

# 6/25 Rainproof NYC Symposium

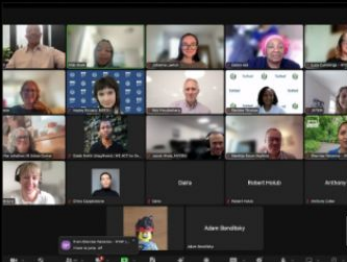
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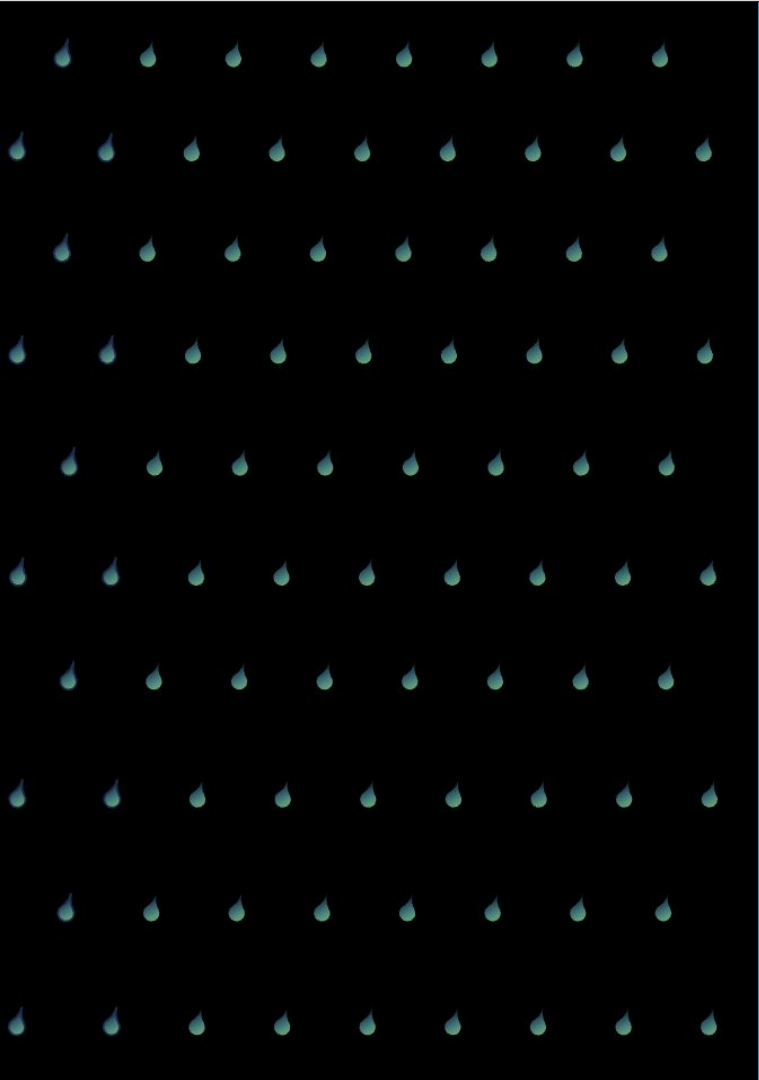


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# RAINPROOF NYC

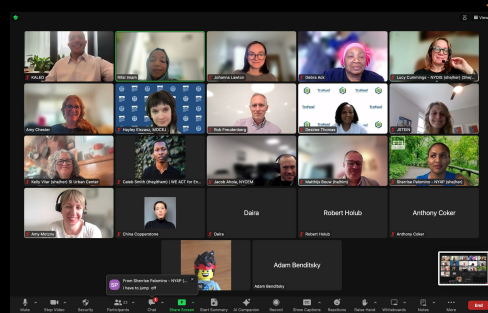
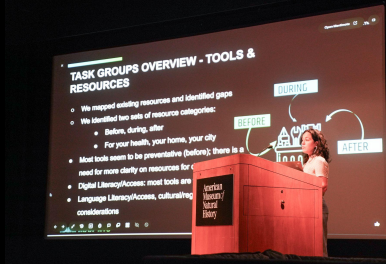




**WELCOME**

**Amy Chester,**

**Rebuild by Design**





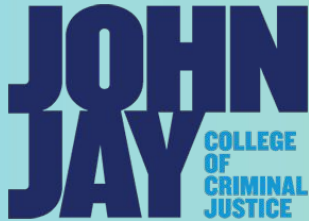
**REBUILD  
BY  
DESIGN**



**Thank you to our event sponsor:**  
Con Edison

**Our Rainproof NYC funders:**  
The Wells Fargo Foundation and the  
NorthLight Foundation

**And to our co-hosts:**



**CUNY Climate Consortium**  
Converging on Climate Research  
and Building Capacity across CUNY

# WELCOME REMARKS

**Allison Pease,  
Provost and Senior Vice  
President of Academic  
Affairs at John Jay College**





## COMMUNITY NORMS

- **Center Respect.** Challenge ideas, not the individual.
- **Engage Constructively.** Share your ideas and opinions thoughtfully while being open to different viewpoints.
- **Share the Air.** Be mindful of the amount of time you are speaking and give space for others to participate.
- **Be Mindful of Language.** Explain acronyms and professional lingo.



# AGENDA

## Welcome

- **Keynote:** NYC DEP Commissioner Aggarwala
- Rainproof NYC Equity + Principles

## Break

- Rainproof NYC Recommendations

## Lunch

- **Keynote:** Rona Taylor, Executive Director at Central x South East Brooklyn CDC
- **Panel:** Rainfall Realities: Navigating Agency Collaboration in a Wetter World

## Break

- **Panel:** Rain Boots on the Ground: Learning from the Front Lines
- **Interactive Session:** Next Steps
- **Closing Remarks:** Alison Landry, Chief Infrastructure Officer at DMOPS
- Reception



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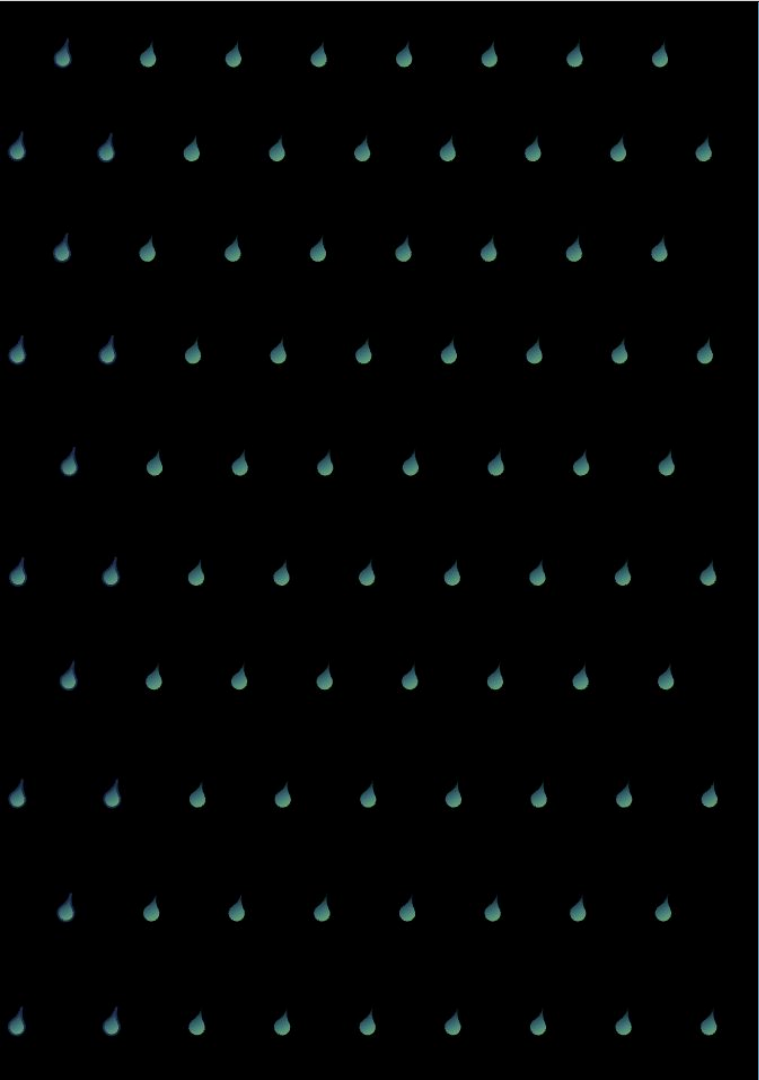


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# TODAY'S GOALS

- To clearly articulate Rainproof NYC's recommendations, the process behind them, and how they fit with other city and non-city initiatives.
- To continue to build a community around addressing heavy rainfall by engaging and mobilizing New Yorkers.
- To plan and mobilize next steps by defining immediate, short-term, and long-term actions, gather feedback, and solidifying rainproof principles.





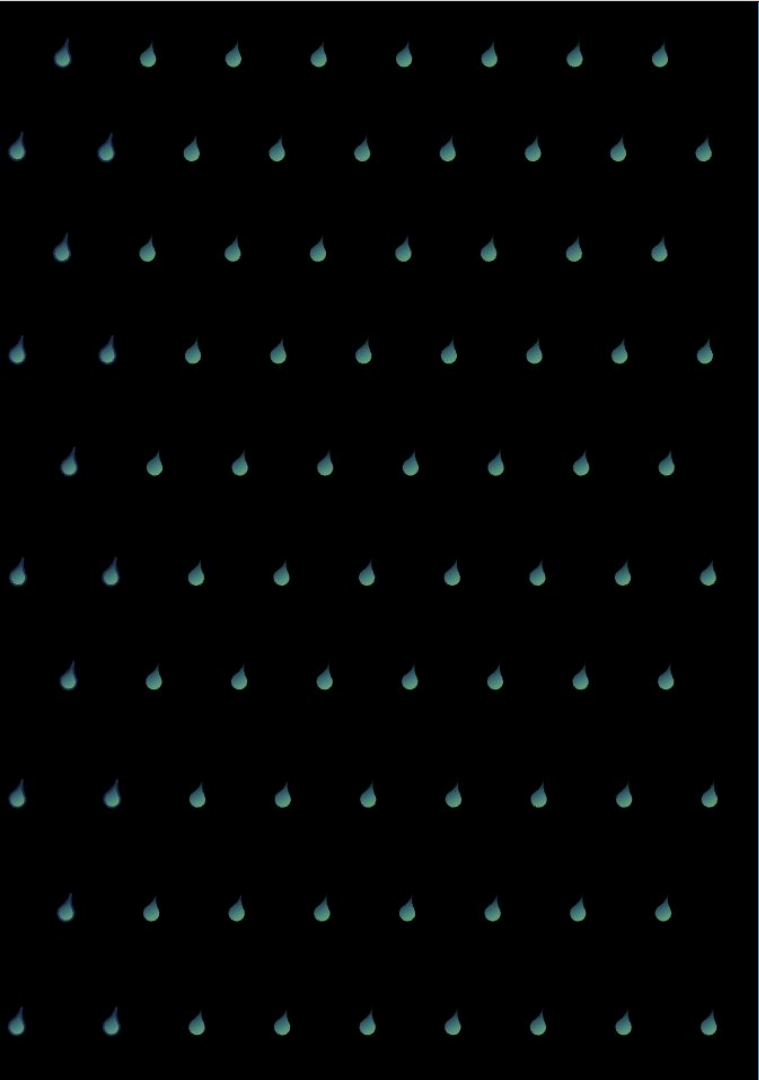
# BACKGROUND ON RAINPROOF NYC



**KEYNOTE**

**Rit Aggarwala,  
Commissioner of the  
NYC DEP**





# **RAINPROOF EQUITY + PRINCIPLES**

**Johanna Lawton,  
Rebuild by Design**

# EQUITY & INCLUSION

## We asked...

- What does equity and inclusion mean?
- How do we translate that into implementation and practice?
- How can we embed equity into every step of the working groups?

## You told us...

- Diversify agency involvement
- Incorporate education (knowledge transfer) in the process to build capacity
- Embed lived experience
- Find umbrella organizations/groups
- Pay participants for their time



# EQUITY & INCLUSION

We asked...Again!

You told us...

- Use accessible language
- Select across multiple sectors and backgrounds
- Create multiple channels of communications
- Create different types of engagement for participants and non-participants
- Prioritize most impacted neighborhoods (selection and process)

# EQUITY & INCLUSION

We asked...Again!

You told us...

- Address power imbalances
- Create guiding criteria
- Share decision-making
- Define & center equity
- Consider unintended consequences

- Distribute wealth & resources
- Prioritize accessibility & mobility
- Center workforce development
- Abstain from premature conclusions



# GUIDING PRINCIPLES

## Equity & Accessibility

Prioritize the needs, access, and voices of historically marginalized communities, ensuring they have decision-making power and ownership over rainproof policies and initiatives.

Recognize & Understand Intersectional Challenges.

## Nature Forward

Prioritize sustainable and nature-based infrastructure solutions that prioritize green over gray infrastructure, promote co-benefits, and amplify natural ecosystems.

## Prioritize & Institutionalize Collaboration

Create avenues to foster collaborative partnerships across sectors, acknowledging the expertise, experiences, and contributions of each stakeholder group including private, public, and community stakeholders.

## Ensure Accountability & Transparency

Establish clear accountability mechanisms (including metrics for success), transparent decision-making processes, and ongoing community feedback loops to ensure accountability and track progress effectively.

## Build Sustainable Stewardship & Aspirational Large-Scale Transformation

Ensure long-term success and resilience of rainproof infrastructure by prioritizing bold, visionary approaches and providing support and resources for maintenance and stewardship, including education and ownership initiatives.

# IMPLEMENTATION

## IMPLEMENTING THE PRINCIPLES INTO PRACTICE

### IMPLEMENTING EQUITY-CENTERED PRACTICES

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- Address intersectionalities by building a better understanding of the specific impacts of increasing heavy rainfall on groups such as the disabled, children, pregnant women, the elderly, and others.
- Prioritize the most impacted communities in decision-making processes and balance placing unfair burdens or expectations on already marginalized communities.
  - Recognize community members for their expertise and provide support to community groups for project planning, implementation, and maintenance.
- Adapt strategies, approaches, and solutions based on community feedback and evolving climate data.
- Ensure equitable access to maintaining infrastructure and provide funding and support to community groups for maintenance, stewardship, and workforce development.

- Implement solutions that adapt to the unique needs and characteristics of different communities, recognizing the diverse challenges posed by stormwater management in NYC.
- Create policies and initiatives that aim to rectify these injustices and ensure fair distribution of resources and benefits.
- Ensure equitable access to information, resources, funding, and programs for all communities, including language-specific outreach and visual communication methods and considerations.
- Integrate accessibility considerations (i.e. language, physical and mental access, etc.) into infrastructure planning.
- Ensure that incentives for rainproofing measures are accessible to all, prioritizing frontline communities. Provide transparent support and financial assistance programs, including grants, loans, and subsidies, for installing rainproof infrastructure, retrofitting housing, and integrating climate resilience into new projects.

### NATURE-FORWARD:

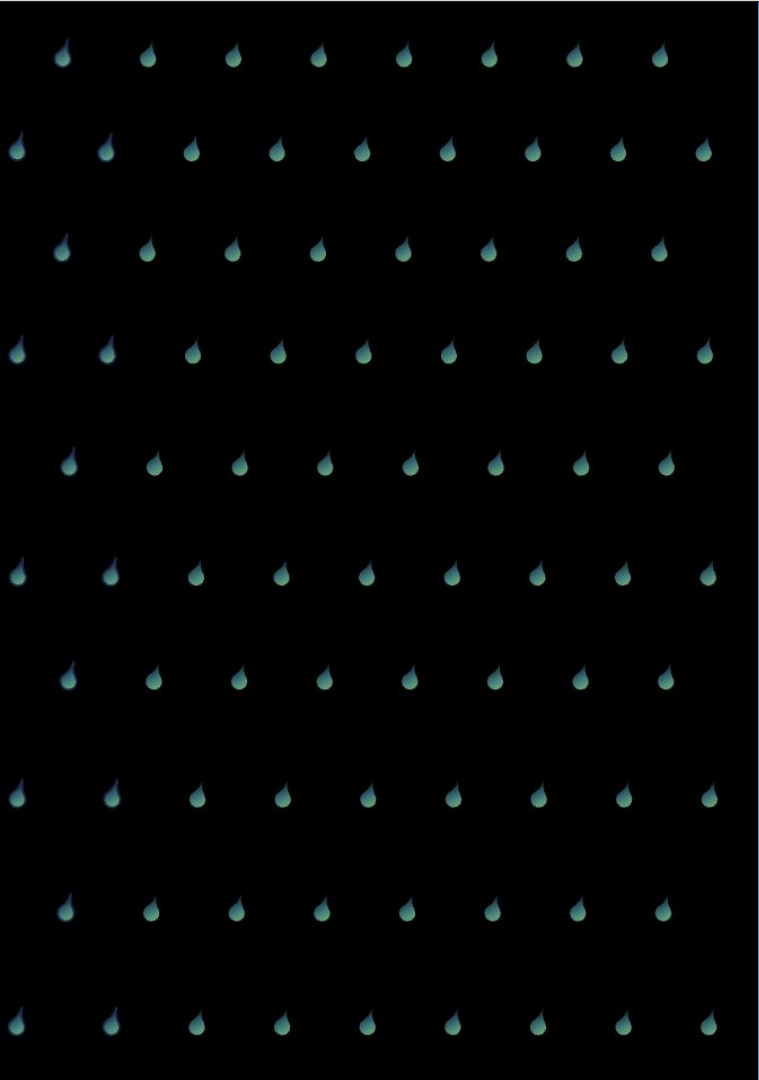
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- Promote innovation in green infrastructure technologies and practices.
- Prioritize holistic, nature-forward strategies that mimic natural processes, considering the interconnectedness of infrastructure, environment, and community well-being, to manage stormwater effectively.
- Prioritize green space development in historically underserved areas to address environmental inequities.
- Integrate a multi-benefit and nature-forward framework into all aspects of housing policy and land use planning. Rezoning should prioritize green infrastructure alongside affordable housing developments to mitigate environmental impacts and ensure long-term sustainability.
- Prioritize the restoration of natural habitats and historic water pathways to improve biodiversity and ecological resilience.
- Consider soil health, groundwater dynamics, and other ecological factors in the planning and development processes of new infrastructure projects, and new infrastructure and land use decisions.

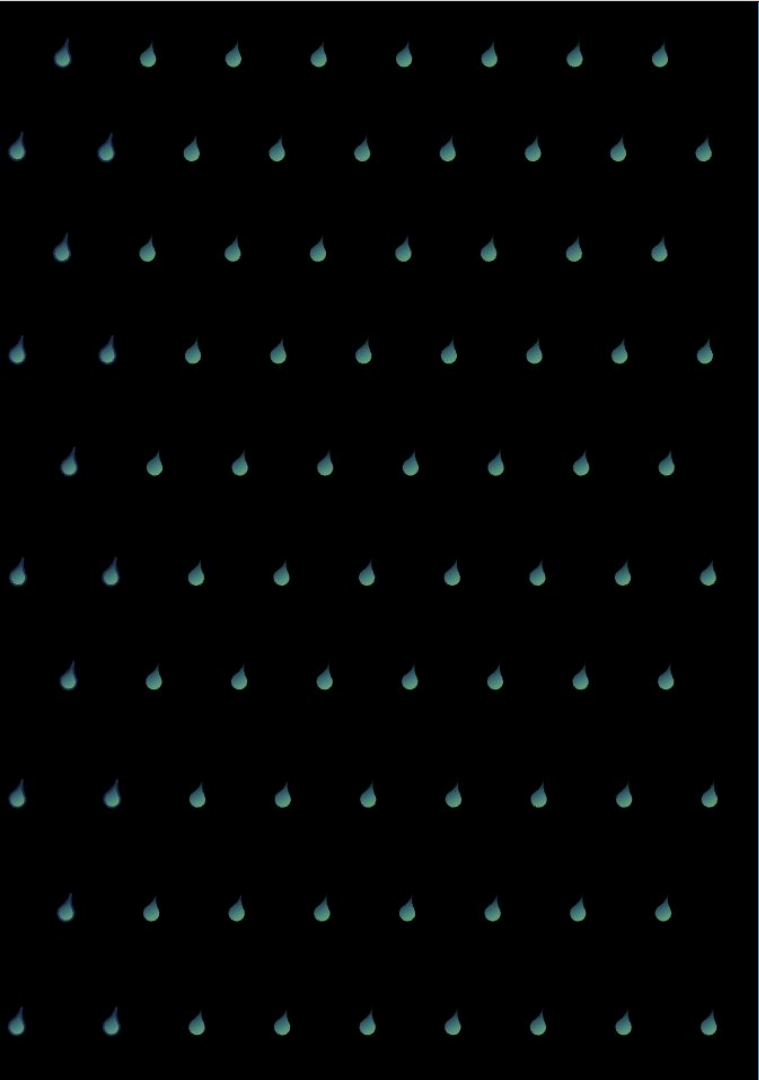
### INSTITUTIONALIZING COLLABORATION:

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- Create mechanisms to gather input from the private sector and establish clear goals and timelines with key stakeholders.
- Facilitate knowledge exchange between stakeholders. Institutionalize interagency collaboration by establishing permanent interdisciplinary groups that meet regularly to address rainproof issues. Integrate communication and workflow by establishing shared communication platforms and workflow channels across relevant city agencies to facilitate collaboration and information sharing.
- Coordinate efforts regionally to leverage resources and expertise, particularly in areas with shared vulnerabilities.
- Engage the public through education and outreach efforts to promote the benefits of nature-based solutions.



**BREAK**



# **RAINPROOF NYC RECOMMENDATIONS**



# Managing Increasing Heavy Rainfall

Alan Cohn, NYC Department of  
Environmental Protection

Rob Freudenberg, Regional  
Plan Association



## WORKING GROUP 1

# Managing Increasing Heavy Rainfall



Alan Cohn | Rob Freudenberg



# WORKING GROUP 1 | Managing Increasing Heavy Rainfall

Kaled Alamarie

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Jessica Colon

China Copperstone

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Despo Thoma

Kelly Vilar

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Amy Motzny | John Brock | Matthijs Bouw | Melissa Enoch

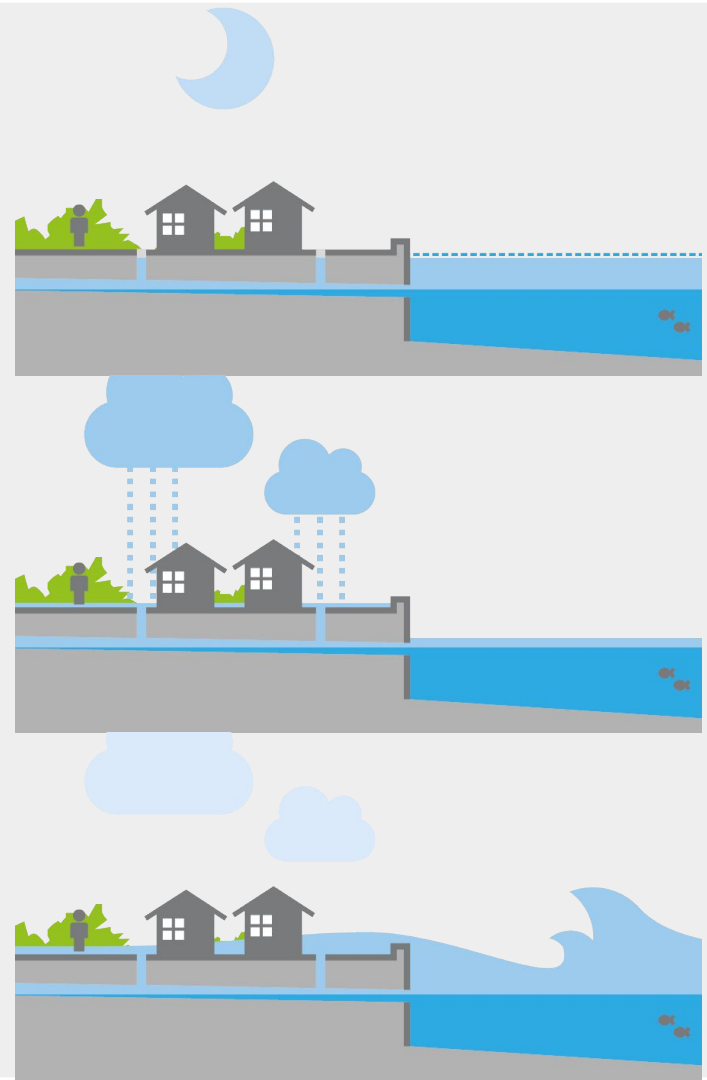


## WORKING GROUP OBJECTIVE

*How can we effectively utilize space in NYC to equitably reduce the risk from heavy rain and add value to communities?*

# PHYSICAL RISKS


- Our existing stormwater management systems are not able to manage all our water.
- New York City is a wet place and in the future, significantly more stormwater will need to be managed.
- New York's unique geography makes urban flooding challenges intrinsically connected to other flood types.
- Our systems are not easily adaptable to these changes.





# **UNDERSTANDING TOTAL RISK:**

Likelihood that New Yorkers face possible loss of life, health decline, displacement, and financial losses resulting from extreme rainfall events. This risk exists today and will increase with sea level rise worsened by climate change and without a rethinking of how stormwater is managed and how risk reduction resources are more widely distributed.



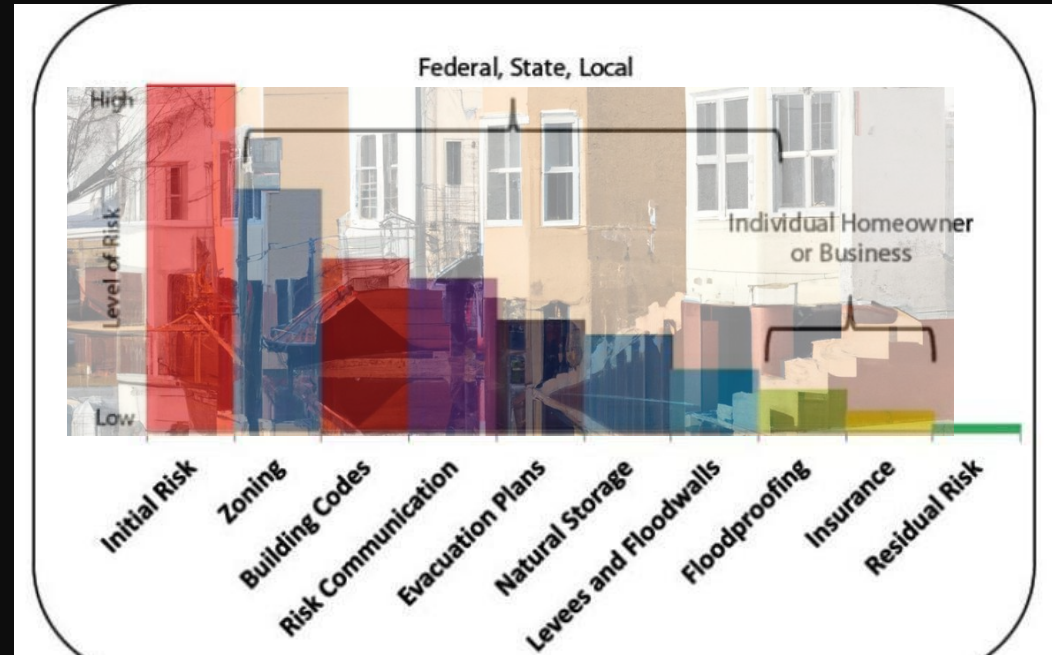
In addition to likelihood, total risk is determined by the consequence of an event. Flood events will impact people, organizations and interests differently. Dimensions of impact can be categorized as:

- Health
- Psychological
- Social/community connections
- Mobility
- Operations
- Financial & economic

*As little as 1" of water can have short and long term impacts on our residents. The impact of every inch will differ depending on multiple factors including property ownership and socio-economic status.*

# RISK REDUCTION

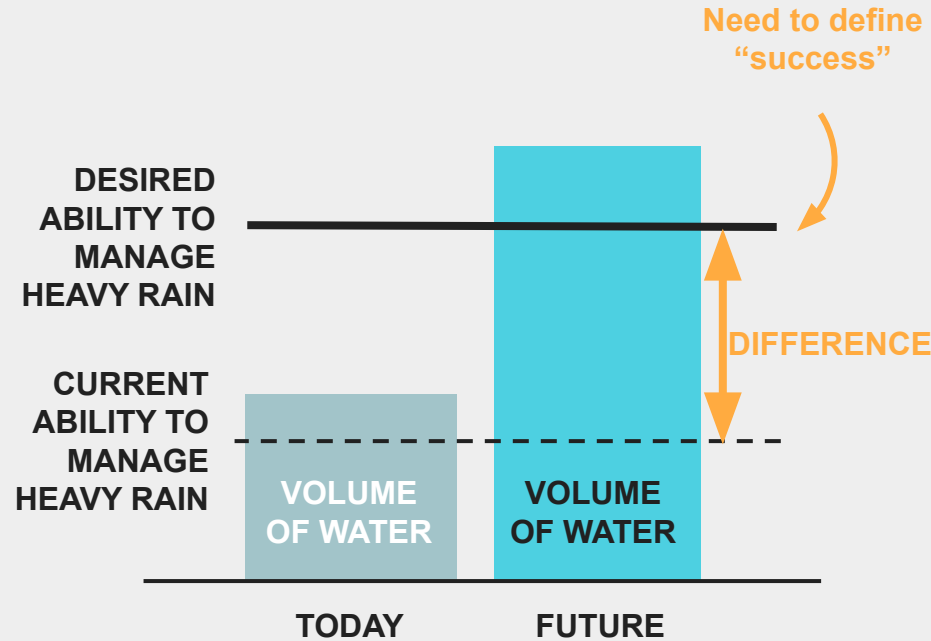
- A responsibility that must be shared across governmental and non-governmental organizations and individuals.
- Diverse risk reduction measures should be considered.
- However, no one measure or combination of measures will reduce risk to zero
  - There will always be remaining or residual risk when considering human-made or natural hazards including extreme rainfall events
  - Tolerances and trade-offs must be understood as measures are evaluated.



Source: Adapted from the National Academy of Sciences.

# SETTING OBJECTIVES

- Heavy rain increases the existing risk to stormwater flooding and extends that risk to new areas.
- This risk is destructive and can result in the loss of life and disruption of livelihoods.
- Needs and expectations will need to be understood and discussed.





# We Need to Shift our Approach to Water



**We have limited the ability of natural systems to manage heavy rainfall**



**Spaces that have been designed to keep water out must transform to integrate water**



**Natural and engineered systems must work together more seamlessly**



# WORKING GROUP 1 | Managing Increasing Heavy Rainfall

## Recommendations

1. Learning to Live With Water
2. Integrating Green & Gray Infrastructure
3. Improving & Expanding Natural Systems

# Learning to Live with Water

**Goal:** To prepare New Yorkers for a future with more water but less disruption from flooding, while also collectively setting new benchmarks for a more resilient and wetter future.

“Learning to Live with Water” means:

- No lives lost nor negatively altered
- Shift to a paradigm in which water can be absorbed within the dense urban landscape
- Clearly communicate what living with water looks like, and how it can be done equitably and in a way that prioritizes the health and well-being of residents



Bishan-Ang Mo Kio Park, Singapore

# Learning to Live with Water

## Recommendations

1. Establish a clear **citywide communication strategy** for all New Yorkers



# Learning to Live with Water

## Recommendations

1. Establish a clear citywide communication strategy for all New Yorkers
2. **Strengthen community relations** by coordinating with established local community organizations to create paid positions and training programs for community members in vulnerable areas to improve community preparedness and communication



# Learning to Live with Water

## Recommendations

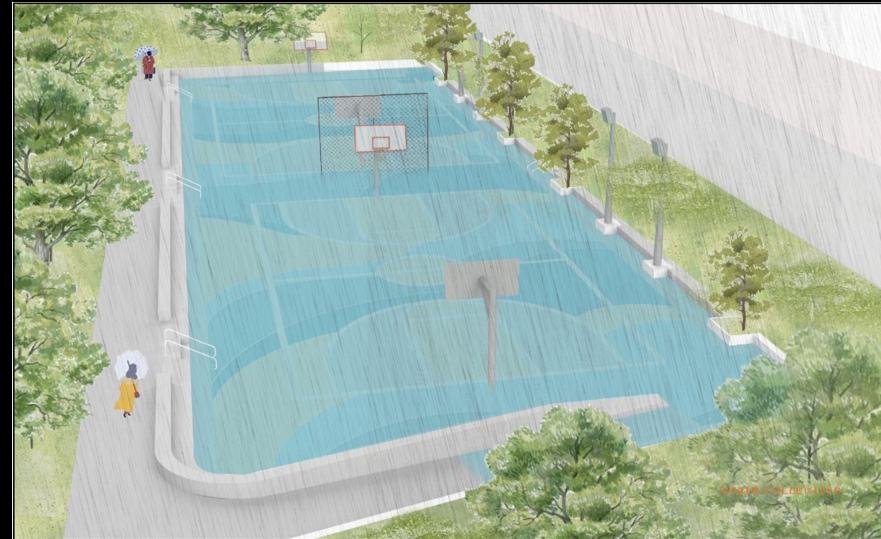
1. Establish a clear citywide communication strategy for all New Yorkers
2. Strengthen community relations by coordinating with established local community organizations to create paid positions and training programs for community members in vulnerable areas to improve community preparedness and communication
3. **Integrate stormwater resiliency standards and programs** for wet (designed to permit flooding) and dry (designed to be water-tight) flood proofing



# Learning to Live with Water

## Recommendations

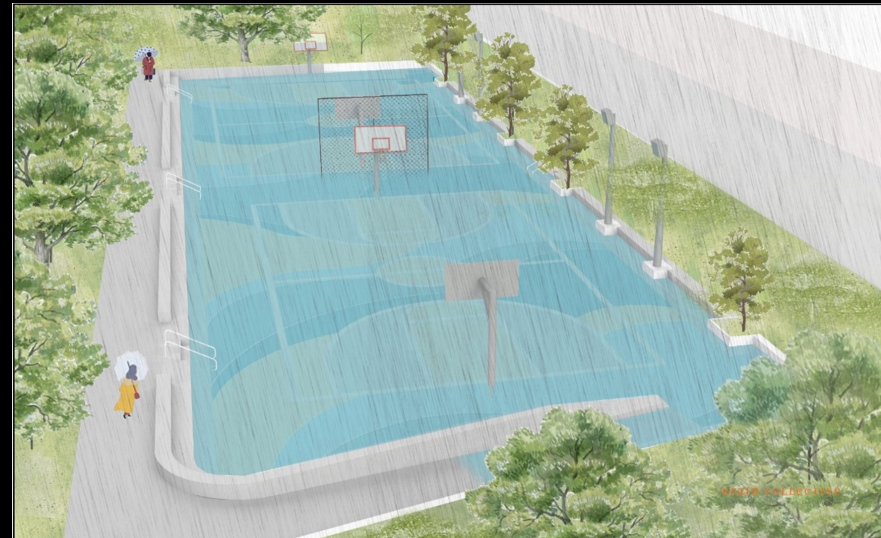
4. **Prioritize floodproofing of critical infrastructure** starting in the most vulnerable neighborhoods, including major roadways, public transit, power infrastructure, and schools to maintain critical function



# Learning to Live with Water

## Recommendations

4. Prioritize floodproofing of critical infrastructure starting in the most vulnerable neighborhoods, including major roadways, public transit, power infrastructure, and schools to maintain critical function
5. Consider ways to **view water as a public asset** and promote ecological value for biodiversity:
  - Research legal/policy and design constraints and opportunities for scaling capture and reuse of stormwater
  - Enhance and increase uptake of existing incentive programs
  - Elevate the role of form, not just function by incorporating placemaking into stormwater design





# Learning to Live with Water | Recommendation Deep Dive

## Establish a clear citywide communication strategy

### WHAT

- **Acknowledges** different types of flooding and the efforts underway to mitigate them
- **Educates** on emergency preparedness, improved response, public health issues, and the need to address all of these issues comprehensively and holistically
- **Incorporates** science, lived experiences, policy, and art and establishes a dialogue regarding tolerable standards for what future flooding looks like citywide
- **Conveys** that we will not be able to solve all flooding issues, but can create integrated planning processes and design standards that mitigate severe flooding impacts in the most vulnerable areas
- **Advances** a public awareness campaign - “We Live in a Wet Place” and educates New Yorkers on what living with water means, what they can expect, and what they can do about it
- **Promotes** the potential development of Community Board or Borough level “Living with Water Plans”

### HOW

Leverages the work being done by existing task forces to integrate heavy rainfall and flood impacts as part of existing tools and frameworks

#### **ACTION:**

Work with **MOCEJ** and the **Environmental Justice Advisory Board** to inform the development of the Environmental Justice Plan to suggest integration opportunities for the EJ Mapping Tool into the city’s Stormwater Resiliency Map as part of the update required under LL 172

# Integrating Green & Grey Infrastructure

**Goal:** To work together across all dimensions, gray and green infrastructure, among government agencies, and between government and the public to better manage heavy rain.

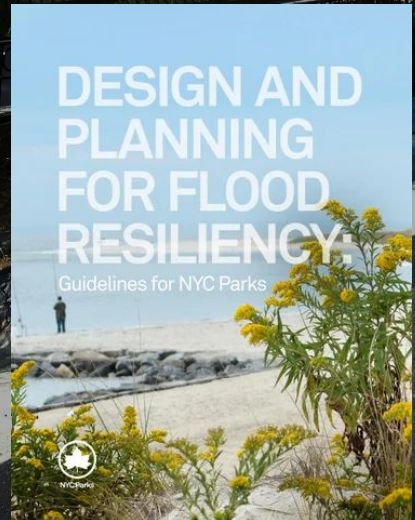
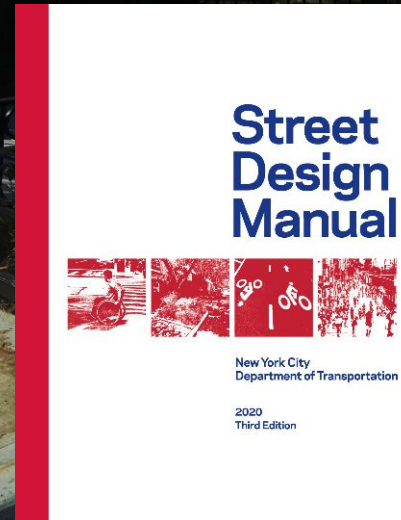
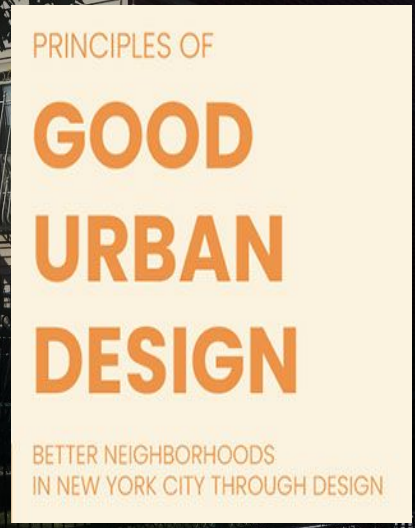
The City's stormwater infrastructure is not designed to manage heavy rain events, which are only anticipated to become worse. We will need to invest in both gray and green infrastructure to manage as much stormwater as possible. However, space and funding are both limited, and trade-offs are inevitable.



# Integrating Green & Grey Infrastructure

## Recommendations:

1. Consider ways to view water as an integral part of the built environment through **modified design standards that promote integrated green/gray solutions** across city agencies to improve and expand stormwater management.



# Integrating Green & Grey Infrastructure

## Recommendations:

2. **Identify partially funded capital and demonstration projects** and pursue funding through pooling of city agency resources and federal funding opportunities



Rain Garden (photo: Alisha Goldstein/EPA)



Green roof in the Netherlands (photo: Rene Nootenboomer)

# Integrating Green & Grey Infrastructure

## Recommendations:

2. Identify partially funded capital and demonstration projects and pursue funding through pooling of city agency resources and federal funding opportunities
3. **Tailor and expand incentive programs** to promote greater outreach, coordination, and adoption amongst under-resourced or at-risk private properties (new-build and retrofit)



Rain Garden (photo: Alisha Goldstein/EPA)



Green roof in the Netherlands (photo: Rene Nootenboomer)

# Integrating Green & Grey Infrastructure

## Recommendations:

2. Identify partially funded capital and demonstration projects and pursue funding through pooling of city agency resources and federal funding opportunities
3. Tailor and expand incentive programs to promote greater outreach, coordination, and adoption amongst under-resourced or at-risk private properties (new-build and retrofit)
4. **Consider maintenance needs early in the project planning and budgeting phase** to ensure funding budgets for gray and green stormwater systems and prevent maintenance from being a barrier to integrating vegetative approaches



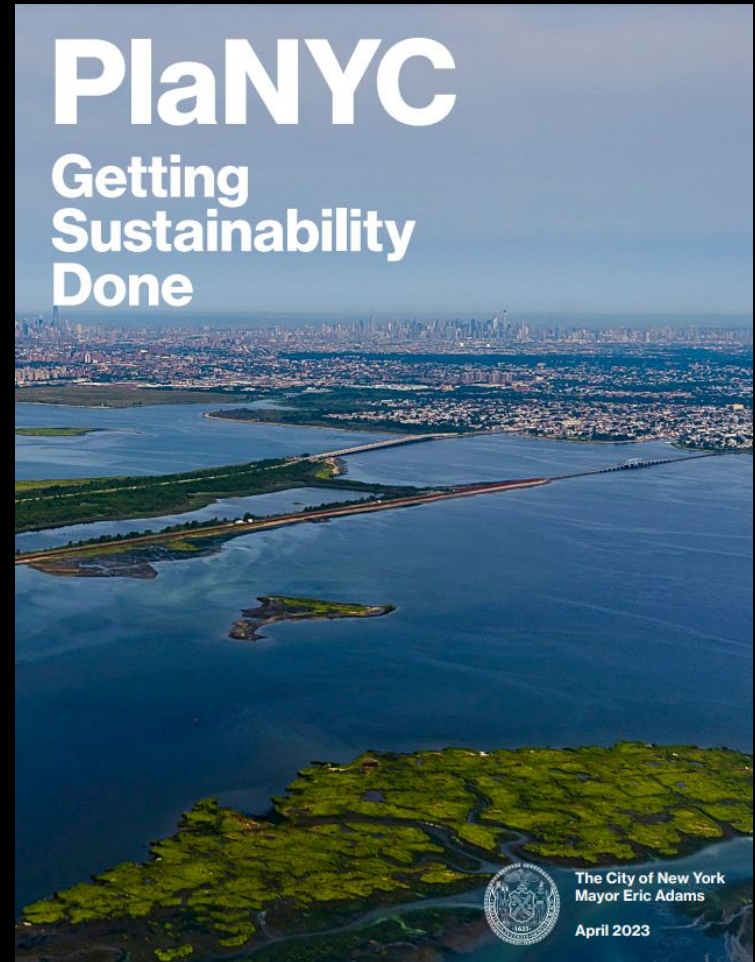
# Integrating Green & Grey Infrastructure

## Recommendations:

5. **Adopt an urban watershed planning approach** that includes:

- Prioritized integrated planning (green/gray infrastructure)
- Multifaceted, stakeholder engagement
- Robust risk analyses
- Comprehensive analytical tools
- Establishing and communicating flood risk reduction standards
- Research & development

Adopting an urban stormwater planning approach would support PlaNYC's goal of developing a stormwater flooding adaptation plan to establish a citywide flood protection target for stormwater infrastructure under the flooding initiative.



# Integrating Green & Grey Infrastructure | Deep Dive

## Adopt an urban watershed planning approach

### HOW

Leverage expertise on watershed planning efforts to date by **NYC Parks** and **NYC DEP** to develop a coordinated, multi-agency planning framework (**DEP, DPR, MOCEJ, NYCEM**) in coordination with **OMB**

### ACTION:

Develop in conjunction with initiatives such as PlaNYC to meet City targets and commitments to specifically address:

- **Flooding:** Develop Multilayered strategy for flood resilience that includes benchmarks for Stormwater Flooding Adaptation Plan (2024) and Flood Protection Targets for Stormwater Infrastructure
- **Waterways/Water Quality:** Develop projects, strategies, and benchmarks for reducing CSO by 4BGY by 2045 and zero CSO by 2060
- **Increase Funding:** Develop strategies in coordination with OMB to incorporate maintenance needs for gray and green infrastructure early in the planning and budget phase of project planning



# Improving & Expanding Natural Systems

**Goal: To protect, expand, and maintain natural systems on public and private properties.**

Natural systems - urban forests, streams, and wetlands - as well as natural spaces such as parks, street trees, and community gardens, provide ecosystem and social benefits.

Our natural areas and natural infrastructure are not self-sustaining, and their health and value decrease when they are not maintained, have either been damaged or lost to development, are limited in extent, or are not being effectively used to manage heavy rain.

Restoring, maintaining, and redesigning such spaces could provide additional co-benefits such as heat mitigation, active mobility, biodiversity, and community-specific programming.



# Improving & Expanding Natural Systems

## Recommendations:

1. **Protect and restore existing ecological systems**, such as forests and wetlands located within parks, waterfronts, and open space; implement existing recommendations including the Wetlands Management Framework and potential legal protection status



# Improving & Expanding Natural Systems

## Recommendations:

1. Protect and restore existing ecological systems, such as forests and wetlands located within parks, waterfronts, and open space; implement existing recommendations including the Wetlands Management Framework and potential legal protection status
2. **Expand constructed or enhanced natural systems**, such as Bluebelts, daylighted streams, and restored wetlands, integrating them into the watershed of flood-prone communities and coordinate with related programs, such as the emerging housing mobility/buyout approach



# Improving & Expanding Natural Systems

## Recommendations:

1. Protect and restore existing ecological systems, such as forests and wetlands located within parks, waterfronts, and open space; implement existing recommendations including the Wetlands Management Framework and potential legal protection status
2. Expand constructed or enhanced natural systems, such as Bluebelts, daylighted streams, and restored wetlands, integrating them into the watershed of flood-prone communities and coordinate with related programs, such as the emerging housing mobility/buyout approach
3. **Develop citywide education programs** to create awareness of the role of natural systems in managing stormwater and for workforce planning



# Improving & Expanding Natural Systems | Recommendation Deep Dive

Protect existing ecological systems, such as forests and wetlands located within parks, waterfronts, and open space

## HOW

- Consider and leverage already established recommendations including the **Wetlands Management Framework**
- **Expand funding** for City and CBO restoration and maintenance of high priority sites based on goals of maintaining existing stormwater capture and promoting community co-benefits.
- Develop infrastructure guidelines, zoning codes, and incentives to maximize infiltration and help restore and maintain the natural stormwater and groundwater flows that sustained historical ecological systems, engaging ecologists and incorporating both hybrid green-gray systems and future conditions into planning.
- Integrate engineering, physical science, and ecological discipline to incorporate both hybrid green-gray systems and future conditions into planning
- Further develop accounting systems to properly evaluate potential loss of natural areas.

## ACTION:

City agencies, such as **DPR**, **DEP**, and **OMB** will coordinate with non-profits such as **NY-NJ HEP** to protect the City's ecological systems and establish long term guidance for ongoing maintenance and expand advocacy to advance potential legal protection status through designations such as **Forever Wild**

# WORKING GROUP 1 | Managing Increasing Heavy Rainfall

## QUESTIONS?





## Housing Mobility

Liz Greenstein, NYC Mayor's  
Office of Housing Recovery  
Operations

Christie Peale, Center for NYC  
Neighborhoods



# WORKING GROUP 2 - Housing Mobility

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Amy Chan

Amy Chester

Annie Stefanski

Anthony Coker

Bo Chung

Britney Dixon

Debra Ack

Desiree Thomas

Dmitri Johnson

Jacob Ahola

Joe Tirone, Jr.

Kate Boicourt

Kelly Leilani Main

Lucy Cummings

Mallory Rutigliano

Michael Marrella

Michael Sanders

Paul Lozito

Sangu Iyer

Talley Burley

Thaddeus Pawlowski

Tyler Taba

Non-government member

Government member

Special thanks to:

Daira Raheem

Jessica Castro





WORKING GROUP #2:  
**HOUSING MOBILITY**

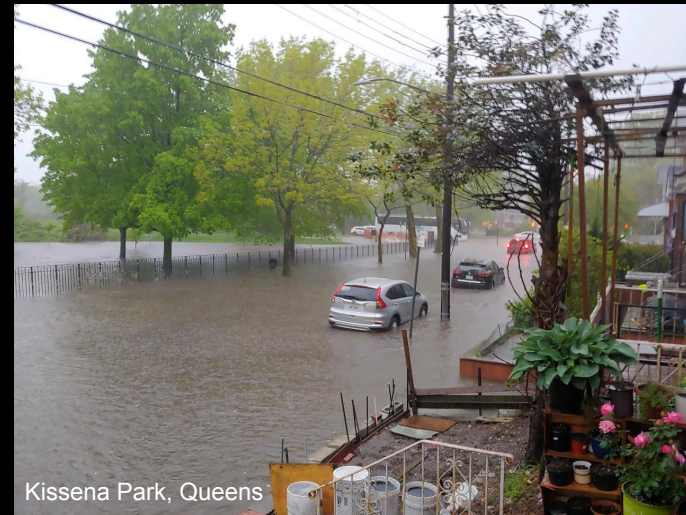
## Working Group #2 - Housing Mobility

### Our Scope of Work:

Determine the parameters and best practices for an equitable and voluntary program buyout program for one- to four-family residences in flood-prone areas of New York City.

NYC has funding from US HUD to hire a consultant to develop a buyout program to be deployed after future disasters and when other funding is available.

Through the Rainproof NYC process, a working group including private citizens, nonprofit and community leaders, academics and government representatives came together to study the issue and make recommendations to the City.



# Housing Mobility - RESEARCH PROCESS

Background research and case studies: learning from experience

Decision tree to guide evaluation of sites and suitable flooding solutions

Meetings with community organizations and residents

List of Frequently Asked Questions to address in buyout program

Framework for what happens to the land after buyouts

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## Working Group #2 - Housing Mobility

Because we know...

- NYC neighborhoods can flood both along the coast and inland
- NYC regularly floods from both disasters like hurricanes and chronic events such as increased rainfall
- There is a housing crisis in NYC with few vacant affordable units
- Buyouts are only one of many tools to address flood risk
- Most buyout programs yield inequitable outcomes, exacerbating existing inequities in Black and Brown homeownership
- The program being designed at this time will be limited to 1-4 family structures; multifamily buildings and businesses will be addressed in future programs

# Principle #1: Voluntary & Well-Informed

The program must be voluntary and prioritize getting people out of harm's way

- Targeted neighborhoods should have property owners with an expressed interest in participating, and a community engagement plan has been undertaken
- Eligible residents must be provided necessary and sufficient information in accessible language in order to make informed decisions
- Homeowners need to know why the buyout is being offered and what alternatives options are available
- Homeowners should understand the tradeoffs of different options for mitigating current and future risks
- Participants must be able to withdraw their participation from the program at any stage in the process

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## Principle #2: Community-Based & Neighborhood-Specific

Neighborhoods are shaped by their residents, and buyout programs can change the fabric of those neighborhoods.

- There is a need for a community-driven process that is integrated into other long-term community planning initiatives
- Buyout programs must lead to improvements in the quality of life for all area residents, in addition to owner-participants
- Because every neighborhood is different, the program should be flexible enough to account for diverse local needs
- The program should work with social service nonprofits, community groups, and social networks to collaborate on outreach, intake, communication, and strategies for land reuse and stewardship when possible
- Outreach to groups and residents must be thorough and materials should be written in accessible language, available in translated versions, and accompanied by counseling

# Principle #3: Housing-Centered & Housing-Focused

The program must recognize the intersections between buyouts and the housing market:

- NYC is facing a significant housing crisis at all price points and with low vacancy rates
- Buyouts should not exacerbate the housing crisis
- The program should promote access to safe, affordable housing through:
  - Robust rehousing and case management services with mortgage resolution expertise
  - Combining resources with other housing programs
  - Providing sufficient financial resources for relocating owners and renters
  - Investing in affordable housing outside flood-prone areas
- The program should address historic injustices in overburdened, underserved neighborhoods:
  - Recognize histories of disinvestment
  - Use Fair Market Value adjustment factors for fair compensation
- The program should strive to address challenges like finding permanent replacement housing and increased housing costs

## Principle #4: Equitable & Renter-Inclusive

The program should be human-centered and strive to prioritize assistance to New Yorkers who need the most help.

- Holistic wrap-around services – such as housing counseling, financial counseling, and mental health support services with a trauma-informed response – before, during, and after the buyout process are critical to program success and should be available to both homeowners and renters
- The majority of New Yorkers are renters, and a housing mobility program needs to provide sufficient resources to support the relocation of renters
- Relocation opportunities should be in climate resilient communities, and prioritize access to economic opportunities and social cohesion
- The City should utilize all available tools to develop affordable rental housing and home ownership opportunities during blue skies to enable renters to have this housing mobility option before disaster strikes



"Jewel Streets," East NY, Brooklyn





## Principle #5: Environmentally Restorative & Integrated

- The program should require that any acquired properties be preserved as open space in perpetuity, with no further residential, commercial, or industrial development allowed.
- The buyout program should strive to restore natural floodplain function, create vital flood protection infrastructure, and integrate the bought-out parcels into a broader watershed management strategy for flood risk reduction.
- These restored floodplain ecosystems should maximize climate co-benefits, such as reduced heat island effect, improved water quality, and restored habitat for improved biodiversity.
- The City should integrate planning and funding for the stewardship and maintenance of buyout parcels before the program begins, and partner with community organizations to push for adaptive reuse plans that maximize local benefit.

# Principle #6: Permanent & Adaptable

The housing mobility program should be:

- Viewed as a multi-decade, multi-generational effort
- Permanent and operate year-round, with the ability to be deployed rapidly in the event of a disaster or as funding is available
- Coordinated across many City agencies, supporting institutional capacity building and collaboration
- Structured to test communication and outreach methods and receive community and participant feedback for ongoing program improvement, to build trust and accountability



# Next Steps & Questions



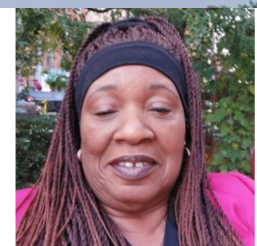
"Jewel Streets," East NY, Brooklyn

# THANK YOU!

Christie Peale  
Center for NYC Neighborhoods  
[christie.peale@cnycn.org](mailto:christie.peale@cnycn.org)

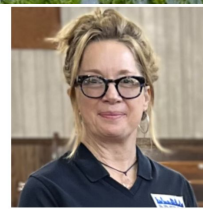
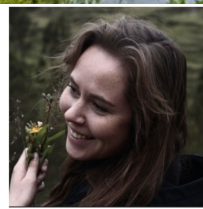
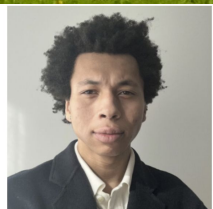
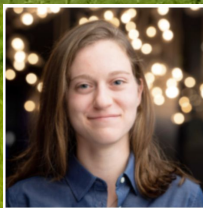
Liz Greenstein  
Mayor's Office of Housing  
Recovery Operations  
[egreenstein@recovery.nyc.gov](mailto:egreenstein@recovery.nyc.gov)





**THANK YOU**

**Working  
Group  
2**





# Everyone Has a Role to Play

Hayley Elszasz, NYC Mayor's  
Office of Climate &  
Environmental Justice

Tonya Gayle, Green City Force

# RAINPROOF NY



WORKING GROUP 3: EVERYONE HAS A ROLE TO PLAY

---

# AGENDA

- 🔹 WG3 Overview
- 🔹 Recommendations
- 🔹 Closing





The background of the slide is a vibrant photograph of a community garden. In the foreground, a young woman in a striped shirt and dark skirt is smiling as she works in a raised garden bed. Behind her, several other people, including men and children, are engaged in gardening activities. The garden is filled with various green plants and flowers. In the background, a paved walkway runs through the garden, with people walking and riding bicycles. The overall scene is bright and positive, representing community involvement and urban agriculture.

# RAINPROOF NYC

## WORKING GROUP 3 (WG3): EVERYONE HAS A ROLE TO PLAY

How can we build capacity among communities, the private sector, & CBO's to share responsibility of managing increased heavy rainfall?

Every drop counts.

We planned to build out an education & communications campaign to build the capacities of all to do their part in managing increasing heavy rainfall.

**Conceptual Design for NYCHA Cloudburst Project at the South Jamaica Houses, A.B.**

# WORKING GROUP 3



RONA TAYLOR



HOPE SUTHERLAND



JILL CORNELL



TONYA GAYLE



HAYLEY ELSZASZ



LOT LOCHER



HELEN WILEY



ANDREW BLANCERO



MICHAEL ROBERSON



NIKKI TOURIGNY



PAMELA PETTYJOHN



SHIVALI GOWDA



ABBY JORDAN



JULIA EIFERMAN



FRANK BLANCERO



ADAM BENDITSKY

SAYLOR POCHAN  
ALLAN ZARETSKY  
CHELSEA CAWLEY  
DANIELA SANCU

KATHERIN SIBEL  
SARAH NIELSON  
INGER YANCY

## Make Rainproof a part of regular community engagement. Use/leverage existing programs, events, and resources to increase people's knowledge of ways to mitigate/prepare for extreme rain

Leverage existing public programs to promote Rainproof

- DEP's hydra barrier distribution program with Borough Presidents, NYCEM's Strengthening Communities, DOHMH's "Be a Buddy", CERT Volunteers; DOHMH Community Health Workers; SRIJB\* Community Flood Fellows: NYC Days of Action

Engage existing platforms for civic engagement:

- Town halls, community boards, civic associations, "Friends of" parks groups, and other civic groups

Partner with public and non-profit agencies that have existing infrastructure to train and manage workforce for outreach, flier distribution and volunteer coordination at events

- NYC Civic Corps Fellows, NYC Service Summer Employment, Rain Coalition, Green City Force & The HOPE Program

1

RAINIPROOF NYC



## NYC CIVIC GROUPS IN ACTION



## Prioritize outreach and resource allocation to populations affected by extreme rain; and diversify resources to address accessibility gaps

Develop a digestible communication tool to link resources to the before, during, after categories for health, home, and community/city.

Create opportunities for New Yorkers to physically engage with stormwater infrastructure, such as bluebelts, catch basins or rain gardens through:

- Employment opportunities,
- Volunteerism (i.e. Super Steward, Citizen Pruner, Master Composter),
- Recreation

Expand access to existing resources through language translation and print media (i.e. no internet or apps).

- Examples of existing resources with accessibility barriers;
- Rainfall Ready, Stormwater flood maps, FloodhelpNY.org, Notify NYC, WAIT!

Develop a guide for multifamily property owners/managers to identify flood-threat, incorporate flood-proofing measures and inform tenants about stormwater flooding risks, resources, and emergency communication systems.

Develop a guide for renters to be prepared in case of an extreme rainfall event.

## 2

## WG3 RainProof NYC Outreach Flyer

- Digestible communication tool
- Expands access to existing resources through print media
- Informs folks about stormwater flooding risks, resources, and emergency communication systems

## Stay Informed, Stay Flood Safe...



For Your Health →



[on.nyc.gov/3VUXheZ](https://on.nyc.gov/3VUXheZ)

- Stay informed with Notify NYC
- Make an emergency plan
- Keep out of flood water, install carbon monoxide detectors, don't drive in floods



For Your Home →



[floodhelpny.org](https://floodhelpny.org)

- Know your flood risk with FloodHelpNY
- Insure your home with Floodsmart.gov
- Install rain barrels and green space



For Your City →



[portal.311.nyc.gov](https://portal.311.nyc.gov)



- Report flood damage to 311
- Limit water use during storms
- Keep grease and debris out of drains, streets, tree beds and sewers



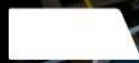


# 3

## Invest in and equip community leaders with more resources and knowledge on how to interpret rain forecasts/understand better how extreme rain affects them

-  Leverage trusted community leaders to engage constituents in the Rainproof toolkit and Rainproof civic engagement events
-  Collaborate with agencies, nonprofits, and community groups to identify potential risk translators and connect with under-represented groups
-  Look to existing community advocacy and public agencies' civic trainings for program design (i.e. SRIJB Community Flood Fellows Program, The Sanitation Foundation's Trash Academy)
-  Explore corporate funding opportunities for Risk Translators program

# nyc trash academy



presented by the  
sanitation foundation



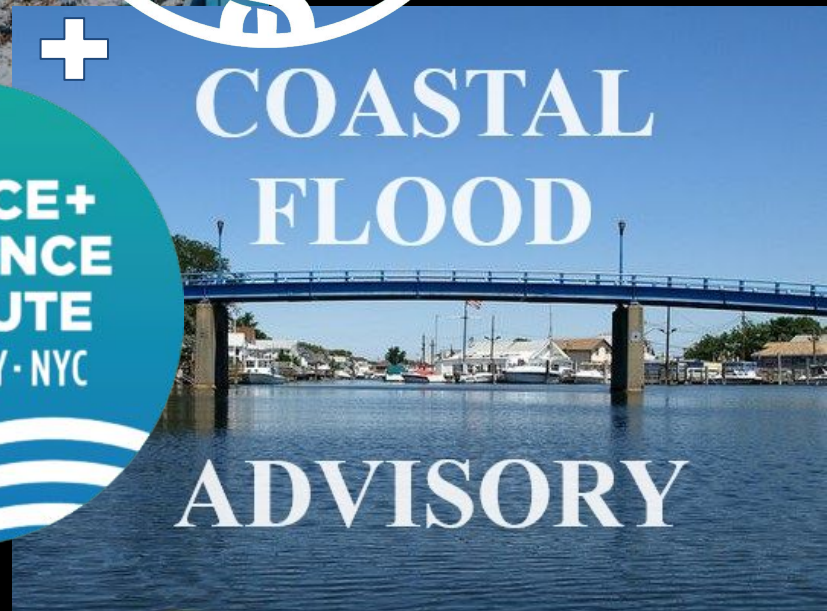
+

## COASTAL FLOOD



SCIENCE+  
RESILIENCE  
INSTITUTE  
JAMAICA BAY · NYC

## ADVISORY

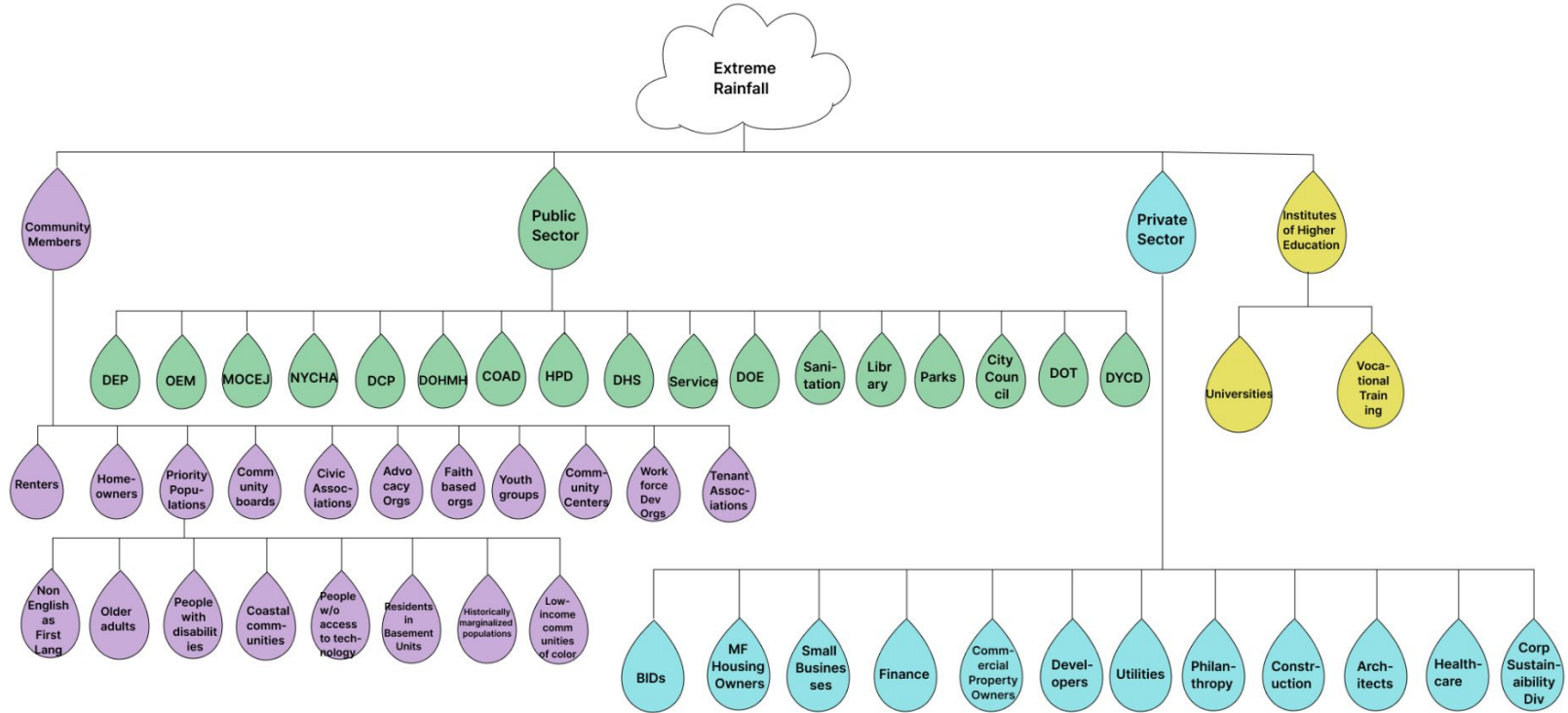




## Encourage collaboration and shared ownership of dealing with extreme rain across city agencies, the private sector, nonprofits, and communities

- Require that city agencies include “Rainproof” planning information in any submissions to the Mayor’s Management Report.
- Incentivize multi-family affordable housing owners to develop business continuity plans.
- Develop an engagement process with mission-driven multifamily affordable housing owner/operators with properties in high risk areas to develop best practices and peer exchange for emergency communication with tenants, building protection during extreme rainfall, business continuity plan development, and more.
- Academic institutions introduce Rainproof into their curricula, classroom, and capstone projects.
- Community-based organizations to educate and engage constituents in Rainproofing NYC.
- City agencies and property owners can collaborate to develop resilience equipment libraries so resources can be shared in areas of high risk (for example back up sump pumps, wet vacs, etc.).
- Private companies and financial institutions work through risks and values of stormwater flooding.

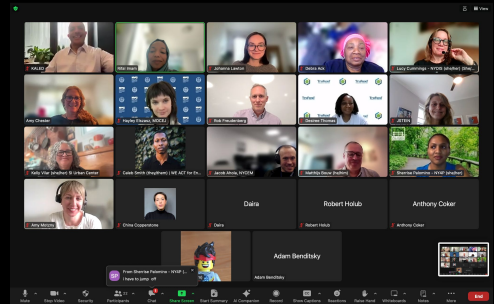
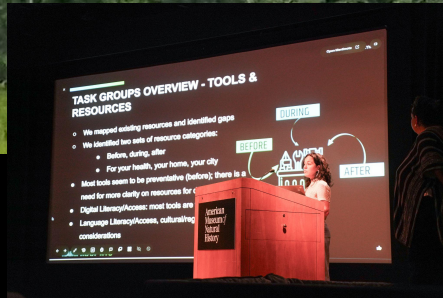
# Stakeholder Map

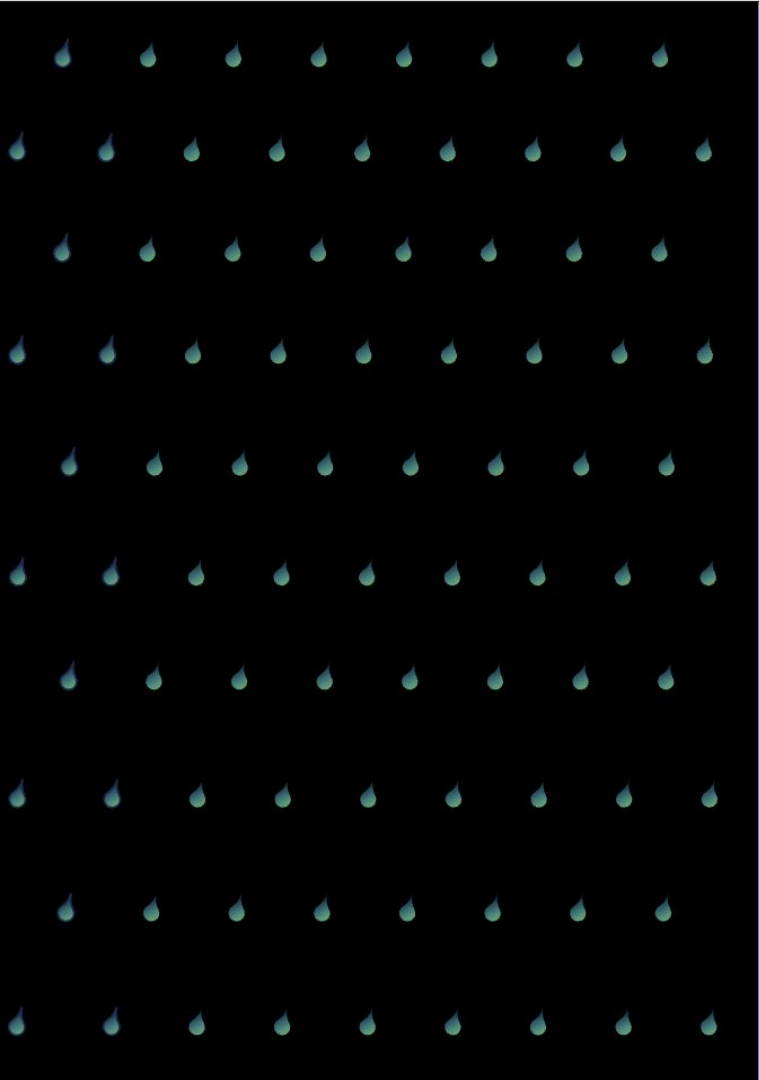


Thank you! Any Questions for WG3?

# RAINPROOF INYC

Fishermen in Coney Island Creek, Brooklyn A.J.



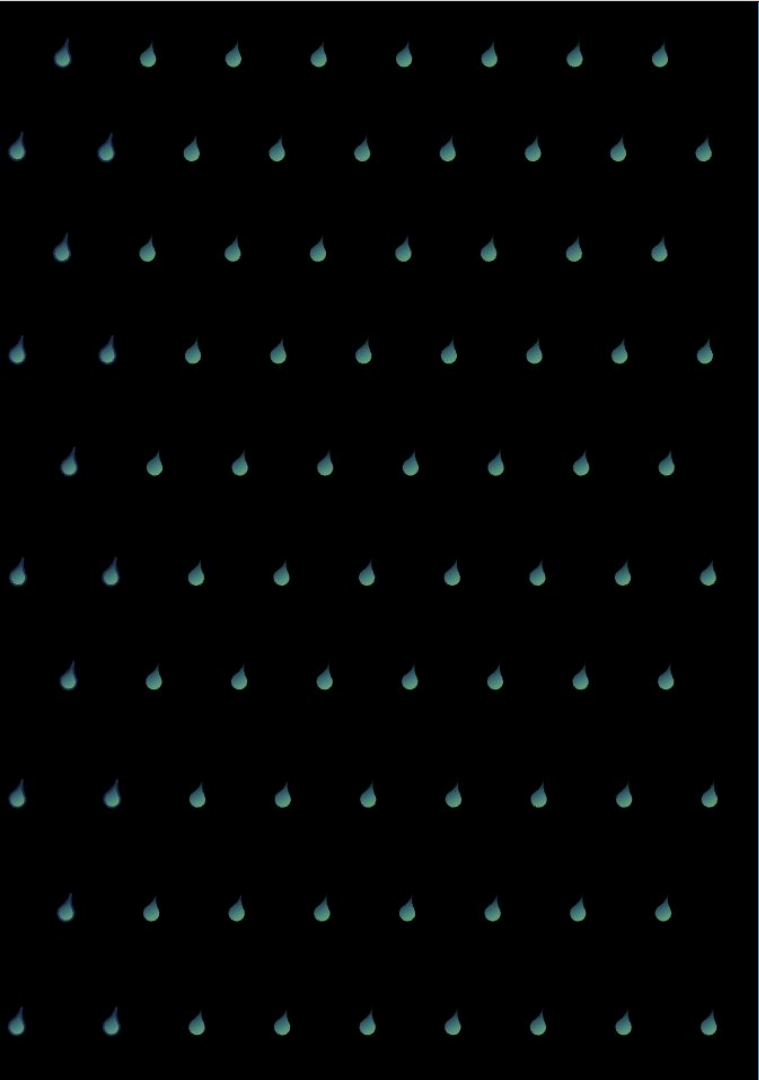


**LUNCH**

# KEYNOTE

**Rona Taylor,  
Executive Director at  
Central x South East  
Brooklyn CDC**





**PANEL:**

**Rainfall Realities:  
Navigating Agency  
Collaboration in a  
Wetter World**

# RAINFALL REALITIES: NAVIGATING AGENCY COLLABORATION IN A WETTER WORLD



**LIZZIE HODGES MCQUADE**  
*NYC Housing Authority*



**PAUL MERCURIO**  
*NYC Department of  
Transportation*



**MARIT LARSON**  
*NYC PARKS*



**ERIN MOREY**  
*Metropolitan  
Transportation Authority*



**BO CHUNG**  
*NYC Department of Health  
and Mental Hygiene*



*Moderated by*  
**RUSS DUDLEY**  
*ARCADIS*



# Hurricane Ida – September 1<sup>st</sup>, 2021



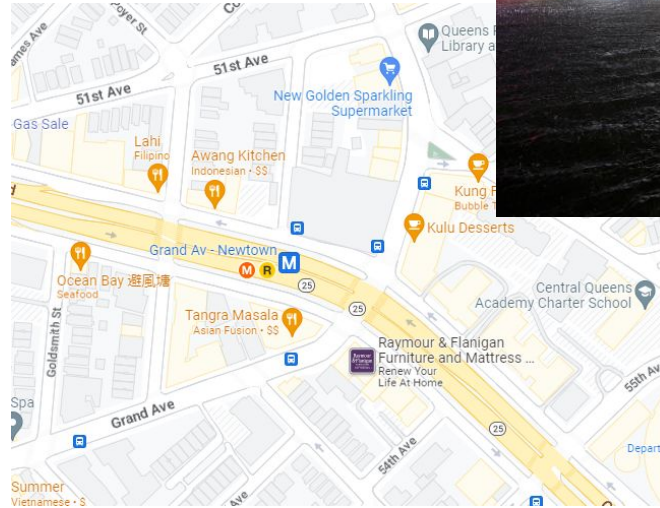
# Hurricane Ida – September 1<sup>st</sup>, 2021

## Elmhurst, Queens



AP Images

***Central Park recorded 3.15' of rain between 8:57 and 9:57 p.m.***



Pat Cavlin  
@pcavlin · Follow

Queens Blvd or the North Atlantic?

We are witnessing history tonight.



10:33 PM · Sep 1, 2021



# Hurricane Ida – September 1<sup>st</sup>, 2021



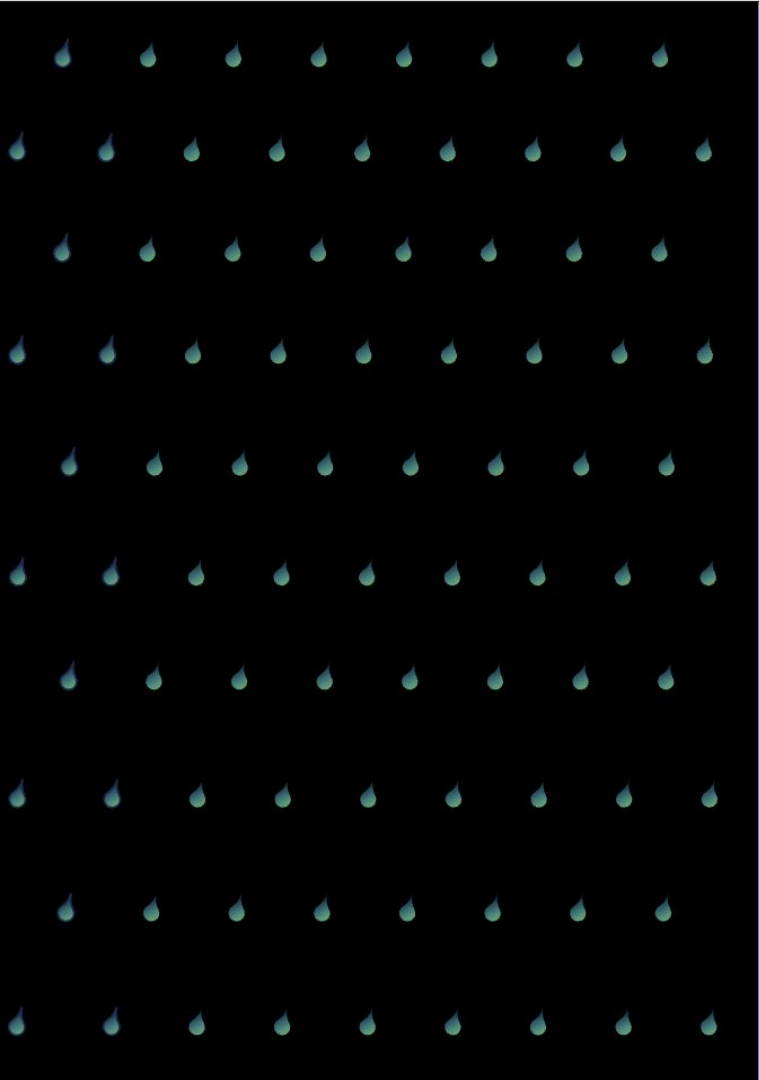
*Central Park recorded 3.15" of rain between 8:57 and 9:57 p.m.*

<p>Moderate Stormwater Flood with Current Sea Levels</p>	<p>Moderate Stormwater Flood with 2050 Sea Level Rise</p>	<p>Extreme Stormwater Flood with 2080 Sea Level Rise</p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #cccccc; margin-right: 5px;"></span> Area not included in analysis</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc00; margin-right: 5px;"></span> Future High Tides 2080</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff6666; margin-right: 5px;"></span> National Wetlands Inventory</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #0066cc; margin-right: 5px;"></span> Deep and Contiguous Flooding (1ft and greater)</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #66b3ff; margin-right: 5px;"></span> Nuisance Flooding (greater or equal to 4 in and less than 1ft)</li> </ul>
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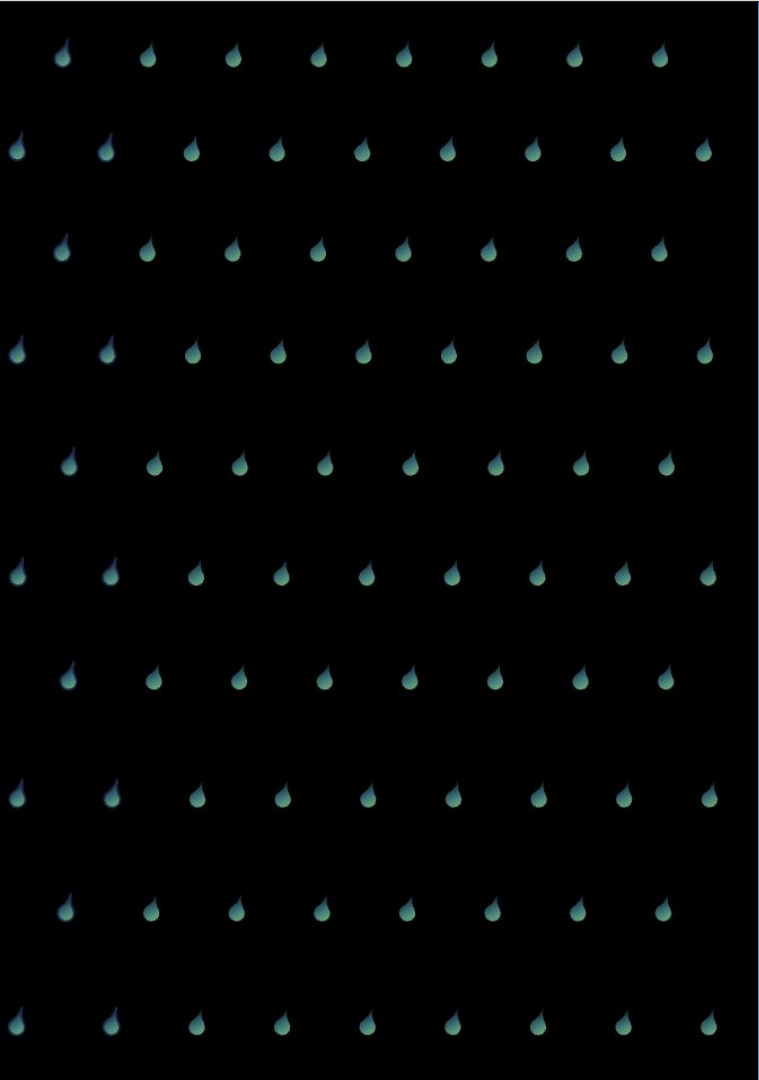
# REFLECTIONS

**Angela Licata,  
Deputy Commissioner of  
Sustainability at NYC  
Department of  
Environmental Protection**





**BREAK**



**PANEL:**

**Rain Boots on the  
Ground: Learning from  
the Frontlines**

# RAIN BOOTS ON THE GROUND: LEARNING FROM THE FRONTLINES



**TONYA GAYLE**  
*GREEN CITY FORCE*



**REBECCA PRYOR**  
*RAIN COALITION*



*Moderated by*

**JILL CORNELL**  
*NYC EMERGENCY  
MANAGEMENT (NYCEM)*



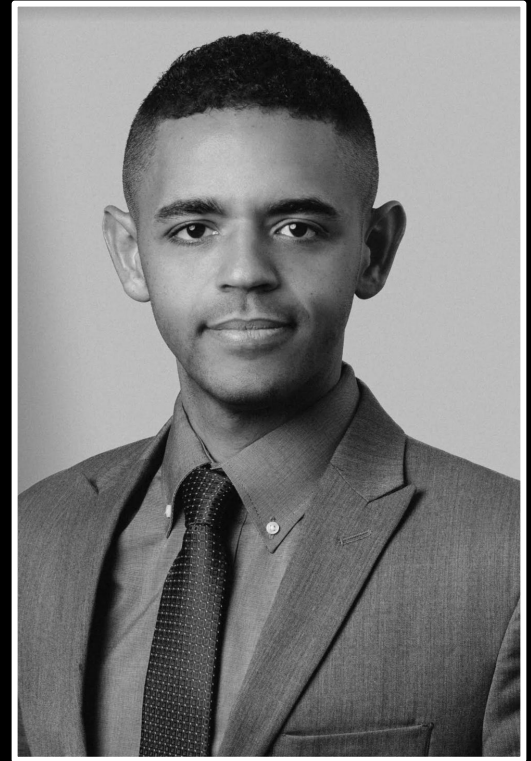
**LUCY CUMMINGS**  
*NEW YORK DISASTER  
INTERFAITH SERVICES*



**PAMELA PETTYJOHN**  
*CONEY ISLAND  
BEAUTIFICATION PROJECT*

# REFLECTIONS

**Paul Lozito,  
Deputy Executive Director,  
NYC Mayor's Office of  
Climate and Environmental  
Justice**





**Code: 2401 2404**  
**[menti.com/al76kuh66snj](https://menti.com/al76kuh66snj)**



**NEXT STEPS:**  
**INTERACTIVE SESSION:**  
**How can we each lead a**  
**Rainproof NYC**  
**movement?**

# WELCOME REMARKS

**Alison N. Landry,  
Chief Infrastructure Officer,  
Office of the Deputy Mayor  
for Operations**



# THANK YOU!

If you have any questions,  
comments, or suggestions,  
please email  
[info@rebuildbydesign.org](mailto:info@rebuildbydesign.org)

