HOBOKEN RESILIENCE PARKS GUIDE

A WALK THROUGH THE CITY'S RESIST, DELAY, STORE, DISCHARGE INFRASTRUCTURE

PARKS SAVE CITIES. PARKS SAVE LIVES.

REBUILD BY DESIGN

APRIL 2025

SELF-GUIDED WALKING TOUR

HOBOKEN RESILIENCY PARKS GUIDE

How one city adapted to climate change through parks to safeguard its future

Devastated by Superstorm Sandy in 2012, Hoboken turned its vulnerabilities into opportunities for growth and sustainability.

The city worked with Rebuild by Design's Hurricane Sandy Design Competition to create climate-resilient parks that safeguard against future flooding, connect neighbors to nature and one another, and serve as a model for how communities can get it right and protect themselves against climate change.

Hoboken is where urban design meets climate adaptation in the form of new public parks and infrastructure. As a low-lying city with a **combined sewer system**, Hoboken has long faced chronic flooding, worsened by rising sea levels and extreme weather.

Now Hoboken's innovative approach to **resilience** is redefining urban spaces.

By integrating **green infrastructure** with community needs, these parks mitigate the impacts of climate change while fostering community and connection to nature. A walk through these parks shows how Hoboken is turning its vulnerabilities into opportunities for growth and sustainability.

Let's begin!

GETTING TO HOBOKEN:

On the western edge of the Hudson River, accessible via multiple transit options, Hoboken is walkable, bike-friendly, and easy to explore.

PATH TRAIN: From 33rd Street (Midtown) or World Trade Center (Financial District) to Hoboken Terminal.

NJ TRANSIT RAIL: Several commuter rail lines stop at Hoboken Terminal, providing connections to locations across New Jersey.

HUDSON-BERGEN LIGHT RAIL: Serves Hoboken with stops at Hoboken Terminal, 9th Street, and 2nd Street, connecting to Jersey City, Bayonne, and North Bergen.

NY WATERWAY FERRY: From Midtown (W. 39th St.) and Brookfield Place to Hoboken's 14th Street or Hoboken Terminal.

BUS: NJ Transit buses, including the 126, run frequently from Port Authority to Hoboken.

BOLDED TERMS ARE DEFINED IN THE GLOSSARY ON THE LAST PAGE.

HOBOKEN'S FLOOD RISK

One of the United States' most densely populated cities, Hoboken's unique blend of industrial heritage and modern urbanization makes it a compelling case study for climate resilience. The city's combined sanitary and storm sewer system struggles to manage heavy rainfall, exacerbated by high tides that prevent water from draining into the Hudson River.

On October 29, 2012, Hurricane Sandy's tidal surge engulfed 80% of the city, causing Mayor Dawn Zimmer to describe the city as a "bathtub," with streets, homes, and businesses submerged for days. The storm exposed the dangers of coastal flooding and systematic infrastructure failures that made Hoboken vulnerable to extreme weather.

Hoboken serves as a critical lesson for cities worldwide. The city's transformation into a model for climate resilience, particularly through projects like Hoboken's resiliency parks, offers valuable insights into how urban spaces can be designed to mitigate the impacts of climate change. By learning from Hoboken's successes and challenges, other cities can develop strategies to protect their communities and infrastructure from the increasing threats of flooding and extreme weather events.

"There is no point in fortifying our fire station if the whole city is flooded...we need a solution that protects the whole community." - Mayor Dawn Zimmer

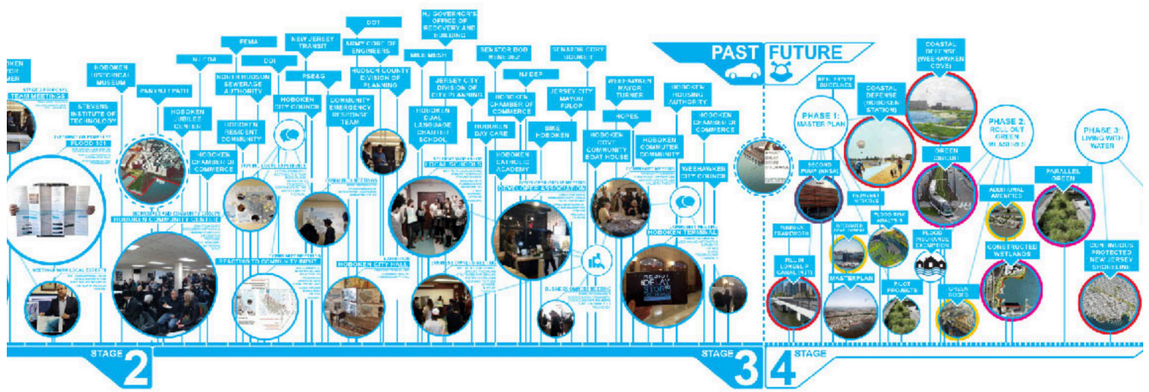
RESIDENTS TRAPPED DURING HURRICANE SANDY | CITY OF HOBOKEN

REBUILD BY DESIGN EFFORTS

In the wake of Sandy's devastation, the Rebuild by Design Competition paired local residents with interdisciplinary teams of architects, designers, engineers, and urban planners in a competition that encouraged bold, innovative strategies to strengthen flood-prone communities across the Sandy-affected region. The program was initiated by the U.S. Department of Housing and Urban Development (HUD) alongside nonprofit and philanthropic leaders.

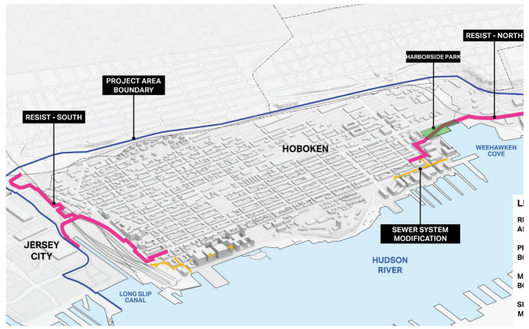
The winning proposal for Hoboken introduced **"Resist, Delay, Store, Discharge,"** a comprehensive, layered strategy to protect the city from future floods while improving overall urban livability.

This holistic approach integrates natural and engineered solutions to tackle coastal **storm surges,** inland precipitation-based flooding, emergency preparedness, and everyday water management challenges. A key component: the transformation of land parcels into multi-functional infrastructure, such as ResilienCity Park, which serves as a stormwater detention site while also providing space and amenities for people and nature.



COMMUNITY ENGAGEMENT PHOTOS | REBUILD BY DESIGN

HOBOKEN'S WATER STRATEGY



RESIST

A combination of hard infrastructure such as bulkheads, floodwalls, and seawalls, as well as soft landscaping features such as **berms** or levees that could act as barriers during exceptionally high tides or storm surge events.

DELAY

Green infrastructure, design guidelines, and policy recommendations for site-specific improvements to buildings that focus on slowing **stormwater runoff** from entering and overwhelming the outdated combined sewer system.

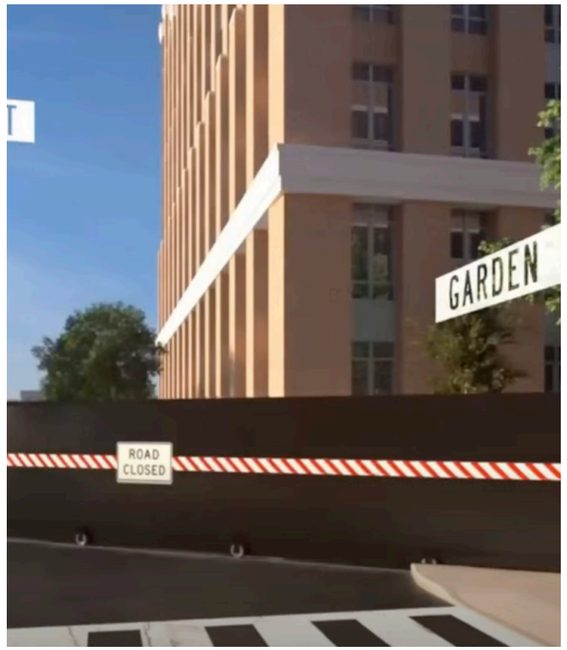
STORE

Green and **gray infrastructure** improvements such as retention basins, **bioswales,** detention tanks, and green roofs designed to capture stormwater.

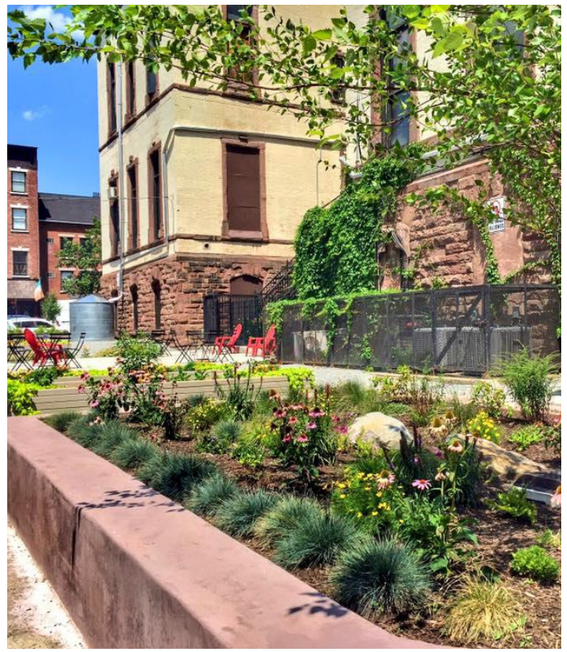
DISCHARGE

Pumps and other means for releasing stormwater, after it has been stored and/or treated, to the river once the **flood risk** has subsided.

HOBOKEN'S INFRASTRUCTURE



RESIST | ROLLING GATE



DELAY | GREEN INFRASTRUCTURE

STORE | HOLDING TANK

DISCHARGE | WATER PUMP

IMAGE CREDITS: CITY OF HOBOKEN

TIME TO START OUR TOUR!

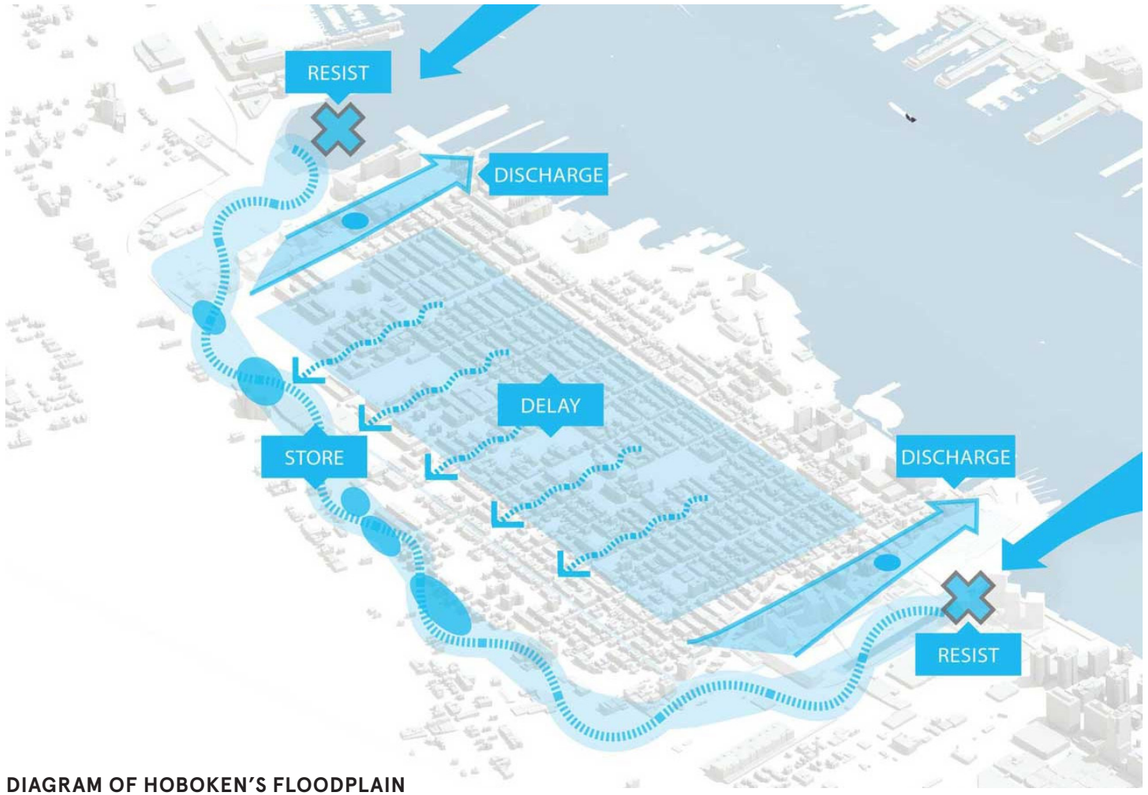


DIAGRAM OF HOBOKEN'S FLOODPLAIN

Thanks to these investments, Hoboken is a national leader in climate resilience. This initiative offers an adaptable, replicable model for other flood-prone urban areas looking to address flooding and the urban heat island effect while maintaining vibrant, livable neighborhoods.

We'll start our tour at **Hoboken Terminal,** a vital transportation hub serving NJ Transit, PATH trains, ferries, and buses, which has historically been one of the most flood-prone locations in the city. During Hurricane Sandy in 2012, a storm surge inundated train tracks and platforms, severely damaging infrastructure and closing access to transportation for months. Nine years later, flash flooding from Hurricane Ida again disrupted service, requiring emergency evacuations.

To address these risks, NJ Transit and PATH have implemented various flood mitigation measures. PATH installed aquarium-thick glass around their elevator and steel doors at stairwells that deploy in advance of storms to keep water out. NJ Transit has focused on elevating critical substations and advancing the Long Slip Fill and Rail Enhancement project to protect infrastructure from future flooding events. These **adaptations** help ensure Hoboken's essential transit services remain operational and weather future storms.

N

WALKING ROUTE

Union City
Jersey City

Weehawken

STARTING POINT
Hoboken Terminal
ENDING POINT
Waterfront Parks
LENGTH
4 miles

KEY

- Elevated Roadway
- Pedestrian Walkway
- Bike Path
- Bike Share Station
- General Park
- Resiliency Park
- Self-Guided Walking Tour

16TH STREET
15TH STREET
14TH STREET
13TH STREET
12TH STREET
11TH STREET
10TH STREET
9TH STREET
8TH STREET
7TH STREET
6TH STREET
5TH STREET
4TH STREET
3RD STREET
2ND STREET
1ST STREET

VIADUCT

+ 12 minute walk
+ 15 minute walk
+ 10 minute walk
+ 5 minute walk
+ 20 minute walk
+ 15 minute walk
+ 20 minute walk

F
G
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SHIPYARD LANE
SINATRA DRIVE N
CASTLE POINT TERRACE
SINATRA DRIVE
HARRISON STREET
MARSHALL DRIVE
MONROE STREET
MADISON STREET
JEFFERSON STREET
MARSHALL STREET
HARRISON STREET
JACKSON STREET
ADAMS STREET
GRAND STREET
CLINTON STREET
WILLOW AVENUE
PARK AVENUE
GARDEN STREET
BLOOMFIELD STREET
WASHINGTON STREET
COURT STREET
HUDSON STREET
RIVER STREET
SINATRA DRIVE
PATERSON AVENUE
NEWARK STREET
HUDSON PLACE
HOBOKEN TERMINAL
PATH TRAIN STATION
JERSEY AVENUE
GROVE STREET
MARIN BLVD./HENDERSON ST.

HUDSON RIVER

New York City
Jersey City

A. Southwest Resiliency Park
B. Southwest Resiliency Park Expansion
C. 7th and Jackson Resiliency Park
D. 800 Monroe Resiliency Park
E. ResilienCity Park / Northwest Resiliency Park
F. Harborside Park
G. Washington Street / Alleyway / Garden Street Floodwalls
H. Waterfront Parks

N

UNDERGROUND FEATURES

North Hudson Sewerage Authority

KEY

- Resist Infrastructure
- Delay, Store, Discharge Infrastructure

OBSERVER HIGHWAY
OBSERVER HIGHWAY

HUDSON RIVER

SOUTHWEST RESILIENCY PARK

A

58 JACKSON STREET | DELAY & STORE

New Jersey's first resiliency park, Southwest Resiliency Park is located in an area that once suffered from severe flooding. It's now transformed into a vibrant space that manages stormwater and offers community recreation. **Rain gardens** collect runoff and **permeable pavers** allow water to seep into the ground. A 200,000-gallon underground **cistern** stores excess water for reuse, reducing pressure on city systems.

Visitors enjoy an open lawn, a dog run, an amphitheater, and a flexible pop-up market space — a true example of how innovative design can be functional, beautiful, and climate resilient.

PARK FEATURES:

- RAIN GARDENS
- PERMEABLE PAVERS
- WATER CISTERN
- OPEN LAWN
- DOG RUN
- AMPHITHEATER
- FLEXIBLE POP-UP SPACE

SOUTHWEST RESILIENCY PARK | CITY OF HOBOKEN

SOUTHWEST PARK EXPANSION

B

60 HARRISON STREET | DELAY & STORE

Southwest Resiliency Park has an **underground storage** tank capable of detaining approximately 260,000 gallons of stormwater beneath the park and adjacent street. Rain gardens and bioretention areas will naturally slow and filter rainwater, easing the flow into storage systems. Alongside improved drainage, new recreational spaces, pickleball and basketball courts, an all-ages playground, and shaded social areas invite the community to enjoy a multi-use, sustainable park.

This expansion reflects Hoboken's commitment to continuous improvement by incorporating lessons learned from past flooding events and adapting its public spaces for modern needs. Construction began in May 2024 and is expected to conclude in Fall 2025.

PARK FEATURES:

- ENHANCED UNDERGROUND STORAGE
- RAIN GARDENS & BIORETENTION AREAS
- PICKLEBALL COURTS
- BASKETBALL COURT
- ALL-AGES PLAYGROUND
- SOCIAL AREAS

SOUTHWEST RESILIENCY PARK EXPANSION RENDERING | CITY OF HOBOKEN

7TH & JACKSON RESILIENCY PARK

C

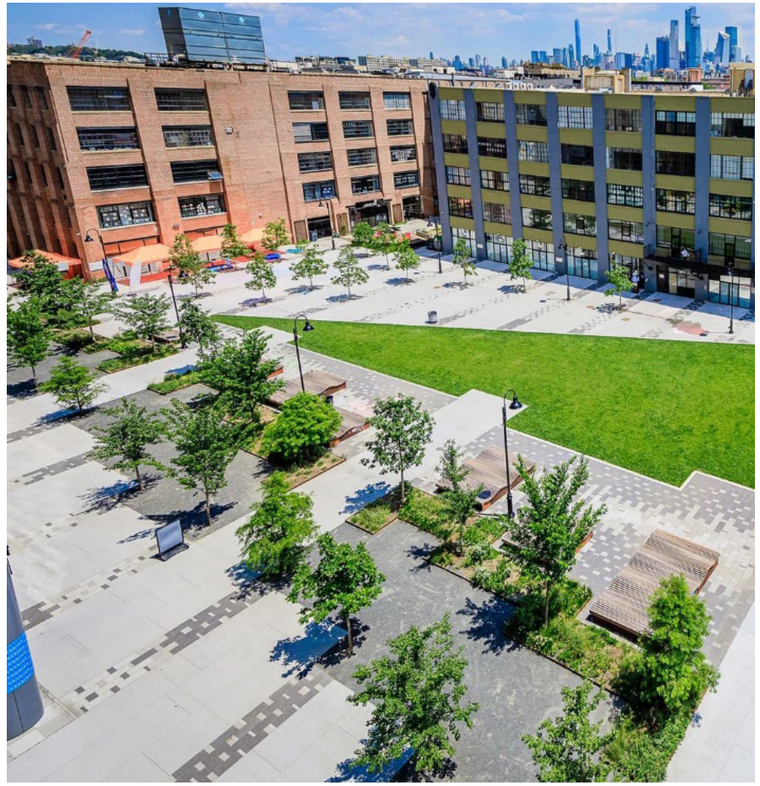
625-627 JACKSON STREET | DELAY & STORE

Opened in 2019, 7th & Jackson Resiliency Park transformed a dense urban area into a green oasis. Its design includes a 470,000-gallon underground tank that stores rainwater, while **bioswales** and other green features delay runoff and naturally filter pollutants. This park not only reduces local flood risks but also creates welcoming community spaces with a large lawn, gym, flood-resistant children's play area, and an open plaza for seasonal markets.

Set in a part of Hoboken that has seen significant urban change, the park honors the neighborhood's past while serving its present-day needs for resilience and community gathering.

PARK FEATURES:

- 470,000-GALLON TANK
- BIOSWALES & VEGETATION
- OPEN LAWN
- GYM & CHILDREN'S PLAY AREA
- OPEN LAWN FOR EVENTS
- SEASONAL MARKETS
- MULTI-USE PUBLIC GYM



7TH AND JACKSON RESILIENCY PARK | CITY OF HOBOKEN

800 MONROE RESILIENCY PARK

D

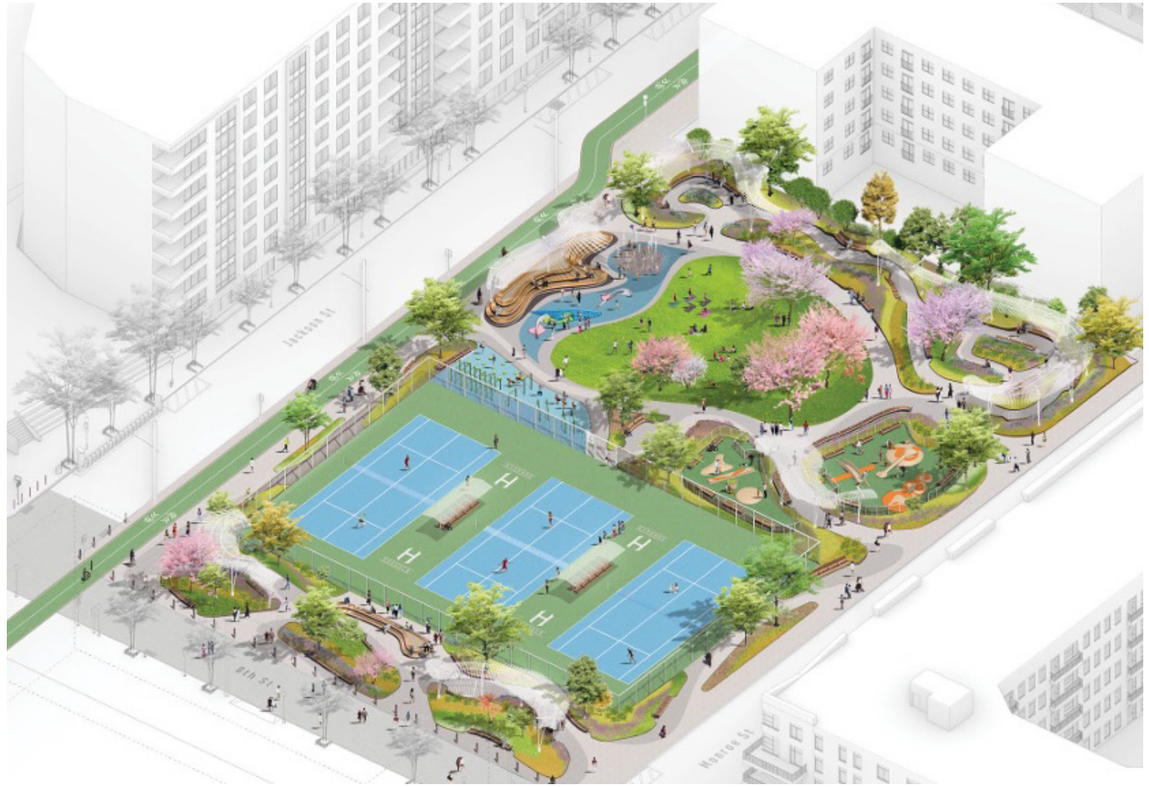
800 MONROE STREET | DELAY & STORE

Sure to become a landmark for innovative stormwater management and community engagement, this park is designed to detain up to 430,000 gallons of stormwater in above- and below-ground infrastructure to reduce flooding and manage stormwater runoff. An interactive water play area for recreation allows visitors to observe how water is collected and stored.

Native landscaping, including rain gardens planted with local species, slow runoff and support critical pollinator habitats. This project highlights Hoboken's dedication to blending environmental resilience with community well-being.

PARK FEATURES:

- UP TO 430,00 GALLONS IN STORMWATER DETENTION
- INTERACTIVE PLAY AREA (EDUCATIONAL)
- NATIVE PLANTINGS
- TENNIS AND PICKLEBALL COURTS
- FITNESS TRAILS
- DOG RUNS
- SHADED SEATING AREAS



PROPOSED RENDERING OF 800 MONROE | CITY OF HOBOKEN

RESILIENCITY PARK

1201 MADISON STREET | RESIST, DELAY & STORE

Hoboken's largest park offers a robust defense against flooding. It features a 2-million-gallon underground tank that stores rainwater, while surface rain gardens and smart drainage systems delay and manage runoff. Innovative design elements — like a basketball court basin with underlying drains — help the park resist flooding even during heavy storms.

With a spacious lawn, a multi-purpose athletic field, inclusive play areas, scenic walking trails, and ample seating, the park blends recreational space with climate adaptation infrastructure. Located in a historically challenged area for stormwater management, this park exemplifies how modern engineering can honor past struggles and build a safer future for the community. Collected rainwater is repurposed for irrigation via a cistern located by the community building and cafe, promoting sustainable water use throughout the park.

PARK FEATURES:

- 2-MILLION-GALLON UNDERGROUND TANK
- SURFACE-LEVEL RAIN GARDENS
- RECYCLED GRAY WATER FOR IRRIGATION
- MULTI-PURPOSE ATHLETIC FIELD & BASKETBALL COURT
- PLAYGROUND & OPEN LAWN SPACE
- RECREATIONAL WATER FEATURE
- TERRACE PAVILION WITH CAFÉ

RESILIENCITY PARK | CITY OF HOBOKEN.

RESILIENCITY PARK IMPACT

Hoboken's ResilienCity Park

A national model for flood resilience and climate change adaptation

1,000,000
gallons of rainwater held through underground storage tank

750,000 +
gallons of rainwater held through above ground green infrastructure

Combatting heavy flooding events through the Northwest Resiliency Park, by the numbers:

8
drainage areas designed into the park to collect thousands of gallons of rainwater

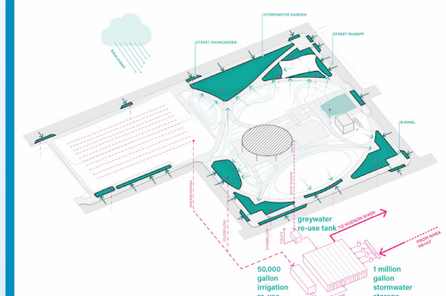
19
rain gardens to collect and treat rainwater during heavy storms

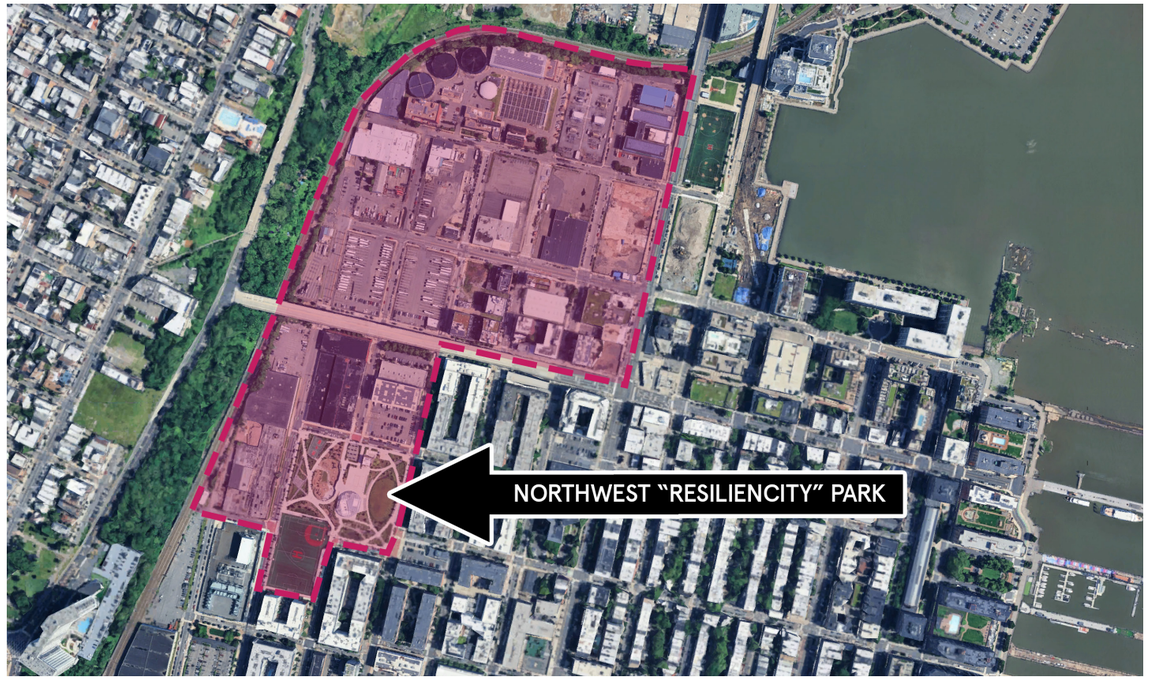
50,000
gallons of rainwater held in an underground cistern, which will help irrigate the park

287
trees to be planted in the park to help collect and absorb rainwater

90%
reduction in combined sewer overflow events in Northwest Hoboken

STORMWATER DELAY - STORE - DISCHARGE





HARBORSIDE PARK

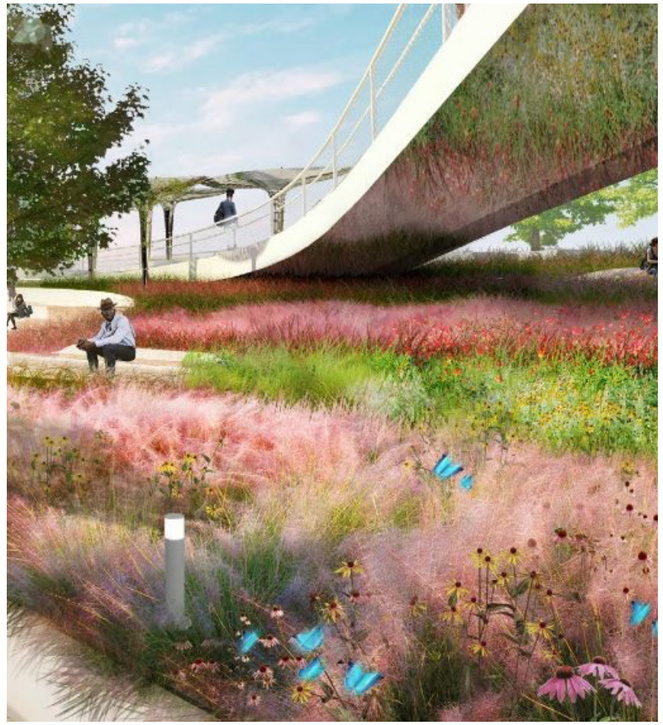
1501 PARK AVENUE | RESIST & DELAY

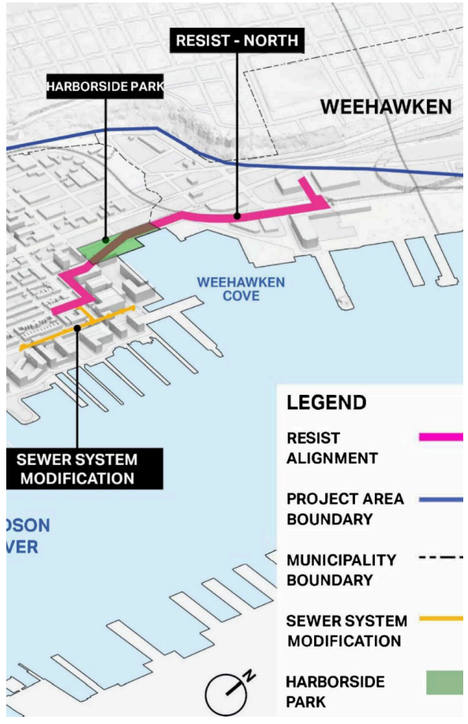
Part of the Rebuild by Design project, Harborside Park is a key element in Hoboken's coastal protection strategy. The park employs a dual resist/delay water strategy: a protective berm conceals a buried floodwall that resists storm surge flooding, while rain gardens and wildflower meadows delay water flow by slowing runoff and promoting natural absorption.

With a scenic waterfront promenade, a lookout point, and an amphitheater for community events, Harborside Park demonstrates how engineered defenses and natural systems can work together to reduce flood risks. It also pays homage to Hoboken's maritime history by blending the city's coastal legacy with modern adaptation efforts. Together, these features enhance the park's climate resilience and ecological health, making it a pioneering model for elevated flood protection in the state.

PARK FEATURES:

- PROTECTIVE BERM & FLOODWALL
- RAIN GARDENS
- WATERFRONT PROMENADE
- LOOKOUT POINT
- AMPHITHEATER
- DOG RUN
- WILDFLOWER MEADOWS





PROPOSED RENDERING OF HARBORSIDE PARK | CITY OF HOBOKEN.

FLOODWALL INFRASTRUCTURE

15TH AND GARDEN STREETS | RESIST & DELAY

The Resist structure plays a vital role in protecting Hoboken from storm surges. With decorative formliners that celebrate the city's heritage, the wall not only resists flood damage but also enhances the neighborhood's look. It employs a simple resist strategy by combining it with community amenities to blend in with the urban environment, including landscaped planters, murals, wayfiding signage, seating, and trellises that add natural beauty to the streetscape.

Public input played a key role in shaping the design, ensuring this critical flood protection feature blends seamlessly into the surrounding neighborhood and reflects the community's vision for the space.

PARK FEATURES:

- FLOODWALLS
- RAIN GARDENS
- PLANTERS
- SEATING & MURALS
- RAINWATER MANAGEMENT

FLOODWALL RENDERING | CITY OF HOBOKEN.

HOBOKEN'S WATERFRONT PARKS

SINATRA DRIVE | RESIST & DELAY

Hoboken's waterfront is the heart of the city, with parks including Pier A Park, Pier C Park, Sinatra Park, and Maxwell Place Park. As part of a comprehensive urban water strategy, these parks incorporate elements like open spaces, large lawns, and plantings to resist the rapid flow of stormwater and delay runoff, reducing erosion and enhancing urban green space.

These designs slow water naturally, protecting the shoreline and improving the park environment. Offering uninterrupted views of the Manhattan skyline, these parks serve as vibrant gathering spaces with large lawns for picnics, playgrounds for children, and paved paths for walking or biking. These parks highlight how public waterfront access enhances quality of life, while celebrating Hoboken's deep connection to the Hudson River.

PARK FEATURES:

- OPEN LAWNS
- PLAYGROUNDS
- PAVED PATHS FOR WALKING
- AMPHITHEATER

WATERFRONT PARK AT PIER C | CITY OF HOBOKEN.

HOBOKEN'S PARKS DATA

MITIGATING FLOODING

with Hoboken's flood pumps, resiliency parks and green infrastructure (2022 & 2023)

4.2 million gal/rain stored in resiliency parks during storms

88% reduction in flooding events

107 storms where flooding was prevented (out of 121 events)

286 combined hours Hoboken's two flood pumps were in operation

598 million gal of rainwater pumped out by two flood pumps

HOW'D YOU SPEND YOUR DAY?

Throughout this tour, you've seen how Hoboken's parks embody the **Resist, Delay, Store, Discharge** approach to water management, where parks like Harborside and ResilienCity Park resist storm surges with floodwalls, delay runoff through rain gardens, store excess water in underground tanks, and discharge it safely, showcasing a comprehensive strategy for mitigating flood risks and enhancing community resilience.

SHARE YOUR EXPERIENCE!

Write a note home and share your favorite moments — whether it was exploring a rain garden buzzing with pollinators, learning how stormwater storage tanks are hidden beneath playgrounds and sports fields, or just enjoying the stunning views of the Manhattan skyline from the waterfront promenade. Hoboken's parks aren't just beautiful, they're a glimpse into the future of resilient, community-centered design.

CONTINUE YOUR JOURNEY

GET A BITE TO EAT?

Antique Bar & Bakery (122 Willow Ave): Wood-fired American cuisine with retro flair, known for its signature bread and creative small plates.

La Isla (104 Washington St): Classic Cuban fare, famous for its pressed sandwiches, rich entrees, and strong cafecitos.

Augustino's (1104 Washington St): Cozy Italian-American spot offering homestyle pasta, seafood, and old-school charm.

Anthony David's (953 Bloomfield St): Upscale Italian-American with seasonal menus, brunch favorites, and elegant outdoor dining.

The Hoboken Biergarten (1422 Grand St): Lively beer hall serving German-inspired cuisine, from sausages and pretzels to hearty schnitzel.

Olivia's (1038 Garden St): Modern Mediterranean-American cuisine featuring fresh seafood, creative small plates, and craft cocktails.

Fiore's Deli (414 Adams St): Beloved old-school Italian deli, famous for fresh mozzarella and hearty sandwiches packed with meats and housemade toppings.

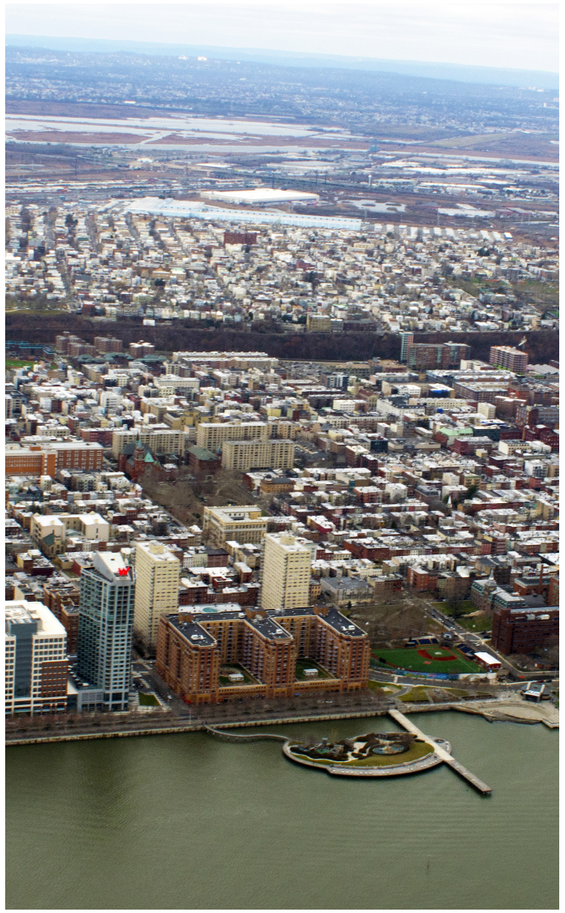
Il Tavolo (700 Clinton St): Italian-American restaurant with a modern twist, offering pizza, pasta, and seafood in a relaxed atmosphere.

Barbès (1300 Park Ave): French-Moroccan fusion, with dishes like tagines, couscous, and French bistro classics served in a stylish setting.

EXPLORE ART OR HISTORY?

Hoboken Historical Museum (1301 Hudson St): Showcasing Hoboken's rich history, from its industrial roots to its cultural icons like Frank Sinatra, with rotating exhibits and community stories.

Monroe Center (720 Monroe St): A vibrant creative hub featuring artist studios, galleries, and performance spaces, hosting exhibits and cultural events.



HOBOKEN AERIAL SHOT | DON LOGAN, WIKIMEDIA

GLOSSARY

Adaptation: The process of adjusting to changing conditions, such as climate change, to reduce vulnerability and enhance resilience.

Berm: A raised area of land, often vegetated, used as a natural barrier to redirect or slow the flow of water, providing flood protection.

Bioswale: A vegetated, sloped channel designed to slow and filter stormwater runoff by allowing it to infiltrate into the soil and be absorbed by plants.

Blue-Green Infrastructure: A design approach that integrates natural landscapes (green) and water management systems (blue) to manage stormwater, reduce flooding, and enhance environmental and community benefits.

Cistern: A storage tank, often underground, used to collect and hold stormwater for later use, such as irrigation, or gradual release to reduce flooding.

Combined Sewer System: A sewer system that collects both stormwater runoff and sewage in the same pipes, which can become overwhelmed during heavy rain, leading to flooding and combined sewer overflows (CSOs).

Flood Risk: The likelihood and potential impact of flooding on people, property, and the environment.

Floodwall: A vertical barrier designed to prevent floodwaters from entering specific areas, often integrated with green infrastructure elements such as rain gardens and planters.

Gray Infrastructure: Traditional engineered systems, such as pipes, pumps, and underground storage tanks, designed to capture, convey, and manage stormwater.

Green Infrastructure: Natural and engineered systems, like rain gardens, bioswales, and permeable pavers, designed to capture, absorb, and filter stormwater to reduce flooding and improve water quality.

Multi-benefit Infrastructure: Infrastructure designed to serve multiple functions, such as flood protection, water quality improvement, habitat creation, and recreational space.

Permeable Pavers: Pavement materials that allow water to pass through, reducing stormwater runoff and improving groundwater recharge.

Pump: A mechanical system used to actively move stormwater from low-lying areas into nearby waterways or drainage systems, especially when natural gravity is insufficient.

Rain Garden: A depression planted with native vegetation that captures, absorbs, and filters stormwater runoff, helping to reduce flooding and remove pollutants.

Resilience: The ability of a system to withstand and recover from disturbances, such as natural disasters or climate change.

Storm Surge: A rise in sea level due to a storm, which can cause coastal flooding.

Stormwater Runoff: Precipitation that flows over land surfaces instead of being absorbed, often carrying pollutants into nearby water bodies.

Underground Storage Tank: A large tank buried beneath the surface designed to capture and temporarily store stormwater during heavy rain events to prevent street flooding and sewer overflow.

HOBOKEN SUNSET | CITY OF HOBOKEN