

NYC Green Infrastructure Program 2024 Annual Report

Public Presentation

May 29, 2025



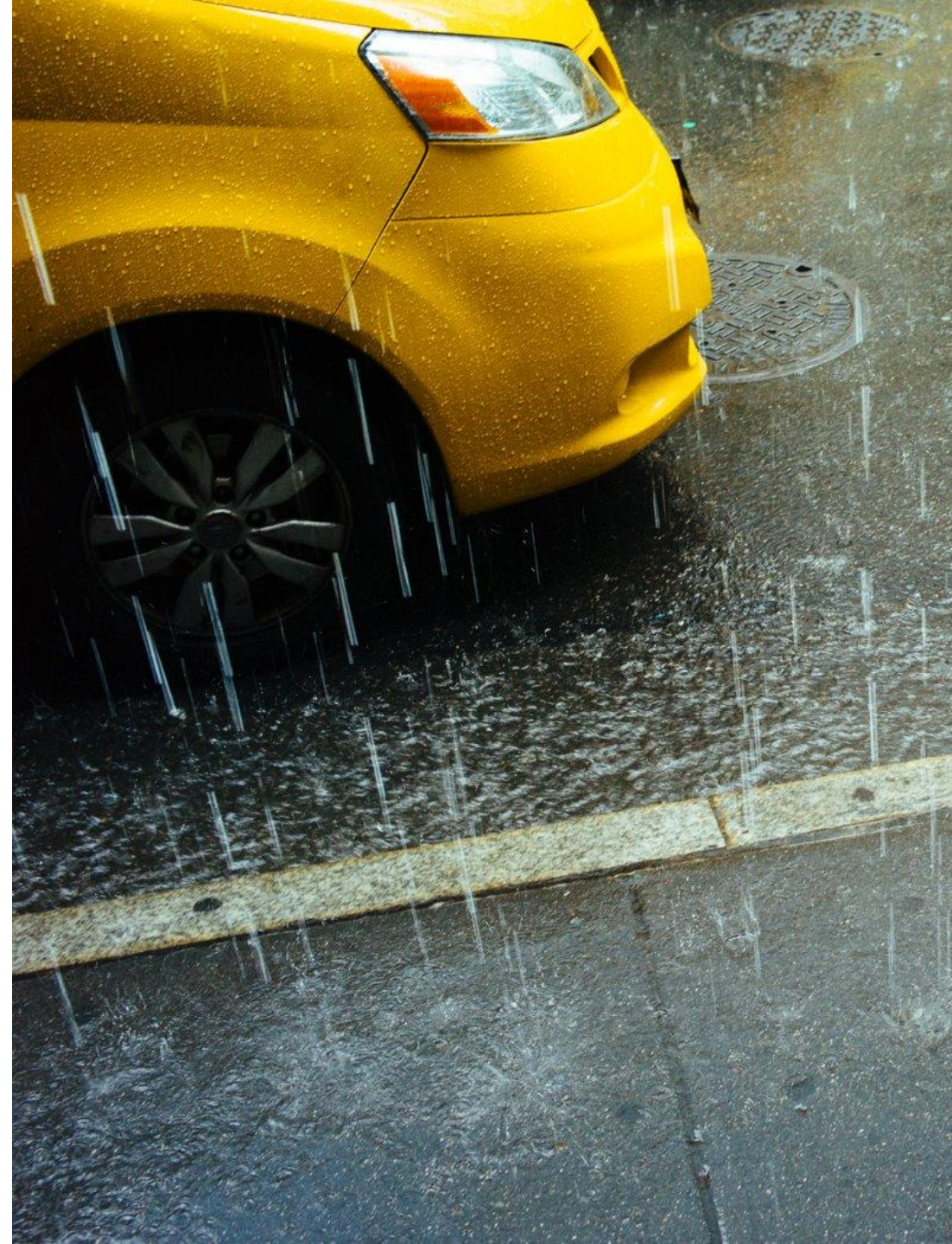
Agenda



- Stormwater overview
- NYC Green Infrastructure Program Updates
 - Right-of-Way
 - Large-Scale medians and In-house design
 - Public partnerships
 - Private property financial incentives
 - Stormwater regulations
 - Resiliency and cloudburst management
 - Daylighting
 - Adaptive Management
- Additional Updates
 - Plans for 2025
 - Resources

Stormwater Management in NYC

- Infrastructure
 - Sewers
 - Bluebelts
 - Green infrastructure
 - Cloudburst
- Concerns
 - Harbor water quality
 - Flooding
- 2024 Stormwater Analysis
 - nyc.gov/assets/dep/downloads/pdf/water/stormwater/2024-stormwater-analysis-report.pdf



The NYC Green Infrastructure Program



Right of Way



Stormwater Regulations



**Large-Scale Medians and
In-house Design**



**Resiliency and Cloudburst
Management**



Public Partnerships



Daylighting



**Private Property
Financial Incentives**



Adaptive Management

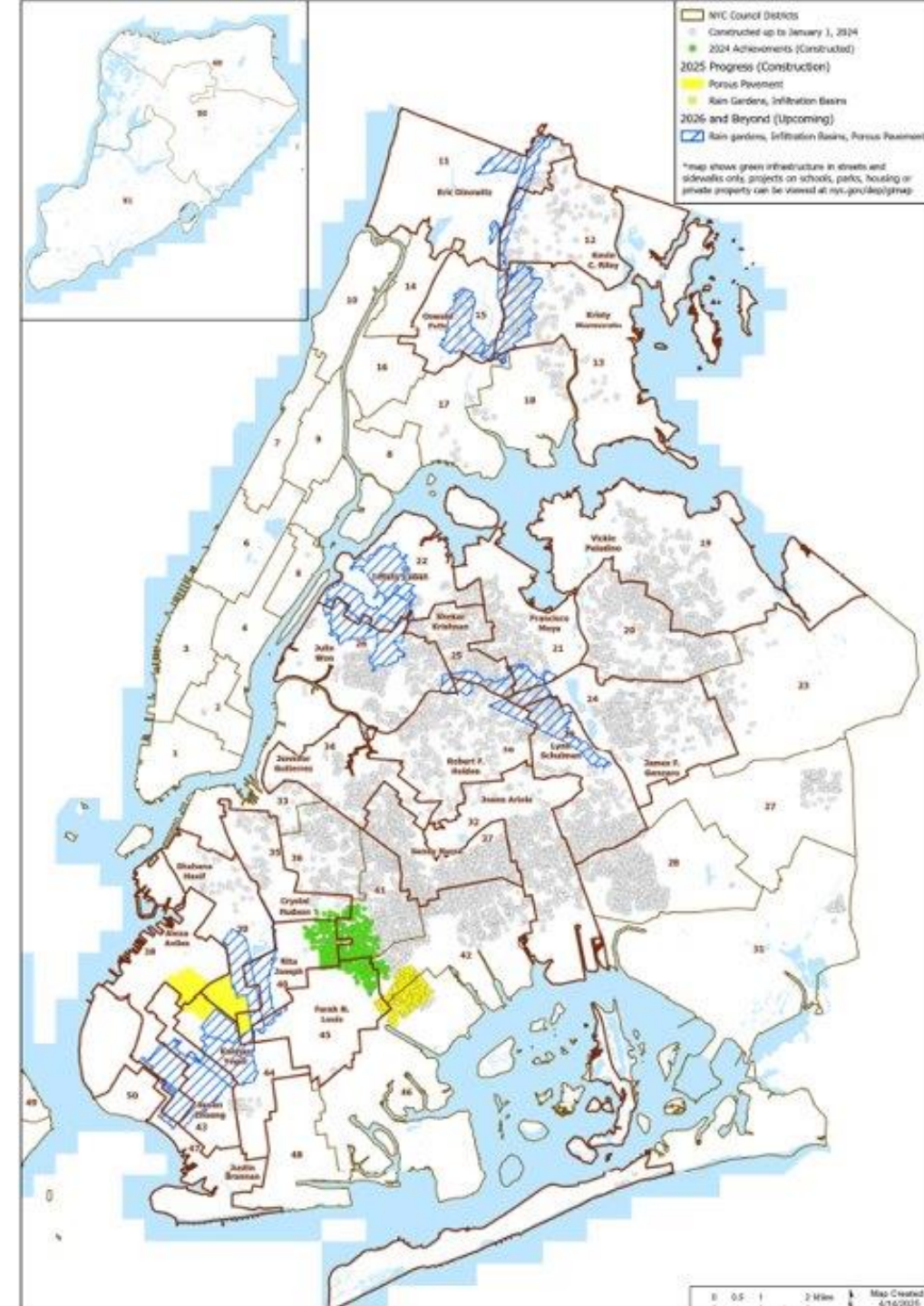


Right-of-way



Right-of-way

- 2024 Achievements
 - Completed construction of ~1,400 ROW green infrastructure assets in Whitestone, Queens and East Flatbush, Brooklyn
 - Porous pavement construction contract for over 100,000 SF broke ground in Borough Park, Brooklyn
- 2025 Progress Highlights
 - Substantial completion of 600+ GI assets in Canarsie
 - Active porous pavement design contract in the Bronx, aiming to implement 150,000 SF
 - Advertising construction of 400,000+ SF of porous pavement in Brooklyn
- 2026 and Beyond (Planning and in design)
 - Astoria/Sunnyside, Elmhurst
 - Additional 250,000 SF of porous pavement in Brooklyn



Porous Pavement

- Quick Facts
 - How it works



- NY Times article:
<https://www.nytimes.com/2024/09/23/nyregion/street-wars-flooding-pavement-porous.html>



Porous Pavement During Construction

Porous Pavement

How the maintenance works:

- Spring and Fall
- 1st pass with sweeper removing large debris and sediment
- 2nd pass with deep cleaning head
 - Uses high pressure rotary nozzles and vacuum simultaneously
- Testing per ASTM C1701 performed to ensure infiltration restored



Regenerative Air Vacuum Sweeper Mode
to remove caked on dirt, sediment and debris.



6 Rotary High Pressure Nozzles (i.e. 2,000 psi each)



BEFORE

AFTER



Large-Scale Medians & In-House Design

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Large-Scale Medians and In-House Design

- Green street median project completed construction in 2024
 - Located in Queens Village MS4 area
- Additional medians expected to begin construction in 2025
 - Located in Queens: Springfield Blvd, Union Turnpike, Frances Lewis Blvd
 - \$5M awarded from NYS EFC grants
- Gateway to Greenpoint
 - Located in Brooklyn MS4 area
 - Construction scheduled to begin in 2025
 - Funding sources include the City, City Council, and federal government





Public Partnerships



Public Partnerships

- Retrofits on publicly-owned properties
- Since 2011, constructed/in construction:
 - Parks & Playgrounds: 129 projects
 - Public Schools: 92 projects
 - NYCHA Housing: 37 projects
 - Other public: 8 projects



Trust for Public Land PS 204 Brooklyn



Private Property Financial Incentives



Private Property Financial Incentives

Green Infrastructure Grant Program

- Funds the design and construction of green roof retrofits on private property in combined and separately sewer areas
- In 2024, DEP updated the Grant Program reimbursement schedule that decreases minimum required green roof area and increased \$/SF to reflect rising construction costs
- Upcoming 2025 quarterly webinars on how to apply:
 - June 11, 2-3 pm
 - September 10, 2-3 pm
 - December 10, 2-3 pm

TABLE 4: NEW REIMBURSEMENT RATES FOR GREEN ROOF PROJECTS

Soil Depth (in)	Green Roof Area ≥ 3,500 (sf)
1.5 - 1.99	\$15
2.0 - 2.99	\$20
3.0 - 3.99	\$35
4.0 +	\$40

Private Property Financial Incentives

Resilient NYC Partners

Funds the design and construction of site-level green infrastructure practices for properties with >50,000 SF site-level impervious area.

2024 Highlights

- DEP spent over \$3M to manage 4.03 million gallons of stormwater per year in both MS4 and combined sewer areas
 - 1.97 million gallons per year of CSO volume reduction
 - 0.25 million gallons per year of stormwater managed in MS4 areas
- 6 projects across 4 properties
 - Pratt Institute (Brooklyn)
 - Green-Wood Cemetery (Brooklyn)
 - T. Mina Supply – private company (Queens)
 - Flushing Hospital (Queens)



Resilient NYC Partners Highlight: Green-Wood Cemetery Service Yard



Resilient NYC Partners Highlight: Green-Wood Cemetery Maple Ave





Stormwater Regulations

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Stormwater Regulations

- Unified Stormwater Rule
 - Covers certain development and redevelopment citywide
 - Includes Site/House Connection Proposal Certifications & Stormwater Construction and Maintenance Permits
- Highlights
 - Over 1,400 assets constructed managing ~130 acres of stormwater citywide
 - Projects under construction with post-construction SMPs anticipated to provide ~50 MGY in CSO volume reduction



APPENDIX* NEW YORK CITY STORMWATER MANUAL

NYC Stormwater Manual is technical guidance:
https://www.nyc.gov/assets/dep/downloads/pdf/water/stormwater/unified-stormwater-rule/uswr_nyc_stormwater_manual.pdf

Unified Stormwater Rule Project Highlight: Edgemere Commons



Stormwater Management Practices will include:

- Green roof
- Vegetated retention
- Porous pavement
- Detention tank



Resiliency & Cloudburst



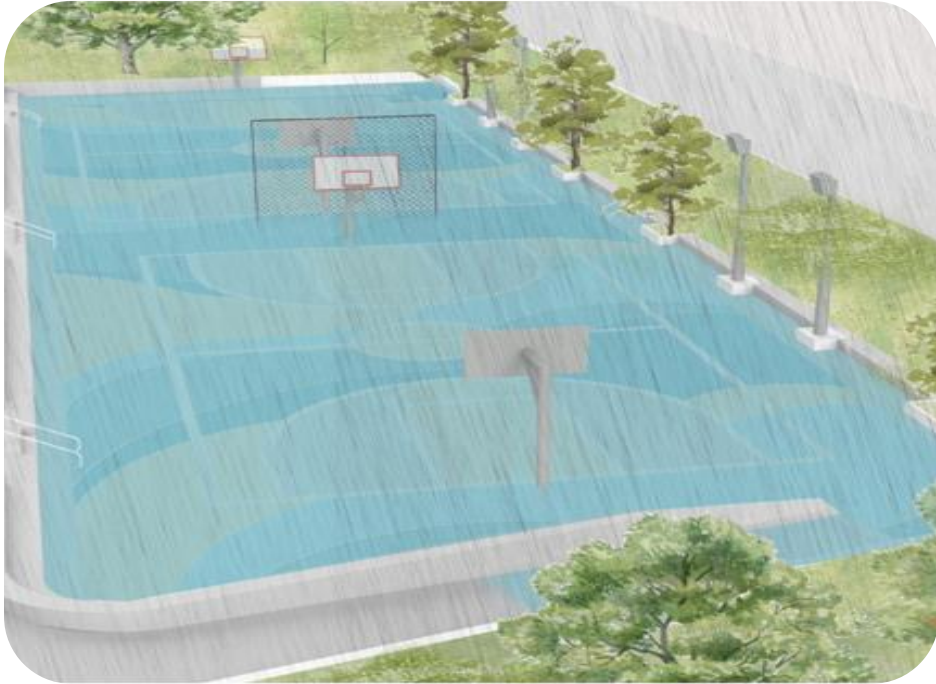
Cloudburst Projects

- **DEP and NYCHA partnered on two cloudburst pilots:**
 - South Jamaica Houses, Queens
 - Clinton Houses, Manhattan
- **DEP and Parks partnered on two cloudburst pilots:**
 - Rufus King Park, Queens
 - Archie Spigner Park, Queens
- **DEP and DOT designing a cloudburst pilot in the ROW at St. Albans:**
 - Intersection of 177th St and 112th Ave, Queens



NYCHA South Jamaica Houses in Southeast Queens – During Construction

Cloudburst Pilot Highlight: South Jamaica Houses in SEQ



Basketball Court Rendering (2021)



Basketball Court in Construction (2024)

Cloudburst Pilot Highlight: South Jamaica Houses in SEQ



Basketball Court Constructed (2025)

Cloudburst Hub Projects

4 Initial Hub Locations

In Design

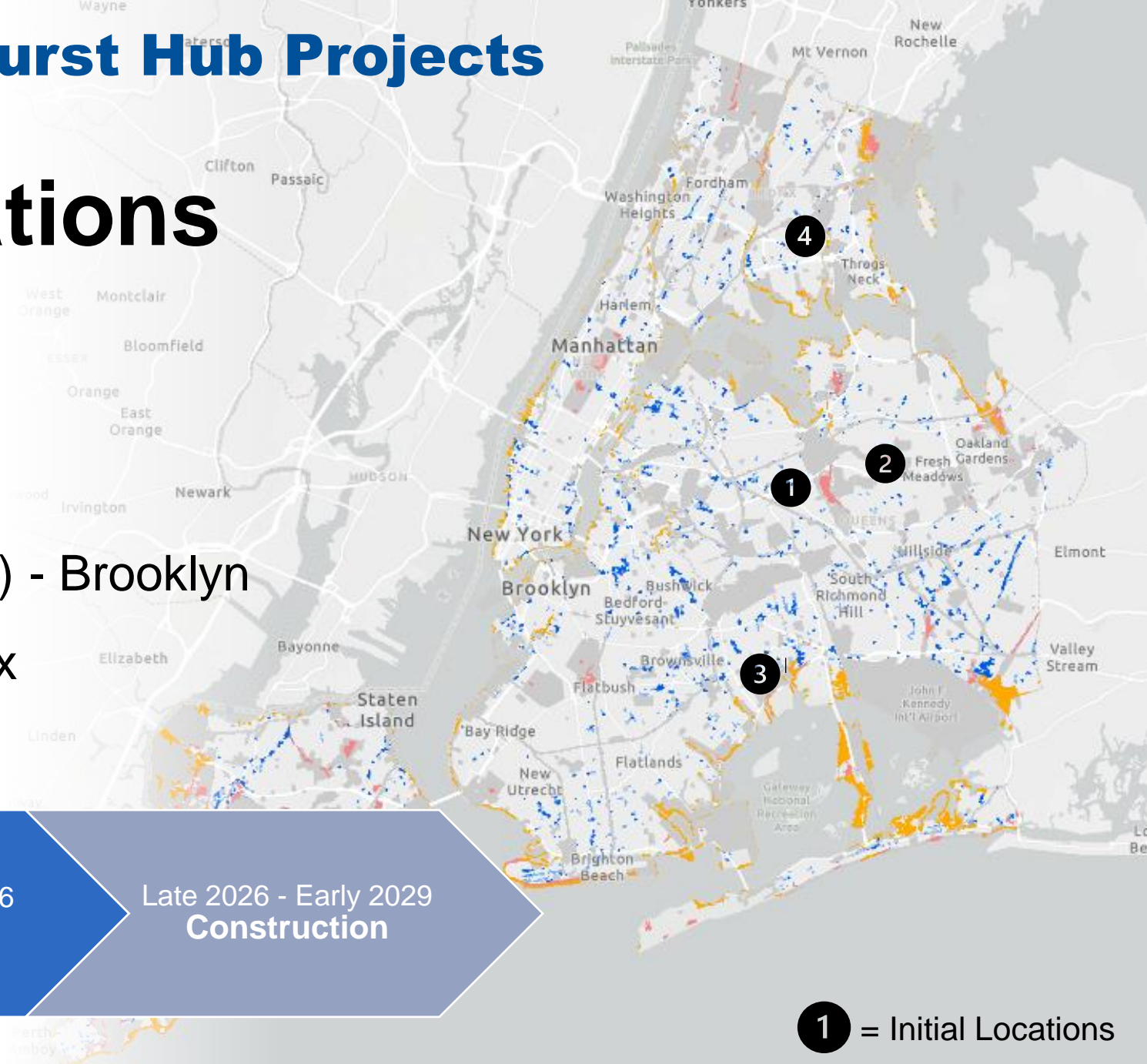
1. Corona - Queens
2. Kissena - Queens
3. East New York (Hendrix/Linden) - Brooklyn
4. Parkchester/Morris Park - Bronx

Early 2023 - Late 2025
Design

Late 2025 - Late 2026
Procurement

Late 2026 - Early 2029
Construction

1 = Initial Locations



Cloudburst Outreach Process

The primary goal of this outreach process is to develop platforms for knowledge exchange on flooding and the complexity of urban drainage systems. This form of knowledge sharing helps the City better understand neighborhood flood conditions, risks, and impacts on daily life.

1. Listening Phase

Information sharing, gathering local experiences with flooding as well as developing community's foundational understanding of flooding issues and causes.

2. Visioning Phase

Gathering community preferences to integrate into design plans wherever feasible. Support opportunities for stormwater management, to work toward multi-benefit open spaces that reflect community priorities.



Learn more



Stay involved



Cloudburst Engagement Event Recap & Looking Ahead

Corona



Event Locations

- Queens Public Library at Corona Community Day
- The New York Hall of Science Community Day
- Corona Plaza
- Corona Health Fair

Languages: English, Spanish

Total Participants: 150

Upcoming Outreach:

Community Meeting - **June 16**
Final Design Update - **Fall 2025**

Kissena



Event Locations

- Virtual Intro Meeting
- PS24 Visioning Open House
- Kissena Corridor Park Tabling

Languages: English, Spanish, Chinese (Mandarin)

Total Participants: 150

Upcoming Outreach:

Community Meeting – **Summer 2025**
Final Design Update - **Fall 2025**

East New York (Hendrix/Linden)



Event Locations

- Community Org Presentations
 - Cypress Hills LDC, ENY Farms, Jamaica Bay Rockaway Park Conservancy
- Tabling
 - Cypress Hills LDC Farmstand, JBRC Festival, ENY Farms Market
- Brooklyn Public Library New Lots

Languages: English, Spanish

Total Participants: 120

Upcoming Outreach:

Community Meeting - **Summer 2025**
Final Design Update - **Fall 2025**

Parkchester/ Morris Park



Event Locations

- CB 11 and CB9 Presentations
- Morris Park BID
- Tabling Castle Hill Playground
- PS83 PTA Meeting
- Parkchester Family Day
- PS106

Languages:

English, Spanish, Bengali

Total Participants: 250

Upcoming Outreach:

Community Meeting - **June 5**
Final Design Update - **Fall 2025**

Daylighting

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Tibbetts Brook Daylighting

In 2024, DEP made several key achievements:

- Advanced interagency coordination and design development
- Finalized \$11.2M purchase and acquisition of former rail line property from CSX Transportation
- Held meetings with the Tibbetts Advisory Group
- Final Design approved by Public Design Commission (PDC)
- DEP continued to work to acquire an easement from Metro North for conduit to bring Tibbetts Brook flow to Harlem River.
- Received \$10M in funding through New York State Environmental Facilities Corporation Green Resiliency
- Began Phase 1, field activities for invasives control and disposal in August 2024.



Tibbetts Brook Daylighting: Phase 1 Lake Improvements (Ongoing)



Water Chestnut Removal – Before (2024)



Water Chestnut Removal – After (2024)



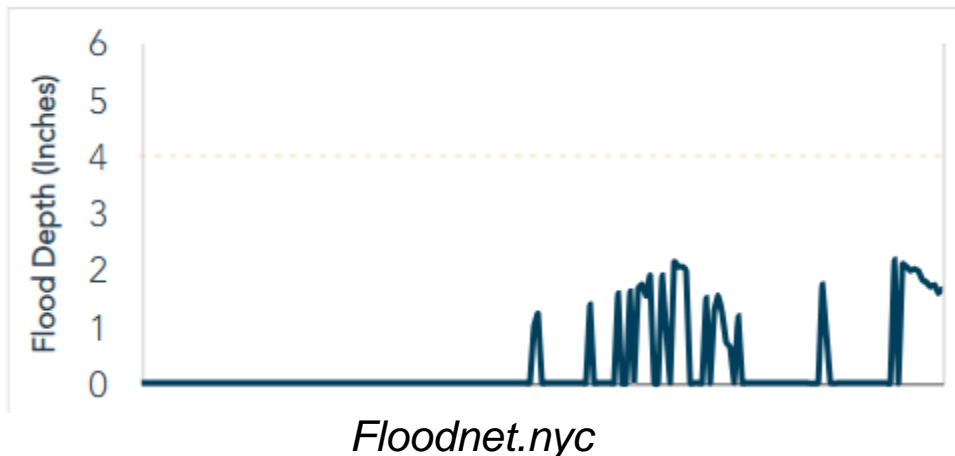
Adaptive Management

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Adaptive Management Highlights: 2024

- DEP conducted field tests utilizing water level sensors and flow meters to collect data necessary to develop detailed representative models of typical installations
- DEP and DOT continued working with DSNY to evaluate porous pavement cleaning equipment



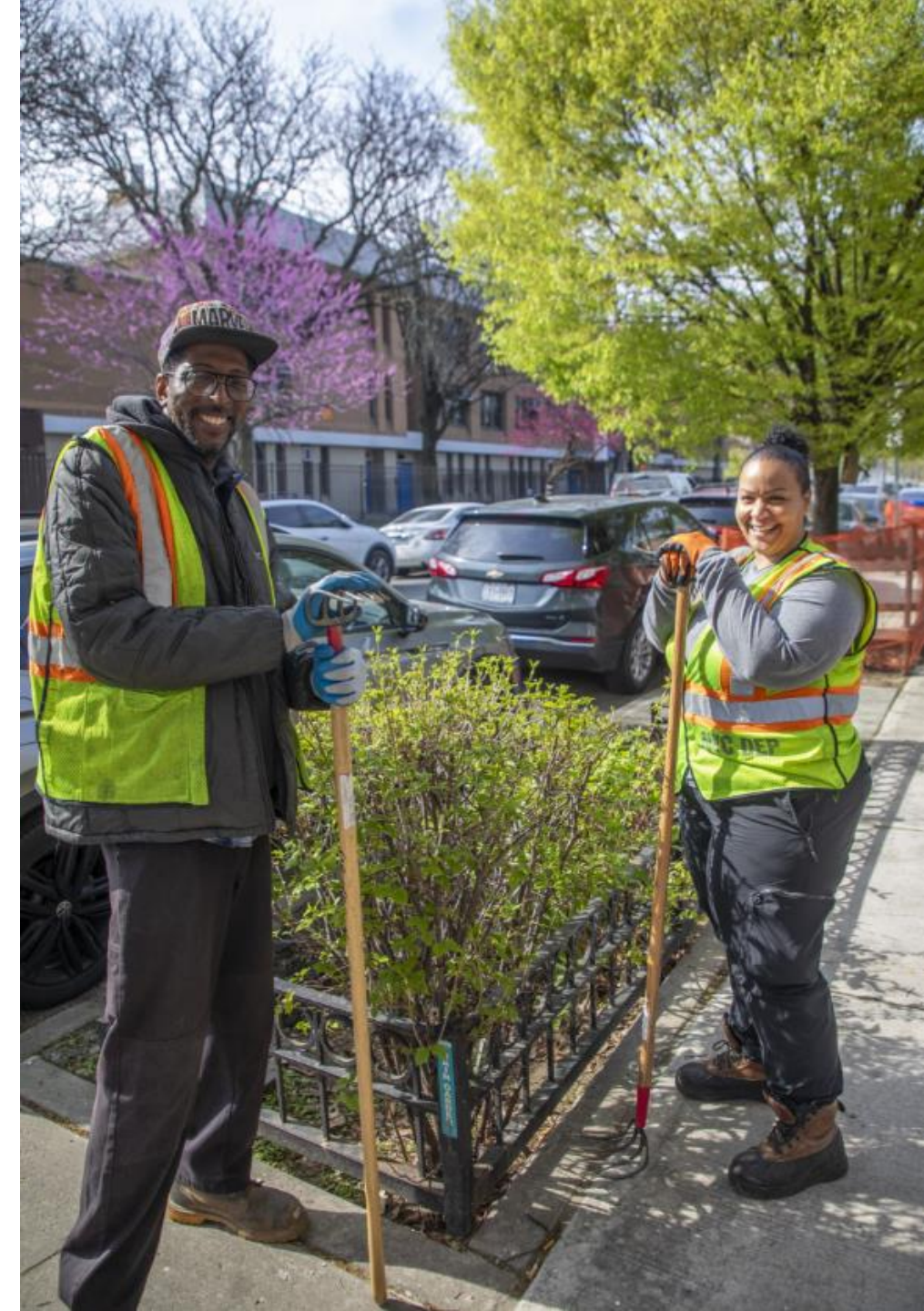
- DEP has been collaborating with academic research partners and other City agencies to support the development and implementation of a sensor network called FloodNet
 - provides real-time data on the presence, depth, and frequency of street flooding throughout NYC
 - 242 sensors installed



Additional Updates

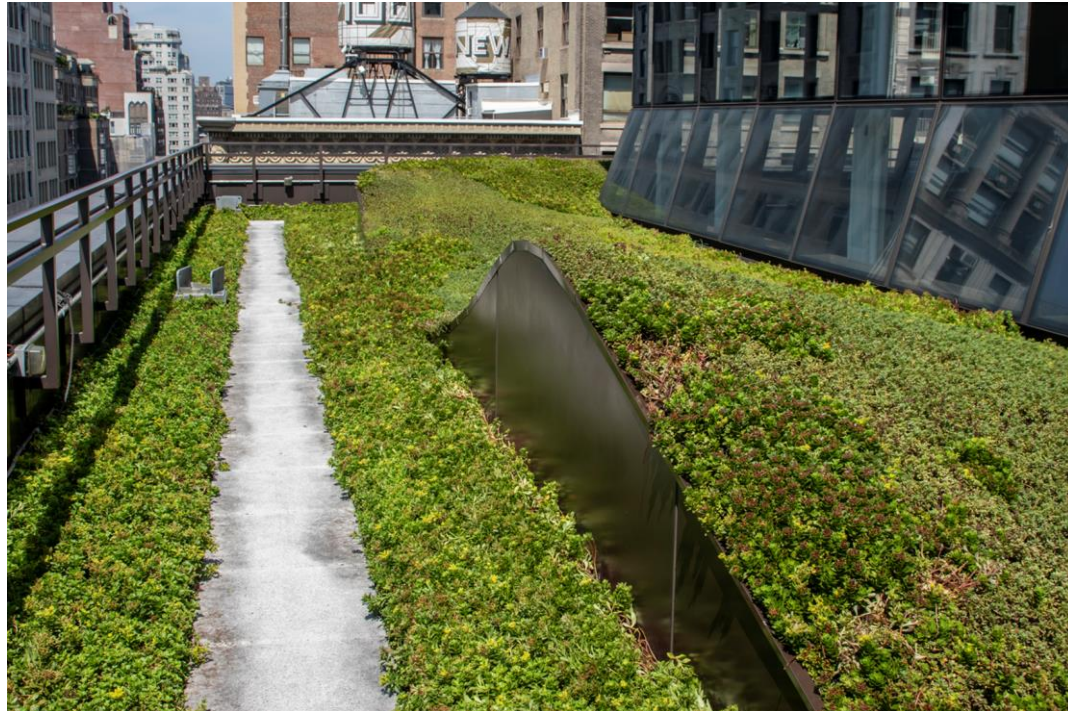
Looking Ahead to 2025

- 2025 Milestone Certification
 - DEP will certify CSO volume reduction and funds encumbered
 - Based on 2023 CSO Consent Order Modification
- New MS4 Green Infrastructure Opportunity Analysis
 - Bergen Basin
 - Thurston Basin
- Stormwater Master Plan
 - New effort for green and grey infrastructure teams at DEP
- Stormwater Permitting Webinars
 - Held the last Tues of every month at 12 pm over Teams



Look Ahead Highlight: Stormwater Permitting Workshops

- Join DEP for monthly webinars to guide users through the stormwater permitting process
- Find previous presentations:
www.nyc.gov/site/dep/water/stormwater-permits.page
- Topic survey:
<https://dep.wufoo.com/forms/zr8ip61112p87z>



Get Involved!

Rain Garden Stewardship

- DEP provides training, tools, and support as needed
- Stewards join at a level, or tier, that matches their experience, interests, and availability
- Email Gistewardship@dep.nyc.gov for more information or to sign up!



Rain Garden Clean up

Resources

- **Green Infrastructure Webpage:** nyc.gov/dep/greeninfrastructure
 - **2024 Annual Report:** <https://www.nyc.gov/assets/dep/downloads/pdf/water/stormwater/green-infrastructure/gi-annual-report-2024.pdf>
 - **Green Infrastructure Map:** nyc.gov/dep/gimap
 - **Rain Garden Stewardship:** nyc.gov/site/dep/water/rain-gardens.page
 - **Green Infrastructure Grant Program:** nyc.gov/dep/gigrantprogram
 - **Resilient NYC Partners:** nyc.gov/site/dep/whats-new/resilient-nyc-partners.page
- **DEP Newsletter Sign Up:** nyc.gov/site/dep/about/newsletters.page
- **DEP Social Media:** nyc.gov/connect/social-media.page

