



Drawing Water - Panel Discussion

Stacy Levy

Eymund Diegel

Steve Duncan

Diana Gruberg

Jonathan Turer - Moderator

61 LOCAL

Steve Duncan













Stacy Levy
Drawing water in
the city

Making the hidden
underground water
into a visible walk-
able experience



A sense of water
flowing under our feet



Even with all dry materials— a way to kinetically feel the water



Sometimes the flow
is up and down:
flooding



And we need a way to register the
changing levels—
so we can remember



The pattern of the watershed is hard for us to comprehend—



Sometimes we need
to be in it to see it



And we can compare
the different waters
from each tributary



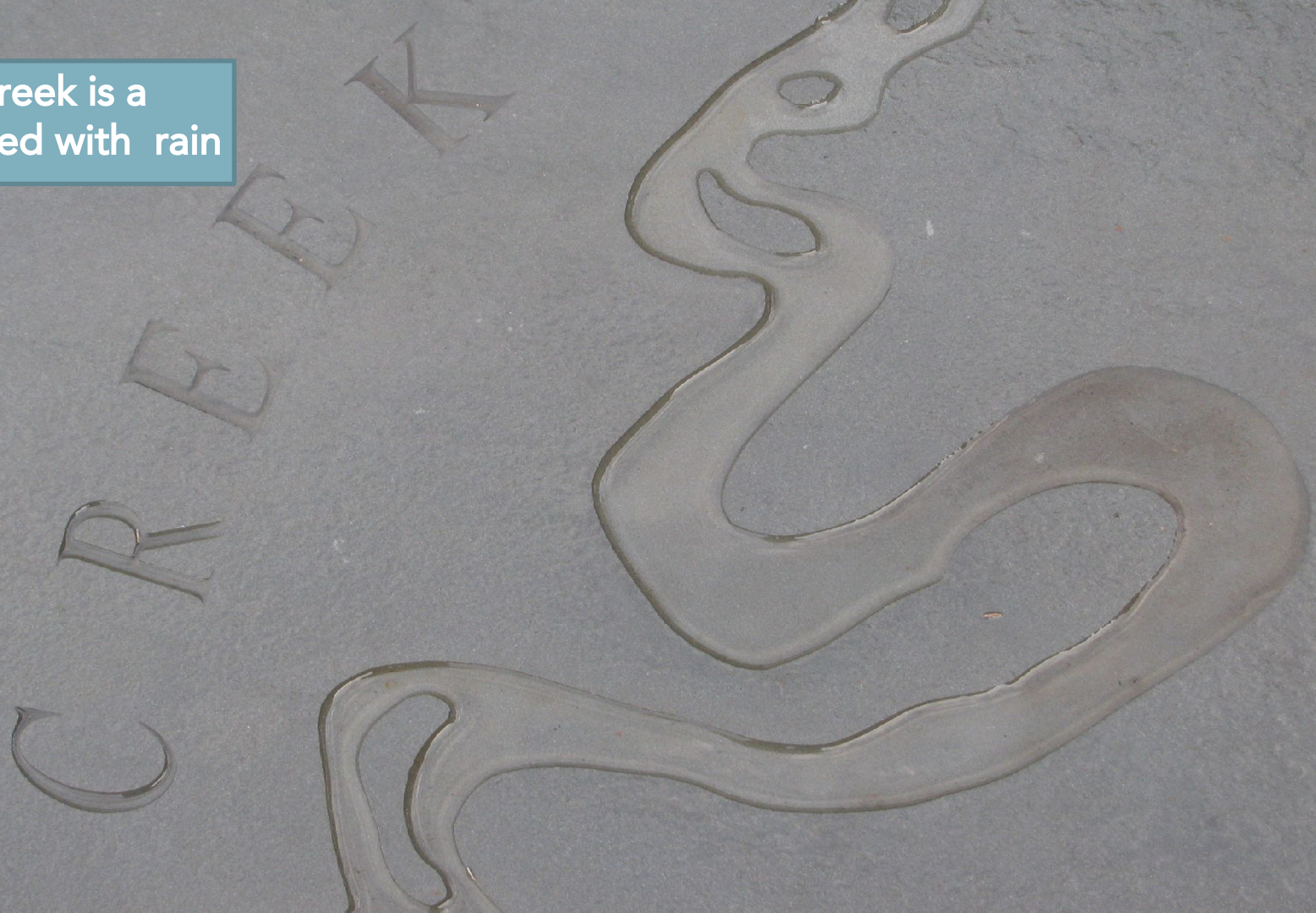
collecting water
allows us to learn
how to find
waterways





Maps that carry the rain— like watersheds in miniature

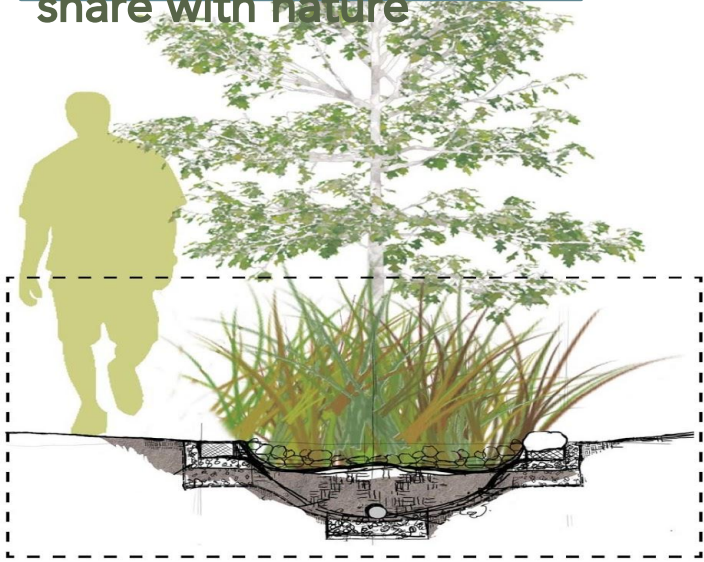
Each creek is a
runnel filled with rain





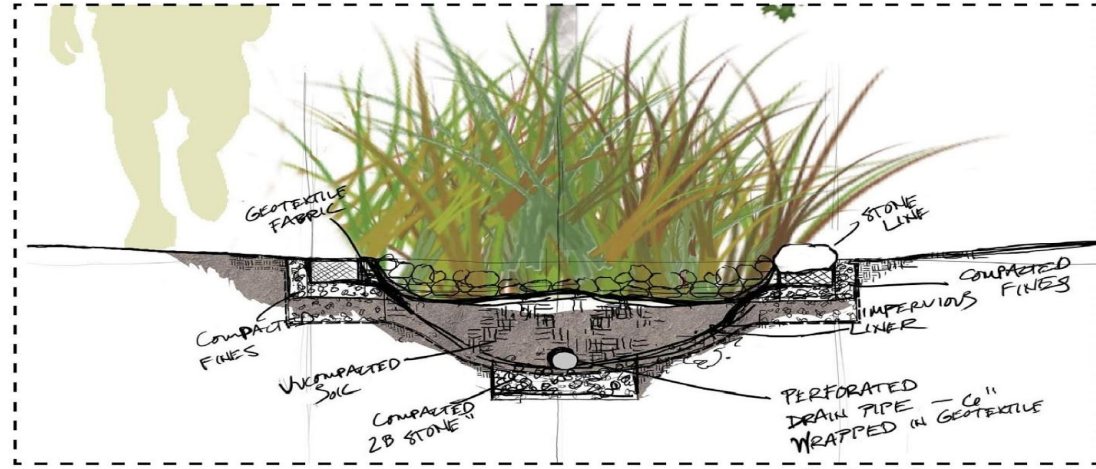
Taking back places where water has been driven away and reclaiming a space for water to flow

Engineering a way for the human hardscape to share with nature



Installation:

The construction will involve the removal of a specific piece of the parking lots surface in a dendritic watershed pattern, affecting 25-40 parking spaces depending on the layout. This linear form of varying width from 10 feet to two feet will be excavated to a depth of 18 inches and reconstructed as a living swale with perforated pipe, set in gravel and an impervious liner to direct the water flow and pervious soil matrix to support native wetland plants which are then planted in the bio swale.



Detail of swale construction

Removing hardscape



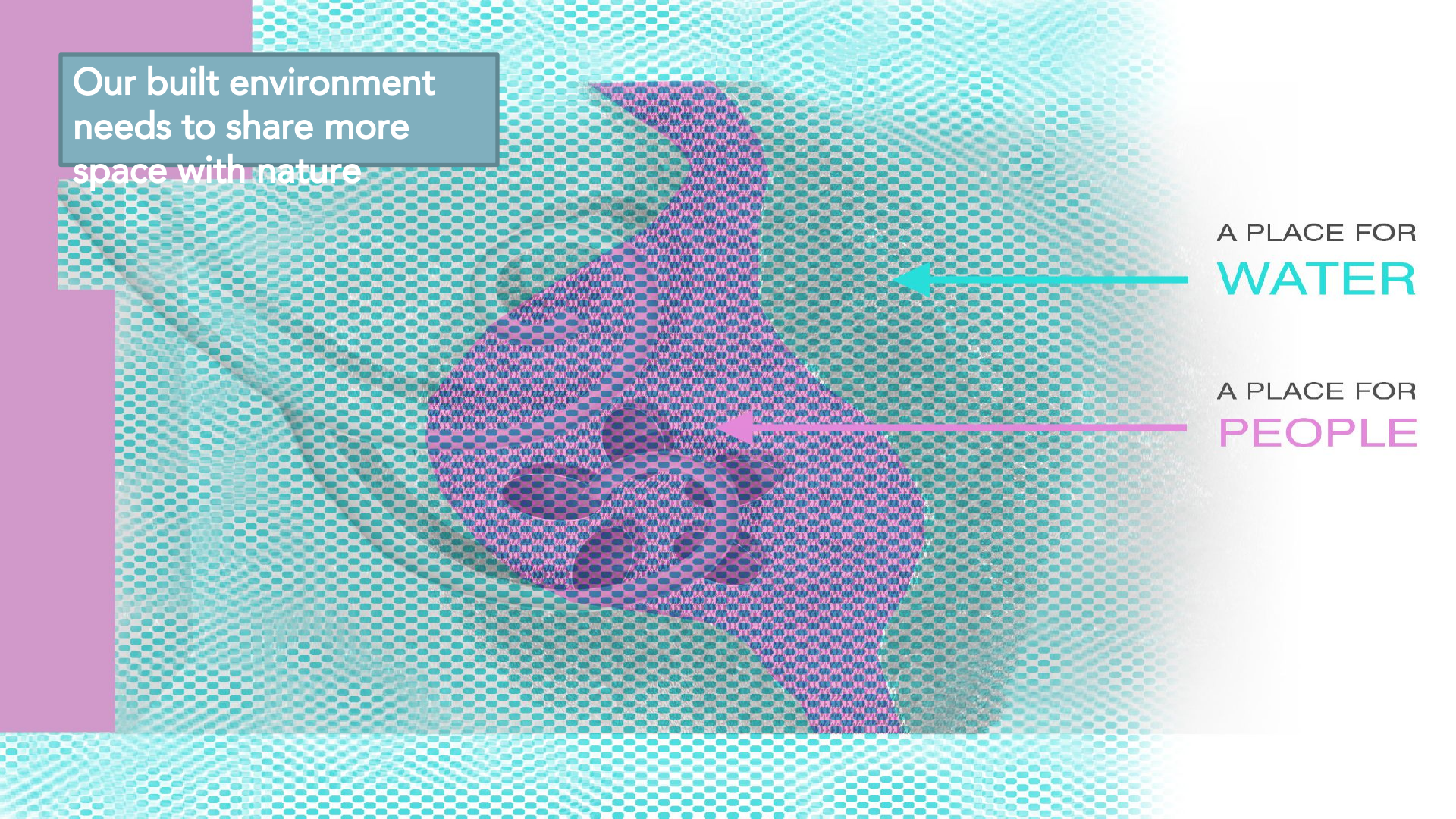
Giving water a place to flow
and be filtered



Our built environment
needs to share more
space with nature

A PLACE FOR
WATER

A PLACE FOR
PEOPLE



Giving Nature a larger portion of the urban infrastructure



Which work in all
seasons





Art has a job:
Introducing
people to the
everyday flows of
urban nature

Brooklyn = the Land of Brooks

Sassian Stream



Sassian = (Indian) Planter, the woman who sows

Brouwers Brook

Vechte's Brook



1901 – Indian Place Names of Brooklyn, William Tooker



Bryant White

1766 Ratzer map



CREEK SCENE INVESTIGATION – REVERSING THE FLOW OF TIME...

Brooklyn's spring water made first settlements possible.

"I was going by the house of Lubbertse, and saw many little hills in the way from the house to (Brouwer's) Mill along the neck and inquired what the hills were ... was answered that it was the INDIAN CORN LANDS."

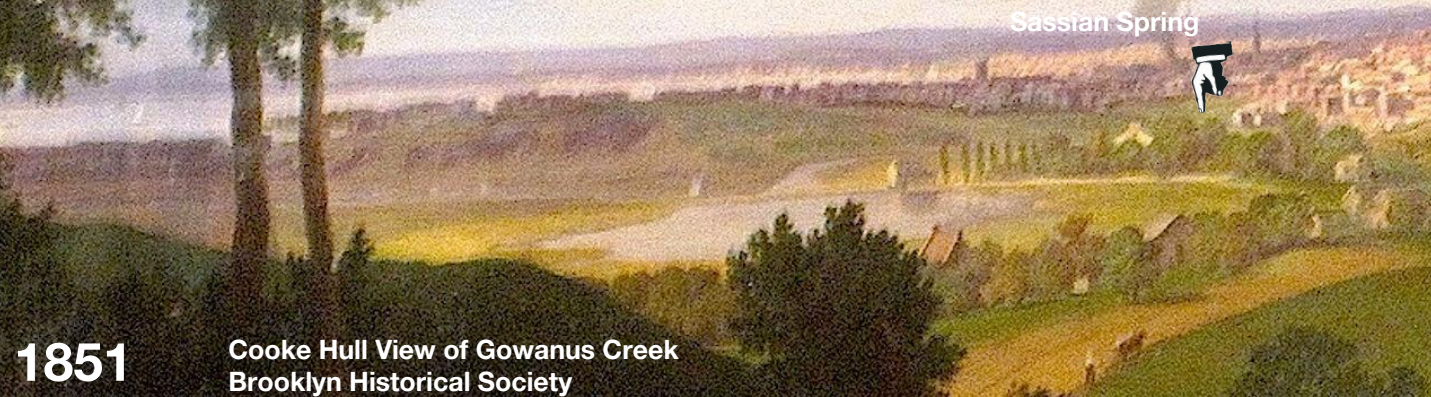
Maritie Bevors, 84 years old, 1741 New Amsterdam Court Trial Proceedings



THE TYPICAL LANDSCAPE: SMITH & BERGEN STREET (circa 1640)

artist Len Tantillo

L. F. TANTILLO 2008



1851

Cooke Hull View of Gowanus Creek
Brooklyn Historical Society



Indian Corn Fields /
Sassian's Maize Lands
(approximate)

Indian Burial
Ground?
Spring?

YOU ARE
HERE

Lubbertse /
Johannas
Bergen
House

Werpoes Canarsie
Indian Village

Van
Brunt
House

1766 Ratzel Map

SMITH ST

Sassian
Stream

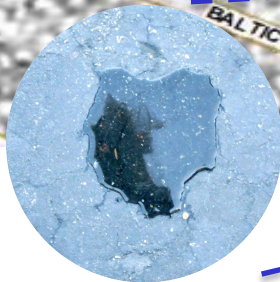
Bergen
Creek



**YOU ARE
HERE**

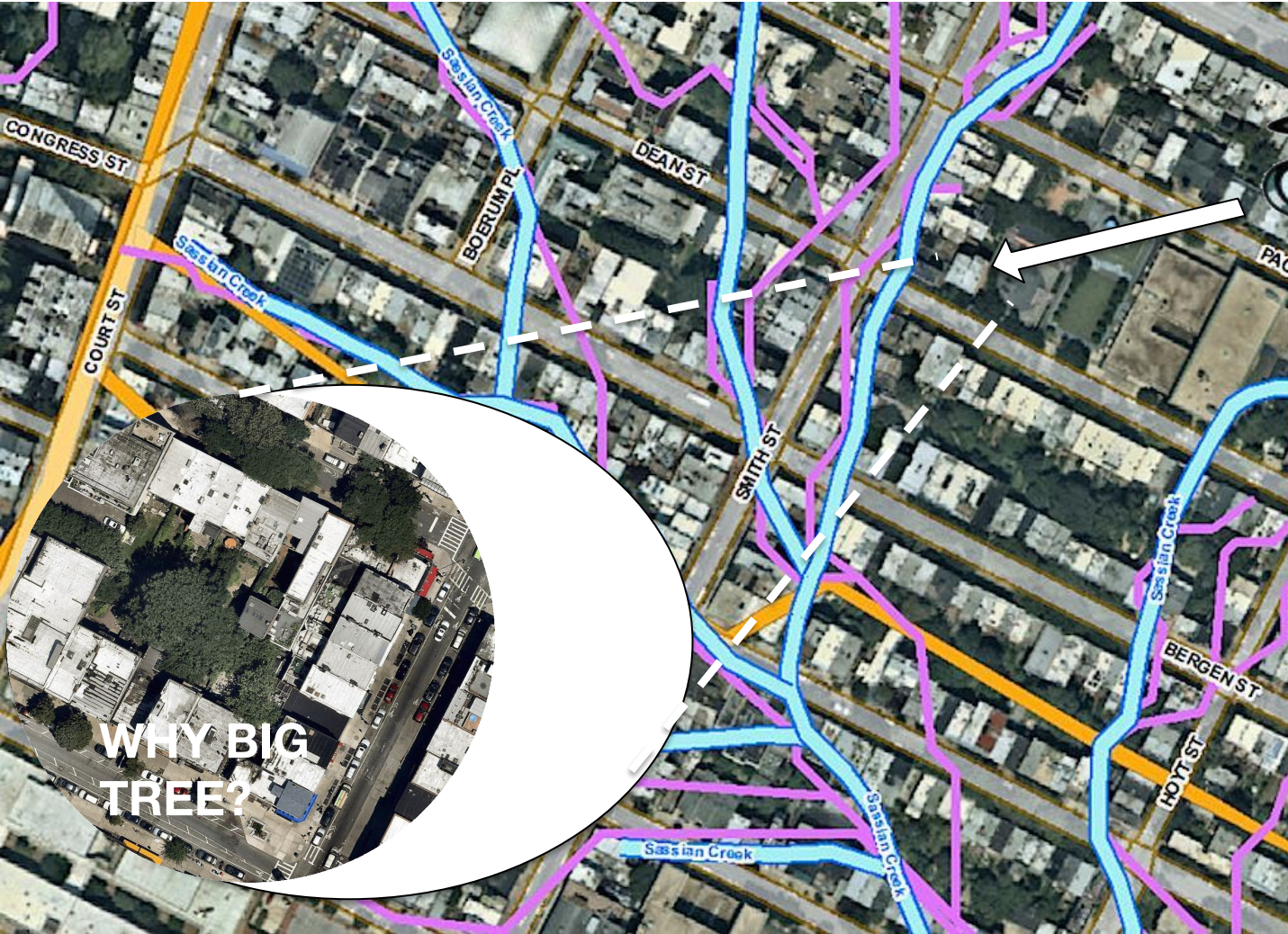
**WHY
CROOKED
STREET ?**

**WHY
PUDDLE?**



**CSI: CREEK SCENE
INVESTIGATION**







MTA Bergen St F, G Lines

Bird's eye

United States · NY · Kings Co. · Boerum Hill

LONG ISLAND
61 Bergen St,
Brooklyn, NY 11201

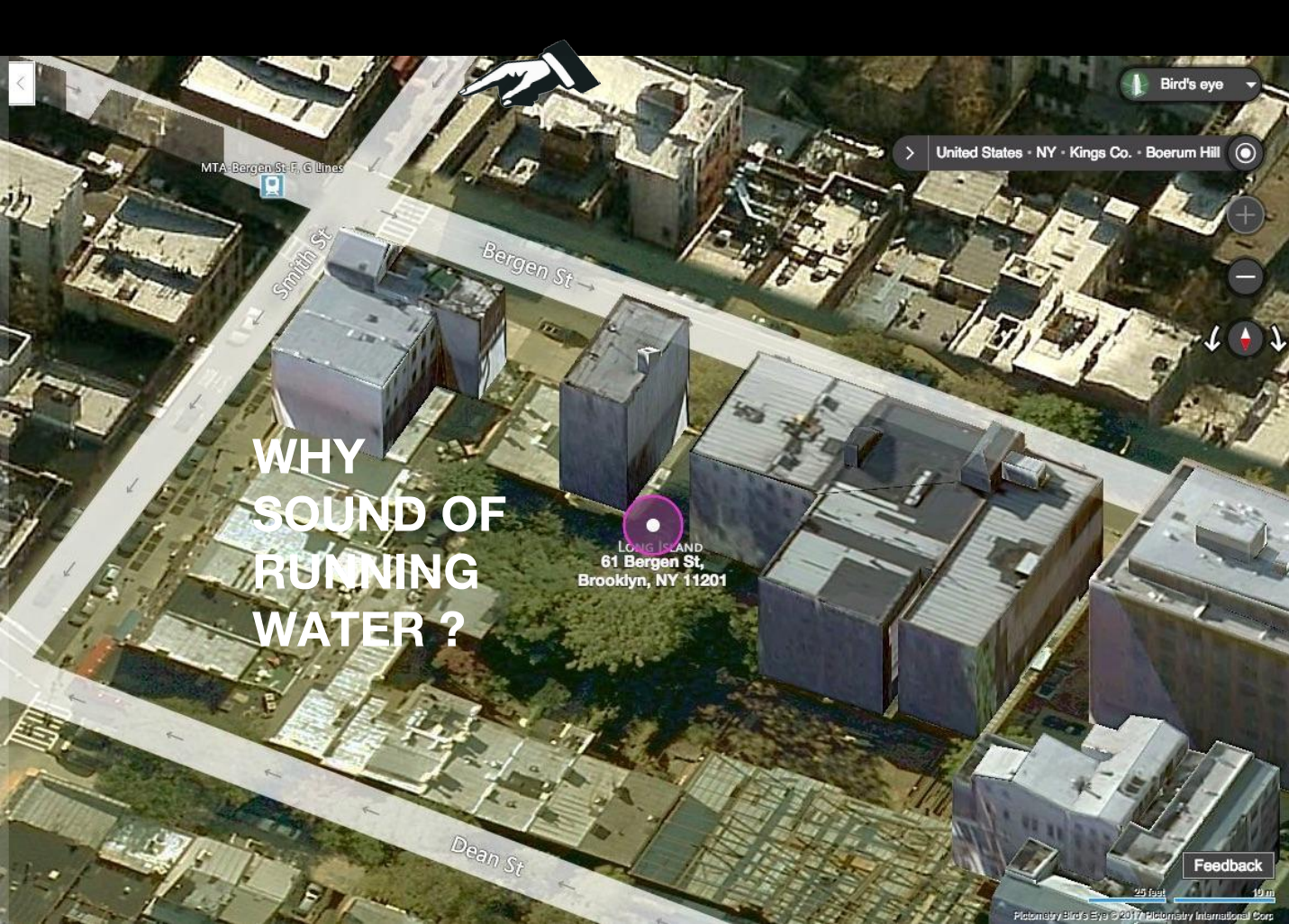
WHY BIG
TREE?

Feedback

25 feet 10 m

Platnomy Bird's Eye © 2010 Platnomy International Corp

Bing Aerials, circa 2010



WHY
SOUND OF
RUNNING
WATER ?

IS SASSIAN
STREAM
STILL
FLOWING AT
THE
CORNER OF
SMITH &
BERGEN
STREET ?



A HIDDEN WORLD UNDERNEATH OUR F



WHY DO WE CARE ?

Sewer Overflow Pollution in our water recreation areas (Poop, Estrogen, Zoloft, Viagra)

NEARLY A MILLION GALLONS PER DAY

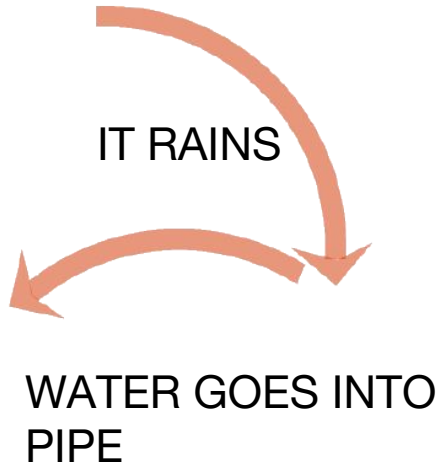


ARE THERE W
FORGOTT
OUT OF SEWE

15 DECEMBER 2012 BALLOON AERIAL

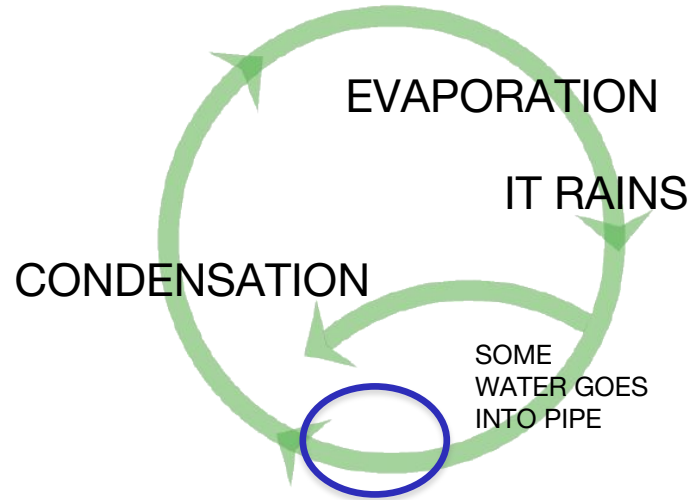
GOWANUS CANAL MAPPING OF SEWAGE PLUMES FROM HURRICANE SA

URBAN WATER CYCLE



WHAT WE WANT

ECOLOGICAL (HISTORICAL) WATER CYCLE



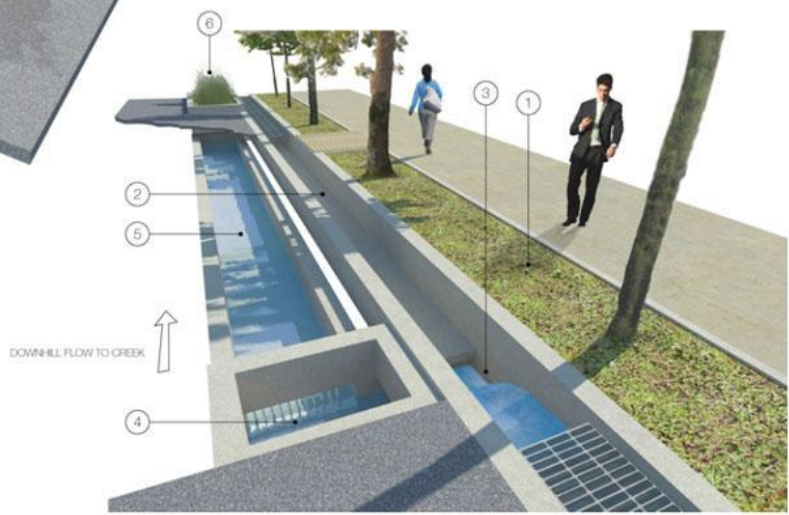
INFILTRATION &
HISTORIC STREAM
RESTORATION







- ① PERVIOUS PLANTING ZONE:
ABSORBS STORMWATER RUNOFF FROM SIDEWALK
- ② STREET CHANNEL:
COLLECTS STORMWATER RUNOFF FROM CATCHMENT AREA AND DIRECTS IT TOWARD CREEK
- ③ CISTERN INLET:
INLET POINT FOR FIRST FLUSH; WHEN CISTERN IS FULL, CLEAN RUNOFF PROCEEDS OVER INLET TO CREEK
- ④ CATCH BASIN:
COLLECTS DEBRIS AND FLOATABLES FOR REMOVAL
- ⑤ FIRST FLUSH CISTERN:
LOCATED BELOW STREET SURFACE, INTERCEPTS AND CAPTURES FIRST FLUSH FROM EACH BLOCK FOR RELEASE INTO BIOSWALE
- ⑥ BIOSWALE:
CLEANS FIRST FLUSH BEFORE RELEASING IT BACK INTO CHANNEL AND TOWARD CREEK



Street Creeks

Ate Atema 2012

FIRST FLUSH CATCHMENT AND CLEANING SYSTEM

THE "FIRST FLUSH" (.15 INCHES) OF STREET RUNOFF CONTAINS THE MAJORITY OF SURFACE POLLUTANTS DURING A RAIN EVENT.
 LOCATED AT THE DOWNHILL END OF EACH BLOCK THROUGHOUT THE WATERSHED, THIS GRAVITY-FED BIOFILTER COLLECTS AND CLEANS THE FIRST FLUSH, DIRECTING THE REMAINING STORMWATER RUNOFF DOWNHILL TO THE CREEK.



PLAYPUMPS !

Use Playgrounds built on old Ponds to store water

Water Parks

- Carroll St entrance
- Daylighted fresh water spring
- Upland plaza
- Pedestrian bridge
- Accessible ramps
- 15,000 sq ft salt marsh
- Gabion walks
- 4,000 sq ft upland plantings
- 3rd Ave entrance



Denton's Mill
Battle Site

Christopher Anderson
2017 First Street Basin redevelopment
proposal

M

An aerial, top-down view of a city grid, likely New York City, showing a dense pattern of streets and buildings. A canal, the Gowanus Canal, is visible as a blue line winding through the grid. The image has a semi-transparent green overlay. In the center, the text 'Gowanus Canal' is written in a white, serif font. Below the text is a white graphic consisting of two wavy, overlapping lines that resemble a stylized canal or water. Below the graphic, the word 'CONSERVANCY' is written in a white, serif font.

Gowanus Canal

CONSERVANCY



FLOODPLAIN

MUDFLATS

TIDAL ECOSYSTEM

MILL POND

HISTORIC WATERWAY

TRIBUTARY STREAMS

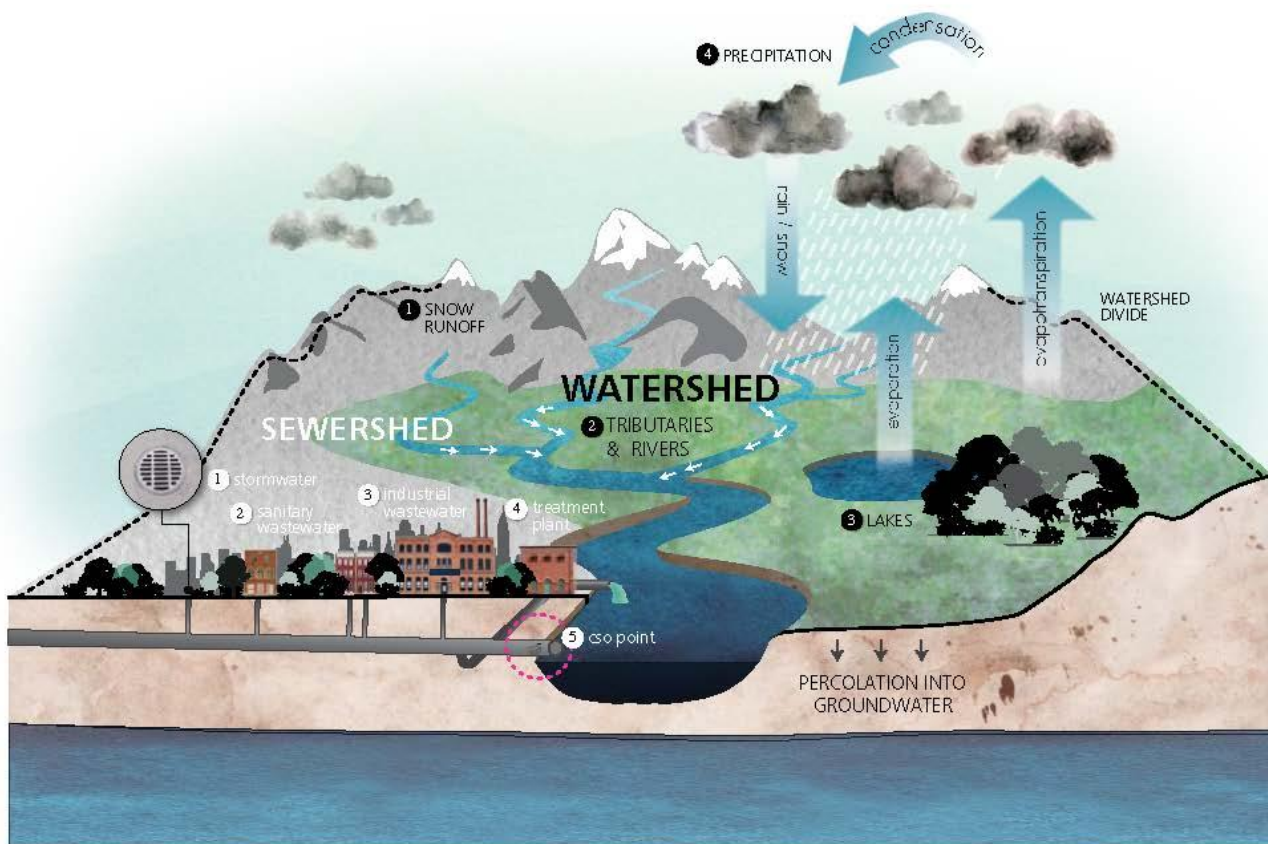
HISTORIC DRAINAGE PATTERNS

HISTORIC SALT MARSH

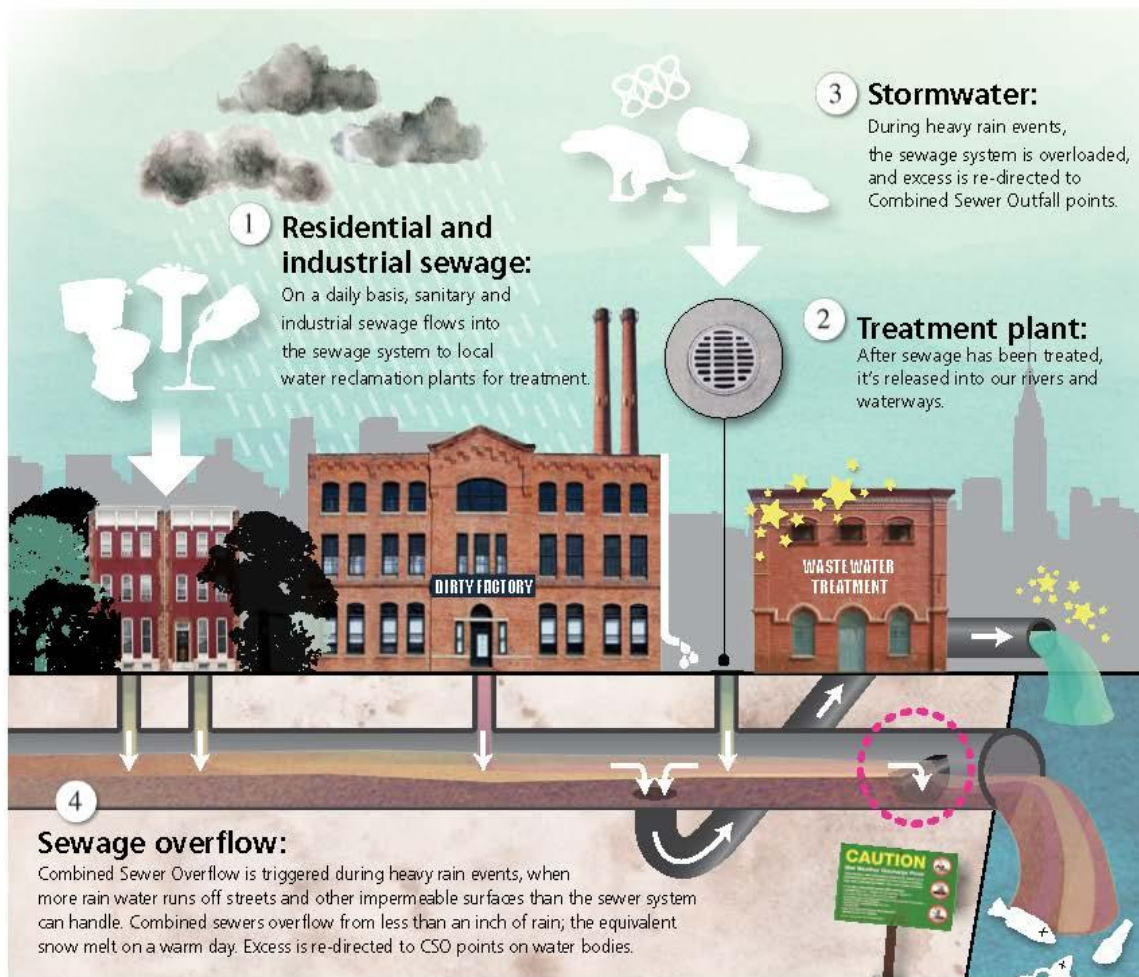
HISTORIC LOWLANDS

Gowanus Canal

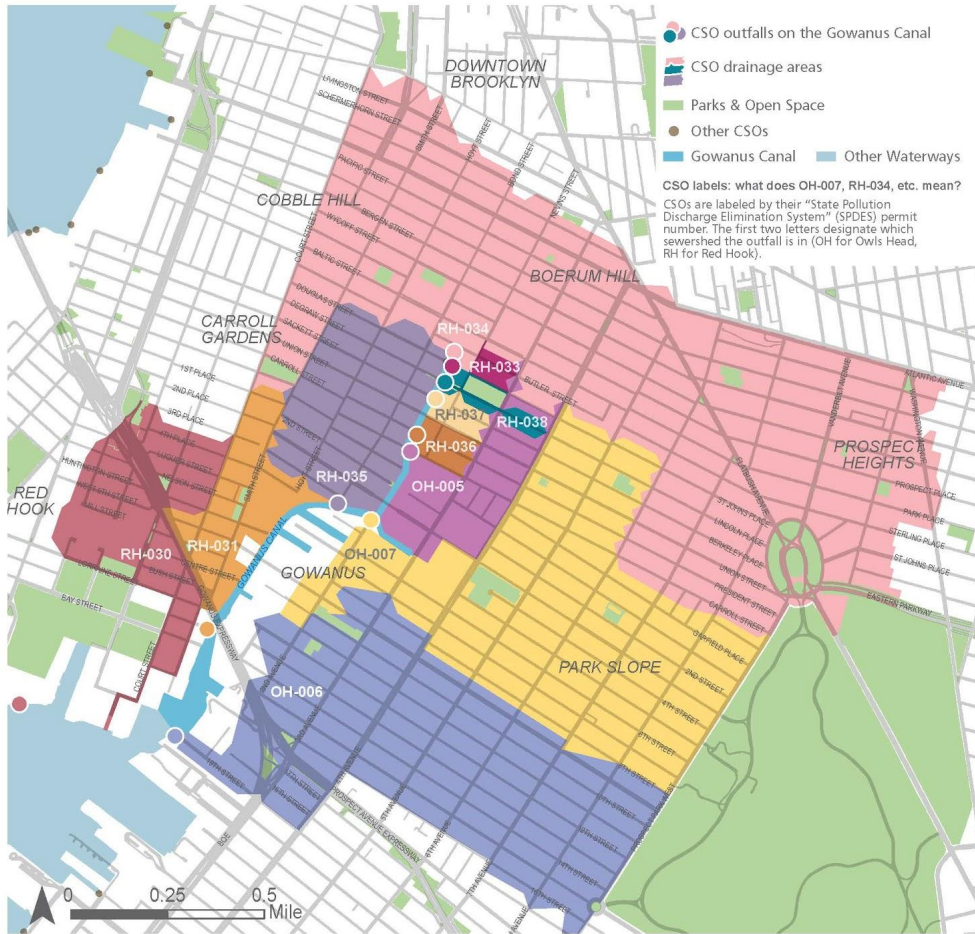
SCAPE



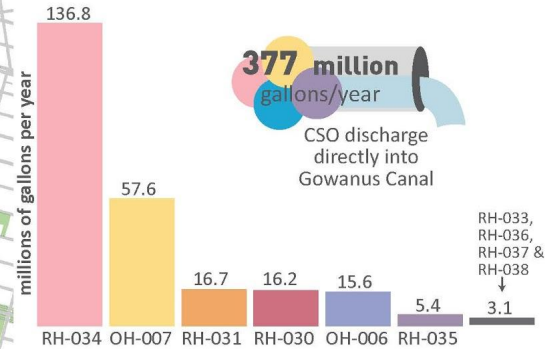
URBAN STORMWATER MANAGEMENT TODAY



COMBINED SEWAGE OVERFLOW



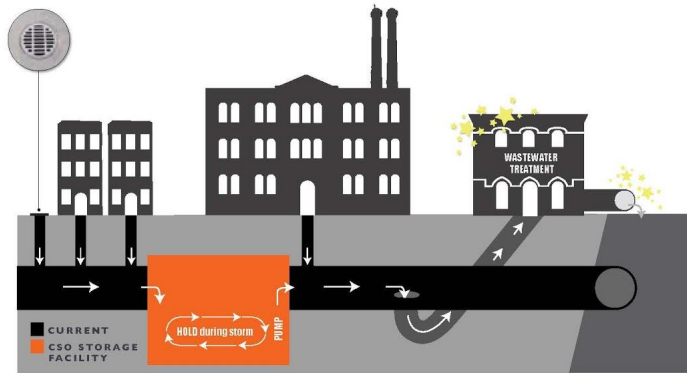
The Gowanus Canal receives about 377 million gallons of CSO discharge a year via ten different CSO outfalls. Overflow events happen as often as 40 times a year, after as little as a quarter-inch of rain.



GOWANUS WATERSHED

GREY INFRASTRUCTURE

- SEWAGE DETENTION TANKS
- FLUSHING TUNNEL UPGRADES
- HIGH LEVEL STORM SEWERS



GREEN INFRASTRUCTURE

- GREEN ROOFS
- RAIN GARDENS
- RAINWATER HARVESTING SYSTEMS





GOWANUS LOWLANDS

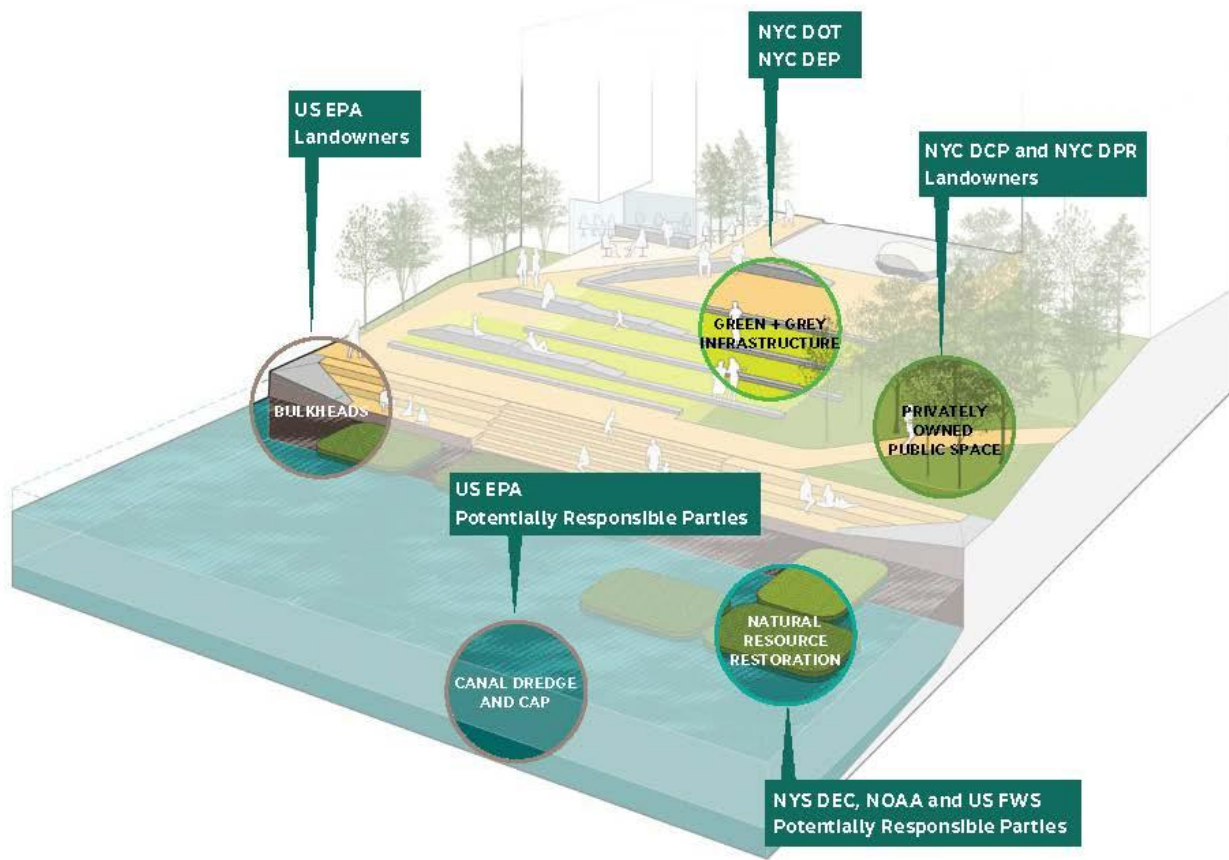
A BLUEPRINT FOR NYC'S NEXT GREAT PARK

SCAPE / LANDSCAPE
ARCHITECTURE DPC

Gowanus Canal



CONSERVANCY





RED HOOK

INDUSTRIAL STORMWATER STREET

DEP RETENTION TANK

MIXED USE STORMWATER STREET

STREAM DAYLIGHTING

CARROLL GARDENS

PARK SLOPE

DEP RETENTION TANK

BOERUM HILL

© 2015 SCAPE

SCAPE

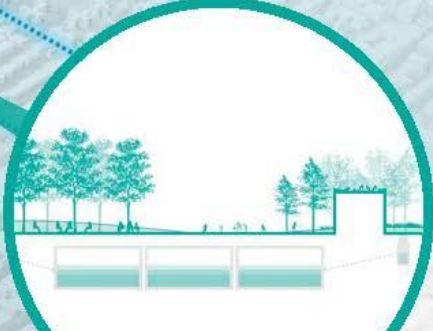
IMPROVE WATER QUALITY OVER TIME



STORMWATER STREETS



STREAM DAYLIGHTING



DEP RETENTION TANKS



SHORE RESTORATION

RED HOOK

INDUSTRIAL GREEN ROOFS

BASIN WETLAND RESTORATION

GREEN ROOFS

CARROLL GARDENS

RESIDENTIAL GREEN ROOFS

FLOATING HABITAT

PARK SLOPE

BOERUM HILL

BUILD NEW URBAN ECOSYSTEMS

Gowanus Canal
EPA SYSTEMS

SCAPE



Genentech Canal
CONSERVANCY

SCAPE

SALT LOT AND 6TH ST WETLAND BASIN

Gowanus Canal
CONSERVANCY

