

Homecrest Cloudburst Introduction

Agenda

- **Cloudburst Overview**
 - Introduction to Cloudburst Management
 - DEP Cloudburst Program
- **Homecrest Cloudburst Hub**
 - Existing Conditions
 - Cloudburst Toolkit
 - Project Process + Timeline
- **Next Steps**

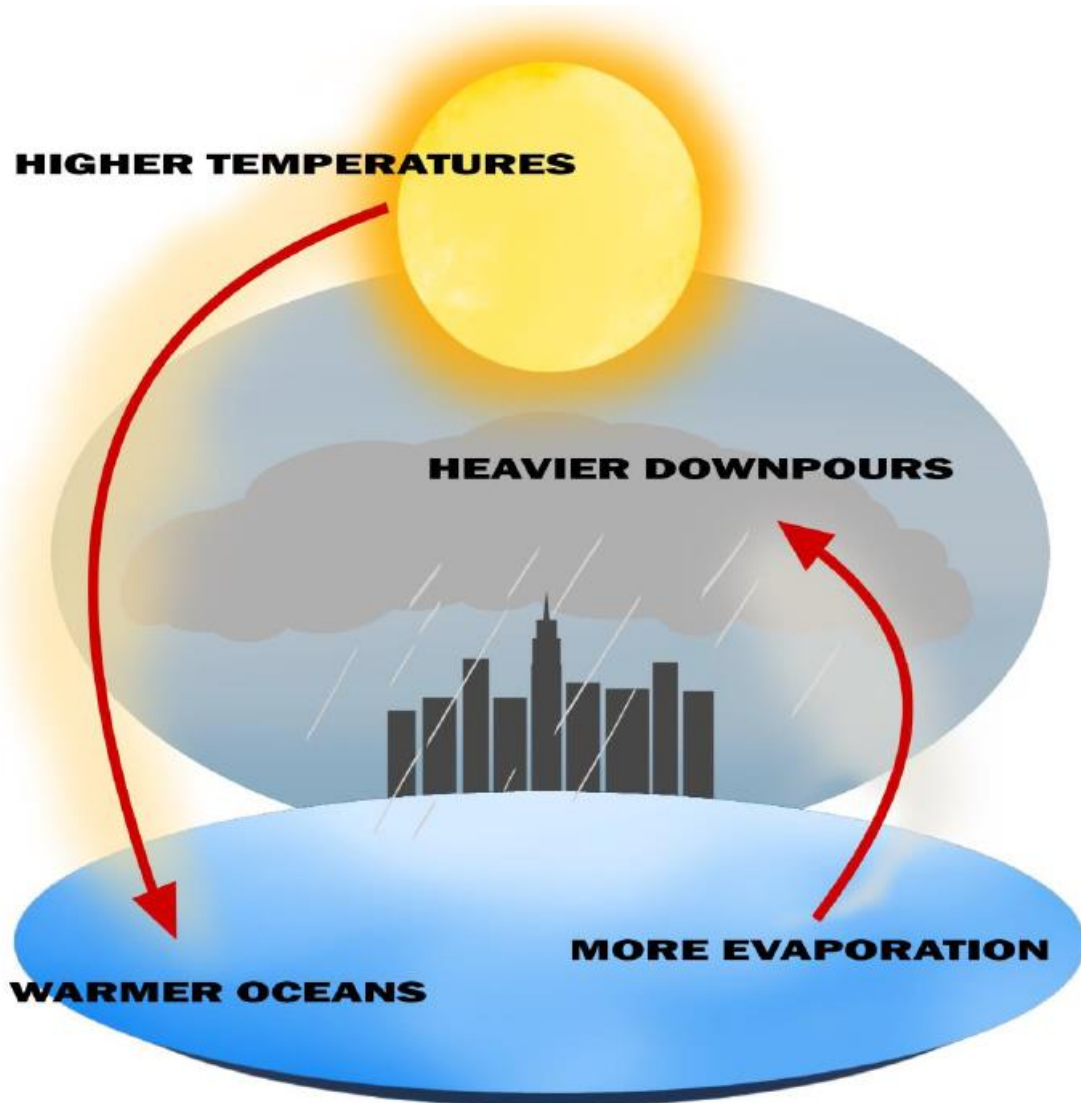
Cloudburst Overview

The Problem

Climate change is causing more localized flooding across NYC.



Our Changing Climate



Sudden, powerful storms are bringing more **intense rainfall** to New York City.

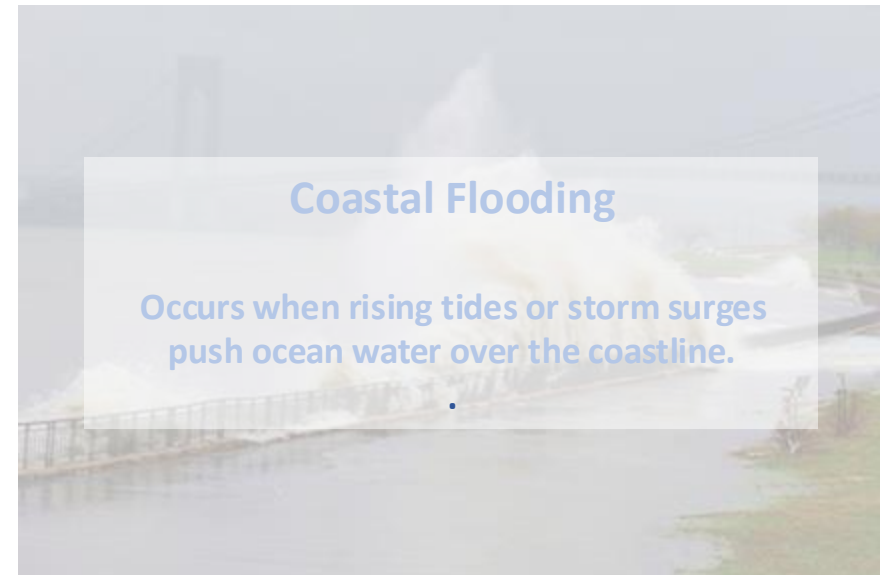
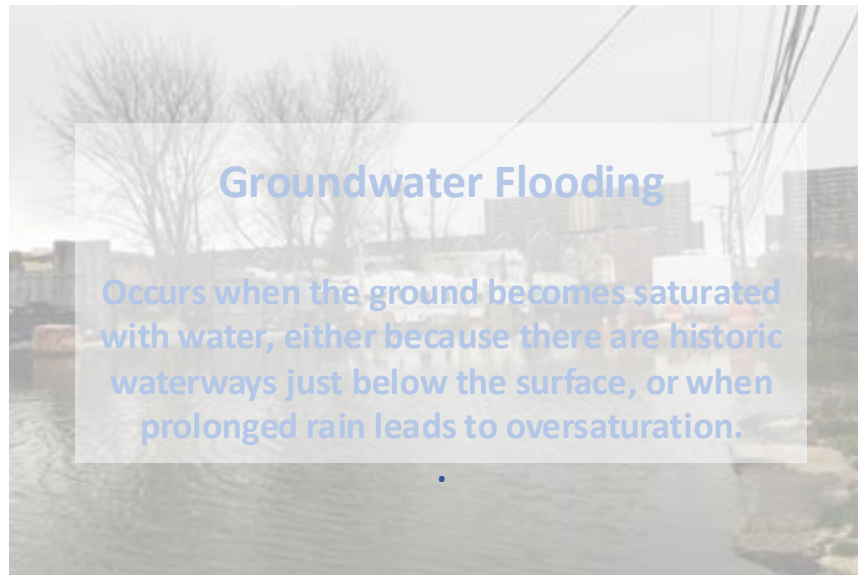
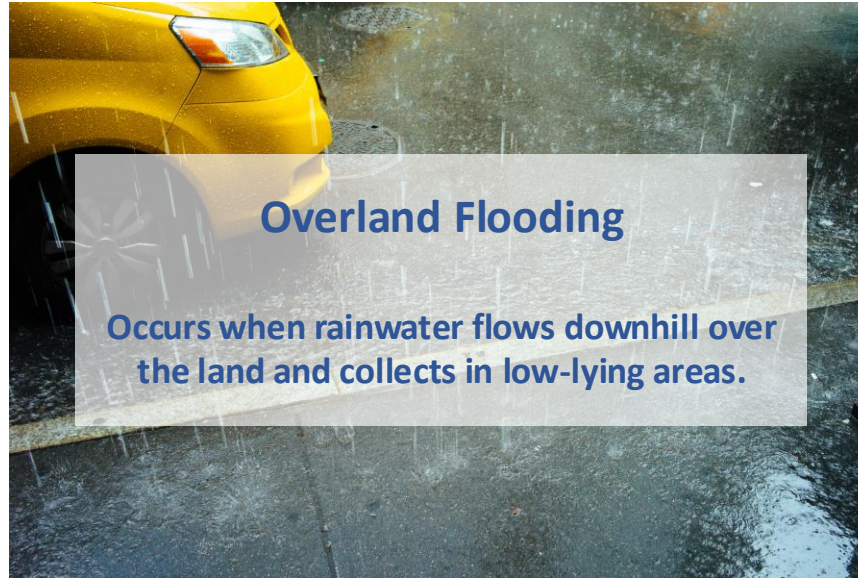
- August 2021 (Henri) – 1.94 inches in an hour
- September 2021 (Ida) – 3.15 inches in an hour
- September 29, 2023 – 2.5 inches in an hour

In 2023, NYC experienced **rain every 3 days**.

NOAA (National Oceanic and Atmospheric Administration) has **reclassified NYC** a “**humid subtropical**” climate.

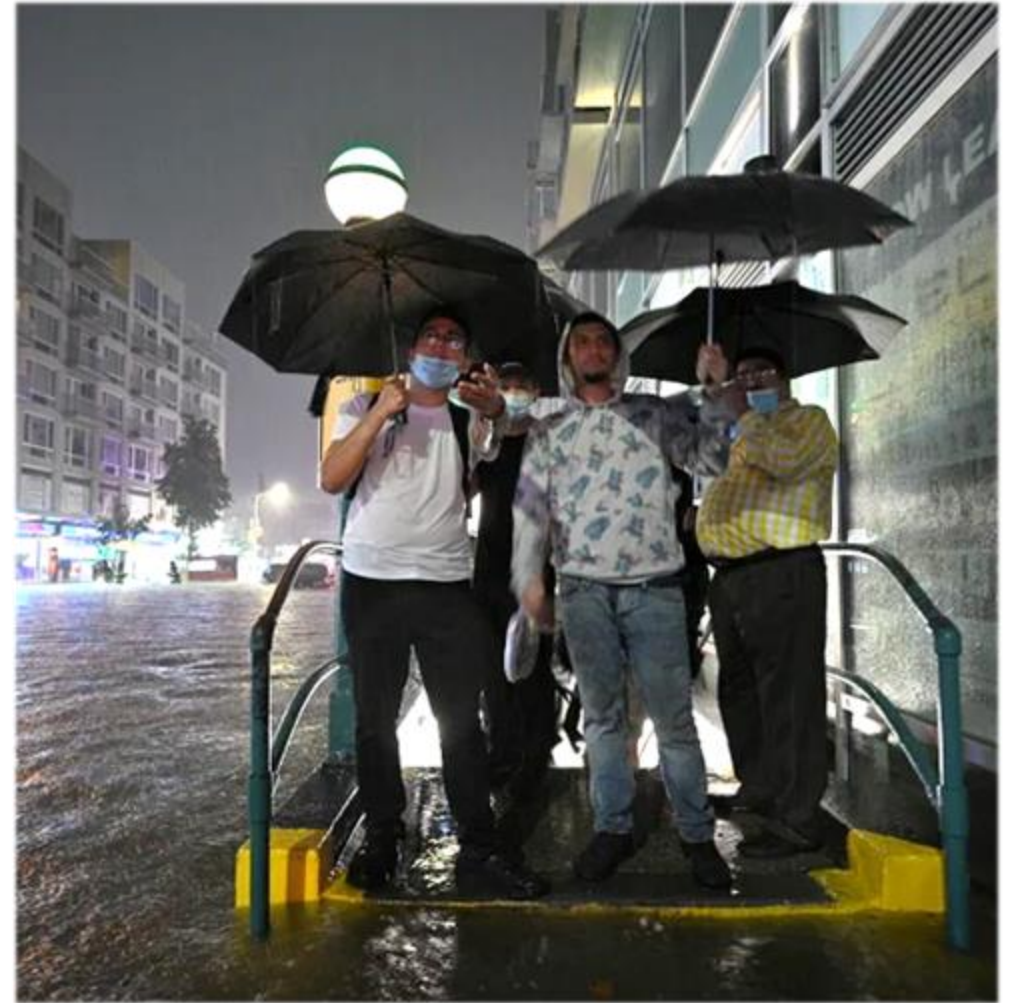
Types of Flooding

- There are several different types of flooding that New Yorkers may experience, either combined or in isolation during a flooding event.
- Cloudburst Management is primarily suited to address overland flooding.



What is a Cloudburst?

- A cloudburst is a sudden, heavy downpour where a lot of rain falls in a short amount of time.
- Cloudbursts can cause flooding, damage property, disrupt critical infrastructure, pollute New York's waterways, and in extreme examples even cause loss of life.

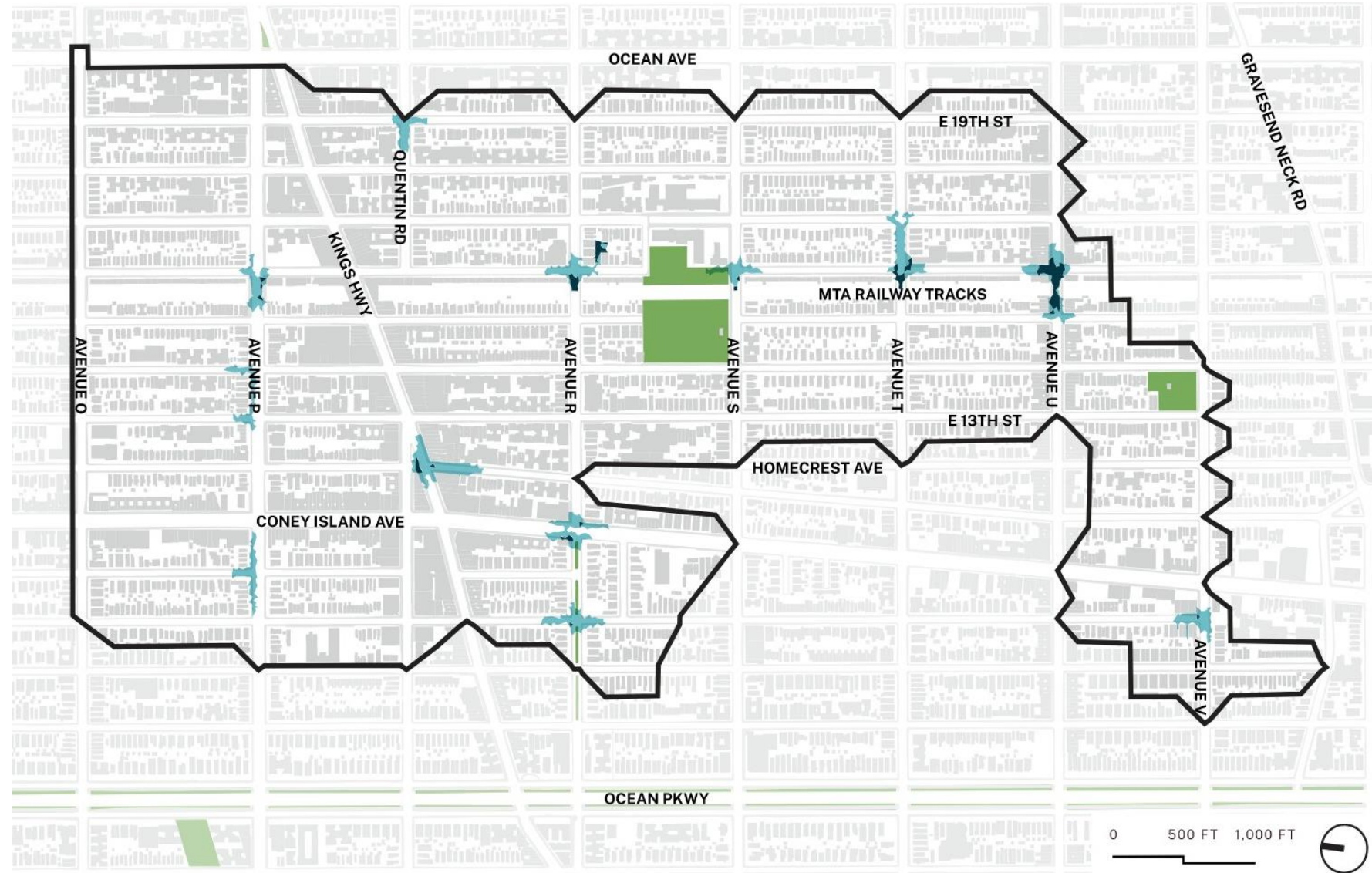


Homecrest, Brooklyn Stormwater Flood Map

- NYC DEP selected Homecrest as a site for a Cloudburst Hub.
- The neighborhood experiences localized flooding, the team would like to hear where the community sees and experiences flooding.

LEGEND

- Homecrest Cloudburst Boundary
- Nuisance Flooding (*greater or equal to 4 in. and less than 1 ft.*)
- Deep and Contiguous Flooding (*1 ft. and greater*).

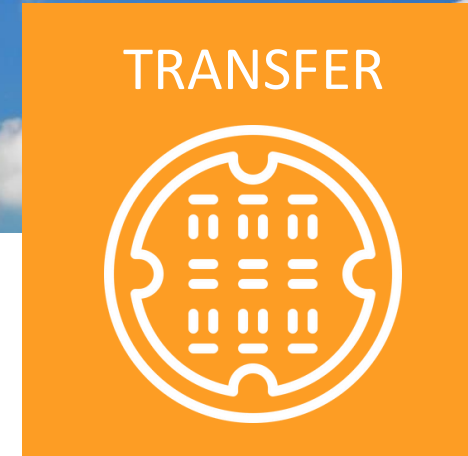
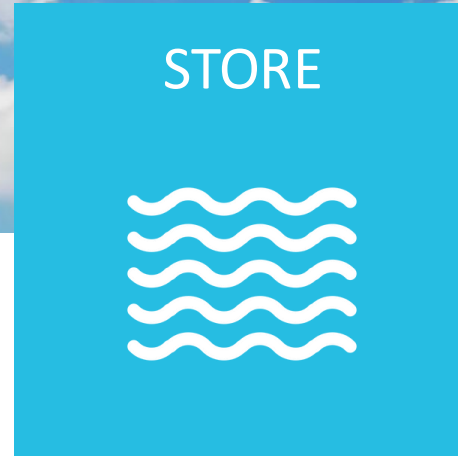
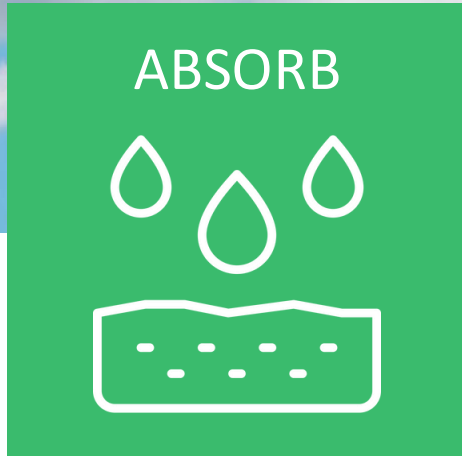




What is Cloudburst Management?

Cloudburst Management is a way of **absorbing, storing, and transferring stormwater to minimize flooding from heavy rain events**. Cloudburst Management uses a combination of grey infrastructure, like drainage pipes and underground tanks, and green infrastructure, like trees and rain gardens.

During heavy rain events, Cloudburst Management can minimize damage to property and infrastructure by reducing pressure on the sewer system.



What are examples of Cloudburst Management projects?

The City considers different Cloudburst Management projects to absorb, store, and transfer stormwater.



Projects that allow for surface water to enter the soil or ground

ABSORB



These include green infrastructure like:

- Porous pavement
- Rain gardens.

Pictured here is an example of a rain garden project in Brooklyn.



STORE

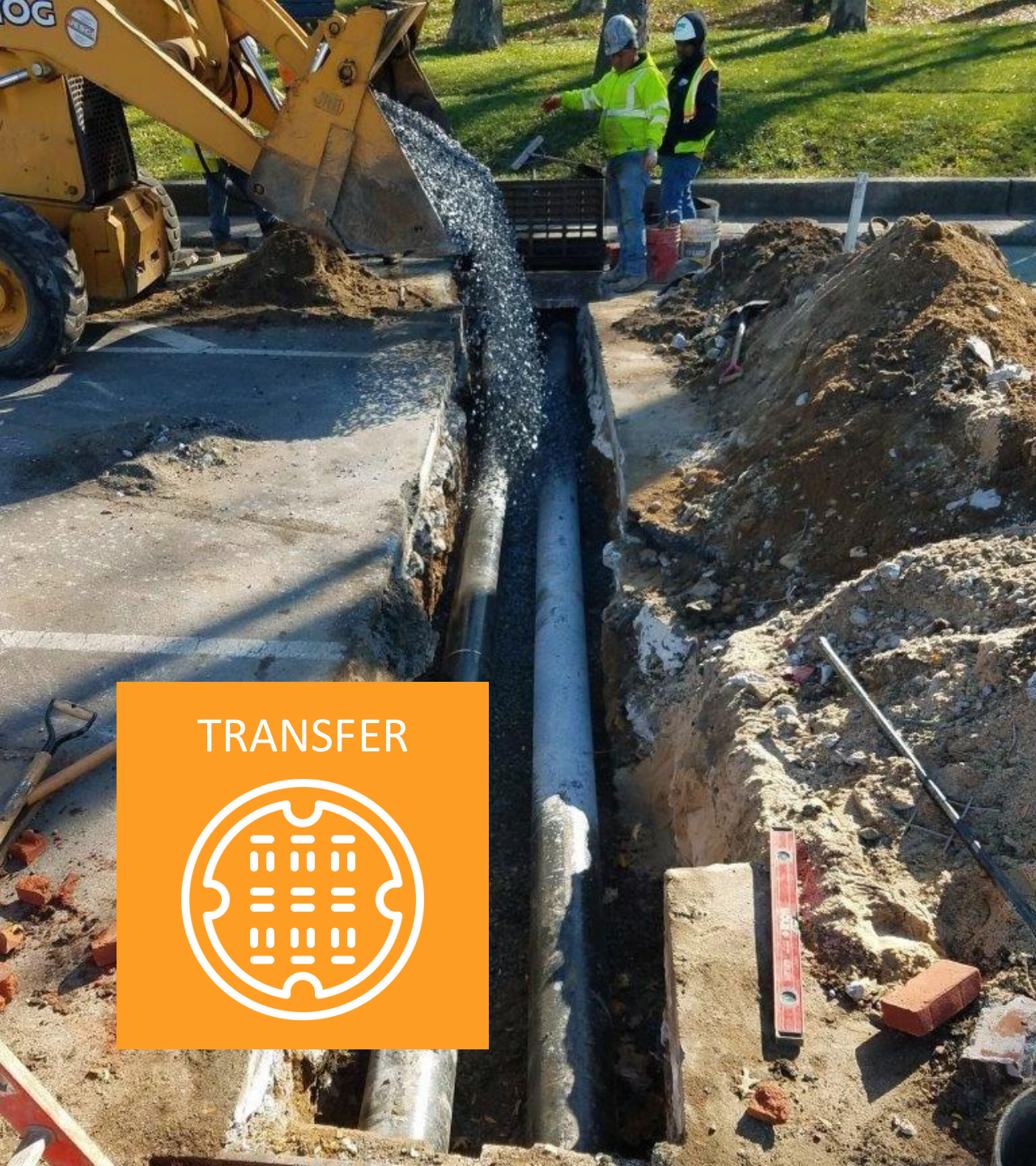


Projects that hold stormwater

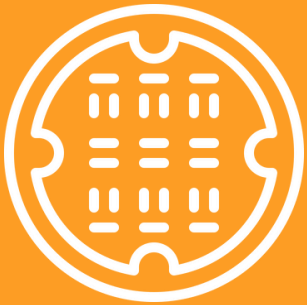
These include:

- Water squares
- Subsurface storage
- Wet ponds

Pictured here is the storage below the basketball courts at South Jamaica Houses, Queens



TRANSFER



Projects that move water from one place to another

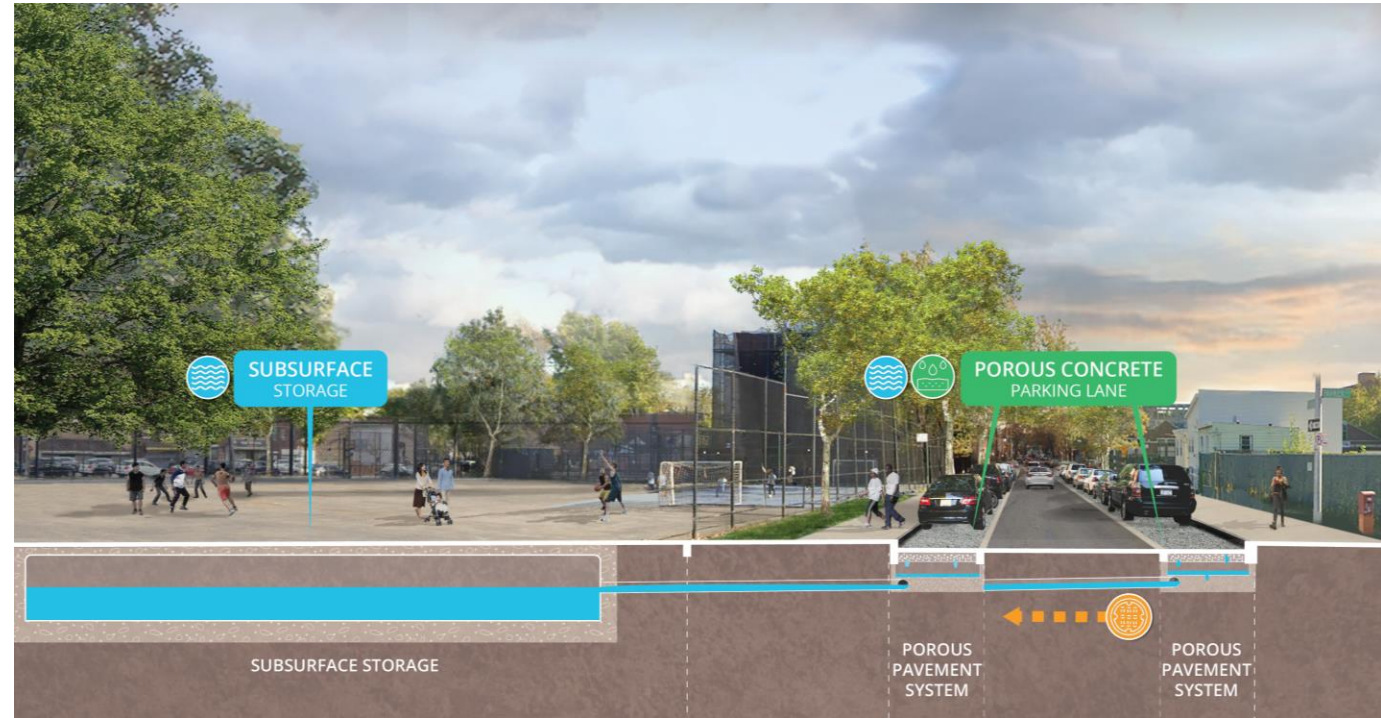
These include:

- On-site drainage
- Re-grading streets

Pictured here is a drainage improvement project along Shore Blvd in Astoria Park, Queens.

What is a Cloudburst Hub?

- Flood hotspots were identified and clustered into Cloudburst Hubs.
- NYC DEP will use a variety of stormwater management approaches in each Cloudburst Hub.



Cloudburst Program & Agency Partners

Sister City Partnership



Cloudburst Planning Study



NYC Parks



Department of
Design and
Construction



Cloudburst Pilot Projects



Cloudburst Hubs



Mayor's Office of Climate &
Environmental Justice

Homecrest Cloudburst Hub

Existing Conditions + Other Planning Projects

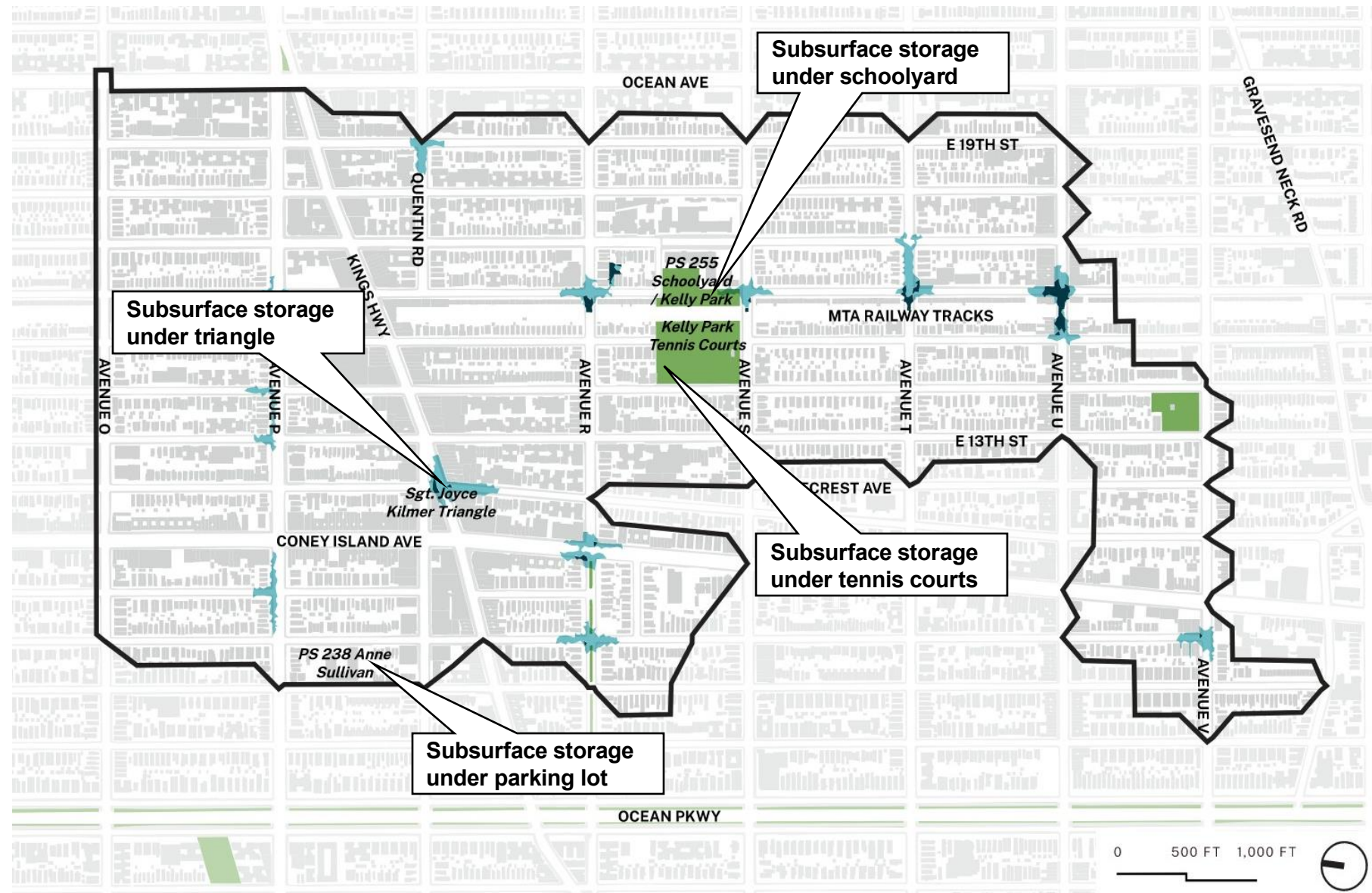


Homecrest Cloudburst Hub

- Subsurface detention is proposed at Sgt. Joyce Kilmer Square, Kelly Park (schoolyard and tennis courts), and the PS 238 parking lot.
- These systems are located below ground, allowing existing surface uses to remain largely unchanged.

LEGEND

-  Homecrest Cloudburst Boundary
-  Nuisance Flooding (*greater or equal to 4 in. and less than 1 ft.*)
-  Deep and Contiguous Flooding (*1 ft. and greater*)



Homecrest Cloudburst Hub Toolkit



Porous Pavement

Parking lanes



Rain Gardens + Bioswales

Streets and sidewalks



Subsurface water detention

*Parking lots, fields and courts,
and streets*

Gathering input during design phase



Cloudburst Outreach Goals

01

Inform communities about ongoing cloudburst projects and provide opportunities for their input throughout the design process.

02

Educate communities about the type of flooding cloudburst projects will address and communicate residual risks.

03

Establish foundational relationships with communities to ensure successful community engagement for cloudburst projects that can be built upon for planned long-term infrastructure improvement projects.



How can you get involved?

- If you live or work within one of the cloudburst hubs, sign up for your hub's mailing list through the link below
 - <https://nyc.gov/dep/newsletters>
- You can also sign up for the new NYC Water newsletter by selecting "DEP Stormwater" from this link
- Educate your community about flooding and the many citywide initiatives currently underway to address it

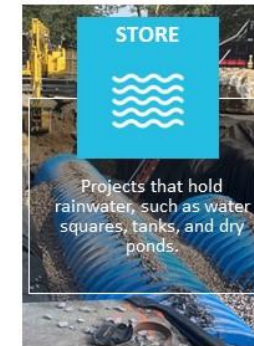
Cloudburst Planning in NYC

What is a cloudburst?

A cloudburst is a sudden, heavy downpour where a lot of rain falls in a short amount of time. Cloudbursts can cause flooding, damage property, disrupt critical infrastructure, and pollute New York's rivers and Harbor.

Cloudburst Management

Cloudburst Management is a way of **absorbing**, **storing**, and **transferring** stormwater to minimize flooding from heavy rain events. Cloudburst Management uses a combination of grey infrastructure, like drainage pipes and underground tanks, and green infrastructure, like trees and rain gardens. During heavy rain events, Cloudburst Management can minimize damage to property and infrastructure by reducing pressure on the sewer system.



Cloudburst Planning

In January 2023, the Mayor announced an expansion of the city's cloudburst program to four new sites as part of ongoing resiliency efforts to better prepare for intense rain events. Supported with nearly \$400 million in capital funds, these specially designed, built, and engineered infrastructure projects will protect residents and property in Corona and Kissena Park, Queens, Parkchester, Bronx, and East New York, Brooklyn from future extreme weather brought about by climate change.

Learn more about Cloudburst!

To learn more about the planning process and ways to get involved, go to our website by scanning the QR code or contact us at the email below.



NYC Environmental Protection

Email communityaffairs@dep.nyc.gov

Website nyc.gov/dep/cloudburst

Report flooding related issues by calling 311

How can you get involved?

- Use this link to ask a question or provide a comment on the Homecrest Cloudburst Hub
- This form can be used to provide feedback on flooding locations: <https://www.surveymonkey.com/r/PWLNNTY>

