructure

Joint Oversight Hearing

10th Anniversary of Superstorm Hearing

October 26, 2022

Good morning, Chairs Kagan and Brooks-Powers, and Members of the committees on Resiliency and Waterfronts and Transportation and Infrastructure. I am Rohit T. Aggarwala, City's Chief Climate Officer, in which capacity I oversee the Mayor's Office of Climate and Environmental Justice (MOCEJ), and the Commissioner of the New York City Department of Environmental Protection (DEP). Thank you for the opportunity to speak today about the Adams Administration's work to adapt to climate change, which presents an existential threat to New York City and the 8.6 million New Yorkers who call this City home. I am joined today by Kizzy Charles-Guzman, Executive Director of MOCEJ; Senior Policy Advisor for Climate Ready Infrastructure at MOCEJ, Jordan Salinger; and my colleagues at DDC, Parks, HRO, NYCHA, and EDC, among other agencies.

This week we commemorate the 10th anniversary of Hurricane Sandy – the deadliest and most destructive natural disaster in our city's history. It cost 44 New Yorkers their lives, upended entire neighborhoods, and caused $19 billion in damages and economic loss. It was, sadly, exactly the kind of catastrophe that climate scientists have been predicting.

I am here today to report on what has happened since the storm. I will detail this Administration's approach to climate change adaptation, focusing on the ways in which it is informed by the lessons of the past decade and advancements in global and local thinking about risk mitigation. Finally, I will talk about the challenges that we must jointly address to make New York City resilient.

I'd like to leave you with a few key messages today.

First, there is a lot to be grateful for in the work that New York City and its partners have accomplished in the last decade New York City is much better prepared for a storm like Sandy than it was ten years ago – but there is still work to be done.

Second, Hurricane Ida last year reminded us that we cannot afford to make the mistake of fighting the last war. Sandy was a coastal inundation. Ida was a rainstorm. In the ten years since Sandy, heat waves **have killed six times as many New Yorkers as Sandy and Ida combined.**[1] Going forward, the Adams Administration will be pursuing an approach to climate resilience that is focused equally on all the risks that climate change brings.

Third, we must consider our greenhouse gas reduction strategies as a core part of our resilience efforts. We all must treat every aspect of Local Law 97, every bus lane proposal, each land use decision, each step on the road to congestion pricing and organics collections as part of our climate resilience strategy.

Finally, resilience is not something that has a completion date. This is an ongoing task that will be part of government for the rest of our lives.

I. PROGRESS ON COASTAL RESILIENCE

As I said, we should recognize that we are much safer and better prepared for a coastal inundation than we were ten years ago. This is a result of tremendous efforts by both government and communities, along with tremendous investment: approximately $15 billion in Federal funding for recovery and resiliency and over $5 billion from City taxpayers.

We need to think of post-Sandy work as having three very different components.

One was helping people whose homes and businesses had been damaged. The Build It Back Program served 8,319 single family homeowners citywide and 141 multi-family developments, elevating, repairing, and acquiring homes. EDC and SBS programs BPREP and RISE:NYC served nearly a thousand Sandy-impacted small businesses.

The second was a significant program undertaken – especially by NYCHA and private sector building owners – to make their properties less likely to suffer damage if another Sandy-like event happens. NYCHA has spent over $2.7B to protect over 200 buildings from storm surge and power outages. BiB's Multifamily Program has assisted more than 19,600 households through assistance for repairs, resiliency upgrades, and rental assistance.

A key aspect of resilience is not just physical, but institutional. Since 2012, the number of New Yorkers with flood insurance has increased by about 50%, in large part through the City's FloodHelpNY program, a partnership with FEMA and the Center for NYC Neighborhoods.

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[1] NYC Annual Heat Mortality Report (required by LL as of 2021)

https://www.noaa.gov/news/earth-had-its-6th-hottest-july-and-year-to-date-on-record

https://www.ny1.com/nyc/all-boroughs/weather/2022/09/01/this-summer-was-one-of-the-hottest-on-record-for-nyc

NYCEM has worked to ensure we are better ready to respond when storms hit. We have updated the City's emergency protocols, including new evacuation maps and response equipment.

A third aspect of the post-Sandy work was neighborhood-scale coastal protection, exemplified by work done by the Army Corps in the Rockaways and by the City on the Lower East Side. In addition to the over $1 billion work being paid for directly by the Army Corps, the City has received nearly $600 million from federal grants and is investing over $2.7 billion from City capital for this type of large-scale coastal resiliency work.

- We have completed construction on several shorefront projects, including the 5.5.-mile-long Rockaway Boardwalk, nearly 10 miles of new dunes across Staten Island and the Rockaway peninsula; and coastal wetland restorations in Sunset Cove in Queens and Saw Mill Creek in Staten Island;
- The largest portion of this money will be spent over the next 2-3 years, as we have several additional major projects that are now in construction.

Today, I was honored to join Mayor Adams for the groundbreaking of two key projects, the Brooklyn Bridge to Montgomery Coastal Resiliency (BMCR) project and the Howard Beach Raise Shoreline project in Queens. We expect to break ground on the Travis Avenue Raise Shoreline project by the end of this year and the Staten Island Coastal Storm Risk Management Project in the new year.

There is a great deal more that needs to be done.

First, we need to ensure projects with the Army Corps are successful. We are still waiting for the South Shore of Staten Island project – long recognized to be a top priority as an area that suffered the most concentrated loss of life – to break ground. There have been challenges because the Army Corps' Congressionally defined mission was only to protect against coastal flooding, while the project must concurrently remediate contamination and avoid creating new stormwater flooding risks.

Second, we need HATS to be a success to protect more of our coastal communities. In 2016, the Army Corps of Engineers began studying coastal risk for the North Atlantic seaboard region. Last month, they released a Tentatively Selected Plan, which envisions a network of coastal defenses along with sea barriers at key locations.

We are reviewing the report and working with the Army Corps, government partners and the public, to ensure that the final recommendation reflects the needs of all New Yorkers. I urge you to spread the news about this study and help facilitate conversations about the plan.

There are two key things we know the City will need from whatever plan is ultimately adopted: we will need our Congressional delegation to ensure that the project receives the necessary funding, and we need the enabling legislation to provide the Army Corps with a broad enough mandate to assist with the City's multifaceted efforts to protect against stormwater flooding.

II. RESILIENCY PRINCIPLES

All of this adds up to a direct response to Hurricane Sandy. But Sandy is far from the only climate change impact we face. Hurricane Ida demonstrated that stormwater can also kill. Heat waves

kill many more New Yorkers than flooding. While drought is not New York City's greatest risk, our water supply is indeed at risk from the combination of sea level rise and drought.

As a result, we will pursue a multi-hazard approach to climate resilience. Such an approach addresses all the climate threats that impact our city, including both catastrophic ones like coastal inundation but also chronic ones like rising heat and ongoing tidal flooding. In keeping with this approach, we have already undertaken multiple new efforts to protect New Yorkers:

- Our housing plan, *Housing Our Neighbors: A Blueprint for Housing and Homelessness*, included a significant focus on keeping us safe in our homes during floods, heat emergencies, and in the face of a changing climate.
- To combat extreme heat, we have implemented Cool Neighborhoods NYC, a $106 million program to keep us safe and cool through expanding our tree canopy and programs to connect vulnerable residents to community volunteers. We have allocated an additional $112 million dollars to tree plantings in our most heat vulnerable communities.
- To combat extreme rainfall, we have released both *Rainfall Ready* and a *Stormwater Resilience Vision. Rainfall Ready* outlines immediate steps to combat extreme rainfall, and the vision lays out our transformative approach to managing stormwater, with commitments in how we plan drainage, deploy green infrastructure, and rapidly expand our cloudburst and Bluebelt programs. You'll be hearing more about how we will implement this vision this spring.

III. LOOKING TO THE FUTURE

Today, we announced several important policy steps:

1. Releasing AdaptNYC – New York City's citywide climate change adaptation strategy
2. Launching Climate Strong Communities – the city's next generation of adaptation projects.
3. Advocating for Progress Design Build state legislation to get these projects done quickly.
4. Requesting a dedicated federal funding stream for coastal resiliency projects.

The first of these, AdaptNYC, is the City's approach to climate resilience in partnership with the City Council's mandate in Local 221 of 2021. Because resilience planning requires neighborhood engagement, we are releasing AdaptNYC as a web-based resource. AdaptNYC identifies the climate change challenges that pose the greatest threats; the populations and neighborhoods that are most at risk; and the resiliency and adaptation measures the city is taking to protect residents, property, and infrastructure.

We are now launching Climate Strong Communities, a program that will develop the next generation of resiliency and sustainability projects centered on environmental justice and are proactive, multi-hazard, and targeted in vulnerable areas left out of previous Hurricane Sandy-focused funding. Climate Strong Communities will design and accelerate resiliency and sustainability investments with the explicit intent of maximizing opportunities for federal and state infrastructure funding coming down the pike.

Further, as we know, a key challenge facing resilience efforts is that City projects move too slowly. The Capital Project Delivery Reform Task Force, led by First Deputy Mayor Grillo in partnership with Comptroller Lander, is critical to our future resilience efforts. As a part of that, today the Mayor

called on the Governor and the Legislature to pass progressive design build legislation for the City, a modern form of contracting used widely by State governments and the private sector. We cannot afford to continue to deny the City the most effective approaches to fast, safe, and responsible project delivery.

Finally, today the Mayor called for the Federal government to recognize that climate resilience is going to be the work of generations. Just as previous generations recognized new roles for government, resilience will be a key task of government as long as anyone in this room is alive. Like transportation, housing, and education, we need to shift to a federal formula-based approach so that cities like New York can plan projects with an understanding of what the long-term funding landscape looks like.

IV. CONCLUSION

These initiatives announced today are just one step towards our overall resilience strategy. We will release an updated citywide sustainability plan this coming April. The plan will include a significant focus on resilience, and we intend to work with City Council as we develop that work.

And, as I said at the outset, we also must recognize that all our efforts to reduce greenhouse gas emissions are part of a resilience strategy. So, we will continue our work to implement Local Law 97 and congestion pricing, and promote initiatives like a circular economy.

As I closed when we gathered to commemorate the anniversary of Hurricane Ida, I want to thank this Council for your ongoing attention to these critical issues. After 10 years of rebuilding and planning for more frequent and stronger storms, there is no question of the challenges, and transformative opportunities, that lie ahead of us. We need to work together, thoughtfully, quickly, and prioritizing the most vulnerable among us to act at the scale this climate emergency requires. My colleagues and I are happy to answer any questions.

Thank you.

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
BRAD LANDER

Testimony of NYC Office of the Comptroller on Superstorm Sandy Oversight Hearing

Thank you to Chairs Brooks-Powers and Kagan for convening this important hearing as New York City approaches the ten-year anniversary of Superstorm Sandy. As the City's Chief Accountability Officer, Comptroller Lander takes a long-term view in managing risks facing the city, including the climate risks that threaten New York City's physical, social, and financial future.

The devastation brought by Superstorm Sandy laid bare the vulnerabilities of New York City's coastal communities and infrastructure. The storm resulted in the deaths of 43 city residents and caused damages estimated at $19 billion. With the support of the Federal government, the City initiated billions of dollars of investments in recovery and new resiliency infrastructure. These initiatives have gone a long way to repair damaged homes, elevate mechanical and electrical systems, install backup generators, and support the recovery of impacted residents and businesses.

However, a decade later, many of these projects remain far from completion. Building upon Comptroller Lander's longstanding work to reform the capital process, the NYC Office of the Comptroller recently released *Ten Years After Sandy: Barriers to Resilience*. The report provides an analysis of the City's progress in implementing Sandy recovery and resiliency projects to date, and assesses property values and essential infrastructure at risk of flooding that make these resiliency projects all the more important to complete.

Our analysis found that the City has not yet spent 27% of the $15 billion of federal funding allocated to New York City for Superstorm Sandy. The HUD-funded Coastal Resiliency portfolio, which includes some of the city's highest profile initiatives such as the East Side Coastal Resiliency project, remains among the furthest behind. Only 36% of the HUD funding for these Coastal Resiliency projects have been spent—and that is only just a partial picture. The City's Sandy Funding Tracker only captures federal grant spending and does not include the City's own capital contributions. When we conducted a more comprehensive budget analysis that accounted for the total project budgets for select Coastal Resiliency projects, we found an even slower rate of progress: the East Side Coastal Resiliency project has only spent 13% of its total budget; the Raise Shorelines projects to elevate low-lying roadways has only spent 0.3% of its total budget; and the Hunts Point Resiliency project to install resilient backup power at two schools has only spent 6.3% of its total project budget. According to the City's FY23 Capital Plan, some of these projects have completion dates as far out as 2030, nearly 20 years after Sandy.

Climate change is moving faster than we are, leaving significant essential infrastructure at risk. In the past decade, the property value waterfront developments have increased to over $176 billion, a 44% increase in waterfront property value since Sandy. The worsening impacts of climate change will put upwards of $242 billion of current property value at risk of coastal flooding by 2050. These impacts jeopardize the fiscal health of our city: the tax lots in today's 100-year floodplain

are estimated to generate $2 billion in annual property taxes. As the floodplain grows, more tax lots will be at risk, threatening $3.1 billion in annual projected property tax revenue by the middle of the century.

The City's public housing stock will be particularly impacted. Today, 17% of NYCHA's buildings are in the floodplain; that number will grow to 25% by the mid-century. The current 100-year floodplain is also home to 79% of all citywide transportation and utility land uses, two-thirds of the city's parks and open spaces, and 46% of the city's industrial and manufacturing areas—industries on which our local economy and supply chain rely.

We must pick up the pace of implementation for these critical resiliency projects as the impacts of climate change are already here and threatening our frontline communities. As the report reflects on our progress in the last 10 years, we also look toward recommendations that will ensure effective and efficient implementation of resiliency projects and improve the city's capacity for long-term resiliency planning.

Comptroller Lander was pleased to join Mayor Adams and First Deputy Mayor Grillo in announcing a series of capital process reforms last week. Our office supports these concrete steps to streamline capital project delivery and sure that the incomplete resiliency projects can be built on time and on budget. We also highlight the need for a citywide capital project tracker and better grant cost accounting procedures to improve public transparency of capital investments and maximize federal reimbursements. Our office also recognizes the importance of fully funding operations and maintenance needs associated with these new capital projects so that the city's new resilient infrastructure can provide the protection that it was designed for in the long run.

The City must also improve our capacity for resiliency planning based on the lessons we have learned from Sandy. The decisions about what resiliency investments to make, and where, must be grounded in a thoughtful framework based in our latest understanding of climate risks. Many of the city's current resiliency projects were developed in response to areas damaged by the last storm. We must take a comprehensive approach to determining what a resilient future means for neighborhoods across the five boroughs, informed by an inclusive and thoughtful community engagement process. If the City's decisions about how or where to invest in resiliency remain untethered from a comprehensive framework to assess future climate risks, it will lead to inconsistent and potentially conflicting signals as one arm of government invests in floodproofing while another decides that the area is unviable. For instance, the Resiliency Property Purpose Program, funded with $5.8 million of CDBG-DR grants, is currently facilitating the buyout of residential and vacant lands in Staten Island so that those properties can be incorporated into a new coastal levee that the US Army Corps of Engineers is implementing. The concurrent support by different levels of government for buyouts and coastal defense in the same area presents mixed messages about the long-term future of the community. We must address the current fractured and ad hoc nature of resiliency planning with a clear risk-based framework to guide resilient decision-making for coastal flooding like Superstorm Sandy to flash flooding like Hurricane Ida to deadly heat waves that will only become more frequent in the future.

Fortunately, as we embark on new resiliency projects, we do not need to start from square one. The City should codify design guidelines for new resilient infrastructure informed by the first generation of Sandy resiliency projects to improve the overall design process from the outset.

The City is poised to receive $188 million of new HUD CDGB Disaster Recovery funding to address the devastating impacts of Hurricane Ida, as well as over $1 billion of potential federal infrastructure funding from the historic passage of the Infrastructure Investment and Jobs Act. We must enact significant improvements to our infrastructure planning, design, and delivery to complete spending the federal funds we received a decade ago to address Superstorm Sandy and effectively leverage future funds.

We also support Resolution No. 81, introduced by Councilmember Brannan, to amend the Stafford Disaster Relief and Emergency Assistance Act to proactively fund the planning and construction of coastal resiliency projects. The Stafford Act establishes the statutory authority for federal disaster response, and establishes the resources available to state and local governments in the aftermath of a disaster. The devastation caused by Hurricane Ian in Florida and Puerto Rico this year serves as a cruel but important reminder that climate change is already here. As New York City and other cities across the country face more frequent and severe climate disasters as global sea levels and temperatures rise, it is necessary to revisit how we support climate-vulnerable places to prepare for and respond to emergencies in a just and equitable manner.

The concrete steps we outline here to improve planning, design, and delivery of resiliency projects offer a path forward for the City's future resiliency efforts as we reflect on the ten-year anniversary of Sandy. Thank you again to the Committee on Resiliency & Waterfronts and the Committee on Transportation & Infrastructure for holding this oversight hearing to ensure our City is better prepared for future storms.

Submitted Testimony of Con Edison to the
City Council Committee on Resiliency and Waterfronts
Oversight Hearing re 10th Anniversary of Superstorm Sandy
October 26, 2022

Con Edison supports the City and State's environmental and resiliency goals and we are dedicated to leading and delivering the clean energy future as outlined in our Clean Energy Commitment. We continue to invest to build a safe, reliable, resilient, 22nd century electric grid that delivers 100% clean energy by 2040. As electrifying buildings and transportation make the grid even more integral to reaching our society's climate goals, the company will continue its industry-leading resiliency programs, which will include significant investment in fortifying the grid, selective undergrounding of vulnerable overhead power lines, and building to higher design standards to consider the projected impacts of climate change.

Climate Resiliency Leadership

Nearly 10 years after Superstorm Sandy took lives, destroyed homes and caused significant power outages, Con Edison has fortified its energy systems and is planning for the hotter, stormier weather that climate change will continue to bring. We are seeking to invest billions over the next 10 years to increase resiliency and reduce future peak demand through energy efficiency, battery storage, and managed electric vehicle charging, among other actions. The company's investments in its electric delivery system have already prevented 1.1M customer outages during weather events in the past decade. Those upgrades have included placing vulnerable overhead lines underground, placing smart switches on lines to minimize outages when a tree or branch falls on the wire by isolating the damage, and installing stronger poles and wiring. Approximately $900M in climate resilience projects were included in our latest investment plan. Additionally, as part of enacted climate resilience legislation in New York State, Con Edison will build on its current climate change vulnerability study and engage stakeholders on a 10- and 20-year climate resilience plan.

Con Edison invests more than $3B annually in its energy delivery systems to maintain its industry-leading reliability. The company is already undergrounding vulnerable power lines and we are planning to expand these investments with support from stakeholders. Selective undergrounding is one important tool in the suite of resiliency investments we are making to enhance our ability to recover from major storms and restore customers. Most of our electric system is underground--83% in New York City. Staten Island, however, is 66% overhead, with 22% in Queens, 20% in the Bronx, and 11% in Brooklyn.

The main benefits to the selective undergrounding of overhead power lines are to reduce the quantity of customer outages from damaged poles, equipment, and wires due to storms. Undergrounding can also benefit the entire system by minimizing the overall number of storm repairs thus allowing for improved crew utilization and dispatch. In addition, some members of the public may value aesthetic improvements to avoiding overhead poles and wires if all utilities underground their infrastructure. While there are clear benefits to undergrounding there are some challenges to be addressed. The largest being cost. There is a cost to all customers, just as there is for any energy infrastructure investment and then also to individual customers who may have to modify and/or move their equipment.

Constraints to the Clean Energy Transition

Some of our work in building the grid of the future is impaired by the current property tax framework, which raises the cost of the clean energy transition and serves only to compete with the necessary investment in energy infrastructure that is necessary to meet our region's needs. A partnership with government officials is needed to fix this broken property tax system and we would like to add this item to the larger discussion of inequitable property taxes. This unjust property tax system has already been called out as such by some elected officials, regulators, and advocates. In fact, some Public Service Commission commissioners have expressed major concerns about this issue.

New York is unique in the way that utilities like Con Edison are assessed for property taxes. In addition to paying taxes on our buildings and land like other businesses, utilities in this state are also taxed on the actual infrastructure we build and install. These fees, authorized by the state and collected by municipalities, are called "special franchise taxes." Again, this circumstance is different from how other businesses are taxed and has resulted in an ever-increasing tax bill that contributes significantly to higher rates for our customers. The special franchise tax also has the unintended consequence of penalizing our customers for needed investments in the system, including to maintain high levels of reliability, to improve storm resilience, and to meet our City and State's clean energy goals. For example, if the Company added $2B of infrastructure investment in the City, the Company, and that means our customers, would pay an annual property tax of approximately $100M on that infrastructure investment.

Con Edison will continue to seek support for our investments in advancing clean energy, electrification, resiliency, and ensuring an inclusive and accessible clean energy transition leaves no one behind. We look forward to working with the Council and other stakeholders on these important topics.

ANTHONY CIORRA, PE
Chief, Coastal Restoration & Special Projects Branch
US Army Corps of Engineers, New York District

- Good afternoon, my name is Anthony Ciorra, I am the Chief of the Coastal Restoration Branch with the US Army Corps of Engineers, New York District (USACE).

- I would like to thank the City Council for the invitation to testify and the opportunity to provide an update on the status of the Corps of Engineers' post-Sandy coastal recovery efforts in the City of New York.

- As the Hurricane Sandy recovery program manager, I'm responsible for the New York District's $6 billion coastal restoration program in New York City, coastal Long Island, and northern New Jersey.

- The continued partnership between the State of New York, City of New York, and the U.S. Army Corps of Engineers is vital to the recovery efforts and for the future of a sustainable and resilient New York City.

- USACE personnel played key roles in the response following Superstorm Sandy, removing approximately 475 million gallons of salt water from critical infrastructure around Lower Manhattan and removing 3.6+ million cubic yards of debris from the five boroughs. The New York District directly supported the U.S. Coast Guard in reopening New York-New Jersey Harbor by pulling over 200,000 cubic yards of hazardous debris from the water in less than three weeks.

- USACE is currently executing our post-Sandy Coastal Storm Risk Reduction Program funded under Public Law 113-2, the Emergency Supplemental Bill passed shortly after Superstorm Sandy in January 2013. This $6 billion comprehensive portfolio required the repair and restoration of eight existing projects damaged during the storm at a cost of $242 million, including coastal storm risk management projects at Coney Island, Rockaway Beach, and the Oakwood Beach levee/tide gate on Staten Island.

- Some brief highlights of the work completed and ongoing in our joint efforts to rebuild a stronger and more adaptable City for all New Yorkers.

- Coney Island, ($33M) – This project included the construction of four new T-groin structures and placing 70,000 cubic yards of sand in Sea Gate to protect the integrity of the existing coastal storm risk reduction project at Coney Island that reduces risk to the residents of adjacent communities. The project was completed in 2016.

- Rockaway, ($702M) - USACE is currently working on a comprehensive coastal storm risk reduction project that includes construction of a reinforced dune, new and rehabilitated groins, and beach re-nourishment along the Atlantic Ocean shorefront. The project also includes nature-based measures with structural features to be constructed on the Jamaica Bay shoreline to address more frequent storm-surge flooding. Two construction contracts totaling $340 million are ongoing along the shorefront until early 2026 while design work continues on the Jamaica Bay features with construction scheduled to begin in 2025.

- South Shore of Staten Island ($1.9B) – design efforts are continuing for this coastal storm risk reduction project that will help reduce risk to vulnerable low lying communities between Fort Wadsworth and Oakwood Beach where 24 fatalities were suffered during Sandy. The project includes the construction of a 5 mile long buried seawall and associated interior drainage features.

- USACE is also working on the NY/NJ Harbor and Tributaries Study, or HATS, which is expected to provide additional coastal storm risk reduction options for at-risk communities throughout New York City and areas in the harbor estuary. The HATS Draft Feasibility Report and integrated Tier 1 Environmental Impact Statement was recently released for agency and public review and the comment period is open until January 6, 2023. USACE is currently coordinating with the non-federal partners on

- scheduling public meetings in November and December. The feasibility study is scheduled to be completed in June 2024 at which time Congressional authorization will be needed for construction. The tentatively selected plan has various types of coastal storm risk management features identified in many areas of New York City. We will be happy to provide more details on the Draft Report and Tentatively Selected Plan to the New York City Council shortly as was recently requested of our study team.

- In closing, I want to stress that the Corps of Engineers and our partners have not lost our sense of urgency for completing these projects as soon as possible to reduce the risk to coastal communities that remain vulnerable from the impact of future storm events. Although we understand the frustration of our stakeholders and the public that our process requires time due to the extremely complex nature of these projects and environment in which they are located, we are still pushing to move everything forward as quickly as possible because we understand the risk still exists. Our Sandy recovery and coastal program continues to be a priority for our agency as we approach the 10 year anniversary of the storm.

- Again, thank you for inviting me to speak in front of your committees today. USACE New York District is proud to call the City of New York a great partner in our joint efforts to reduce coastal storm risk for all New Yorkers and to build a more resilient and robust city for the residents and visitors to enjoy for many years to come.

PUBLIC TESTIMONY OF WATERFRONT ALLIANCE

October 26, 2022

Oversight Hearing of the New York City Council Committee on Resiliency and Waterfronts and Committee on Parks and Recreation RE: 10th Anniversary of Superstorm Sandy

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

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Thank you, Chair Kagan for hosting this oversight hearing today. I am Tyler Taba, Senior Manager for Climate Policy at Waterfront Alliance, an alliance of more than 1,100 organizations, businesses, and individuals. Waterfront Alliance is the leader in waterfront revitalization, climate resilience, and advocacy for the New York-New Jersey Harbor region.

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

I am grateful for the opportunity to testify at today's hearing.

While Sandy affected neighborhoods across New York City, the storm hit five coastal areas particularly hard—the Brooklyn-Queens Waterfront, the East and South Shores of Staten Island, South Queens, Southern Brooklyn, and Southern Manhattan. Three of the five areas (the East and South Shores of Staten Island, South Queens, and Southern Brooklyn) were directly exposed to storm surge and destructive waves along the shore, and all experienced widespread inundation. Across the five areas—which are home to 685,000 people—physical and economic damage was extensive and long-lasting. In areas with particularly strong flooding, subway systems were paralyzed. Over 8 million people lost power during the storm. Outages were seen for days in some places, while outlying areas were without power for weeks.

Long after the storm, in some cases up to five years later, residents were still rebuilding, with many relocating to higher ground. Thousands of people were temporarily left homeless, and more than 20,000 households were displaced a year after the storm hit. At the time it hit, Sandy was the fourth most expensive storm in U.S. history. The government of New York City estimates that $19 billion in

damage was inflicted on the city alone.[1] Even up to five years after Sandy, more than a thousand New Jersey residents reported still being unable to return home.[2]

Climate disasters across the country and in New York City have become more frequent and intense. In the 2010's alone, they cost the nation $81 billion per year – up from $18 billion per year in the 1980s. Flooding is not just the most expensive climate-related disaster in New York – it also disrupts the livelihoods of millions of New Yorkers who live, work, recreate, and rely on infrastructure, along the waterfront.

From now on, climate resilience must be a part of every decision that is made having to do with waterfronts and coastlines. That includes housing, parks and boardwalks, shorelines, and all the infrastructure that make up the waterfront. Waterfront Alliance has been at the forefront of advocacy for climate resilience through calls for comprehensive planning, like AdaptNYC, adequate levels of funding for resiliency projects, pre-storm investments, increasing community awareness around flood risk, and prioritization of green infrastructure solutions.

Below are a few of Waterfront Alliance's recommendations for continuing to push for climate resilience throughout New York City, in response to Sandy and beyond.

Five Borough Climate Adaptation Plan (AdaptNYC) and Other Climate Plans

First and foremost, I would like to reiterate Waterfront Alliance's strong support for a Five-Borough Comprehensive Climate Adaptation Plan, AdaptNYC.

Several advocates, including member of our Rise to Resilience coalition, worked together to pass Local Law 122 that required the city to develop a Comprehensive Resilience Plan by the end of September. To date, a plan for developing either comprehensive resilience plans for individual neighborhoods or a single comprehensive plan have not been released. The Waterfront Alliance has recommended to the city that Local Law 122 be implemented by first developing comprehensive plans for the neighborhoods and communities most impacted by climate hazards and least likely to have the means and resources to recover from major climate impacts or disasters. The plans should be structured to attract federal and state funding that is now available through for the first time in generations.

It is critical that the City Council follow up on this important legislation that was passed to ensure that it is successfully implemented.

[1] https://www1.nyc.gov/site/cdbgdr/about/About%20Hurricane%20Sandy.page
[2] https://www.nj.com/ocean/2017/10/the_fallout_from_hurricane_sandy_5_years_later.html

Moreover, 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.

We also encourage the city to commit to the NYC Comprehensive Waterfront Plan (CWP) as a guiding vision for the first term,and develop an action agenda in conjunction with the NYC Waterfront Management Advisory Board that includes metrics, timelines and milestones for CWP implementation.

U.S. Army Corps of Engineers' New York – New Jersey Harbor and Tributaries Study

Additionally, a major response to Sandy was the U.S. Army Corps of Engineers (USACE) New York-New Jersey Harbor and Tributaries Study (NYNJHATS). Last month, the Corps released their Tentatively Selected Plan (TSP), which looks to bring on a series of shoreline-based measures and smaller gates. It is not yet clear what exactly these shoreline-based measures will look like, but there is a sense of optimism that USACE is eyeing more natural and nature-based solutions along many of New York and New Jersey's most flood vulnerable communities. The gates – proposed for places like Arthur Kill, Jamaica Bay, Gowanus Canal, and Newtown Creek – are included in the mix.

Waterfront Alliance, earlier this year, recommended to Mayor Adams that his administration dedicate staff, attention and visibility to the NYNJHAT's project, making the city a partner in that process and through public engagement.

Waterfront Alliance has been working with more than 20 other environment, community, and climate justice-focused organizations to push for a more extended, iterative, and robust engagement process. As Council members, you can also play a role by working closely with the city to ensure that community members and organizations in your district are aware of opportunities to join public information sessions and other forums for input, and calling on the city, State, and USACE for a more extended, iterative process.

Prioritize Green Infrastructure and Nature-Based Solutions

Waterfront Alliance and the Rise to Resilience coalition have been leading advocacy efforts around the implementation of green infrastructure and nature-based solutions wherever possible.

All green infrastructure projects require 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.

Similarly, two particular initiatives should be prioritized to expand green infrastructure solutions.

First, we recommend the prioritization of the Wetlands Management Framework for NYC. More specifically, the proposal within the Framework to transfer 93 acres of publicly owned property to the jurisdiction of NYC Parks and acquire 50 additional acres of privately-owned land to be managed as wetlands. Wetlands provide protection to the communities nearby, helping attenuate wave energy, stabilize shorelines, and reduce nuisance flooding.

Second, building on the success of the Saw Mill Creek Wetland Mitigation Bank, commit to prioritizing more wetlands mitigation banks. Although significant wetlands are preserved within the city parks system as well as on state and federal lands, many coastal and freshwater wetlands throughout the city are still in private hands or on land under the jurisdiction of other agencies.

Conduct Additional Hearings to Address Climate Resilience

We are grateful for Council Member Kagan's leadership as chair of this committee and recommend that more City Council hearings are scheduled over the next few months to expand upon the conversations we are having today.

Waterfront Alliance strongly recommends this committee host a hearing on the U.S Army Corps of Engineers NYNJHATS project. The project will have major implications for New York City residents and deserves the attention of the City Council.

The committee should consider a hearing on the bill that passed last year, NYC's Climate Resilient Design Guidelines, directs the city to develop resilient design guidelines that will ensure that all public infrastructure, from schools to streets, is built to withstand climate threats. It is critical that the Council engage with the Mayor's Office to ensure that these design guidelines advance, that they are informed by your constituents, and that there is also a clear path toward their requirement for private as well as public infrastructure.

We recommend the committee host a hearing on the plan to accelerate climate resilience and the Climate Strong Communities initiative that have been released by the administration today.

Lastly, we recommend this committee host a hearing on Local Law 122.

The risks of climate change have showed themselves in the years after Sandy. It's clear that 10 years later, vulnerabilities to people, infrastructure, and our natural environment still exist. Waterfront Alliance will continue to call for an increase in funding and adequate staffing for resiliency efforts across New York City. Let this remembrance of Hurricane Sandy serve as a moment of reflection. Where challenges exist,

opportunities await. We stand ready to partner with you all to transform, make resilient, and revitalize our coastlines to prevent devastation from storms like Sandy.

Testimony of Alia Soomro, Deputy Director for New York City Policy
New York League of Conservation Voters
City Council Committee on Resiliency and Waterfronts
Jointly with the Committee on Transportation and Infrastructure
Oversight Hearing on the 10th Anniversary of Superstorm Sandy
October 26, 2022

Good afternoon, my name is Alia Soomro and I am the Deputy Director for New York City Policy at the New York League of Conservation Voters (NYLCV). NYLCV is a statewide environmental advocacy organization representing over 30,000 members in New York City. Thank you, Chair Kagan, Chair Brooks-Powers, and members of the Committees on Resiliency and Waterfronts and Transportation and Infrastructure for the opportunity to testify today.

The tenth anniversary of Superstorm Sandy marks a significant milestone for remembering the loss of 44 New York City residents, examining what New York City has accomplished, and, most importantly, what more needs to be done to combat climate change and prepare for the next disaster. While NYLCV commends the City for adopting numerous laws and policies related to coastal resilience, building emissions, waste, and energy, there is no doubt more must be done.

It's well known that warming temperatures due to increased greenhouse gas emissions make hurricanes stronger, rainier, and deadlier. On top of this, we've seen repeatedly that climate change exacerbates existing inequities, especially for low-income and people of color due to structural racism. Despite this knowledge, rebuilding from Hurricane Sandy has been slow, as seen in the City's Build It Back program; it's been inequitable, with an overemphasis on planning for the Lower Manhattan area even though low-income neighborhoods such as Red Hook, Hunts Point, and the Rockaways were devastated; it's been reactive, as witnessed last year in the aftermath of Hurricane Ida; and, lastly, it's incomplete, as highlighted in New York City Comptroller Lander's recent report, *Ten Years After Sandy*, which found that of the $15 billion of federal grants appropriated for Sandy recovery and resilience, the City has spent $11 billion, or 73%, as of June 2022.

The City still lacks a comprehensive, long-term plan that considers all climate change impacts, ranging from inland flooding, extreme heat, sea level rise, cloudbursts, climate-related migration, lack of affordable housing for homeowners and renters alike, food insecurity, and more. Although the City Council passed Local Law 122 of 2021, which requires the Mayor's Office to publish a citywide climate adaptation plan by September 30, 2022, as of October 25, 2022, the plan has not been published. This is inexcusable. The City must do better and act with a sense of urgency.

Much of our resiliency and mitigation work has been reactive and fragmented, relying on federal disaster funds in response to storm devastation. Because of this, NYLCV supports Resolution 0081-2022, calling on Congress to pass, and the President to sign, legislation amending the Stafford Act to *proactively* fund the planning and construction of FEMA and HUD coastal resiliency projects. The City must begin long-term planning for critical infrastructures such as NYCHA campuses, airports, power facilities, and wastewater treatment plants.

Going forward, the City must center equity, justice, and deliberative community engagement in its climate and environmental planning efforts, especially in areas beyond Lower Manhattan that have experienced historic disinvestment. NYLCV echoes the call by advocates to establish an environment and climate justice advisory committee for the US Army Corps of Engineers New York New Jersey Harbor and Tributaries Study.

In addition to planning and building large-scale gray infrastructure, the City must invest in smaller green infrastructure projects such as updating antiquated sewage systems and implementing stormwater management solutions such as rain gardens, bioswales, permeable pavement, water squares, and wetland restoration. The City must implement existing stormwater and extreme weather plans, as well as develop holistic solutions to mitigate inland and coastal flooding that considers existing infrastructure, safe and affordable housing, public health, and emergency responses. We commend the Department of Environmental Protection for their work on green infrastructure to date, but moving forward we need more ambition and a public deployment plan to allow for accountability.

Even with the existing laws requiring rapid decarbonization by mid-century, the effects of climate change will be felt for many generations. While recognizing that not every community faces the same climate risks, the City must work with residents, regional, state, and federal officials to proactively begin stakeholder engagement and education concerning a long-term, equitable, and voluntary buyout program for the most vulnerable areas of the City. Despite the known risks of building in the floodplain, the Comptroller's recent report estimates that more than $176 billion worth of property is located in the City's current floodplain, a 44% increase from ten years ago. As the climate warms and storms become more extreme, this will have devastating consequences in the future on our infrastructure, economy, insurance market, property tax system, and livelihoods. Voluntary buyouts are not a far-flung idea and should be considered one of the many tools in our climate adaptation toolbox. For instance, Staten Island's Oakwood Beach residents lobbied New York State officials to buy out damaged property after Hurricane Sandy. Other states have permanent offices devoted to buyouts, such as New Jersey's Blue Acres program. We urge New York City and State to learn from past buyout programs and other jurisdictions to develop an equitable and permanent buyout program that avoids historic top-down relocation approaches. Further, this conversation is not just about working with communities to identify how and where to relocate residents equitably and comprehensively to safe and affordable homes, but identifying what happens to the land post-buyout, such as wetland and open space restoration, as well as site remediation if it was contaminated.

Lastly, the City must apply for funding at the state and federal levels, as well as be transparent and accountable during the implementation phase. This includes federal funding from the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, FEMA's Building Resilient Infrastructure and Communities (BRIC) program, and HUD to proactively plan for future climate change impacts. Additionally, we urge voters to vote yes on the Clean Water, Clean Air, and Green Jobs Bond Act this November. If voters approve this ballot proposal, the City and State have the potential to fund infrastructure projects, wetland restoration, buyouts, and, most importantly, ensure that 35-40% of funding will go to disadvantaged communities.

While the past ten years have shown us that ideas and recommendations to combat climate change impacts are plentiful, the City urgently needs political action and courage from elected officials, as well as long-term funding. Moving forward, the City must balance transparency, accountability, and community engagement without allowing parochial interests to overshadow the City's adaptation needs. NYLCV looks forward to working with the City Council, Mayor's Office, government agencies, and our advocacy partners to ensure a more equitable, just, and resilient New York City. Thank you for the opportunity to speak.

October 28, 2022

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

To the New York City Council Committee on Resiliency and Waterfronts

Regarding the 10th Anniversary of Superstorm Sandy

Dear Committee Chair Ari Kagan and Committee on Resiliency and Waterfronts:

Thank you for the opportunity to reflect on Superstorm Sandy and to testify to the harm it inflicted on our communities and point out that we need immediate, bold action at the city, state, and federal levels to address the climate crisis to prevent more devastation.

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.

I am Lonnie Portis, Environmental Policy and Advocacy Coordinator at WE ACT. I routinely analyze New York City policies and programs for equity and climate justice and support a group of community members mobilized around climate and environmental issues in Northern Manhattan.

Superstorm 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. But preparing for the impacts of climate change, which hit communities like East Harlem first and worst, is one thing. We also need action to address the causes of the climate crisis, which means reducing greenhouse gas emissions that cause it.

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.
- Accelerate New York City's transition away from fossil fuels and reduce emissions by equitably implementing Local Law 97 of 2019 without loopholes that give building owners an easy out.

As we recognize the 10th anniversary of Superstorm Sandy, and the physical, social, economic and emotional damage it caused across the city, I am compelled to point out that so much work still needs to be done; especially in low-income communities of color like East Harlem. Most of that neighborhood lies in a coastal flood plain, spared the wrath of Sandy by the luck of the tides. However, storms like Sandy are getting strong and happening more frequently due to the climate crisis. Communities like East Harlem can no longer rely on luck to protect them.

It is 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 (FEMA). The most at-risk areas have residents that are majority Black and Latinx and represent some of the poorest in New York City.

East Harlem is one of the most underserved communities in New York City. For more than a decade communities in East Harlem have been promised plans and funds to make the neighborhood more resistant to flooding. However, funding commitments and promises of repairs to the East Harlem waterfront failed to materialize.

WE ACT has been tracking the progress of the work going on at the waterfront and we were excited to hear an update – 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.[1]

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.

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

[1] 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.

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 applauds New York City Mayor Eric Adams for taking action on this front. Recently he announced he will pursue federal funding to complete coastal resiliency projects – like the East Harlem Coastal Resiliency project – around the city as part of his new Climate Strong Communities program. A coastal resiliency program which will elevate the waterfront and implement an integrated stormwater management system for the community. Many of the communities that will benefit from this program are communities of color that – for decades – have experienced a disproportionate burden of the impacts of the climate crisis while simultaneously suffering from decades of disinvestment.

However, the City Council needs to be a strong watchdog with the Climate Strong Communities program and make sure that it is successful. New Yorkers cannot afford anymore failed promises and neighborhoods like East Harlem deserve justice.

Thank you again, Chair Kagan and Committee on Parks and Recreation for allowing WE ACT to testify on such an important topic.

Lonnie J. Portis

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Testimony of the Resilient Coastal Communities Project on the 10th Anniversary of Superstorm Sandy

The Columbia Climate School's *Resilient Coastal Communities Project* (RCCP)[1] respectfully submits this written testimony on the occasion of the tenth anniversary of Superstorm Sandy in New York City. We note that as this hearing was held, communities continue to struggle to recover from the devastation and immense suffering caused by Hurricane Ian. These storms remind us of the enormity of the challenges we face as we work to protect our communities from flooding in the years to come.

The risks to the New York City area have become more serious in the decade since Superstorm Sandy struck, bringing loss of life and widespread devastation through a storm surge which flooded 51 square miles of the city. And although many successful flood protection measures have been delivered since, Hurricane Ida showed us that too many New York City residents remain vulnerable to a range of deadly flood risks. Without effective flood protection which responds to all varieties of flooding, many New York City residents affected by future floods such as the one we experienced during Sandy will face serious risk to life and property with little or no access to reparation or shelter.

According to recent projections by the New York City Panel on Climate Change, sea levels in the 2050s are likely to be 11 to 21 inches higher than in 2000. As heavy downpours like Hurricane Ida and enormous storm surges like those seen during Sandy and Ian become more frequent, the

[1] The RCCP is a partnership between the Columbia Climate School and the New York City Environmental Justice Alliance seeking to foster new collaborations between environmental justice communities, practitioners, and researchers, as envisioned in Columbia's Task Force Report on Directed Action, to help develop actionable, fundable, and equitable solutions to flood risks that also deliver complementary benefits, like habitat restoration, job creation, and greater community cohesion – and put into practice the Climate School's commitment to fairness, social justice, and anti-racism. The RCCP also unequivocally advocates for increased community voice in flood planning and response in New York City to deliver better and more just solutions.

extremity of flooding will be exacerbated by sea level rise, with the greatest impacts falling on communities already most vulnerable due to a history of redlining, disinvestment, and other inequitable land use policies.[2] Yet these are often the same communities sidelined in planning and project developments that take on a top-down and exclusive character.

Repeatedly over the past decade, we have seen just how complex and multifaceted the problem of protecting New York City from flooding is. To be effective, the city and its partners must deal with three distinct problems our communities simply were not built for:

- *storm surges like we saw with Hurricane Sandy ten years ago,*
- *heavy downpours like Irene and Lee brought us last year, and*
- *seas that will rise by roughly a foot or two higher by 2050 than they were at the turn of the century.*

At the same time, any effective flood protection plan for New York City must seek to achieve a number of potentially conflicting goals, including:

- *Protecting Public Health and Safety*
- *Safeguarding our Natural Systems and Biodiversity*
- *Providing all New Yorkers with Access to their Waterfronts*
- *Protecting Community Character and Property, and*
- *Redressing Past Inequality and Building Social Cohesion*

In short, we face multiple flood-related threats with no ready playbook or precedent to rely on in formulating our response. Such a challenge is often referred to as a "wicked problem," given its extraordinary complexity and the need to address it through numerous intersecting projects and initiatives.

To protect New Yorkers from the growing flood risk we all face, we will need to learn from the past and wisely invest our region's considerable resources on a varied and comprehensive set of structural, non-structural and

[2] See: EPA Report Shows Disproportionate Impacts of Climate Change on Socially Vulnerable Populations in the United States. September 2, 2021.

nature-based risk-reduction measures. Current efforts to do so are centered on the New York-New Jersey Harbor and Tributaries Study (HATS), now proceeding under the auspices of the US Army Corps of Engineers, the States of New York and New Jersey, and the City of New York.

It's not hyperbole to say that the HATS, which was begun in response to the damages caused by Sandy and is the largest study of its kind in the United States, is *almost certainly our last chance to effectively protect our coastal communities and ecosystems from the ever-growing risk of repeated flood-related disasters.*

There are over forty different possible approaches to flood risk reduction identified in the latest phase of the HATS - the "Tentatively Selected Plan" released on September 26, about one month ahead of the ten year anniversary of Superstorm Sandy. The key to the success of this monumental planning undertaking will be *picking the right combination of these different approaches so that communities along the entirety of New York City's 520 miles of coastline and in dozens of inland neighborhoods facing flood risk receive equitable protection*. At present, the needs of many vulnerable communities are not addressed by the HATS or by other local flood protection initiatives.

Foregrounding Community Priorities in HATS Planning

The only way for the Army Corps and its state and city partners to craft flood management plans that will actually protect NYC's at-risk communities from flooding like we saw during Sandy and Ida will be for these agencies to commit to designing such plans ***with*** communities, rather than ***for*** them.

Fortunately, the United States Army Corp of Engineers has promised to put communities facing the biggest flooding risks right in the middle of this planning process. Indeed, on March 15, 2022, Assistant Secretary of the Army for Civil Works Michael Connor issued an interim guidance entitled "*Implementation of Environmental Justice and the Justice40 Initiative*". The guidance directed a new approach to be taken by the Army Corps in

planning studies that *"goes beyond 'doing no harm,' to focus on putting the disadvantaged communities at the front and center of [such] studies."* Assistant Secretary Connor made it clear that such an approach:

> "*...will require a commitment starting at the earliest phase in the process. USACE is directed to initiate outreach and engage disadvantaged communities early in the process to identify and address problems. The early engagement will be used to help scope the study.*
>
> *USACE will also ensure they [maintain] particular focus on those areas which advance environmental justice."*

Here in New York and New Jersey, in furtherance of Assistant Army Secretary Connor's Justice40 guidance, the United States Army Corp of Engineers has promised to convene an *Environment and Climate Justice Working Group* to collaborate with its internal HATS project team. This offers a huge opportunity to center the communities most greatly impacted by Sandy in storm protection studies - to go beyond merely *informing* the public to *learning* from and *co-planning* with them, which is essential to the success of this or any other complex planning initiative.[3]

The newly announced HATS Environment and Climate Justice Working Group can help identify and resolve key issues and priorities for the communities most impacted by storms like Ida and Sandy. Composed of a variety of stakeholders like community organizations, the RCCP and other academic groups, and representatives from local and state agencies involved in the HATS, this working group could provide the ample space and opportunity necessary for community voices, leadership, and priorities to be heard and incorporated into the final recommendations and plan.

For the HATS Environment and Climate Justice Working Group to succeed, the City of New York must actively participate in its work, and we ask that

[3] See Designing Community-led Plans to Strengthen Social Cohesion: What Neighborhoods Facing Climate-driven Flood Risks Want From Resilience Planning, the RCCP working paper summarizing a series of 10 in-depth community interviews we conducted earlier this year.

the City Council support such a partnership. We are encouraged that the City has expressed initial support for this working group, which could serve as a model for other communities seeking to protect themselves from flooding and achieve the broader goals of the Justice40 initiative.

Looking at the question of community engagement more broadly: on September 30, 2022, the Army Corps released a draft Communications Plan for the HATS, which we are challenging the Corps to revise and augment, as communications is just one aspect of community engagement and empowerment. Still, we're heartened that this draft plan does indeed commit to a partnership between the Army Corps and the public on flood protection planning. For example, the Corps promises:

- *effective two-way communication with external stakeholders … to find and build consensus on the most feasible, environmentally acceptable, innovative and effective solutions;*
- *a culture of commitment to public openness and transparency; and*
- *incorporat[ing] stakeholder input into future plans and ensuring that disadvantaged communities' input is included.*

Finally and most critically, the Army Corps states that:

> *Public participation and meaningful incorporation of their input [are] key to the [HATS] study's success.*

This is an extraordinarily important statement, which seems to have been inspired by the Biden Administration's Justice40 Initiative. Should the Army Corps and its city and state partners prove able to deliver a HATS study shaped by community partnership and input, it would not only increase the likelihood that this study will protect New Yorkers from flooding, it would also set a vastly higher bar for future community consultation and empowerment in resilience planning, both here in New York City and elsewhere in the nation.

However, while the Army Corps correctly observes that effective public participation and input are keys to the success of the HATS, this means that

if the Corps fails to provide the time and resources needed for such participation and input, the HATS is doomed to failure and the city will lose a critical opportunity to protect its communities and ecosystems.

In this light, it is extremely troubling that the Army Corps has determined that the process of public comment on the HATS "Tentatively Selected Plan" must be completed by January 6, 2023. That's essentially three months after this community engagement and empowerment plan – perhaps the largest and most complex plan of its kind ever undertaken – was first shared with the public. The RCCP with its coastal resilience partners are in the process of seeking an extension of this comment period so that the project can allow for meaningful engagement and input. We would appreciate the City Council's similarly making and supporting this request.

In conclusion, the Army Corps must take this moment to strive for a win-win HATS flood protection plan whose **goal** is to serve and protect as many people as possible, especially those who face disadvantage due to structurally biased policies and practices. This will require the Corps to provide sufficient **time, resources and expertise** to allow the City, planners and community members to come together around the HATS. Only then can we create a just, effective and transformative coastal flood protection plan for New York City and the surrounding metropolitan area.

As to the **time** needed for the HATS to succeed: the good intentions and high hopes associated with the HATS Environment and Climate Justice Working Group will likely be squandered if this working group and the Army Corps' other outreach and empowerment efforts are not given sufficient time to achieve their goals. To keep community priorities in the forefront of the planning process, a far longer timeframe than the currently-planned three months for consultation is essential. We believe that for a plan of this magnitude, at least one year will be necessary for adequate community engagement and co-planning, and for adequate integration of the HATS with existing plans such as OneNYC, the NYC Comprehensive Waterfront

Plan, and state initiatives in this space.

In terms of **resources**: we know that there are numerous barriers to equitable engagement from disadvantaged communities. People from frontline communities are less likely to have digital access, access to transport, access to childcare, or the ability to work flexibly and take time during the day to attend community meetings. There must be resources allocated to address these barriers before a truly equitable community engagement process can take place.

The right **expertise** will also be needed to allow the Army Corps to engage adequately with frontline communities. This may mean allocating budgets to resource community organizations to support the community engagement process. Many members of frontline communities face language barriers, and may speak English as a second language or not at all. Even for those that do speak English, there may be lower literacy levels. Community organizations can provide expertise in this area. Furthermore, for communities grappling with the extremely complex and technical language included within the Army Corps' plan, we recommend that more easily digestible and accessible forms of information must be provided.

And, so, we ask the Committee on Resiliency and Waterfronts to resolve – with all your fellow councilmembers, if possible – that the Army Corps vastly expand its public comment period for the HATS Tentatively Selected Plan. We ask that the Army Corps provide the council with a revised timetable and strategy for public engagement that matches up with the Corps' laudable promise to fully inform and enfranchise the public in the development of all strategies and initiatives to be included in the HATS coastal protection plan, even if that takes a year or more to do.

The Army Corps must treat the HATS Environment and Climate Justice Working Group and all of its other HATS-related public engagement work as an opportunity to help break traditional, systemically racist, and exclusionary processes. We have a chance instead to build trust-based, inclusive

approaches that help to empower community expertise and priorities in an effort that can improve the lives of millions of people, particularly those that are most vulnerable to flood risk.

Given the importance of the HATS to the future safety and vitality of the New York metropolitan region, we simply must do everything we can to assure that our communities are, to quote Assistant Army Secretary Connor, at “the front and center” of this critically important planning process. This is especially vital as we strive to ensure that the devastation caused when Sandy struck will never be repeated and that New Yorkers get the protections for life, property and quality of life they need and deserve.

Respectfully submitted,

The Resilient Coastal Communities Project
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TESTIMONY AT HEARING 10/26/2022 JOEL R KUPFERMAN draft ----

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CITY COUNCIL SUBMISSION

TESTIMONY for Joint Committees on Resiliency and Waterfronts & Transportation and Infrastructure given by Joel R Kupferman October 26, 2022

FEMA funded NYCHA Sandy Resiliency Projects :
Arsenic, Lead and noxious PM2.5 at Jacob Riis and Alfred E Smith Houses

I am Joel R Kupferman. Executive Director and Senior Attorney at the Environmental Justice Initiative- and counsel to the Jacob RIIS and Alfred E SMITH Resident Associations, respectively.

Concern that Sandy Restoration work is deleterious to environmental health of NYCHA residents, NYCHA staff, contractors and the Community

Gross mismanagement by construction managers and the NYCHA Capital Division-Recovery and Resilience Department.

It is error to claim that there is no actionable exposure to arsenic by RIIS residents.

It is not only in the water. It is in the soil. The City and NYCHA are in error to put the attention on one and ignore the other. People are being poisoned by the dust in the air from the dirt piles -from the soil itself. The soil and residents must be tested. The soil must be contained. Currently, it is not

controlled. We know the City applied massive amounts of arsenic to all surface and sub-surface soil, to kill the rats. But they have failed to remove the arsenic, which is cancerous, and noxious, thus continue to poison the tenants- who they were supposedly trying to protect.
Testing at NYCHA Smith Houses indicated 240 parts per million in the soil– which is 15 times the New York State Soil Cleanup Objectives of 16 parts per million—a huge elevation of allowable limit. We do not know the exact amount at Riis Houses – but NYCHA and NYC DOH and DEP have failed to measure or to mitigate the ongoing chronic exposure. The Smith Resident Association has urged Dan Greene, then NYCHA Compliance officer; DEP Commissioner Sepenzia; and STV (the same company in charge of construction and water infrastructure matters at RIIS), that all soil, thus toxic, must be covered, then controlled/removed. The pleas went on deaf ears.
Studies at Flint, Detroit, New Orleans show that resuspended soil leads to heightened Pb levels in children's blood. Harvard studies show that a slight increase in long term exposure to Particulate Matter 2.5, found in soil, leads to a major increase in Covid death.[1]
Exposure to arsenic can cause several cancer and noncancer health effects. "Arsenic is classified as a known human carcinogen by the United States Environmental Protection Agency (US EPA) and several other health agencies based on studies that show increased risks for lung, skin and bladder cancer in people who were exposed to high levels of arsenic in drinking water for long periods of time. Long-term oral exposure to arsenic can also cause noncancer health effects such as darkening and thickening of the skin on the hands and feet, nerve and liver damage, high blood pressure and damage to blood vessels. Since arsenic can cause adverse health effects in humans after high levels of exposure, lower levels of arsenic exposure in environmental media such as soil or water over long periods of time may pose an increased risk for arsenic-related health effects."
CITE NYS DOH "TheDevelopment of New York State Soil Cleanup Objectives for Arsenic"

Health-based noncancer and cancer SCOs for arsenic were calculated for three types of land use where people live on the property. The land uses are called unrestricted, residential and restricted residential (SCOs also were developed for commercial and industrial land uses). All three land uses for properties where people live assume that exposure to arsenic occurs through ingestion of contaminated soil and indoor dust and inhalation of soil particles in air. NYS DOH E

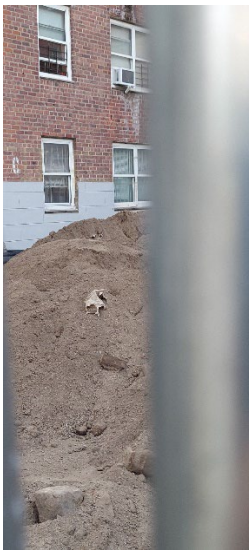
Health-Based SCOs for Arsenic
(all values in parts per million (ppm))

Land use	Noncancer SCO	Cancer SCO
unrestricted	1.1	0.11
residential	2.2	0.22
restricted residential	11	1.1

The initial measurements for Arsenic at RIIS is 15.9 and 7.30 parts per million, which is more than 7 times the Noncancer SCO and 70 times the Cancer SCO.

This is compounded by the indoor exposure of lead paint, asbestos, and mold as well as the close proximity to the particulate matter emitting from the East 14thSt. Con Ed power plant.

Despite the fact that RIIS residents are vulnerable and have suffered chronic exposure, neither NYCHA , NYC DEP and DOH nor its contractor, STV, have seen fit to adopt adequate preventative, protective, or mitigating practices to address the environmental and health hazards confronting the residents.[2] Instead, NYCHA has merely waived aside evidence indicating the presence of serious hazards as well as the multiple vectors of exposure, and stands on the pronouncement withdrawal that the arsenic actionable levels in the water do not exist- states, *without support*, that RIIS residents face no real risks. NYCHA's pronouncement is deeply troubling not only because it articulates the shocking principle that toxic exposures should be accepted by affected populations merely because they happen all the time, but also because it completely elides the significant health effects from exposures to environmental toxicological agents. Such callousness by NYCHA is astounding, who is mandated to care for residents living in City housing;[3] as is the fact that NYCHA's deference puts at great risk the City's most vulnerable residents: young children, people with chronic respiratory illnesses, and the elderly. This evasion makes the situation even more distressing.



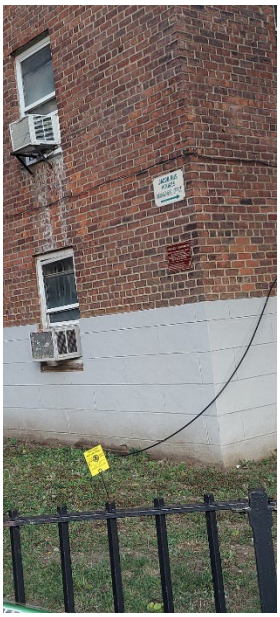


Figure 1 176 Ave D 9-9 -22 pic by J.Kupferman

In this regard, EJI calls attention to the fact that despite NYCHA's recent admissions regarding its failure to protect housing residents from serious lead and mold exposures,[4] NYCHA has additionally *refused* to adopt even the most basic and inexpensive measures at the RIIS Houses site—measures such as the placement of geo-textile matting, the planting of ground cover, and the layering of fresh soil on top of *in situ* soils—to prevent the dangerous re-suspension of contaminated soils and dust -all surfaces where children play, and their

migration into RIIS Houses apartments, nearby local public schools, and the adjacent playgrounds. And finally, adding yet another layer of concern is the City's acceptance of NYCHA and its contractors' failure to adopt any effective protective measures- especially at waterfront developments. NYCHA, as the largest public housing authority in North America and as home to 1 in 14 New Yorkers,[5] presents a horrific example to state and local governments around the country- of how the nation's poorest residents and they are particularly people of color, are treated.

The Housing Authority and the City cannot in good faith rely upon on a risk assessment report (or lack of one) that lacks both scientific integrity and legal support - a deficient risk assessment that stems from its failure to examine the full spectrum of harms faced by RIIS Houses residents and workers. First, NYCHA employed a deficient methodology- when it failed to undertake a comprehensive soil sampling plan including all sites that could contribute to residents' and workers' exposure to the lead, arsenic, VOCS, SVOCs, barium, and cadmium most likely contained in the soil. JACOB RIIS Houses is emblematic of other similarly located NYCHA waterfront developments. There has been failure to examine all of the following: the suspension, re-suspension, and dispersal of soil contaminants; the penetration of these contaminants into tenants' apartments, school building hallways and other residential common areas; the ingestion of contaminated soil by young children playing on the grounds. There are multiple avenues of exposure for individuals involved in one or more of the following activities, in addition to living with the re-suspended and transported, contaminated soil dust in their apartments: passing by the active sites; sitting outside near the apartment buildings; attending one of the public schools on the block; and playing in the area.

Assumption of Arsenic at RIIS:

The high levels of arsenic found at Smith Houses is a strong indicator of the probability of similar levels present at RIIS. Both these and other NYCHA Developments received the large arsenic doses placed by the NYC Department of Health's Rat Poison Control Program in prior years. NYCHA is recklessly discounting exceedance findings. Waldon was the environmental engineering firm employed by the contractor Navillus, which trenched and placed pipes at Smith as part of the Post-Sandy Rebuild. Waldon's tests show an arsenic concentration level in the topmost 12 inches of soil of 42.8 milligram per kilogram (mg/kg), 18.7 mg/kg, 18.6 mg/kg, 19.8 mg/kg, and 43.2 mg/kg—concentrations far exceeding—in fact, *2.7 times*—the Residential and Restricted Residential SCO of 16 ppm.[7] The arsenic concentrations of 85 ppm found in a prior test by EJI/NYELJP, and 240 ppm found in tests undertaken by the Urban Soils Institute, denote an extreme health concern given that the contaminated soil is located within the area surrounding a daycare facility where

very young children play outdoors for hours and near residential units without appropriate window protections. *(See* NYELJP's November 2018 letter, Attachment G.)

Toxic levels of arsenic exposure can occur through inhalation, absorption through the skin, and ingestion;[8] because it is tasteless and odorless, it is quite difficult for a person to know at the outset when they are exposed at levels falling below the acute poisoning range of 100 to 300 mg.[9] In fact, the onset of chronic arsenic poisoning is particularly insidious given that a person exposed to concentrations above 20 mg/kg may exhibit any of several non-specific symptoms, including abdominal pain, diarrhea, or sore throat,[10] all of which are associated with numerous and more benign illnesses. Long-term arsenic exposure from soil and water, leads to multi-system disease —including the cardiovascular, neurological, genitourinary, and respiratory systems—as exemplified by malignancy of the skin, lungs, liver, kidneys, and bladder.[11]

We should also be concerned about the assumed high levels of lead found in the soil and the lack of any lead soil testing (other than EJI's) or publication of results at RIIS. EJI found at RIIS actionable lead levels of 869 ppm and 133 ppm in loose soil. Lead was found at Smith to be 505 ppm, 592 ppm, and 802 ppm by EJI/NYELJP and 551 & 552 ppm by Waldon. The lead concentration of these sets of samples all exceed the SCO limit of 400 ppm, the level deemed by DEC to require remedial action.[12] The Housing Authority's failure to act in such circumstances defies comprehension. The US Environmental Protection Agency "has recognized that lead poisoning is the number one environmental health threat in the United States for children ages 6 and younger".[13] According to the Centers for Disease Control, in this country there are approximately half a million children, aged 1 through 5 years,[14] with blood lead levels above 5 micrograms per deciliter (μg/dL), the reference level at which the CDC recommends that public health actions be initiated. However, the CDC has made clear that this action level should not be taken as a demarcation of a zone of harmless exposure because "no safe blood lead level in children has been identified".[15] Indeed, even very low levels of lead in blood have been shown to result in neurologic impairments such as behavioral and learning issues, slowed growth and, in rare cases, seizures and death. Even when lead exposure is caught before the direst consequences, its effect on children is never inconsequential because the *effects of lead exposure cannot be corrected*.[16] It is for all these reasons that the public health goal is to prevent children's exposure to lead *before* they are harmed. And pursuing this objective is the most critical for populations like the residents of RIIS Houses because children living at or below the poverty line who live in older housing are at greatest risk.

NYCHA's soil inaction appears to be based on the fundamental misconception that the risks from exposure to contaminated soil dust posed by renovation, construction, and demolition activities[17] are short-term and geographically limited. In other words, NYCHA's myopic position is that these risks may be assessed in complete isolation from people's health status, past exposures, cumulative impact and experience of current exposures to other toxic agents. However,

neither the law nor environmental health science permits the use of such a stunted assessment. Beyond any concern over short-term exposures to airborne toxic particulate matter("PM") arising from construction/maintenance activities, consideration must also be taken for long-term exposures to particulate matter from contaminated soil dust that settles across the Housing complex for inhalation, ingestion, or dermal exposure after re-suspension.[18] In addition to the plethora of studies establishing the prevalence of this risk in urban settings, New York City's own Division of Environmental Health confirmed the existence of this risk when it investigated the Smith Project site on August 14, 2018, and issued an Inspection Report and Notice of Violation to both to Navillus and NYCHA.[19] The Notice of Violation states that both entities must "contain dust areas, use dust suppression methods while working," and "isolate work from the public."[20] The City issued the Notice of Violation after undertaking a site investigation and determined that Navillus' practices are deficient to such a degree that the public is at risk of exposure to contaminated soil dust. Given this determination, it is difficult to understand why neither NYCHA, STV nor Navillus have seen fit to alter practices at the SMITH site to comply with the City's order. The same concern is ever more present at RIIS.

NYC Health Department most certainly must be aware of the egregious soil situation there, at RIIS. NYC DOH Deputy Commissioner Corinne Schiff and NYC DEP Operating Officer Sapienza were at RIIS for many hours according to administration testimony at Friday's City Council Public Housing Committee hearing ***[DATE]. I, myself, Joel Kupferman/EJI, contacted DOH-Environmental Division about the arsenic soil endangerment- only to be told that the Health Department can only deal with one issue at a time.

At the time, Chief Operating Officer- Vincent Sapienza, then DEP Commissioner Sapienza, was apprised of the similar SMITH situation in a eleven-page, well-documented, April 3, 2018 letter (attached). Daniel Green, then NYCHA's Chief Compliance Officer, now NYCHA's Vice President for Healthy Homes, was apprised of the toxic soil exposure problem at Smith via letters, direct communication by phone, weekly-meeting discussions, and staged walk-through. Due to his ongoing inspections, he is apparently aware or should be aware of the evident endangerment to human health posed by the toxic mounds of soil. Joy Sinderbrand, Vice President for the Recovery and Resilience Department, who testified at this City Council hearing, was apprised of same concerns at Smith yet has failed to take action to rectify the problem.

In addition to the health risks created by short- and long-term exposures, STV and NYCHA fail to take into account the health status of RIIS Houses residents. Given that NYCHA Housing residents now remain in their apartments on average for 22 years,[21] there is a high probability that many, if not all, of the residents living in RIIS Houses are exposed to the extremely toxic plume of particulate matter and aerosolized compounds resulting from the operation of the particulate matter emitting from the East 14th St Con Ed powerplant .[22] Moreover, added to this combination of exposures, RIIS Houses residents have been subjected to environmental assaults stemming from the contaminated indoor dust and particulate matter generated by adjacent highways and waterways packed with toxin-emitting sources.[23] Studies have shown that PM2.5 and PM10 concentrations are increased by local fugitive sources of particulate matter from vehicle exhaust,[24] road construction activities, and air and sea transportation sources (which produce particles across the range from PM2.5 to PM10).[25] The RIIS Houses apartment complex falls

within the atmospheric dispersal zone of a number of these cumulative, aggravating toxic sources; it is located by the FDR Drive on the East River, which serves as a main waterway for tug boats, water taxis, and garbage barges; it is bounded by both ground and raised highways; and it is within the flight jet path taking off and landing at the City's two major airports. The destruction of East River Park has been a major source of furtive particulate matter. In addition to these permanent and incessant progenitors of toxins, there are other occasional polluting sources, such as the re-surfacing of adjacent highways[26] and the salting of roadways to address icy conditions.[27] The effects of these polluting sources is revealed in the data: the Lower East Side ("LES") neighborhood in which the Smith Houses complex sits has higher percentages than City averages of black carbon, particulate matter, nitric oxide, nitric dioxide, and sulfur dioxide.[28] And adding yet another burden to this toxic environment are the years of people's exposures to pesticides and rodenticides, (including arsenic),[29] black mold,[30] and dust from the unremediated lead paint inside apartments and in the hallways of buildings.[31] Given the widespread knowledge that people in NYCHA housing complexes suffer disproportionately from respiratory illnesses[32] -for example, the LES has a crude rate of verified tuberculosis of 15.1 as compared to the city-wide rate of 7.2 (representing a 210% increase) and a preventable asthma hospitalization rate of 384.6 as compared to the city-wide rate of 232.9 (representing a 165% increase)[33]—this reliance of NYCHA on a deeply flawed report is incomprehensible. *See, e.g., Baez, Maribel et al. v New York City Housing Authority*, 13-cv-08916 (SDNY).

In this regard, EJI/NYELJP notes further that schoolchildren, a particularly vulnerable segment of the population, are being subject to multiple vectors of exposure resulting from the presence of a public school PS/MS 34 located directly across the street from the RIIS immediate area, two within the complex and one adjacent to it near the school across the street. Those children living in the RIIS & Smith Homes complex and attending one of the public schools are exposed to lead, arsenic, pesticides (recently including Roundup) and other toxic agents through at least four different vectors, including: (1) airborne particulate matter resulting from construction and demolition activities disturbing contaminated soil; (2) indoor apartment building dust and household dust resulting from the transport of contaminated soil and airborne particulates and the continual resuspension and deposition of these particulates; (3) indoor school building dust resulting from the same processes; and (4) airborne particulate matter resulting from activities on the playground during and after school. There is little doubt that children who live in the apartment complex but do not attend school there visit the playgrounds near them and thereby are subjected to three of the four noted vectors for exposure. With regard to the health statuses of these children, the latest data shows an asthma hospitalization rate of 40.8 per 100,000 children ages 5-14 years in the neighborhood as compared to the city-wide rate of 37.1.[34] The health of elderly residents of the RIIS Houses, many of whom are likely to suffer from respiratory disease, should be of equal concern to NYCHA given that they are subject to airborne particulate matter from Project activities, re-suspended contaminated soil dust during times they are outside, contaminated indoor dust and contaminated water According to the City's own data, 42% of all families living in Manhattan's public housing complexes are headed by an adult over the age of 62, and according to data for New York County, 7.8% of adults have asthma and 4.9% have Chronic obstructive pulmonary disease (COPD.)[35]

Finally, the NYELJP would be remiss if it did not reiterate its deep concern over the lack of trees, vegetation and ground cover at RIIS Houses caused by reckless renovation activities, poor planning and lack of commitment to maintaining a proper landscape at RIIS . *Trees serve as resiliency hydrological anchors in a flood prone area '' And to reiterate the mismanagement and malfeasance of protecting the water supply infrastructure - an area well covered by City Council members and testifiers. STV, as construction manager must be held accountable.*
Many tres at Smith suffered needless harm from malfeasant *Sandy rebuild practices. see powerpoint pdf*

Arsenic, in the water and in the soil pose a serious endangerment to health and the environment.

Recommendations for actions are found in notes. Please feel free to reach out to me and THE Environmental Justice Initiative for clarification or more information.

Joel R Kupferman,Esq.
10-30-22

FOOTNOTES on Separate page
Pertinent cited and additional Files available at
https://www.dropbox.com/sh/oxmax8mfj76bs8c/AADgaTdhtBdcd2UwVOrQw0B8a?dl=0

WORKING NOTES

1. INTRO
    a. EJI www.nyenvirolaw.org
    b. COUNSEL to Alfred E Smith and Jaco Riis Residents Association
    c. Worked with Flint lawyers
    d. 9/11 – forced reconsideration that the "AIR was SAFE" in lower Manhattan, litigated, sampled
2. WATER CONCERNS
    a. Myriad of problems at Riis
    b. Problems with Pump
    c. STV – construction manager – exercised project management malfeasance at Smith Houses
    d. Cumulative and long-term impact of arsenic exposure discounted or ignored
    e. Water tank – possible arsenic treated wood.
    f. Legionnaires– de minimis investigation Arcane risk assessment that should be examind/revised.

i. Unsubstantiated denial of problem – arcane NYC DOH assessment/classification . Failure to determine source and risk assessment. see

3. SOIL EXPOUSRE
    a. Major route of exposure
        i. Cite David Carpenter's letter
    b. ATSDR: The primary routes of arsenic entry into the body are via ingestion and inhalation. Dermal exposure can occur, but is not considered a primary route of exposure. Exposure dose is the cumulative exposure by all routes.
    c. Arsenic from Water and Soil …Elevated levels of arsenic in soil (due to either natural or man-made contamination) may be an ingestion risk, especially for children with pica and mouthing behaviors during play [Rossman 2007]. However, the bioavailability of arsenic in soil is variable, and dependent on the chemical form of arsenic. https://www.atsdr.cdc.gov/csem/arsenic/what_routes.html
    d. High levels of arsenic in soil – NYC Rat poison Control Program
        i. Findings at Smith: 85 parts per million 240 parts per million
        ii. 15.9 parts per million at Riis
        iii. NYC Health Dept violation cite (non-cover of soil- hazard of intrusion through windows into apartments
    e. Loose uncovered soil at Riis – including six foot mounds
    f. Lead in soil
    g. Resuspension of soil – vector for lead blood levels
    h.
        i. Flint report
        ii. Mielke report – arsenic in soil – flooding
        iii. Children playing in soil – dermal and ingestion
        iv. Trekking into apartments
        v. Penetration through windows

    b. Pesticide application – warning markers – but no listing of pesticide used
    c. Failure to cover – lack of ground cover
    d. Storm Water Management violations –
        i. Run-off into sewer system
        ii. CONSTRUCTION – PLACEMENT OF NEW PIPES causes further soil disturbance

    a. PM 2.5 (picture - Wu q)

[MISSING IMAGE: ,]

    a. Respiratory problems exacerbated – NEJM article https://www.nejm.org/doi/full/10.1056/NEJMoa1702747 Conclusions: In the entire Medicare population, there was significant evidence of adverse effects related to exposure to PM2.5 and ozone at concentrations below current national standards. This effect was most pronounced among self-identified racial minorities

and people with low income. (Supported by the Health Effects Institute and others.)

b. Cumulative impact – chronic exposure
c. LACK OF BIOMARKER TESTING – Urine and Hair
d. Failure of gov't agencies to act
    i. DEP Deputy Commissioner at site
    ii. Deputy NYC DOH Commissioner at site
    iii. I was told by Assistant Commissioner that NYC DOH can only work on one problem at time
e. False reassurance THAT THERE IS NO PROBLEM to residents
f. Dan Green – knowledge about Smith arsenic problem – and failure to contain resuspension
g. STV – apprised of situation at Smith Houses
    i. IN CHARGE of water infrastructure construction management –
    ii. Should be fully audited and investigated - lack of accountability & oversight of faulty contractors
h. High probability of flooding - no resiliency plan , misoending of FEMA rebuild funds
i. Federal Court Case
j. NYS Green Amendment

4. DEMANDS – SOLUTION
    a. Immediate removal of large piles of soil
    b. Geo textile cover placement
    c. Soil Testing - Full RCRA 8 & SVOC, VOCs
    d. Planting of flora - ground cover, shrubs, and trees
        i. Multitude of benefits including hydrological retention
        ii. Shade, mitigate strong rain fall, Air quality
        iii. Removal of toxic soils – Follow NYS DEC # Soil Cleanup
        iv. Much resiliency money available Fed and State CLIMATE funds
    e. Transfer Management of Ground cover and trees to NYC Parks Department
        i. fullI-Tree assessmentof Trees and flora on NYCHA waterfront, flood vulnerable properties
        ii. utilize DEP BLUEBELT- Storm Water Management Designs and Methodology
        iii. GREEN INFRASTRUCTURE utilization
        iv. RETAIN NYCHA Architects, planners and engineers - lessen reliance on outsourcing
    f. Provide HEPA vacuums for residents on lower levels
        i. Share program – based on Syracuse EPA HEPA Vacuum Project
    g. Request for PUBLIC HEALTH ASSESSMENT by Agency for Toxic Substance Disease Agency (ATSDR) with NYS DOH

h. Provide resources for Tenant Association to hire independent environmental assessors and investigators
    i. Difficult for Tenant Association to procure funds & experts
5. Increase Whistleblower protection for NYCHA and City workers
    a. provide increased access to report problems and malfeasance to City Council
6. Create an Ombudsperson position at DEP,DOH and NYCHA
    i.
    ii.

5. Vulnerable population --- disabled ,elderly, people of color, children – utilize full EJ regs and con
6. CITY Health Clinic – state Network Bellevue Clinic provide evaluation at site , request

7. Problem area - 14th Street Con Ed plant

STATE REGS

FOOTNOTES

1. 6 NYCRR Part 375 NYS Environmental Remediation Programs https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375.pdf
2. DER-10 provides an overview of the site investigation and remediation process for DEC's remedial programs administered by the Division of Environmental Remediation (DER). These include the Inactive Hazardous Waste Disposal Site Remedial Program, known as the State Superfund Program (SSF); Brownfield Cleanup Program (BCP); Environmental Restoration Program (ERP); and Voluntary Cleanup Program (VCP); and certain petroleum releases. https://www.dec.ny.gov/regulations/67386.html
3. --- Generic Remedial Action Objectives (RAOs) https://www.dec.ny.gov/regulations/67560.html
    a. Soil
        i. RAOs for Public Health Protection
            1. Prevent ingestion/direct contact with contaminated soil.
            2. Prevent inhalation exposure to contaminants volatilizing from soil
        ii. RAOs for Environmental Protection
            1. Prevent migration of contaminants that would result in (include all appropriate media: groundwater, surface water, or sediment) contamination.
            2. Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain
    b. Soil Vapor
        i. RAOs for Public Health Protection
            1. Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a sit
4. ENVIRONMENTAL JUSTICE – heightened analysis and protection

a. NYC NYS and federal

RESOURCES
https://medicine.tulane.edu/departments/pharmacology/faculty/howard-w-mielke-phd
HOWARD R. MIELKE
Illegally subjects people who breathe or ingest PM2.5, lead and arsenic to serious harm.
Similar health risks for workers… presumed safe levels

Particulate Matter and Soils Articles

Resuspension of urban soils as a persistent source of lead poisoning in children: A review and new directions Mark A.S.Laidlaw Gabriel M.Filippelli Mark A.S.LaidlawGabriel M.Filippelli
https://www.sciencedirect.com/science/article/abs/pii/S0883292708001832

Abstract

Urban soils act as the repository for a number of environmental burdens, including Pb. Significant attention has been devoted to reducing Pb burdens to children with outstanding success, but the fact that blood Pb levels above 10 μg/dL are disproportionately found in children living in many USA cities (15–20% in some cities compared to a national average of less than 2%) indicates that not all of the sources have been eliminated. Although the health risk of fine particulates has begun to raise concerns in cities, little attention has been paid to Pb associated with these particulates and the potential role of this pathway for continued Pb burdens of urban youth. This review summarizes recent work on particulate resuspension and the role of resuspension of Pb-enriched urban soils as a continued source of bio-available Pb both outside and inside homes, then presents recent efforts to model Pb burdens to children based on the atmospheric parameters that drive particulate resuspension. A strong seasonal relationship is found between atmospheric particulate loading and blood Pb levels in children, and new particulate loading models are presented for a range of US cities involved in the Interagency Monitoring of Protected Visual Environments (IMPROVE) program. These seasonal particulate loading models have implications for a number of respiratory health impacts, but can also be used to calculate seasonal patterns in bio-available Pb redistribution onto contact surfaces (the primary pathway for ingestion-related uptake in toddlers) and assist clinicians in interpreting time-specific blood Pb tests

Arsenic from Water and Soil …Elevated levels of arsenic in soil (due to either natural or man-made contamination) may be an ingestion risk, especially for children with pica and mouthing behaviors during play [Rossman 2007]. However, the bioavailability of arsenic in soil is variable, and dependent on the chemical form of arsenic.
https://www.atsdr.cdc.gov/csem/arsenic/what_routes.html ATSDR
Dermal contact when handling preserved wood products containing arsenic could result in arsenic exposure. However, very little is known regarding the chemical form, conditions for absorption, kinetics, or other information needed to make a statement regarding skin absorption in specific populations [NAS 1977]. Toxic effects have been reported in the occupational literature from splashes of arsenic trichloride or arsenic acid on worker's skin [Garb and Hine 1977].

a.

Footnotes

[1] Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici (2020) "Exposure to air pollution and COVID-19 mortality in the United States." medRxiv 2020.04.05.20054502; doi: 10.1101/2020.04.05.20054502

[2] In this regard, NYELJP draws attention to the contract between NYCHA and Navillus which states that the re-use of site soils is permitted only if "they meet the project environmental requirements and specifications," and that "excavated materials unsuitable for filling or backfilling" must be "legally disposed of off-site." *See* Division 31 – Earthwork, Contract between NYCHA and Navillus included in prior submissions. These provisions make clear that soil testing should have been done prior to any other Project activities in order to determine contamination levels and appropriate procedures for handling contaminated soils.

[3] *See, e.g.*, 24 CFR §1.4(b)(2)(i) ("A recipient, in determining the types of housing, accommodations, facilities, services, financial aid, or other benefits which will be provided under any such program or activity, or the class of persons to whom, or the situations in which, such housing, accommodations, facilities, services, financial aid, or other benefits will be provided under any such program or activity, or the class of persons to be afforded an opportunity to participate in any such program or activity, *may not, directly or through contractual or other arrangements, utilize criteria or methods of administration which have the effect of subjecting persons to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program or activity as respect to persons of a particular race, color, or national origin*") (emphasis supplied).

[4] *See* NYCHA Admissions, Consent Decree in *USA v. NYCHA*, 18 Civ. 5213, at 1-3 (June 11, 2018), available at https://www.epa.gov/sites/production/files/2018-06/documents/nycha-cd.pdf (last visited on March 1, 2019).

[5] New York City Housing Authority, "NYCHA 2018 Fact Sheet," (2018), available at https://www1.nyc.gov/assets/nycha/downloads//pdf/NYCHA-Fact-Sheet_2018_Final.pdf (last visited on March 1, 2019).

[6] Of course, NYELJP does not agree that the levels noted by Waldon represent a correct analysis of soil contaminants. Accordingly, this statement should not be taken as any such confirmation of either Waldon's methodology or its findings.
[7] 6 NYCRR § 375-6.8, Table 375-6.8(b) (2006).
[8] R.N. Ratnaike, "Acute and Chronic Arsenic Toxicity," *Postgrad Med J.*, 2003, v. 79, at 391-96.
[9] *Id.*; W.L. Schoolmeester, D.R. White, "Arsenic Poisoning," *South Med J.*, 1980, v. 73, at 198-208. The acute lethal dose of ingested arsenic "has been estimated to be about 0.6 mg/kg/day." R.N. Ratnaike, "Acute and Chronic Arsenic Toxicity," *Postgrad Med J.*, 2003, v. 79, at 392.
[10] *See, e.g.*, Affidavit of Stephen Lester, *Matter of Daisy Wright, et al. v. New York State Department of Health*, dated April 2015; R.N. Ratnaike, "Acute and Chronic Arsenic Toxicity," *Postgrad Med J.*, 2003, v. 79, at 393-94 (internal citations omitted).
[11] R.N. Ratnaike, "Acute and Chronic Arsenic Toxicity," *Postgrad Med J.*, 2003, v. 79, at 393-94 (internal citations omitted).
[12] 6 NYCRR § 375-6.8, Table 375-6.8(b) (2006).
[13] Department of Justice Press Release, "The United States and Indiana Reach Agreement With SunCoke Energy and Cokenergy to Resolve Clean Air Act Violations at Indiana Harbor Coke Plant," January 25, 2018, available at https://www.justice.gov/opa/pr/united-states-and-indiana-reach-agreement-suncoke-energy-and-cokenergy-resolve-clean-air-act (last visited on April 2, 2019).
[14] Children under the age of 6 years old are at risk because they are growing rapidly and because they tend to put their hands or other objects, which may be contaminated with lead dust, into their mouths.
[15] *See* CDC website information, available at https://www.cdc.gov/nceh/lead/https://www.cdc.gov/nceh/lead/ (last visited on April 2, 2019).
[16] *Id.*
[17] Studies have shown that construction and demolition activities result in high local concentrations of PM10, which contains a wide variety of toxic substances and adversely affect the respiratory health of nearby residents. *See* D. Hansen, B. Blahout, *et al., J. Hosp. Infect.*, 2008, v. 70, at 259-264; C.M. Beck, A. Geyh, *et al., J. Air Waste Manage. Assoc.*, 2003, v. 53, at 1256-1264; J. Joseph, R.S. Patil and S.K.Gupta, *Environ. Monit. Assess.*, 2009, v. 159, at 85-98.
[18] P. J. Lioy, C. P. Weisel, J. R. Millette, S. Eisenreich, D. Vallero, J. Offenberg, B. Buckley, B. Turpin, M. Zhong and M. D. Cohen, *Environ. Health Perspect.,* 2002, 110, 703; 40 M. Abu-Allaban, S. Hamasha and A. Gertler, *J. Air Waste Manage. Assoc.*, 2006, 56, 1440–1444.
[19] *See* August 14, 2018 Inspection Report and Notice of Violations issued to NYCHA and Navillus by the New York City Department of Health and Mental Hygiene, Division of Environmental Health.
[20] *See* August 14, 2018 Inspection Report and Notice of Violations issued to NYCHA and Navillus by the New York City Department of Health and Mental Hygiene, Division of Environmental Health.
[21] The Times reports that the average period a NYCHA tenant stays put these days is 22 years, up from 19 years in 2005 and 17 years in 1995. Mireya Navarro, "As New York Rents Soar, Public Housing Becomes Lifelong Refuge," NY Times, Aug. 3, 2015, available at https://www.nytimes.com/2015/08/04/nyregion/as-new-york-rents-soar-public-housing-becomes-lifelong-refuge.html?partner=rss&emc=rss&_r=0.

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[26] This includes, among other highway projects, the re-surfacing of the F.D. Roosevelt Drive, which entailed the application of 35,000 tons of asphalt over a six-month period ending on November 30, 2015. *See* CBS News, "$8.5 million FDR Drive Resurfacing Project Finished Ahead of Schedule," (November 30, 2015), available at https://newyork.cbslocal.com/2015/11/30/fdr-drive-resurfacing-project-complete/ (last visited March 10, 2019).
[27] Recent studies have shown that fine dry road salts migrate in excess of 300 meters after the snowpack melts, and more immediately if the salts are applied in the absence of precipitation. *See* J. Lazarcik, J.E. Dibb, "Evidence of Road Salt in New Hampshire's Snowpack Hundreds of Meters from Roadways," *Geosciences*, 2017, v. 7(3), 54. Rock salt causes burns when it comes into contact with the skin, and respiratory tract irritation when inhaled. Repeated exposures corrode major components of the respiratory tract.
[28] Public Tableau, Bizlitics, NYC Health Dashboard, Lower East Health Outcomes and Neighborhood Conditions, available at https://public.tableau.com/profile/bizlitics#!/vizhome/NYCHealthDashboards_v4demo_0/AllMaps, (last visited February 20, 2019).
[29] Division of Environmental Health, New York City Department of Health and Mental Hygiene, *Pesticide Use by New York City Agencies in 2017*, 1, 42-43 (November 2018) (found at: https://www1.nyc.gov/assets/doh/downloads/pdf/pesticide/pesticide-use-report2017.pdf)
[30] Institute of Medicine of the National Academies, "Report Brief: Damp Indoor Spaces and Health," May 2004, available at http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2004/Damp-Indoor-Spaces-and-Health/dampindoor2pagerforPDF.pdf; Former State Senator Jeffrey Klein, et al., "Break the Mold: Cleaning Up NYCHA's Mess," March 8, 2018, available at

https://www.nysenate.gov/sites/default/files/press-release/attachment/break_the_mold_full_report.pdf.

[31] *See* NYCHA Admissions, Consent Decree in *USA v. NYCHA*, 18 Civ. 5213, at 1-3 (June 11, 2018), available at https://www.epa.gov/sites/production/files/2018-06/documents/nycha-cd.pdf (last visited on March 1, 2019).

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[33] Public Tableau, Bizlitics, NYC Health Dashboard, Lower East Health Outcomes and Neighborhood Conditions, available at https://public.tableau.com/profile/bizlitics#!/vizhome/NYCHealthDashboards_v4demo_0/AllMaps, (last visited February 20, 2019).

[34] Public Tableau, Bizlitics, NYC Health Dashboard, Lower East Health Outcomes and Neighborhood Conditions, available at https://public.tableau.com/profile/bizlitics#!/vizhome/NYCHealthDashboards_v4demo_0/AllMaps, (last visited February 20, 2019).

[35] American Lung Association, "Estimated Prevalence and Incidence of Lung Disease," May 2014, available at https://www.lung.org/assets/documents/research/estimated-prevalence.pdf (last visited March 10, 2019).

Technical Report

prepared for:

Environmental Justice Initiative
301 West 107th Street Suite 4W
New York NY, 125-2793
Attention: Joel Kupferman

Report Date: 10/20/2022
Client Project ID: 22501HA RIIS SOILS
York Project (SDG) No.: 22J0490

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 10/20/2022
Client Project ID: 22501HA RIIS SOILS
York Project (SDG) No.: 22J0490

Environmental Justice Initiative
301 West 107th Street Suite 4W
New York NY, 125-2793
Attention: Joel Kupferman

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on October 11, 2022 and listed below. The project was identified as your project: **22501HA RIIS SOILS**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
22J0490-01	RIIS #1 466	Soil	10/02/2022	10/11/2022
22J0490-02	RIIS #2 E.12	Soil	10/02/2022	10/11/2022

General Notes for York Project (SDG) No.: 22J0490

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:  **Date:** 10/20/2022

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: **RIIS #1 466** **York Sample ID:** **22J0490-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
22J0490	22501HA RIIS SOILS	Soil	October 2, 2022 3:15 pm	10/11/2022

Metals, RCRA

Log-in Notes: BTL-X **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**15.9**		mg/kg dry	1.40	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**241**		mg/kg dry	2.33	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	**Cadmium**	**2.46**		mg/kg dry	0.280	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	**Chromium**	**27.1**		mg/kg dry	0.466	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	**Lead**	**869**		mg/kg dry	0.466	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	Selenium	ND		mg/kg dry	2.33	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.466	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:14	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: BTL-X **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	**Mercury**	**1.68**		mg/kg dry	0.0336	1	EPA 7473	10/19/2022 08:58	10/19/2022 14:54	MR
							Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP			

Total Solids

Log-in Notes: BTL-X **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.4**		%	0.100	1	SM 2540G	10/15/2022 12:08	10/15/2022 14:37	LAR
							Certifications: CTDOH			

Sample Information

Client Sample ID: **RIIS #2 E.12** **York Sample ID:** **22J0490-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
22J0490	22501HA RIIS SOILS	Soil	October 2, 2022 3:35 pm	10/11/2022

Metals, RCRA

Log-in Notes: BTL-X **Sample Notes:**

Sample Information

Client Sample ID: RIIS #2 E.12 **York Sample ID:** 22J0490-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
22J0490	22501HA RIIS SOILS	Soil	October 2, 2022 3:35 pm	10/11/2022

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**7.30**		mg/kg dry	1.41	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**88.8**		mg/kg dry	2.35	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	**Cadmium**	**0.414**		mg/kg dry	0.282	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	**Chromium**	**15.7**		mg/kg dry	0.469	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	**Lead**	**133**		mg/kg dry	0.469	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	Selenium	ND		mg/kg dry	2.35	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.469	1	EPA 6010D	10/17/2022 15:58	10/19/2022 14:16	AJL
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: BTL-X **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	**Mercury**	**0.344**		mg/kg dry	0.0338	1	EPA 7473	10/19/2022 08:58	10/19/2022 15:06	MR
							Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP			

Total Solids

Log-in Notes: BTL-X **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**88.8**		%	0.100	1	SM 2540G	10/15/2022 12:08	10/15/2022 14:37	LAR
							Certifications: CTDOH			

Analytical Batch Summary

Batch ID: BJ20862 **Preparation Method:** % Solids Prep **Prepared By:** LAR

YORK Sample ID	Client Sample ID	Preparation Date
22J0490-01	RIIS #1 466	10/15/22
22J0490-02	RIIS #2 E.12	10/15/22
BJ20862-DUP2	Duplicate	10/15/22

Batch ID: BJ20935 **Preparation Method:** EPA 3050B **Prepared By:** cw

YORK Sample ID	Client Sample ID	Preparation Date
22J0490-01	RIIS #1 466	10/17/22
22J0490-02	RIIS #2 E.12	10/17/22
BJ20935-BLK1	Blank	10/17/22
BJ20935-DUP1	Duplicate	10/17/22
BJ20935-MS1	Matrix Spike	10/17/22
BJ20935-PS1	Post Spike	10/17/22
BJ20935-SRM1	Reference	10/17/22

Batch ID: BJ21046 **Preparation Method:** EPA 7473 soil **Prepared By:** MR

YORK Sample ID	Client Sample ID	Preparation Date
22J0490-01	RIIS #1 466	10/19/22
22J0490-02	RIIS #2 E.12	10/19/22
BJ21046-BLK1	Blank	10/19/22
BJ21046-DUP1	Duplicate	10/19/22
BJ21046-MS1	Matrix Spike	10/19/22
BJ21046-SRM1	Reference	10/19/22

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BJ20935 - EPA 3050B											
Blank (BJ20935-BLK1)									Prepared: 10/17/2022 Analyzed: 10/19/2022		
Arsenic	ND	1.25	mg/kg wet								
Barium	ND	2.08	"								
Cadmium	ND	0.250	"								
Chromium	ND	0.417	"								
Lead	ND	0.417	"								
Selenium	ND	2.08	"								
Silver	ND	0.417	"								
Duplicate (BJ20935-DUP1)	*Source sample: 22J0811-01 (Duplicate)								Prepared: 10/17/2022 Analyzed: 10/19/2022		
Arsenic	8.82	1.48	mg/kg dry		14.3				47.5	35	Non-dir.
Barium	45.2	2.46	"		57.5				24.0	35	
Cadmium	ND	0.295	"		0.464					35	
Chromium	14.8	0.492	"		30.5				69.6	35	Non-dir.
Lead	105	0.492	"		129				20.4	35	
Selenium	ND	2.46	"		ND					35	
Silver	ND	0.492	"		ND					35	
Matrix Spike (BJ20935-MS1)	*Source sample: 22J0811-01 (Matrix Spike)								Prepared: 10/17/2022 Analyzed: 10/19/2022		
Arsenic	188	1.48	mg/kg dry	197	14.3	88.2	75-125				
Barium	241	2.46	"	197	57.5	93.6	75-125				
Cadmium	4.88	0.295	"	4.92	0.464	89.8	75-125				
Chromium	31.7	0.492	"	19.7	30.5	6.20	75-125	Low Bias			
Lead	151	0.492	"	49.2	129	44.2	75-125	Low Bias			
Selenium	142	2.46	"	197	ND	72.3	75-125	Low Bias			
Silver	4.08	0.492	"	4.92	ND	82.9	75-125				
Post Spike (BJ20935-PS1)	*Source sample: 22J0811-01 (Post Spike)								Prepared: 10/17/2022 Analyzed: 10/19/2022		
Arsenic	2.28		mg/L	2.00	0.146	107	75-125				
Barium	2.76		"	2.00	0.584	109	75-125				
Cadmium	0.057		"	0.0500	0.005	105	75-125				
Chromium	0.508		"	0.200	0.310	98.8	75-125				
Lead	1.84		"	0.500	1.31	105	75-125				
Selenium	1.65		"	2.00	-0.164	82.5	75-125				
Silver	0.049		"	0.0500	-0.002	97.9	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BJ20935 - EPA 3050B											
Reference (BJ20935-SRM1)											
Prepared: 10/17/2022 Analyzed: 10/19/2022											
Arsenic	96.8	1.25	mg/kg wet	87.4		111	70-130.4				
Barium	420	2.08	"	347		121	75.2-130.3				
Cadmium	197	0.250	"	160		123	75-145.6				
Chromium	293	0.417	"	231		127	70.1-134.2				
Lead	274	0.417	"	266		103	74.1-125.9				
Selenium	121	2.08	"	130		93.5	66.9-133.8				
Silver	56.0	0.417	"	57.1		98.1	70.2-129.8				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BJ21046 - EPA 7473 soil											
Blank (BJ21046-BLK1)								Prepared & Analyzed: 10/19/2022			
Mercury	ND	0.0300	mg/kg wet								
Duplicate (BJ21046-DUP1)	*Source sample: 22J0544-13 (Duplicate)							Prepared & Analyzed: 10/19/2022			
Mercury	ND	0.0344	mg/kg dry		ND					35	
Matrix Spike (BJ21046-MS1)	*Source sample: 22J0544-13 (Matrix Spike)							Prepared & Analyzed: 10/19/2022			
Mercury	0.550		mg/kg	0.500	0.0157	107	75-125				
Reference (BJ21046-SRM1)								Prepared & Analyzed: 10/19/2022			
Mercury	28.167		mg/kg	27.2		104	59.9-140.1				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BJ20862 - % Solids Prep											
Duplicate (BJ20862-DUP2)	*Source sample: 22J0628-05 (Duplicate)								Prepared & Analyzed: 10/15/2022		
% Solids	91.1	0.100	%		90.8				0.313	20	

Sample and Data Qualifiers Relating to This Work Order

M-SPKM	The spike recovery is not within acceptance windows due to sample non-homogeneity, or matrix interference.
M-DUPS	The RPD between the native sample and the duplicate is outside of limits due to sample non-homogeneity
BTL-X	NON-COMPLIANT - The sample was received in an improper container and/or with improper sampling techique.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
120 Research Drive 132-02 89th Ave
Stratford, CT 06615 Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 22J0490

Page _____ of _____

YOUR Information	Report To:	Invoice To:
ENVIRONMENTAL JUSTICE INITIATIVE	ENVIRONMENTAL JUSTICE INITIATIVE	ENVIRONMENTAL JUSTICE INITIATIVE
301 W.107Th ST 4W New York NY 10025-2793	Address:	Address:
917-414-1983	Phone.:	Phone.:
Joel R Kupferman	Contact:	Contact:
EJI@earthlink.net	E-mail:	E-mail:

YOUR Project Number #22-501HA

YOUR Project Name -RIIS SOILS

YOUR PO#:22-501

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	
RUSH - Four Day	
Standard (5-7 Day)	X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

joel R Kupferman

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil | Other

Samples From

New York	x
New Jersey	
Connecticut	
Pennsylvania	
Other	

Report / EDD Type (circle selections)

Summary Report	CT RCP	Standard Excel EDD
QA Report	CT RCP DQA/DUE	EQuIS (Standard)
NY ASP A Package	NJDEP Reduced	NYSDEC EQuIS
NY ASP B Package	Deliverables	NJDEP SRP HazSite
	NJDKQP	Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	S	Date/Time Sampled	Analysis Requested	
RIIS #1 466	S	Oct 2-22 15:15	RCRA LIST DATA PACKAGE	ZIP LOCK BAG
RIIS#2 E.12	S	Oct 2-22 15:35	**RCRA LIST DATA PACKAGE**	**LOCK BAG**

Joel R Kupferman 10/11/22

Comments:

Preservation: (check all that apply)
HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: _____

Special Instruction
Field Filtered _____
Lab to Filter _____

1. Samples Relinquished by / Company	Date/Time	1. Samples Received by / Company	Date/Time	2. Samples Relinquished by / Company	Date/Time
Joel Kupferman Env. Justice Init.	2022.10.11 AM	K Bonhomme	10/11/22 0810	K Bonhomme 10/11/22	2000
Samples Received by / Company	Date/Time	3. Samples Relinquished by / Company	Date/Time	3. Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	4. Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				[illegible] 10/11/22	2000 / 6.0 Degrees C

Construction/Rebuild Problems at Smith Houses And at RIIS

Environmental Justice Initiative/NEW YORK ENVIRONMENTAL LAW & JUSTICE PROJECT
JOEL KUPFERMAN, Esq
Counsel to Alfred E. Smith Resident Association

Summary

- Navillus/STV/NYCHA did **NOT** do its due diligence to protect the trees at Smith Houses

STV is construction manager at RIIS –overseer water pripe infrastructure

- The damaged trees poses a long term public safety risk.
- NYCHA Should set aside a tree damage fund in escrow and monitor the health of the tree for at least 5 years after the construction is completed
- Navillus/STV/NYCHA did **NOT** do its due diligence to protect the health of the residents, workers and guests at Smith Houses
-
- There are high levels of arsenic and lead in the soil at Smith Houses.
  - The unsafe construction conditions are causing exposure to these toxics to residents patrons of surrounding businesses.

NYCHA Governor A. E. Smith Houses

- Building complete in 1953
- Public housing development
- Home to vulnerable populations
  - Children
  - Elderly
  - Those with chronic health conditions (e.g. asthma)

Including 9/11 victims -
- astmathics (BAEZ
Law Suite

MAJOR EXCEEDANCES

not so moderate --but rather MAJOR EXCEEDANCES in the C-1 and other samples

1. Benzo(a)anthracene 3.2 x NYS Soil Cleanup Objectives
2. Benzo(b)pyrene,3.6x
3. Benzo(b)fluoranthene 3.9x;
4. lndeno (1.2.3-cd)pyrene , 3.6x.

ARSENIC AT RIIS 15.9 PARTS PER MILLION

A Town Hall for Alfred E. Smith Houses Community:

The World Trade Center Health Program and The Sept. 11th Victim Compensation Fund will be Hamilton Madison Houses on

Date: December 4, 2018

1ST Session Time: 3PM – 4PM

2nd Session Time: 6PM -7PM

You may still be eligible to apply for 9/11 health care or compensation. Find out more from Rupa Bhattacharyya, Special Master of the Victim Compensation Fund and Dr. Joan Reibman, Medical Director of the WTC Health Program's Survivor Program. You will be able to get help enrolling in the Health Program at this event. 6:30 - 8:00 pm

Presentation and Q&A Space is limited; please RSVP at 911health2018.eventbrite.com or (212) 330-7658.

ALFRED E. SMITH HOUSES RESIDENT ASSOCIATION, Inc.

史密斯居民協會通

ASOCIACIÓN DE RESIDENTES DEL RESIDENCIAL ALFRED E. SMITH, Inc.

Carsten Glaeser, Ph.D. ASCA

Consulting Arborist
NYS Certified Arborist No. 5198A

- Retained by Alfred E Smith Resident Association
- Visited, evaluated site myriad of times
- Recommendations went unheeded

NYCHA ONLY AS ONE INTERIM ARBORIST NOW

NYCHA BEING SUED FOR TREE LIMB FALLING ON RESIDENT

Findings

The Arborist Found That:

- Navilus did **NOT** comply with Tree Protection Specs
- Non-compliance resulted in damage to the trees
- This damage caused high stress conditions to the trees and this poses long term public safety concern

The trenching of the soil caused root damage causes latent damage

AND EXPOSURE TO THE TOXIC SOILS

MYRIAD OF CONTRACT VIOLATIONS WHISTLEBLOWER SUSPENDED BY NYCHA

The Contract Between NYCHA and Navillus

All trees (unless otherwise noted) are to be protected and will be marked by the Contractor (BEFORE THE GENERAL CONTRACTOR STARTS ANY DEMOLITION OR CONSTRUCTION WORK) with a ribbon which reads "CAUTION" in bold black letters which can be read from a distance of 100 feet.

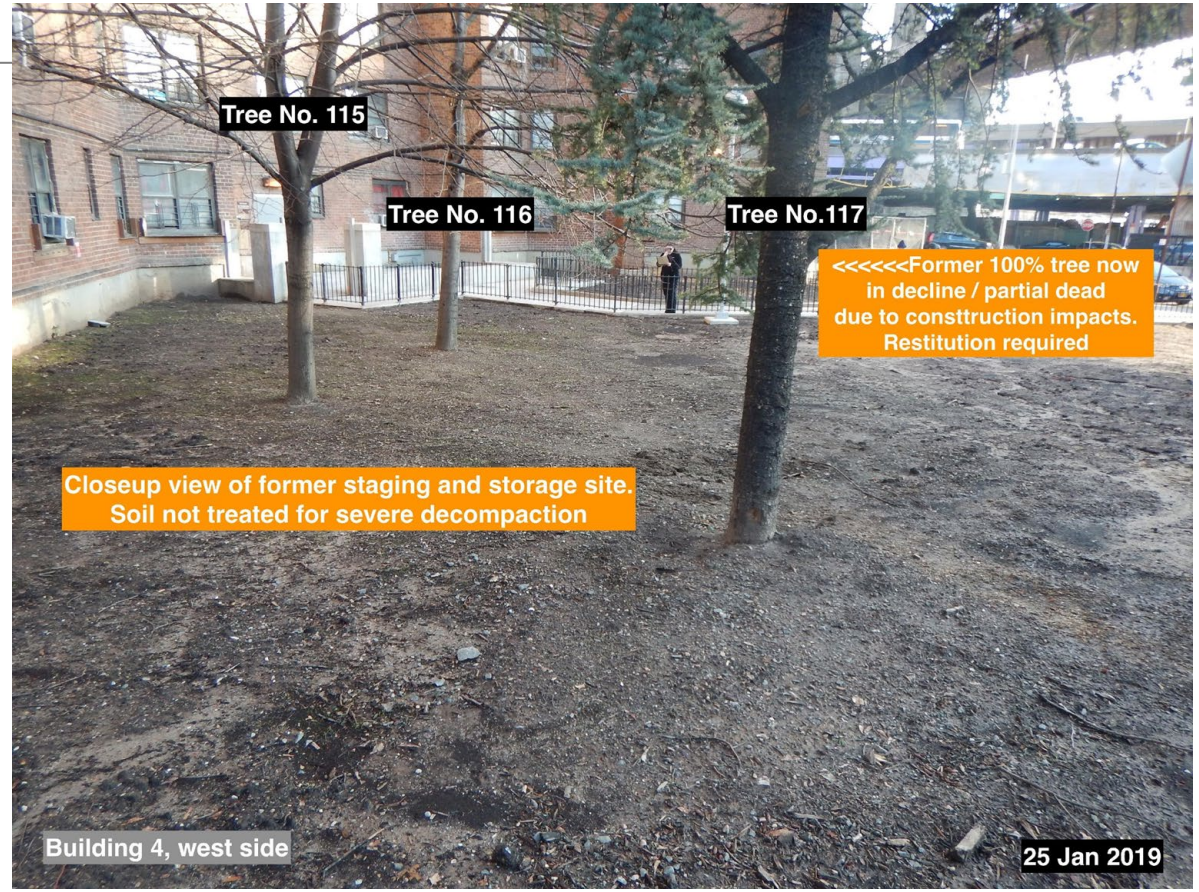
There shall be no stockpiling/storage of fill, removals or any construction materials within the Critical Root Zone (CRZ) (note: Critical Root Zone extends a minimum of 4' beyond the drip line of a tree) of **any** existing tree to be protected at any time before, during and after the construction period. ***This also includes parking any personal vehicles and equipment not directly associated with the day's activities***. If the contractor violates this stipulation, he shall, at his own expense, remediate any and all soil compaction utilizing the methodology approved by NYCHA. (See General Conditions sections 24 and 54)

Site Visits


BUILDING 5
West Side
Tree No. 137
STAGING OF WORK
COMPACTION OF SOILS
CRITICAL ROOT ZONE
STORAGE OF MATERIALS
TRAMPLING BY LABORERS
27 Nov 2017


BUILDING 4
East Side

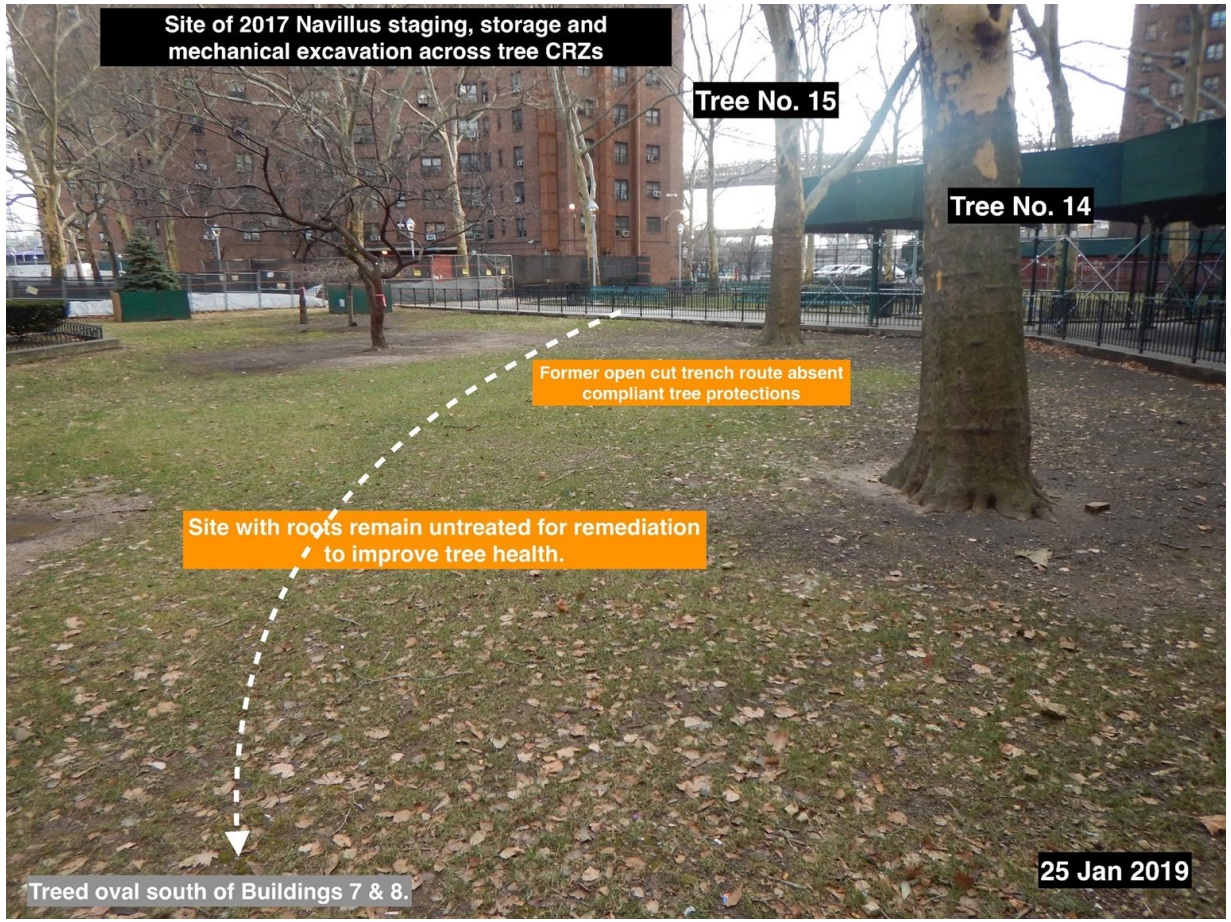

Tree No. 117
Tree No. 115
Tree No. 116
Navillus staging, storage site amid unprotected trees
Building 4, west side
10 June 2018


Tree No. 115
Tree No. 116
Tree No.117
<<<<<<<Former 100% tree now in decline / partial dead due to consttruction impacts. Restitution required
Closeup view of former staging and storage site. Soil not treated for severe decompaction
Building 4, west side
25 Jan 2019


Tree No. 137
TREE PROTECTION ZONE
Ponding of Rain water
Severe Soil Compaction
Deposting of cast soil and fill
atop of CRZ
26 April 2018


2017 Navillus storage and staging site amid trees
Tree No. 137
Tree No. 138
Tree No. 139
Tree No. 140
Ponding is evidence of
construction related
compaction and impermeability
bare soil
Tree killing severe compaction of soil with
roots is left untreated.
bare soil
bare soil
bare soil
bare soil
bare soil
Trees at Building 5
25 Jan 2019


Tree No. 15
Tree No. 14
29 Nov 2017


Site of 2017 Navillus staging, storage and mechanical excavation across tree CRZs
Tree No. 15
Tree No. 14
Former open cut trench route absent compliant tree protections
Site with roots remain untreated for remediation to improve tree health.
Treed oval south of Buildings 7 & 8.
25 Jan 2019

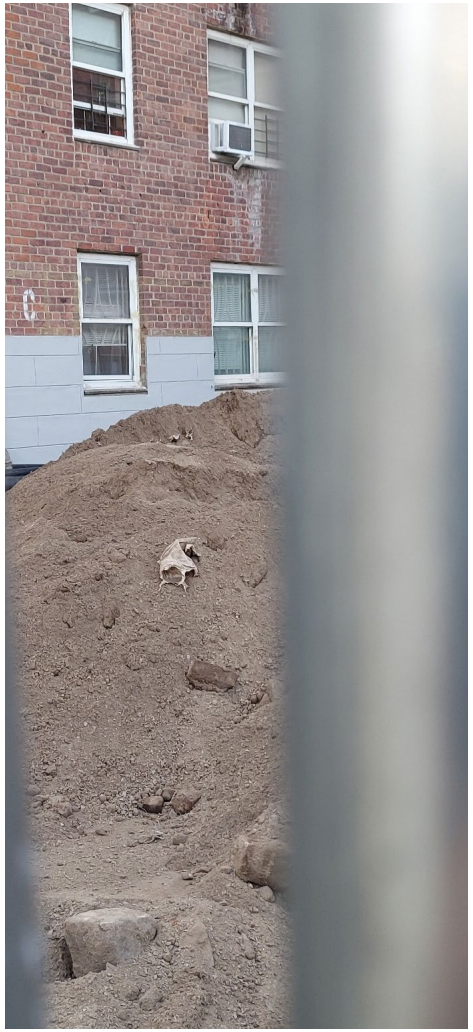

Tree No. 5
WALKWAY CLOSED
PLEASE FIND ALTERNATE ROUTE
21 Dec 2017

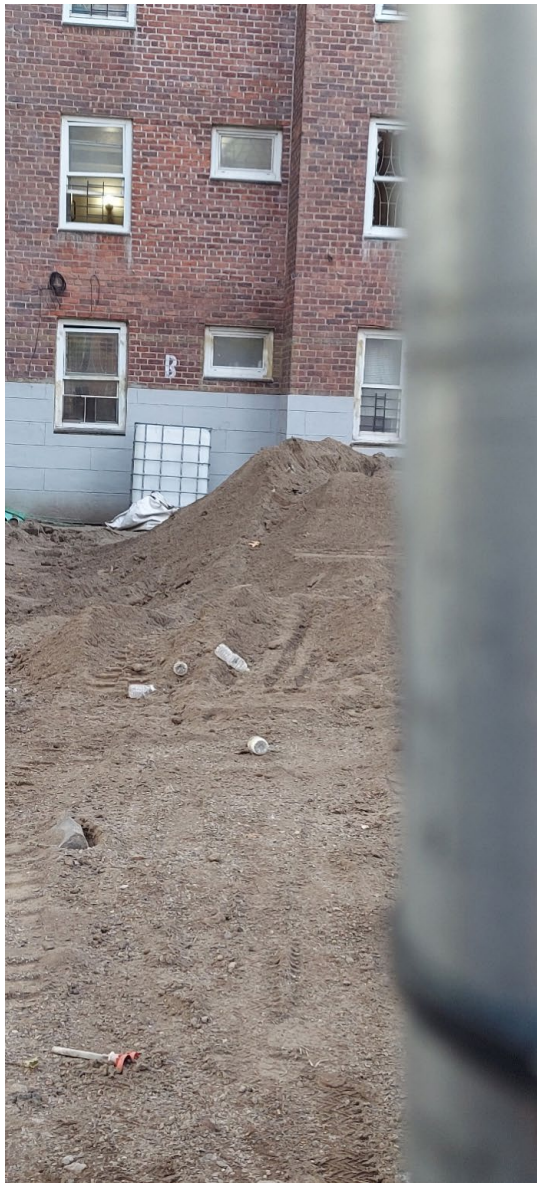

2017 Navillus site for staging, storaging and mechanical excavation across multi CRZs.
Tree Nos. 1 thru12
Tree No. 5
Site with harmed and abused NYCHA trees has not received any necessary tree root remediations to improve tree health.
Treed quad between Buildings 7 and 8
25 Jan 2019

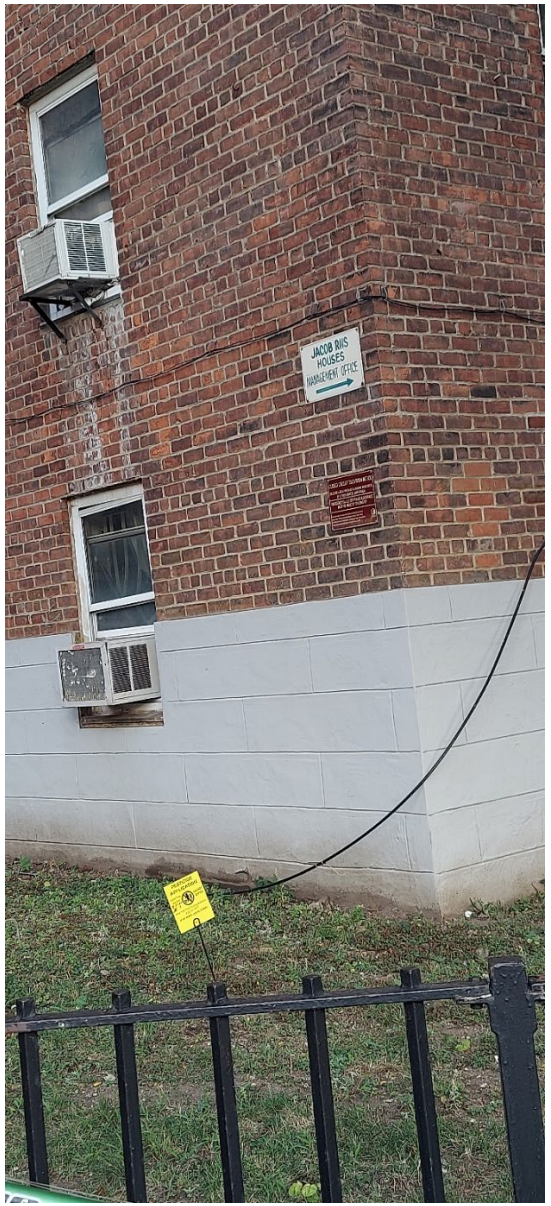

TRENCHED AREA
CRITICAL ROOT ZONE
LARGE ANCHOR TREE LOSS
Navillus Storage Yard
27 Nov 2017


Former 100% healthy trees now in declining health
Tree No. 129
Tree No. 127
Tree No. 131
Tree No. 130
Route for mechanical trenching with severe root loss
Navillus Storage Yard Trees
25 Jan 2019


Probable risk tree
Tree No. 127
Undiagnosed tree trunk cavity
Below ground root loss from mechancial trenching
Navillus Storage Yard
25 Jan 2019







RIIS OCTOBER 3, 2022

Pics by Joel Kupferman

NEW YORK
state department of
HEALTH

The Development of New York State Soil Cleanup Objectives for Arsenic

New York State developed soil cleanup objectives (SCOs) for environmental contaminants in soil including arsenic. This fact sheet describes why and how the health-based SCOs for arsenic were developed.

Health-based noncancer and cancer SCOs for arsenic were calculated for three types of land use where people live on the property. The land uses are called unrestricted, residential and restricted residential (SCOs also were developed for commercial and industrial land uses). All three land uses for properties where people live assume that exposure to arsenic occurs through ingestion of contaminated soil and indoor dust and inhalation of soil particles in air.

- **Why the Concern - Arsenic Toxicity**
- Exposure to arsenic can cause several cancer and noncancer health effects. Arsenic is classified as a known human carcinogen by the United States Environmental Protection Agency (US EPA) and several other health agencies based on studies that show increased risks for lung, skin and bladder cancer in people who were exposed to high levels of arsenic in drinking water for long periods of time. Long-term oral exposure to arsenic can also cause noncancer health effects such as darkening and thickening of the skin on the hands and feet, nerve and liver damage, high blood pressure and damage to blood vessels. Since arsenic can cause adverse health effects in humans after high levels of exposure, lower levels of arsenic exposure in environmental media such as soil or water over long periods of time may pose an increased risk for arsenic-related health effects.

RIIS

Health-Based SCOs for Arsenic
(all values in parts per million (ppm))

Land use	Noncancer SCO	Cancer SCO
unrestricted	1.1	0.11
residential	2.2	0.22
restricted residential	11	1.1

Report Date: 10/20/2022
Client Project ID: 22501HA RIIS SOILS
York Project (SDG) No.: 22J0490

YORK

Technical Report

Metals, RCRA

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units
7440-38-2	Arsenic	15.9		mg/kg dry

Duty to Compensate for Lost/Damaged Trees

Trees that are injured or damaged as the result of contractor negligence (by accident or lack of adherence to this specification) and can be saved, as determined by NYCHA, shall be deep root fertilized and/or watered, AT THE CONTRACTORS EXPENSE (including tree growth regulators), using the following formulations and specifications:

If a tree dies or certain death is imminent, as the result of contractor negligence and as determined by NYCHA, the contractor will be back charged the value of the tree or trees, including the cost of complete removal of the tree and resultant stump, 6" below finished grade. NYCHA will determine the value of the casualty tree by utilizing the formula below:

NYC Tree Valuation Method- NYC Parks

HOW DO WE CALCULATE THE DAMAGE TO PARK TREES?

- The Trunk Formula Method
  - Based on size given the condition, species, and location
- If a tree is destroyed and removed from the site leaving no further evidence, it is assumed to have been in perfect condition prior to its removal
- Currently the average planting cost assigned per a three-inch (3") diameter tree is $1900

Proper Tree Risk Mitigation Practices

- Mulch laid around trees to take impact of weight and reduce soil compaction
- Plywood foot bridges to disperse wait and reduce soil compaction
- Tarping of excess soil or mulch
- Proper tree barriers to protect from construction equipment

NEW YORK STATE STANDARD AND SPECIFICATIONS FOR PROTECTING VEGETATION DURING CONSTRUCTION

- Limit soil placement over existing tree and shrub roots to a maximum of 3 inches
- Use retaining walls and terraces to protect roots of trees and shrubs when grades are lowered
- Construct sturdy fences, or barriers, of wood, steel, or other protective material around valuable vegetation for protection from construction equipment
- Penalties for damage to valuable trees, shrubs, and herbaceous plants should be clearly spelled out in the contract

Personal Injury Actions from Mismanaged Trees

- July 2009 A rotted tree branch in Central Park fell 40 feet, striking a 33-year-old Google computer engineer in the head. The victim was left paralyzed, with serious brain damage and spinal cord injuries; in 2012, the City paid $11.5 million to the victim and his family to settle the case.
- Seven months later, a 54-year-old busboy was struck and killed by a fallen tree as he walked through Central Park. His wife and two small children received $3 million when the City settled the case in June 2013.
- A grandmother was killed while waiting at a Brooklyn bus stop in 2003. According to witnesses, a cascade of branches fell from an overhanging maple tree. A jury awarded the victim's family $1.6 million.
- A 29-year-old social worker sitting on a bench in Stuyvesant Park was hit by a rotten limb that fell 30 feet. The young woman survived the July 2007 event but sustained serious injuries and endured four months in the hospital. The elm tree, which at a height of 80 feet was one of the tallest in New York City, had shed large branches in the past. But poorly-trained parks workers had missed signs that the tree was rotting. The city paid the victim $4 million to settle the lawsuit in February 2012.
- In June 2010, a six-month-old baby was killed in her mother's arms when a huge limb fell from an overhanging tree near the Central Park Zoo. The mother was critically injured. A lawsuit seeking compensation from the City and Zoo is pending.

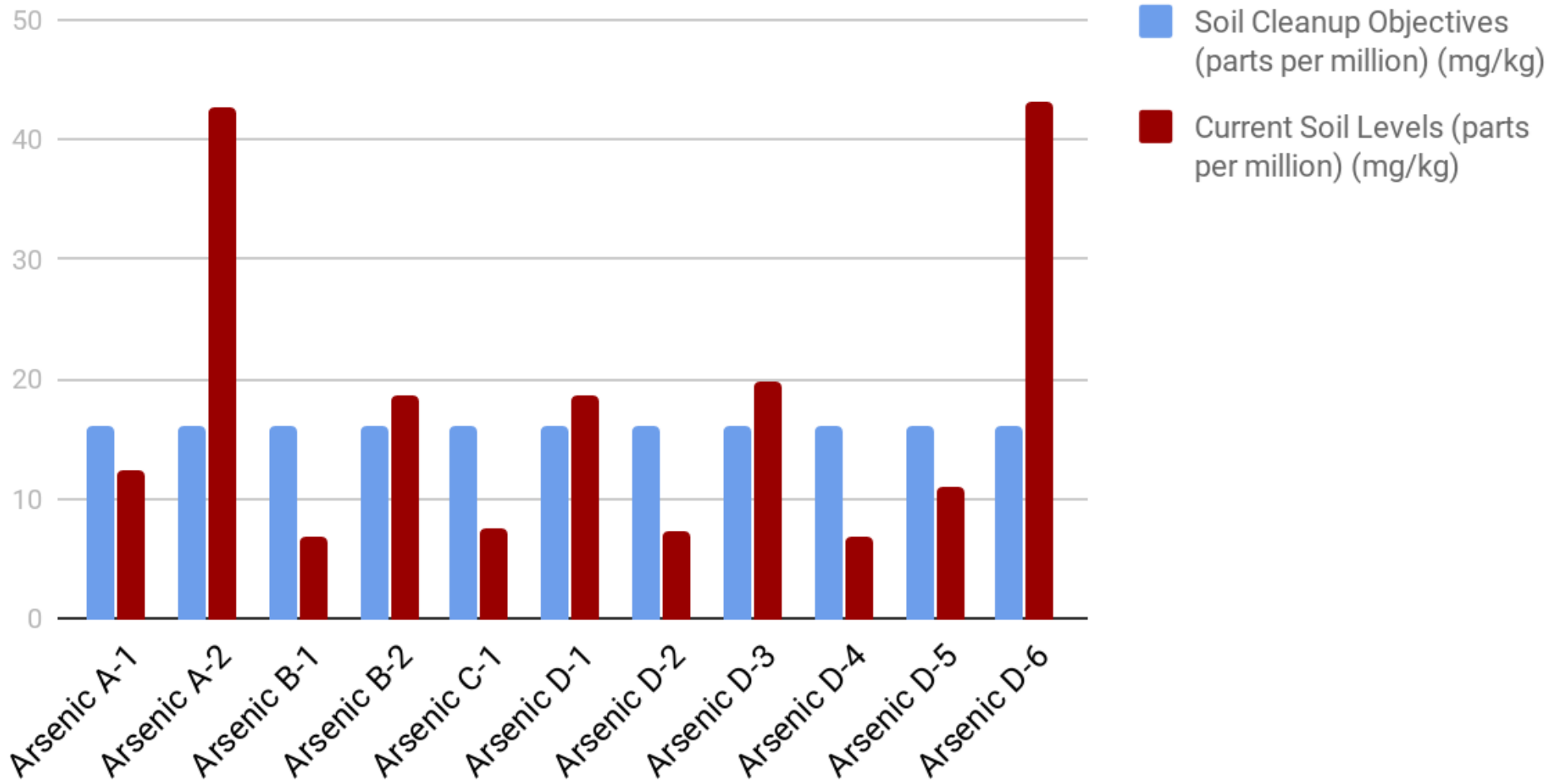
Environmental Soil Investigations By Walden Environmental Engineering

NYCHA
Governor Alfred E. Smith Houses
20 Catherine Slip, New York, New York 10038

Table 2
Trench Soil Sampling - Metals Analysis

Chemical Compound	CAS No.	NYSDEC Soil Cleanup Objectives	A-1 (1'-2')	A-2 (0'-1')	B-1 (3'-4')	B-2 (2'-3')	C-1 (1'-2')	D-1 (0'-1')	D-2 (3'-4')	D-3 (2'-3')	D-4 (3'-4')	D-5 (0'-1')	D-6 (1'-2')
			10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018
		mg/kg	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q	mg/kg Q
Arsenic	7440-38-2	16	12.5	**42.8**	6.78	**18.7**	7.55	**18.6**	7.23	**19.8**	6.86	11.1	**43.2**
Barium	7440-39-3	400	105	53.4	**673**	233	**539**	96	158	130	267	219	**465**
Cadmium	7440-43-9	4.3	< 1.83 U	< 1.96 U	< 1.86 U	< 1.97 U	< 1.85 U	< 2.13 U	< 1.89 U	< 1.96 U	< 1.96 U	< 1.97 U	< **4.52** U
Chromium	7440-47-3	290	25.8	16.2	17.1	19.4	17.3	45.5	18.8	19.8	17	25.1	48.4
Lead	7439-92-1	400	209	90.7	367	205	**551**	332	278	249	276	280	**552**
Mercury	7439-97-6	0.81	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.03 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.05 U
Selenium	7782-49-2	180	< 1.83 U	< 1.96 U	< 1.86 U	< 1.97 U	< 1.85 U	< 2.13 U	< 1.89 U	< 1.96 U	< 1.96 U	< 1.97 U	< 4.52 U
Silver	7440-22-4	180	< 1.83 U	< 1.96 U	< 1.86 U	< 1.97 U	< 1.85 U	< 2.13 U	< 1.89 U	< 1.96 U	< 1.96 U	< 1.97 U	< 4.52 U

Arsenic Levels In The Soil at Smith Houses By Walden Environmental Engineering



• Arsenic was detected at concentrations slightly above SCOs (restricted residential) in five (5) soil samples: A-2 (0'-1 '), B-2 (2'-3'), D-1 (0'-1 '), D-3 (2'-3 ') and D-6 (l '-2 '). The Arsenic concentrations in these samples were reported at 42.8 milligram per kilogram (mg/kg), 18. 7 mg/kg, 18.6 mg/kg, 19.8 mg/kg and 43.2 mg/kg, respectively

Arsenic was detected at concentrations slightly above SCOs (restricted residential) in five
(5) soil samples: A-2 (0'-1 '), B-2 (2'-3'), D-1 (0'-1 '), 0-3 (2'-3') and D-6 (l '-2'). The
Arsenic concentrations in these samples were reported at 42.8 rni[Jigram per kilogram
(mg/kg), l 8. 7 mg/kg, 18.6 mg/kg, 19.8 mg/kg and 43.2 mg/kg, respectively.

“slightly above” mis-characterization

Arsenic was detected at concentrations slightly above SCOs (restricted residential) in five (5) soil samples: A-2 (0'-1 '), B-2 (2'-3'), D-1 (0'-1 '), 0-3 (2'-3') and D-6 (I '-2'). The Arsenic concentrations in these samples were reported at 42.8 milligram per kilogram (mg/kg), I 8. 7 mg/kg, 18.6 mg/kg, 19.8 mg/kg and 43.2 mg/kg, respectively.

Page 6 Walden Report

But 43.2 and 42.8 is **over 2.5 times** the 16 mg/kg SCO for Arsenic

and over **40 times** the Arsenic SCO for NYS Health Dept Health Based SCO for residential area 1.1

Arsenic Exposure Harms

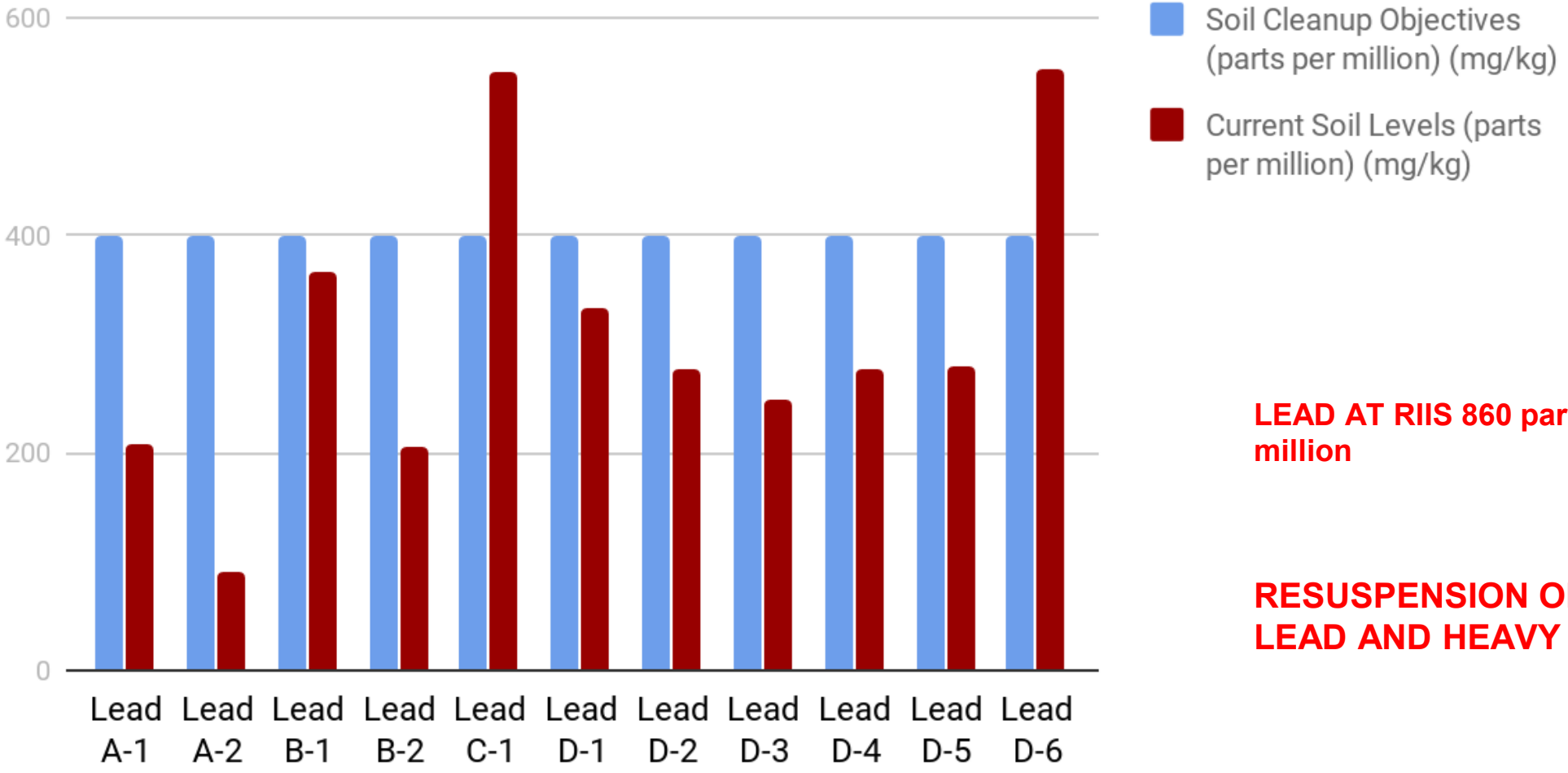
- Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs.
- Ingesting very high levels of arsenic can result in death.
- Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of “pins and needles” in hands and feet.
- Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small “corns” or “warts” on the palms, soles, and torso.
- Skin contact with inorganic arsenic may cause redness and swelling.

Dr. Robert Simon, PhD. Toxicologist

The findings of soil levels of arsenic in soil at the A.E. Smith Homes in the parts per million ranges raises serious exposure potential versus the potential risk of cancer. Exposure to soil levels in the 8 to 240 ppm (parts per million) range found on 11-21-18 at The Smith Homes significantly increases the arsenic risk compared to high relative cancer risks found in the ppb range (parts per billion or 1/1000th of ppm) found in drinking water exposure . Inorganic arsenic, the species found in soil and arsenic poisons showed additional health effects including neuropathy, gastrointestinal irritation, anemia, dermal and vascular lesions as well as hepatic and renal injury. High dose inorganic arsenic levels have shown fetotoxic and teratogenic effects.

At a minimum the high ppm arsenic locations at The Smith Homes demand an immediate blocking off of those areas from any human contact for all arsenic areas greater than 1 ppm.

Lead Levels In The Soil at Smith Houses By Walden Environmental Engineering



LEAD AT RIIS 860 parts per million

RESUSPENSION OF SOILS LEAD AND HEAVY METALS

NO TESTING AT REESE

SVOC's Summary from Walden Report

SVOCs including benzo(a)an thracene, benzo(a)pyrene , benzo(b)fluoranthene , dibenzo(a,h)anthracene and indeno(1 ,2,3-cd)pyrene were detected at concentrations moderately above SCOs (restricted residential) in all soil samples B-1 (3 '-4 '), C-1 (1 ' -

2'), D-3 (2'-3 '), D-4 (3'-4'), D-5 (0'-1 ')and D-6 (l '-2').

- In three (3) soil samples only one or two SVOC compounds were detected slightly above

NYSDEC SCOs (restricted residential):

o B-2 (2 '-3 '): ideno(1,2 ,3-cd)pyrene was detected at concentration of 508 µg/kg

o D-1 (O' -1 '): benzo(b)fluoranthene was detected at concentration of 1,000 µg/kg

o D-2 (3'-4'): ideno(I ,2,3-cd)pyrene and benzo(b)fluoranthene were detected at

concentrations of 1,090 µg/kg and 534 µglkg, respectively.

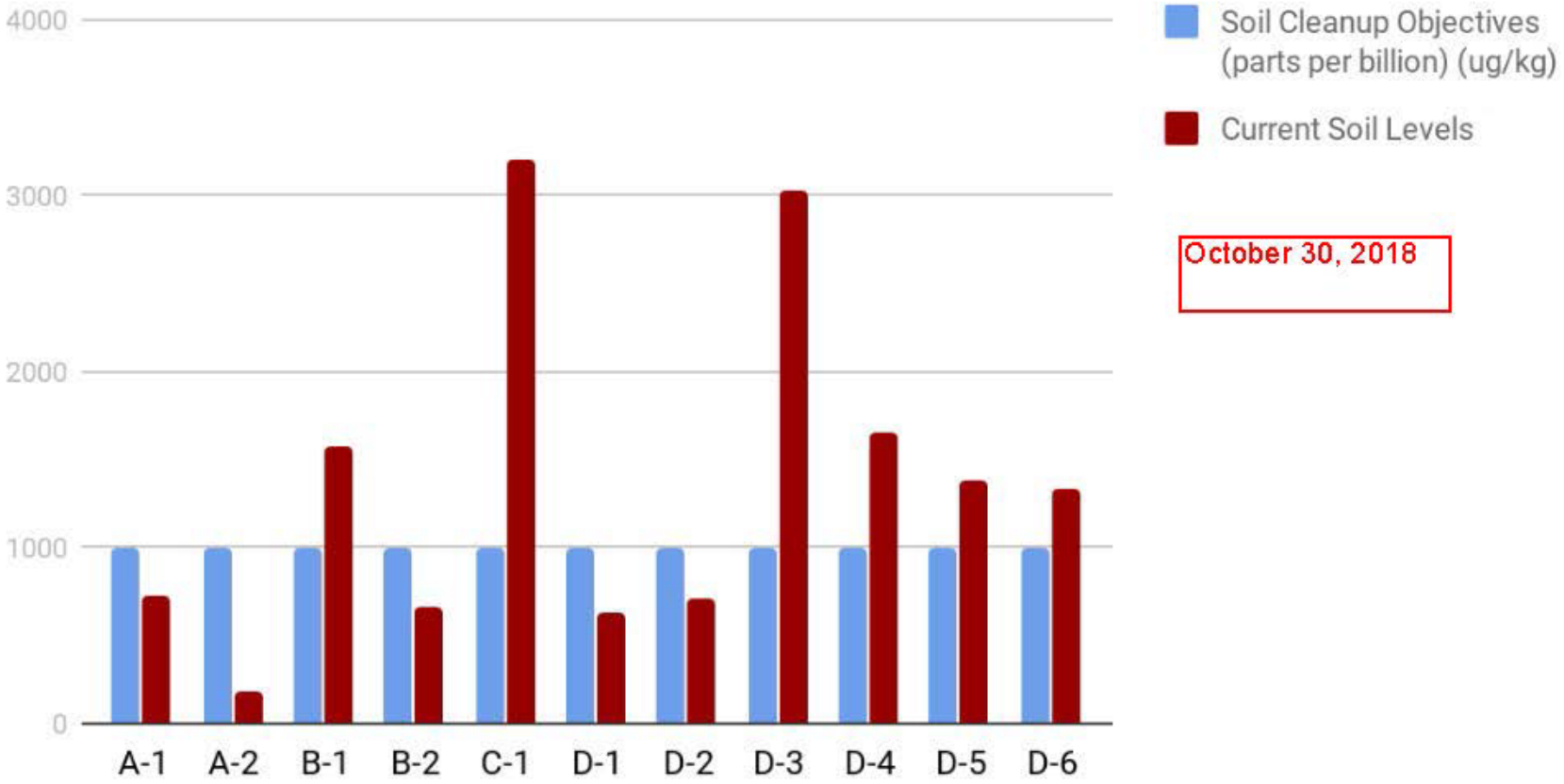
-

NYCHA - Governor Alfred E. Smith Houses
20 Catherine Slip, New York, New York 10038

Table 1
Trench Soil Sampling - Semi-Volatile Organic Compound (SVOC) Analysis

Chemical Compound	CAS No.	NYSDEC Soil Cleanup Objectives	A-1 (1'-2')	A-2 (0'-1')	B-1 (3'-4')	B-2 (2'-3')	C-1 (1'-2')	D-1 (0'-1')	D-2 (3'-4')	D-3 (2'-3')	D-4 (3'-4')	D-5 (0'-1')	D-6 (1'-2')
			10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018	10/31/2018
		µg/kg	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q	µg/kg Q
2-Methylphenol	95-48-7	100,000	< 339 U	< 361 U	< 341 U	< 356 U	< 342 U	< 391 U	< 343 U	< 353 U	< 356 U	< 357 U	< 818 U
3/4-Methylphenol	108-39-4/106-44-5	200,000 *	< 170 U	< 181 U	< 171 U	< 178 U	< 171 U	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Acenaphthene	83-32-9	100,000	238	< 181 U	247	< 178 U	350	< 195 U	< 172 U	823	201	< 178 U	< 409 U
Acenaphthylene	208-96-8	100,000	< 170 U	< 181 U	< 171 U	< 178 U	188	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Aniline	62-53-3	100,000	< 170 U	< 181 U	< 171 U	< 178 U	< 171 U	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Anthracene	120-12-7	100,000	556	< 181 U	662	< 178 U	1180	< 195 U	278	1500	600	462	410
Benzo(a)anthracene	56-55-3	1,000	727	< 181 U	**1570**	661	**3210**	630	719	**3030**	**1650**	**1380**	**1340**
Benzo(a)pyrene	50-32-8	1,000	705	< 181 U	**1720**	741	**3610**	715	858	**3150**	**1980**	**1570**	**1410**
Benzo(b)fluoranthene	205-99-2	1,000	890	< 361 U	**2000**	990	**3960** D	**1000**	**1090**	**3780**	**2410**	**1930**	**1690**
Benzo(g,h,i)perylene	191-24-2	100,000	447	< 181 U	1200	566	2350	524	635	2000	1270	1070	934
Benzo(k)fluoranthene	207-08-9	3,900	292	< 181 U	742	325	1620	282	314	1420	789	745	623
Chrysene	218-01-9	3,900	791	191	1670	809	3710	813	829	3310	2010	1630	1490
Dibenzo(a,h)anthracene	53-70-3	330	< 170 U	< 181 U	294	< 178 U	**656**	< 195 U	< 172 U	**557**	**355**	298	< 409 U
Fluoranthene	206-44-0	100,000	2140	419	3860	1390	8020 D	1630	1630	7740 D	3890	3190	2970
Fluorene	86-73-7	100,000	284	< 181 U	247	< 178 U	413	< 195 U	< 172 U	564	192	< 178 U	< 409 U
Indeno(1,2,3-cd)pyrene	193-39-5	500	408	< 181 U	**1030**	**508**	**2090**	456	**534**	**1820**	**1120**	**959**	**826**
Naphthalene	91-20-3	100,000	< 170 U	< 181 U	< 171 U	< 178 U	278	< 195 U	< 172 U	312	< 178 U	< 178 U	< 409 U
Nitrobenzene	98-95-3	15,000	< 170 U	< 181 U	< 171 U	< 178 U	< 171 U	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Pentachlorophenol	87-86-5	6,700	< 170 U	< 181 U	< 171 U	< 178 U	< 171 U	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Phenanthrene	85-01-8	100,000	2160	336	2920	696	6260 D	985	1140	6140 D	2780	1880	1770
Phenol	108-95-2	100,000	< 170 U	< 181 U	< 171 U	< 178 U	< 171 U	< 195 U	< 172 U	< 176 U	< 178 U	< 178 U	< 409 U
Pyrene	129-00-0	100,000	1690	350	3420	1220	6530 D	1380	1450	7010 D	3400	2710	2670

Benz[a]anthracene Levels In The Soil at Smith Houses By Walden Environmental Engineering



Benzo Exposure Harms

- Benzanthrecene
  - Suspected of Causing Genetic Defects
  - Suspected of Causing Cancer
- Benzopyrene
  - May cause allergic skin reaction
  - May cause genetic defects
  - May cause cancer
  - May damage fertility
- Benzofluroanthene
  - May cause cancer
- Benzoperylene
  - Inhalation may be harmful
  - May cause burns to skin and eyes

NYELJP’s Soil Tests

Completed by the Urban Soils Lab at Brooklyn College


NYELJP Soil Sampling Locations
Legend
Bag
G
High Levels
PG
Bag 1
Bag 2
Bag 3
Bag 4
Bag 5
Bag 6
G 1
G 2
G 3
G 4
G 5
G 6
G 7
G 8
PG 1
PG 2
PG 3
PG 4
PG 5
N
400 ft
Google Earth

XRF Analysis Gun

To test for lead and arsenic and other heavy metals

Sampling by EJI/NYELJP analyzed by Urbans Soils Institute

S0518-25 Soil Test Summary Report

6/2/2018

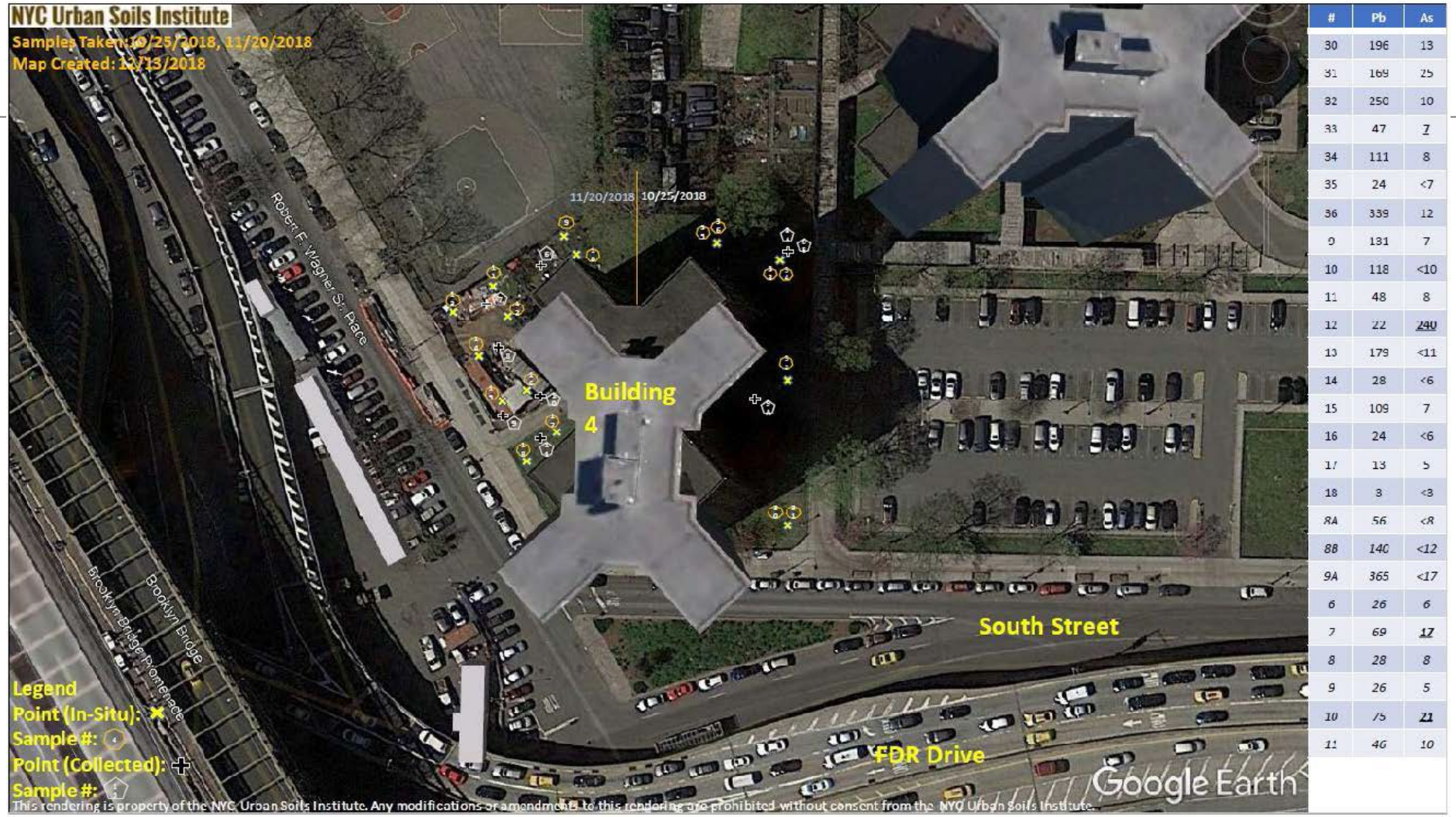
Lab ID	Field ID	Pb (ppm)	Zn (ppm)	Cu (ppm)	As (ppm)
A	#1 “Cerner Plot”	346	400	75	ND
B	#2	175	182	ND	ND
C	#3	241	260	56	ND
D	#4	203	279	ND	ND
E	#5	202	226	61	ND
F	#6	802	247	58	ND
G	#7	592	405	57	ND
H	#8	193	213	59	ND
I	#8 Combo	363	378	74	ND
J	#9	153	276	ND	ND

Arsenic 85 ppm at tree well of Day Care Center

Concentrations in parts per million:

Lab ID	Field ID	Pb	Zn	Cu	As
S0618-20A	Playground #1	505	520	146	ND
S0618-20B	PG #2	329	306	ND	ND
S0618-20C	PG #3	357	356	ND	ND
S0618-20D	PG #4	365	616	ND	ND
S0618-20E	PG #5	276	414	48	ND
S0618-20F	Bag #1	122	581	74	ND
S0618-20G	Bag #2	183	248	ND	ND
S0618-20H	Bag #3	263	310	ND	ND
S0618-20I	Bag #4	134	235	ND	ND
S0618-20J	Bag #5	176	222	ND	ND
S0618-20K	Bag #6	141	168	ND	85

NYC Urban Soils Institute



#	Pb	As
30	196	13
31	169	25
32	250	10
33	47	7
34	111	8
35	24	<7
36	339	12
9	131	7
10	118	<10
11	48	8
12	22	240
13	179	<11
14	28	<6
15	109	7
16	24	<6
17	13	5
18	3	<3
8A	56	<8
8B	140	<12
9A	365	<17
6	26	6
7	69	17
8	28	8
9	26	5
10	75	21
11	46	10

NYS Standard and Specifications for Dust Control

- Construction operations should be scheduled to minimize the amount of area disturbed at one time
- Controls include:
  - Vegetative cover
  - Mulch
  - Spray adhesives
  - Sprinkling
  - Barriers
  - Windbreak

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
DIVISION OF ENVIRONMENTAL HEALTH
INSPECTION REPORT — NOTICE OF VIOLATION

OWNER	D/B/A Re:	C.C. NO.
Nautilus Contracting Inc.	20 Catherine Slip	T-18-08-13-0233
ADDRESS	BORO	PERMIT NO.
633 3rd Ave. 17Fl, NY, NY 10017	Manhattan	
BUREAU	PROGRAM	DATE
B	TV	8/14/18

ITEM NUMBER	DESCRIPTION OF VIOLATIONS
Re:	Dust/Air Quality Investigation
-	The Office of Environmental Investigations visited the Smith Houses Complexes (NYC Housing Authority) to investigate a possible dust nuisance caused by ongoing excavations occurring outdoor in complex.
-	Survey at this time revealed active excavation work directly outside of multiple dwelling 20 Catherine Slip. Active site noted enclosed by a gate. Active site was noted with two holes and uncovered dirt piles & concrete rubble piles. Active work site noted approximately 1-2 feet away from ground floor tenant windows. Said windows were not open, however, no other dust prevention devices noted on facade of multiple dwelling. Playground next to active work site was enclosed and closed off to residents.

NYS Standard and Specifications for Site Pollution Prevention

- On all construction sites where the earth disturbance exceeds 5,000 square feet, and involves the use of fertilizers, pesticides, petroleum based chemicals, fuels and lubricants, as well as sealers, paints, cleared woody vegetation, garbage, and sanitary wastes
- Design Criteria
  - Vehicle and construction equipment staging and maintenance areas will be located away from all drainage ways with their parking areas graded so the runoff from these areas is collected, contained and treated prior to discharge from the site
  - Store, cover, and isolate construction materials including topsoil, and chemicals, to prevent runoff of pollutants and contamination of groundwater and surface waters.
  - Provide adequate disposal for solid waste including woody debris, stumps, and other construction waste and include these methods and directions in the construction details on the site construction drawings

Linking source and effect: resuspended soil lead, air lead, and children's blood lead levels in Detroit, Michigan

This study evaluates atmospheric concentrations of soil and Pb aerosols, and blood lead levels (BLLs) in 367839 children (ages 0-10) in Detroit, Michigan from 2001 to 2009 to test a hypothesized soil → air dust → child pathway of contemporary Pb risk =

Overall, the **resuspension of Pb contaminated soil** explains observed seasonal variation in child BLLs.

Geotextile Fabric

Inexpensive solution to cover soil

(Found at Home Depot)

Exclusive

Vigoro >

4 ft. x 200 ft. Polypropylene Landscape Fabric

★★★★½ (96) Write a Review Questions & Answers (11)

- Helps suppress weeds around flower beds, trees, and shrubs
- Suitable for garden spaces as well as patios and walkways
- Easy to cover with mulch, bark, or stone for an attractive finish

$44.98

Live Chat

Feedback

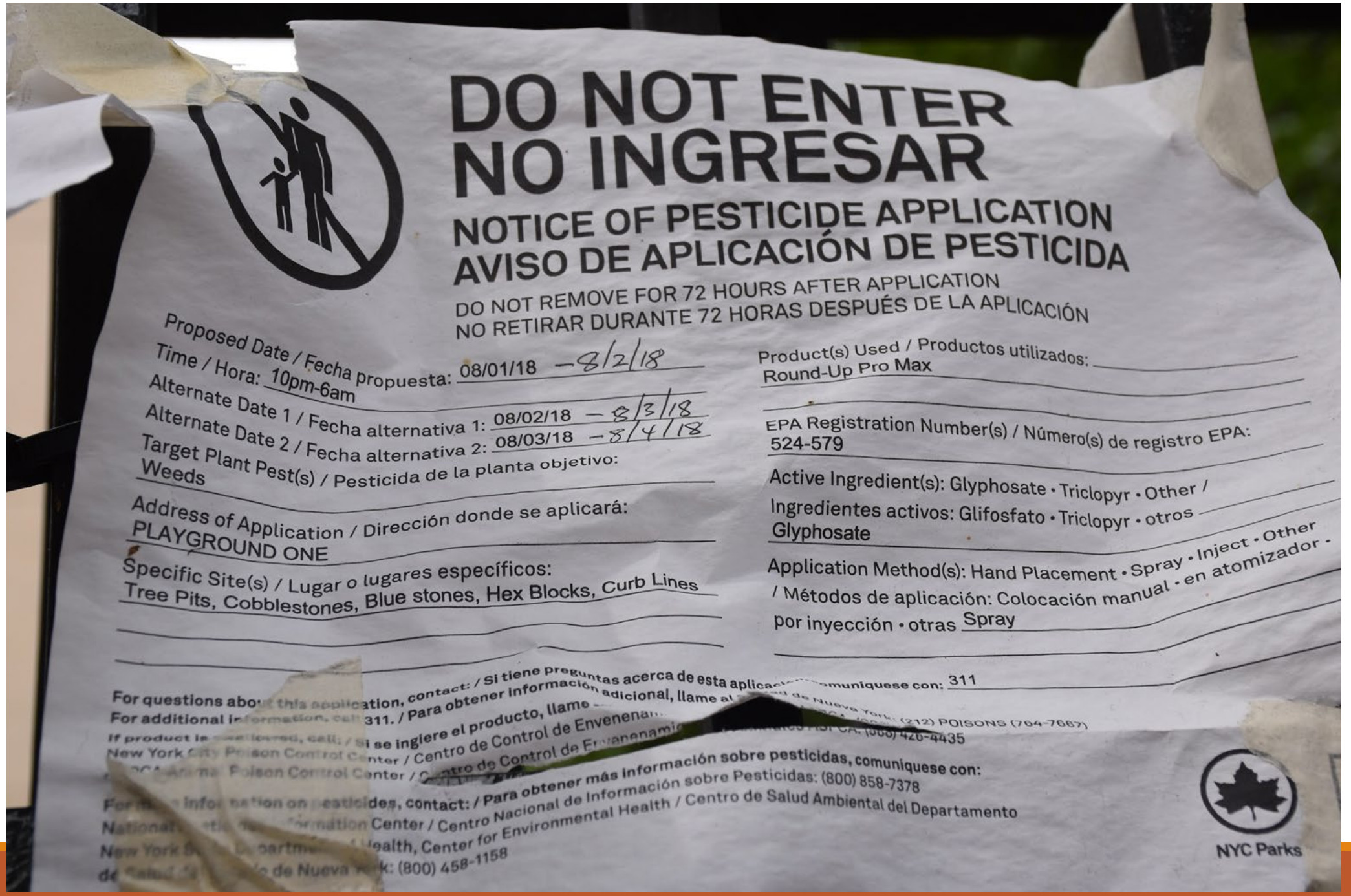
New York City Housing Authority

- NYCHA has not sought additional consultation on toxicity of substances present through other agencies
  - Keeps relying on contractor's experts
  - FOIL response indicated no consultation with other agencies

Roundup

- Daycare center on Smith property
- Tested tree well-- arsenic above levels of 85 ppm
- Spoke to school; said would close playground and send to NYC Parks

  playground next door
  - Center next door using Roundup; concern of migration


DO NOT ENTER
NO INGRESAR
NOTICE OF PESTICIDE APPLICATION
AVISO DE APLICACIÓN DE PESTICIDA
DO NOT REMOVE FOR 72 HOURS AFTER APPLICATION
NO RETIRAR DURANTE 72 HORAS DESPUÉS DE LA APLICACIÓN
Proposed Date / Fecha propuesta: 08/01/18 -8/2/18
Time / Hora: 10pm-6am
Alternate Date 1 / Fecha alternativa 1: 08/02/18 -8/3/18
Alternate Date 2 / Fecha alternativa 2: 08/03/18 -8/4/18
Target Plant Pest(s) / Pesticida de la planta objetivo:
Weeds
Address of Application / Dirección donde se aplicará:
PLAYGROUND ONE
Specific Site(s) / Lugar o lugares específicos:
Tree Pits, Cobblestones, Blue stones, Hex Blocks, Curb Lines
Product(s) Used / Productos utilizados:
Round-Up Pro Max
EPA Registration Number(s) / Número(s) de registro EPA:
524-579
Active Ingredient(s): Glyphosate • Triclopyr • Other /
Ingredientes activos: Glifosfato • Triclopyr • otros
Glyphosate
Application Method(s): Hand Placement • Spray • Inject • Other
/ Métodos de aplicación: Colocación manual • en atomizador •
por inyección • otras Spray
For questions about this application, contact: / Si tiene preguntas acerca de esta aplicación, comuníquese con: 311
For additional information, call 311. / Para obtener información adicional, llame al 311
If product is swallowed, call: / Si se ingiere el producto, llame
New York City Poison Control Center / Centro de Control de Envenenamiento de Nueva York: (212) POISONS (764-7667)
Arizona Poison Control Center / Centro de Control de Envenenamiento de Arizona, AZ, CA: (888) 426-4435
For more information on pesticides, contact: / Para obtener más información sobre pesticidas, comuníquese con:
National Pesticide Information Center / Centro Nacional de Información sobre Pesticidas: (800) 858-7378
New York State Department of Health, Center for Environmental Health / Centro de Salud Ambiental del Departamento de Salud del Estado de Nueva York: (800) 458-1158
NYC Parks

General Remedies

- Set aside sufficient funds for present, imminent and latent tree damage
- Immediate coverings of the soils
- Removal and replacement of the toxic soil
- Recommendation of air spading with tenting and other decompaction actions
- All future construction projects should follow the protocol in place to protect trees and prevent soil resuspension
- NYCHA seeking and retaining appropriate expert witnesses and consultation with other agencies
- Medical Screening

Bad Actor Policy

- **DEC has adopted the "bad actor" policy**
  - Establishes procedures to ensure those who are unsuitable to carry out the responsibilities of DEC permits, certificates, licenses or grants do not receive them

  The policy outlines various factors to consider with respect to suitability of an applicant
  - Whether applicant has been convicted of a crime related to the permitted activity under any federal or state law
  - Whether applicant has been determined in any proceeding to have violated the ECL
  - **Whether applicant has been engaged in conduct that constitutes fraud or deceit or has made materially false or inaccurate statements in the permit application**
  - Whether applicant has been denied a permit for the same or a substantially similar activity

- The policy also addresses the factors to be considered for the revocation, suspension or modification of existing permits held by a person determined to be a "bad actor"

Navillus is a Bad Actor

- Clark Environmental- received $1million fine from the DEC and a $3600 OSHA fine for endangering workers
  - Labeled Bad Actor
  - As a result they were denied the right to bid on future projects
- Navillus was initially fined $76 million for illegitimate union status violations and have settled for $26 million
- STV and NYCHA Rebuild have failed to properly manage the whole operation
- The operation has violated best practices, the contract and a myriad of regulations and laws.

Thank you for working towards confronting the imminent and substantial endangerment to health and environment at Smith Houses.

Our More Watery World October 2022
Shawn Slevin, E.D.

10 years ago Superstorm Sandy caused over 200 fatalities and over $60 billion in damage to New York and New Jersey. 51 square miles of NYC flooded, leaving 43 New Yorkers dead due to drowning. Across the region, water filtration plants, sewage treatment plants and other critical infrastructure were destroyed; the National Guard had to be deployed to evacuate trapped elderly and infirmed people in nursing homes; and FEMA and other local communication networks were nearly inoperable.

Tropical Storm/Hurricane Results effecting NYC since 2016

Year	Storms	Hurricanes	Fatalities	Cost of Damage
2016	15	7	736	$17,485 Billion
2017	17	10	3,369	$294,813 Billion
2018	15	8	172	$50,526 Billion
2019	18	6	121	$11,600 Billion
2020	30	14	417	$51,114 Billion
2021	21	7	194	$80,793 Billion
2022	10	5	257	$30,890 Billion

Fast forward to today and according to the World Bank, rising ocean levels immediately put 700 million of the world's population at risk of catastrophic flooding, especially coastal cities with elevations of 30 feet or less above oceans. Much of New York City is below that 30-foot threshold. Increasingly, extreme weather events are the new normal: part of an undeniable climate crisis that stretches across our entire nation. Climate change isn't a far-off threat. It is here, it is real, and it is taking lives.

Recently, we also learned that remnants of storms, traveling from thousands of miles away, can be just as devastating as those aimed directly at our city. For the first time in history, last year, the National Weather Service (NWS) declared a flash flood emergency in New York City. Tropical Storm Ida shattered the record for the most single hour rainfall in our city, set only two weeks earlier by another extreme storm, Hurricane Henri. It flooded streets, subways, and homes. We need to be prepared not only for storm surge in coastal areas but rainfall **inland**.

Let's reflect on the impact Ida had on the Tri-state last September. 91 lives were lost in New York City and neighboring states. 13 of those deaths were caused by drowning in basements, occurring in my own neighbor in Woodside, Queens. The New York City Panel on Climate Change anticipates by end of century that New York will experience 25% more annual rainfall than today. The intensity of rainfall is increasing and more

water is falling in shorter periods of time. These “cloudburst” events can and do exceed capacity of the New York City sewer system. Bottom line....we can no longer “avoid” water. We need to be prepared with the skills, tools, and resources to live with the way water increasingly impacts our lives.

Climate change is posing a grave threat to our people and our city, and its costs will not be borne equally. The American Red Cross found that households and individuals with incomes of $50,000 or higher were more likely to be prepared to handle a disaster situation. Conversely, those with lower household incomes were less likely to be prepared and they were far more likely to believe that first responders would be able to answer every call for help during an emergency. An absolute impossibility.

I understand that NYC has not been completely blind to the changes in water levels and increasing strength and frequency of storms. For the past several years, resiliency planning and projects have begun in our harbor and along our coasts to mitigate the impacts of extreme weather and storm surge. Also building codes are now regulating building “up” in flood zones. All of this sounds great, right? But where is the protection of our citizens and how can they protect themselves?

Swim Strong Foundation provides this part of the solution. On a practical basis, we understand that not everyone will learn how to swim; however, everyone can learn about the dangers that water represents inside our own homes to everywhere we meet it in the outdoors throughout the year and during extreme weather. If we understand the nature of water and how it is manifests in different environments, we can make the proper decisions which will lead us to be safe in, on and around it. We can educate people to understand the danger of water and the risks they will take if they choose to go in it. Water safety training is NOT a conversation we have only in the summer or around recreational events. In the fall, we have hurricane season making our rip currents much more lethal, even from storms happening hundreds of miles away! Every winter, we rescue several people who have fallen through ice. In the spring, we have flooding and the need to understand when it is not safe to cross water on our roads and streets. We even have a new phenomenon, “sunny day flooding” which has nothing to do with rainfall, but everything to do with super moons creating super tides that far exceed the normal high tide levels. In many cases, those waters have nowhere to go but up on to the roadways and streets, causing flooding in areas which had always been dry before. We need to learn new skill sets to prepare ourselves for the way water can impact our lives.

We are under a triple threat. For the past dozen years our water levels have been rising an 1-1.5 cm per year. Our tropical storms and hurricanes are not only becoming more intense, but the frequency and sheer numbers increase every year. Our waterfronts are being developed as never before in our lifetimes, opening access to open water dramatically to millions of people who cannot swim and do not understand the danger and nature of the water they are around. As a result, our drownings and water-based accidents rates will sky rocket.

We need to acknowledge that our world is becoming much more watery. We need to understand water conditions very differently. In fact, we need a new relationship with water. Our families need to understand that water safety and swimming skills are as important as buckling up your seatbelt when you get into an automobile or understanding what do during a fire drill.

Since the onset of Covid, many of our public pools and beaches have been closed due to lack of staffing. That has not, however, deterred our citizens from seeking out places to swim, often in unguarded or unsafe locations for swimming. NYC is a aquatics desert as it relates to appropriate multiuse swimming pools which can be used to teach a wide range of swimming skills from Learn to Swim through lifeguard and specialty skill training. One could reasonably argue that with the lack of appropriate public swimming pools (***not*** wading or sprinkler pools), we should be looking to set up safe swimming areas along our river fronts, bays, lakes, etc. Safe access to water is critical for our mental and physical health.

Swim Strong believes that education is key to learning water safety. We developed an environmentally focused water safety training program, ***"Know Before You Go ®".*** What is different about this program is that it acknowledges that swimming skills and water safety knowledge are NOT one and the same, but rather complement each other against the backdrop of this increasingly more watery world. Water safety is the knowledge and understanding of the difference in nature, behavior and dangers of different bodies of water as they compare to one another and seasonally, year round. It also addresses extreme weather. Swimming skills are physical skills which make us effective and efficient in the water. Ideally, we would have water safety knowledge before learning swimming skills and we would learn both in our youth. While they complement each other, even people who do not learn to swim must have access to water safety training. Those 13 neighbors in Woodside would not have drowned in their basements during Ida if they had our training.

We have an opportunity to create and realize a vision of climate resiliency and adaption that centers on climate justice, the principal that all peoples should live, learn, work and play in a safe, healthy, resilient, sustainable environment, even as our climate changes. In closing, no one goes to the water and expects a bad outcome. In conjunction with building infrastructure that protects our land and buildings from higher water levels, let us also build water safety, aquatics IQ, and swimming skills for every citizen.

59-15 47th Avenue Apt 15C, New York 11377
646 269-7897 www.swimstrongfoundation.org

Subject of testimony: Bulkhead erosion

I am a homeowner in the Arverne neighborhood of Rockaway Beach, my address is #### Bayfield Ave. In the spring I hired a contractor to build me a new deck in my back yard which is on Jamaica Bay. Upon inspection of the current structure, it was discovered that it was completely eroded and the existing structure is not even safe to occupy. This is due to the deterioration of the bulkhead that is supposed to be preventing the erosion in my yard. If a solution isn't reached to stop the erosion at some point it will reach the house. Thank you for your assistance in this matter.

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. 81

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: ALIA SOOMRO

Address: _____

I represent: NY League of Conservation Voters

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: Joel Kupferman

Address: W. 107th st

I represent: ENVIRONMENTAL JUSTICE INITIATIVE & Resident Associations

Address: Al. Smith Houses & Jacob Riis Houses -

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/2022

(PLEASE PRINT)

Name: Anthony Ciorra

Address: 26 Federal Plaza, NY, NY 10278

I represent: US Army Corps of Engineers, New York District

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: Heather Rolter

Address: 165 Cadman Plaza East Brooklyn 11201

I represent: NYCEM

Address: see above

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: Kim Darga

Address: _____

I represent: NYC Dept. Housing Preservation and Development

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: Joy Sinder-brand

Address: NYCHA 250 Broadway

I represent: NYCHA Capital

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: RUDY S. GIULIANI

Address: _____

I represent: OFFICE OF HOUSING RECOVERY

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: Jordan Salinger

Address: _____

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: 10/26/22

(PLEASE PRINT)

Name: Michael Marrella

Address: 120 Broadway, 31st Floor

I represent: NYC Dept of City Planning

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: ERIC MACFARLANE

Address: 3030 Thomson Ave, LIC 11101

I represent: NYC Dept of Design & Construction

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: KIZZY CHARLES-GUZMAN

Address: 253 BROADWAY 14TH FLOOR

I represent: NYC MAYOR'S OFFICE OF CLIMATE

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: COMMISSIONER ROHIT AGGARWALA

Address: _____

I represent: DEP

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: ANNIQUA BROWN

Address: _____

I represent: HEALTH + HOSPITALS

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: Jennifer Greenfeld

Address: 830 Fifth Ave + NY NY

I represent: NYC Parks

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/22

(PLEASE PRINT)

Name: Matt Drury

Address: Arsenal, 830 Fifth Ave, NY, NY

I represent: NYC Parks

Address: Arsenal, 830 Fifth Ave NY, NY

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Adam Meagher (pronounced "Mar")

Address: _____

I represent: NYCEDC, Senior Vice President for Neighborhood Strategies

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 10/26/2022

(PLEASE PRINT)

Name: Kevin Alexander

Address: 1920 Mott Avenue Far Rockaway, NY 11691

I represent: Rockaway Development & Revitalization Corporation

Address: _____

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