



Drainage Pump Station (DPS) 01 Watershed Drainage Upgrades & Green Infrastructure Project

GANBASE

City of New Orleans

June 20th, 2025

Erika Boerr – Senior Project Manager – Stormwater and Green Infrastructure

New Orleans in Context



New Orleans and the Nation

The Mississippi River drains **40%** of the continental US.

25% of US waterborne exports are shipped through Louisiana's five major ports.

New Orleans in Context



New Orleans and the Region



Metro area population: 1,251,849

City of New Orleans population: 384,320

New Orleans in Context



Nature and the City

Land area: 169 mi² (438 km²)

 **Over 1/3** of that land is wetlands.

New Orleans in Context

Elevation





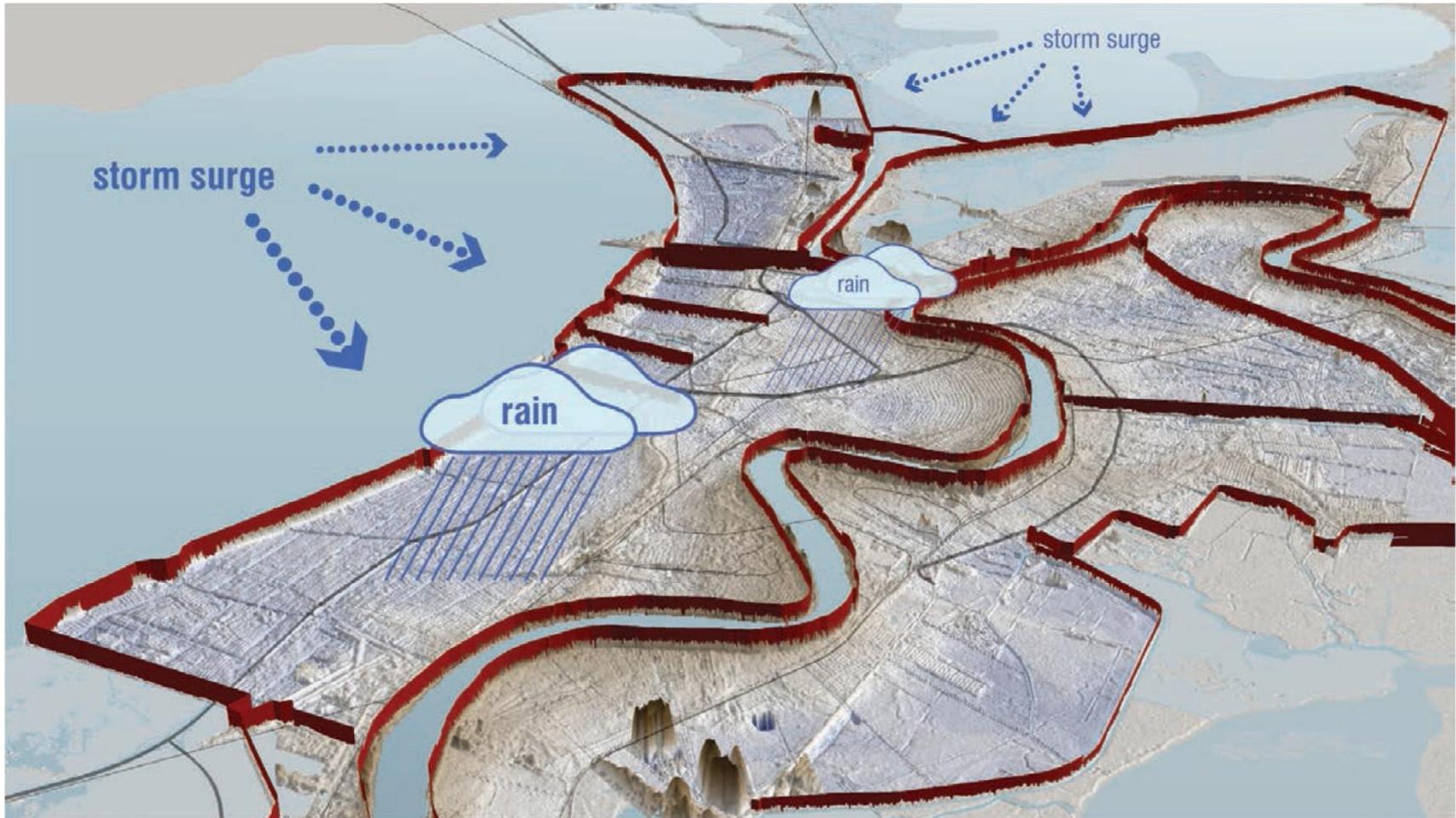


New Orleans
is a coastal city.

New Orleans' location, where the Mississippi River Delta becomes the Gulf of Mexico, is strategic for commerce, but also defines our most existential threat.

WATER

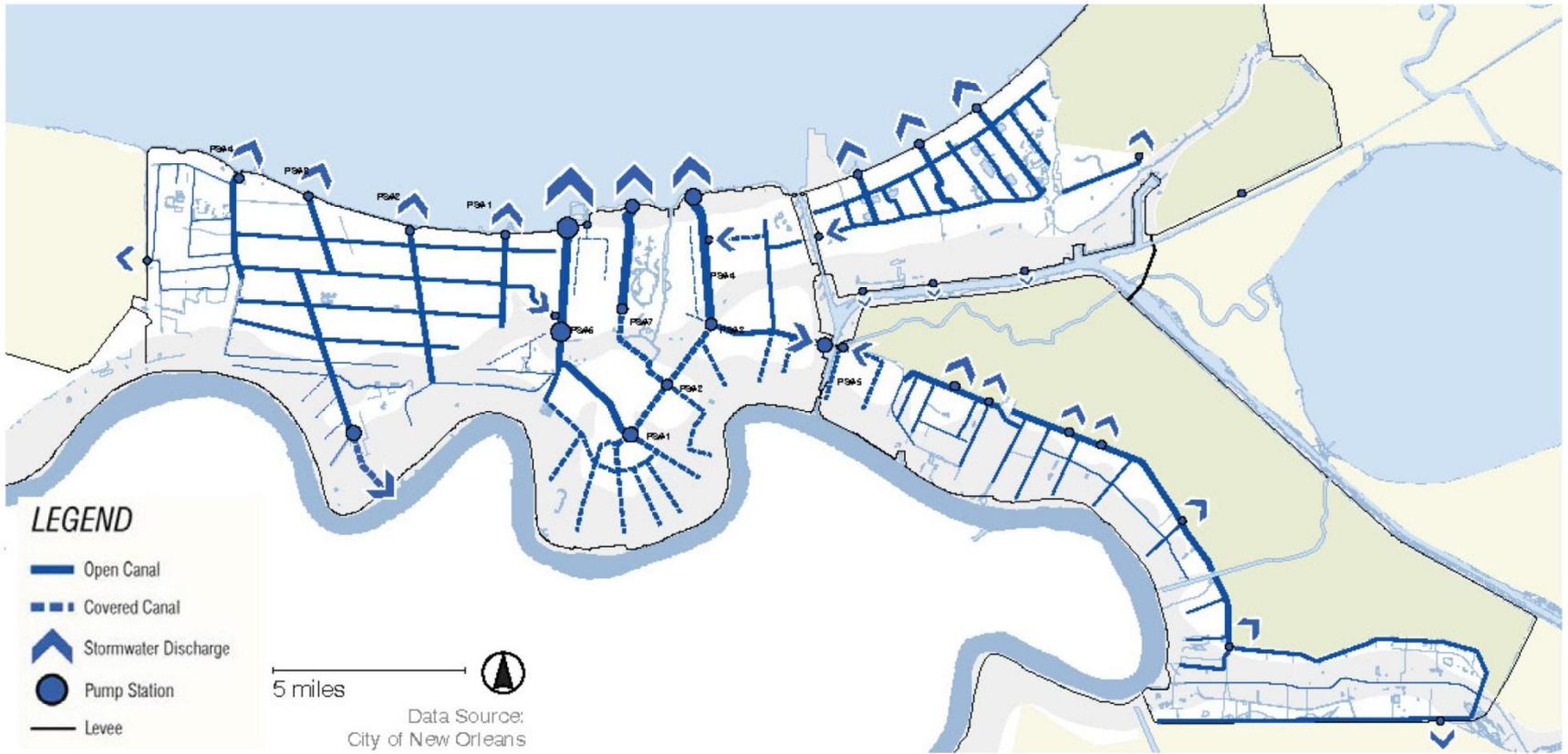
Drainage System Surrounded by levees

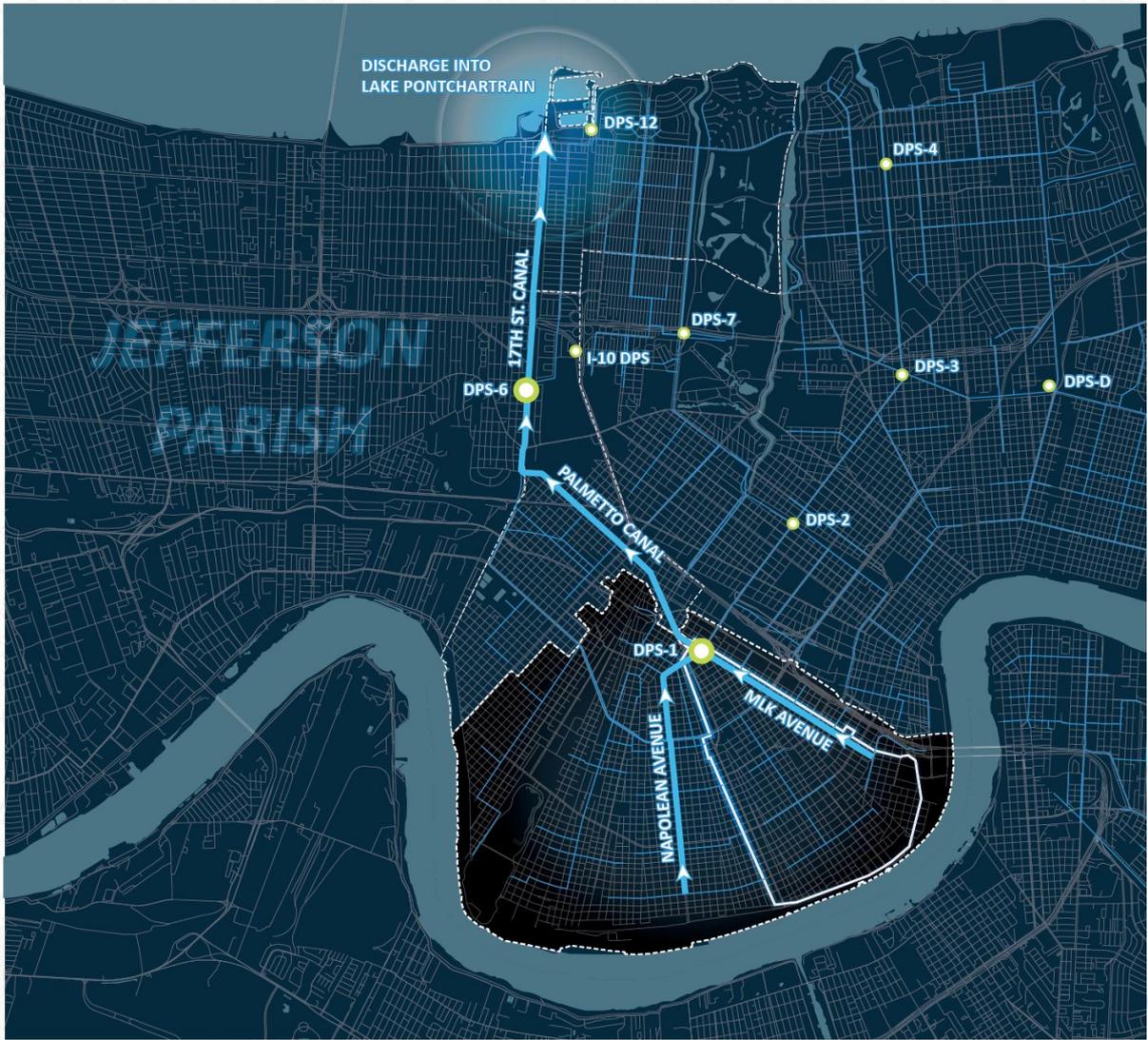


Floodwalls and levees protect New Orleans from storm surge; pumps evacuate stormwater that falls within these boundaries

Source:
Waggoner & Ball Consulting Team

Drainage System





Pipe upgrades increase the amount of stormwater that can get to the pump station and outfall canals

The upgrades make the drainage system more efficient within the Drainage Pump Station 01 (DPS 01)

A combination of grey and green infrastructure will create wide-spread flood risk reduction in the entire DPS 01 watershed

DPS 01 WATERSHED: HYDROLOGY MAP



Agenda

- I. Project Team
- II. Introduction to the project
- III. Project overview
- IV. Existing problems
- V. Proposed solutions
- VI. Next steps

Drainage Pump Station (DPS) 01 Watershed Project (aka: Broadmoor HMGP)

Project Team:

- Owner:

- * City of New Orleans – Office of Stormwater and Green Infrastructure
- * Joseph W. Threat Sr., Director
- * Erika Boerr, Project Manager
- * Brandon Caples, Resilience Outreach Specialist

- Design Team:

- * CDM Smith – Engineer of record
- * Dana Brown & Associates – Landscape Architect
- * Digital Engineering

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DPS 01 Watershed Project (aka: Broadmoor HMGP)

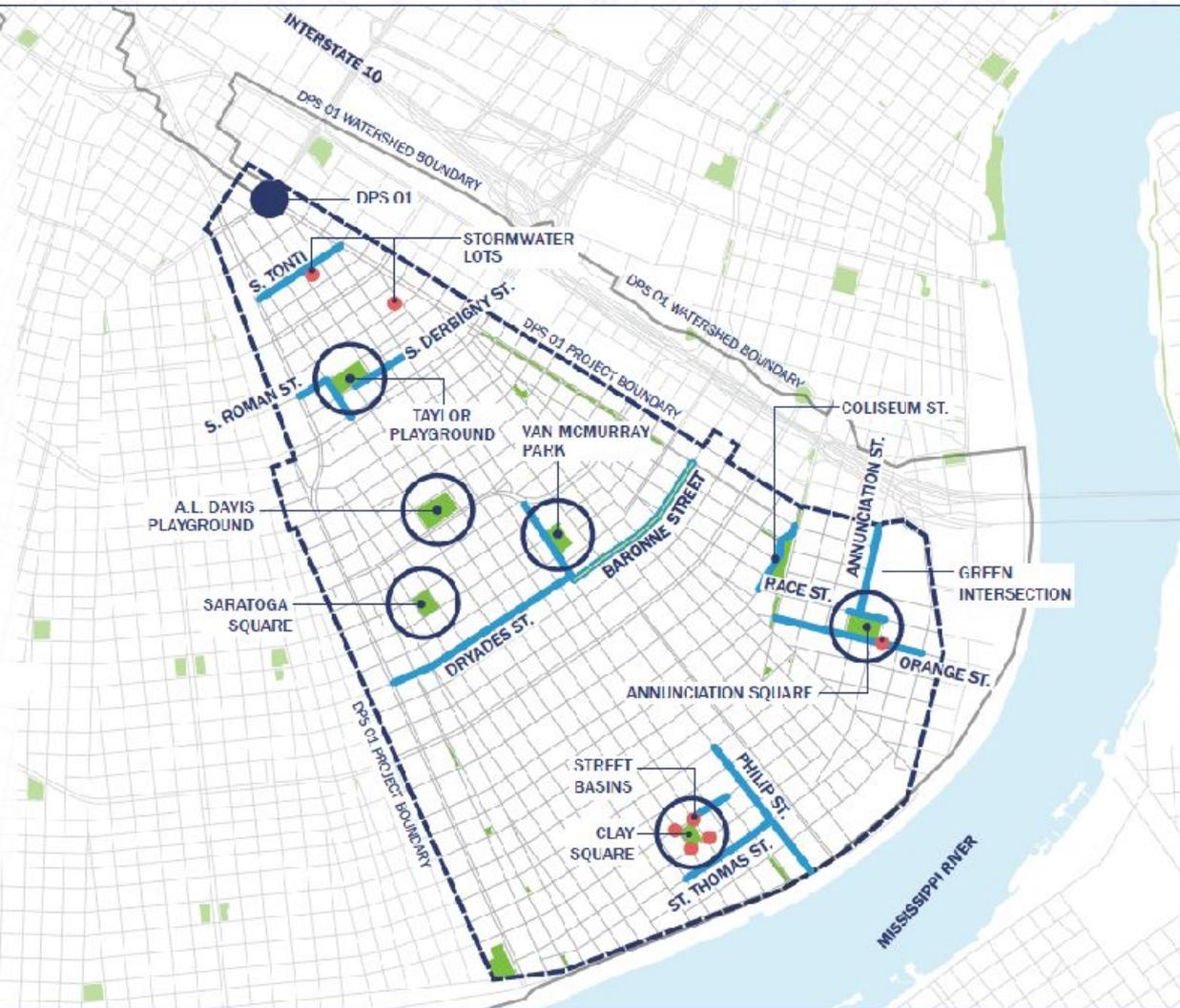
Introduction to project

Nine New Orleans neighborhoods will benefit from reduced flood risk: Broadmoor, Central City, Garden District, Lower Garden District, Irish Channel, St. Thomas Development, Touro, East Riverside, and Milan.

These neighborhoods are located between the Central Business District and Uptown and within the Drainage Pump Station 1 (DPS 01) drainage district.

Properties in these neighborhoods experience frequent localized flooding and repetitive losses due to regular weather events.

The project area is bound by Broad Street to the north, Martin Luther King Boulevard and Melpomene Street to the east, Tchoupitoulas Street to the south, and Louisiana Avenue and Toledano Street to the west.



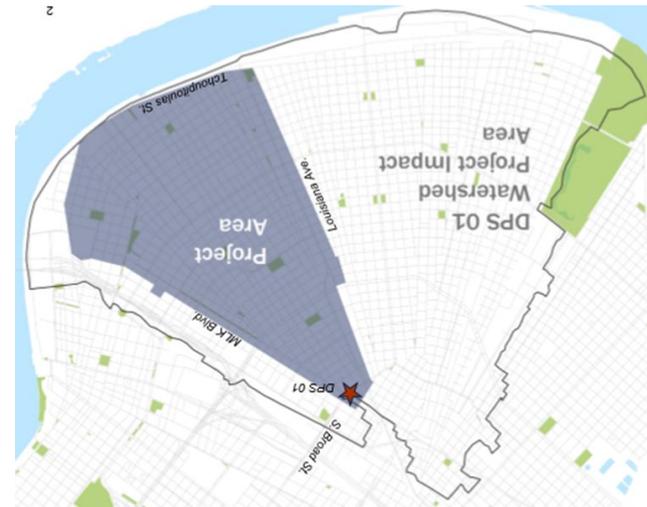
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DPS 01 Watershed Project (aka: Broadmoor HMGP)

Project Overview

- Green infrastructure will temporarily capture stormwater runoff at higher ground near the River
- Pipe upgrades will increase the amount of stormwater that can get to the pump station & outfall canals
- Phase I:
 - 4 Stormwater Parks
 - 2 Stormwater Lots
 - 3 Green Intersections
 - Associated Pipe Upgrades
- Phase II:
 - 2 Stormwater Parks
 - 2 Green Intersections
 - 4 Complete Streets Improvements with Associated Pipe Upgrades



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DPS 01 Watershed Project (aka: Broadmoor HMGP)

EXISTING PROBLEMS

- ***Localized flooding***
- ***Repetitive losses***
- ***Damage to homes, businesses, and vehicles***
- ***Burden on the City's drainage system***



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DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: *STORMWATER PARKS*

- **The four parks will incorporate stormwater management**
- **Existing park recreation will not be changed**
- **Stormwater from neighborhoods will be stored under parks in tanks**
- **Some existing pipes will be upgraded**
- **Where pipe upgrades occur, street segments will be repaved from curb to curb**



AL DAVIS PLAYGROUND



ANNUNCIATION SQUARE



TAYLOR PLAYGROUND

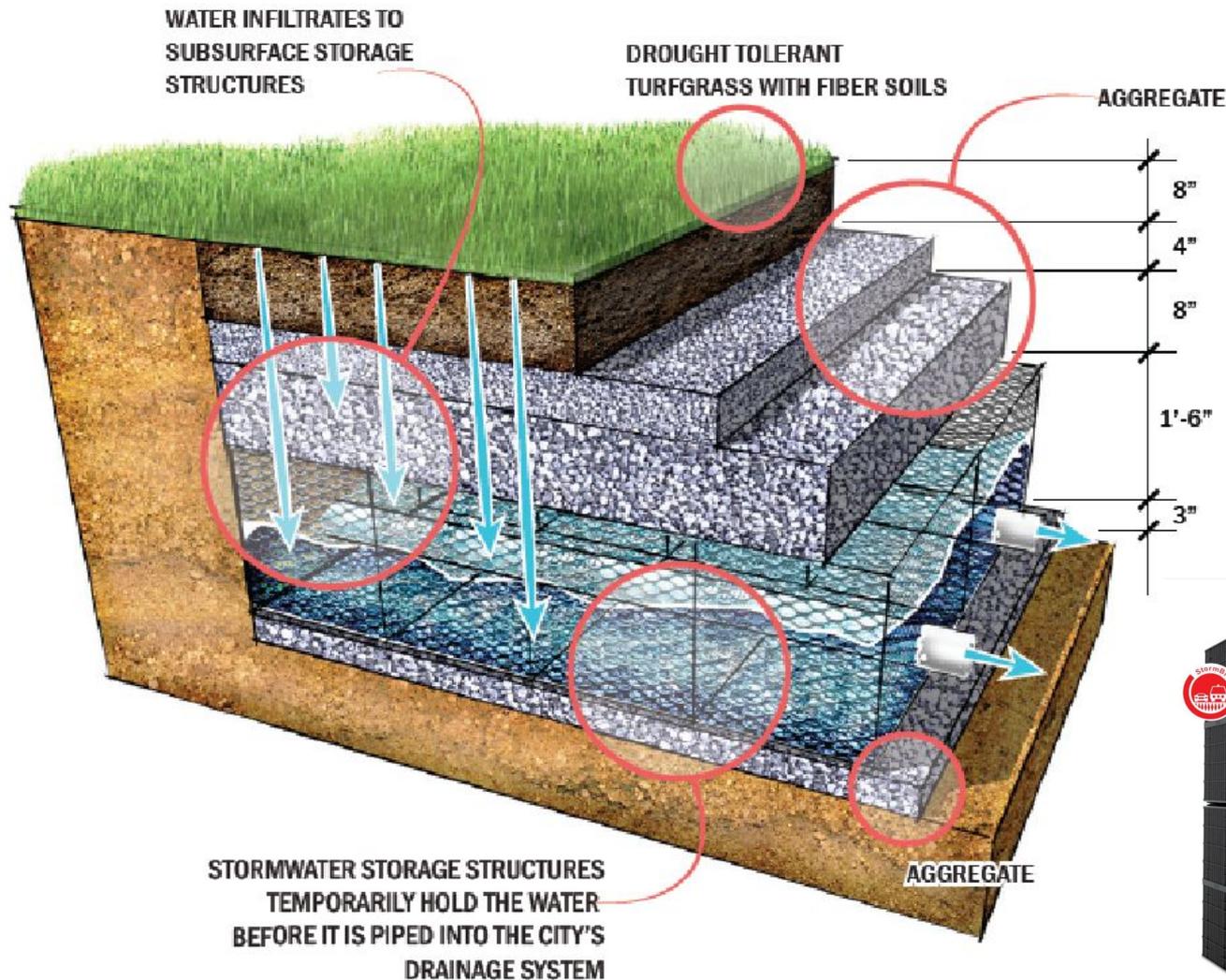


BURKE PLAYGROUND (CLAY SQUARE)



DPS 01 Watershed Project (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: *STORMWATER PARKS*



DPS 01 Watershed Project (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: *STORMWATER PARKS*

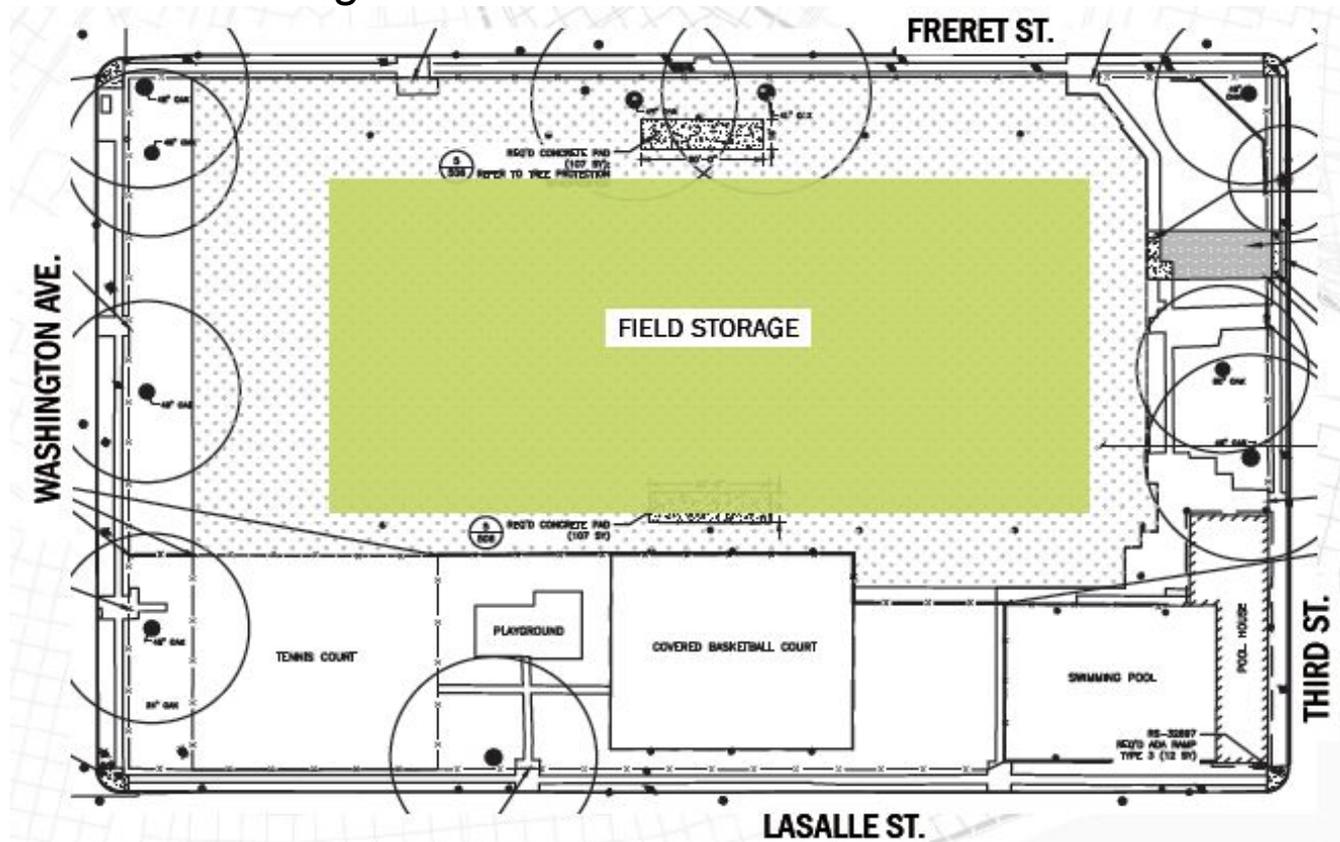


DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER PARKS

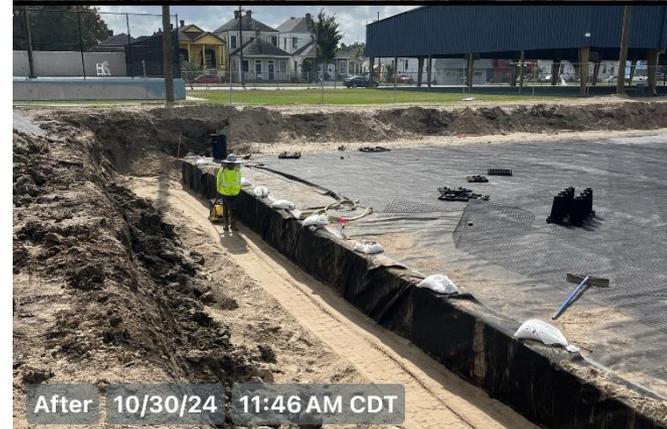
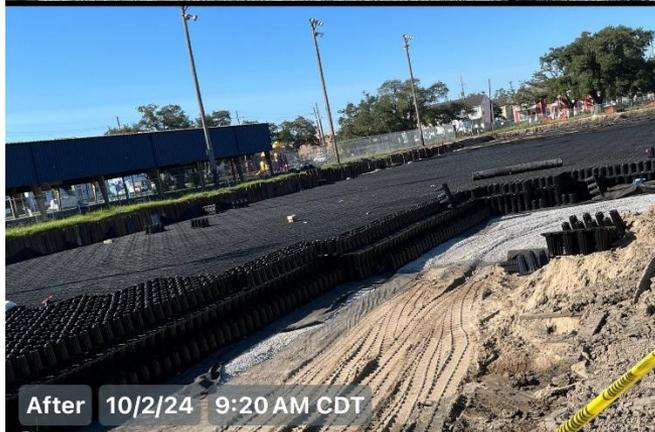
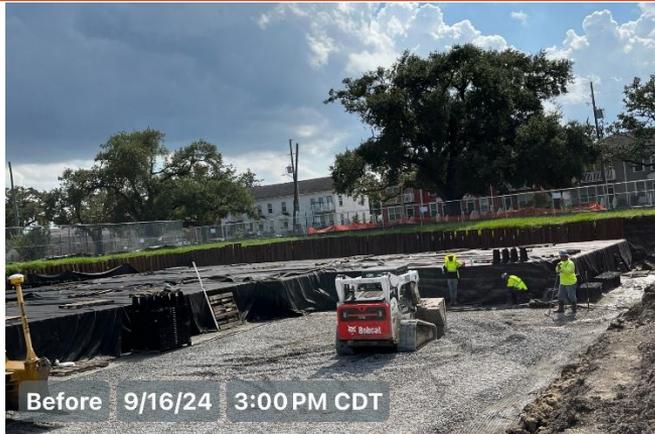
A.L. Davis Playground:

- 229,000 CF of storage
- Reduction of 10" of water over 3 city blocks!
 - Subsurface field storage



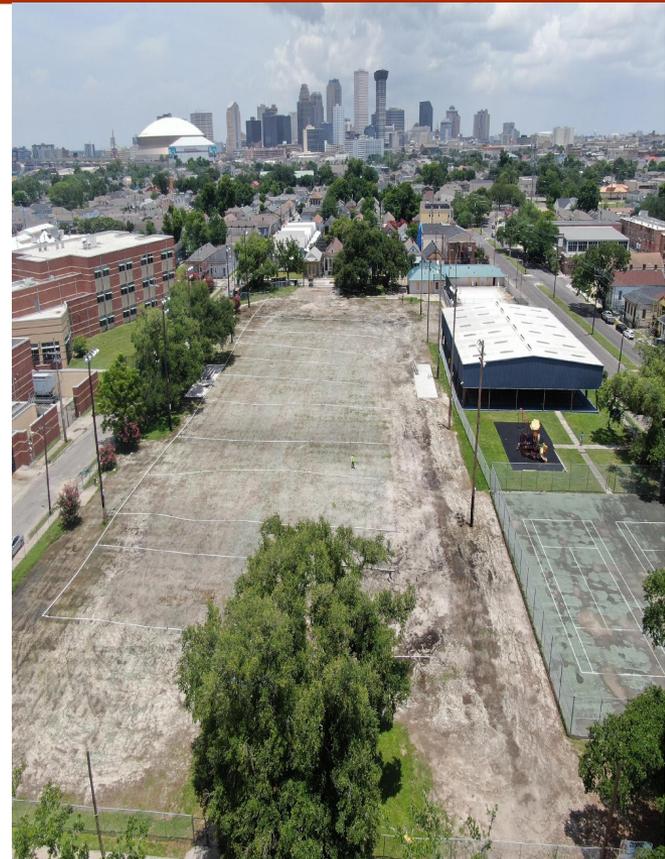
DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER PARKS - A.L. Davis Park



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PROPOSED SOLUTIONS: STORMWATER PARKS - A.L. Davis Park

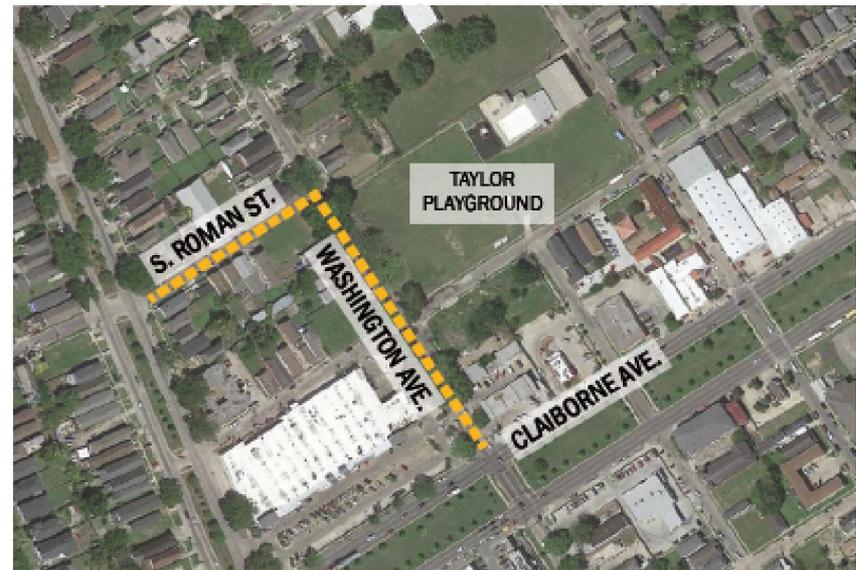
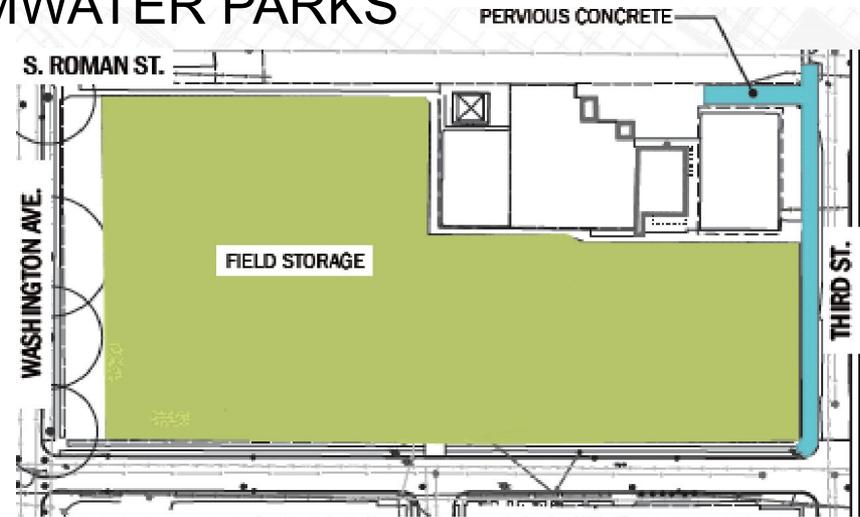


DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER PARKS

Taylor Playground:

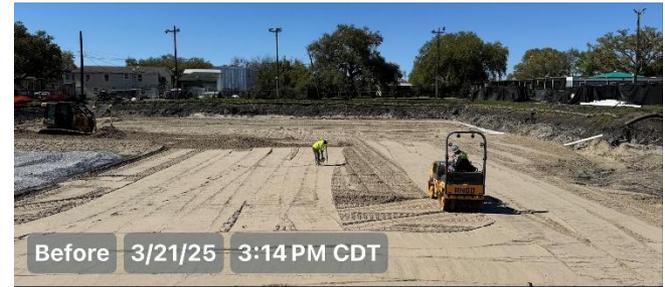
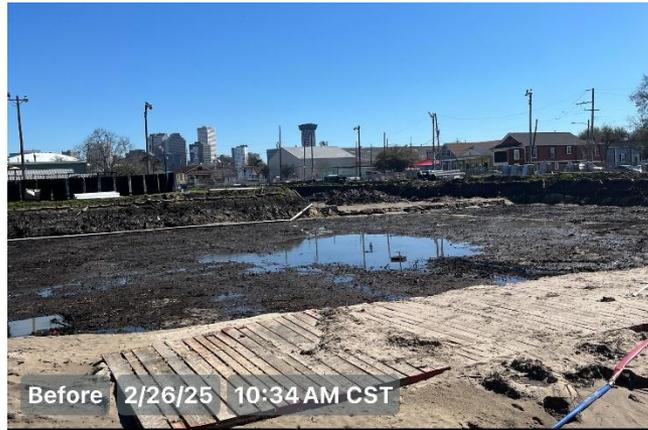
- 240,000 CF of storage
- Reduction of 11" of water over 3 city blocks!
 - Subsurface field storage
 - Pervious concrete sidewalks
- Pipe upgrades:
 - S. Roman Street
 - Washington Avenue



DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER PARKS

Taylor Playground



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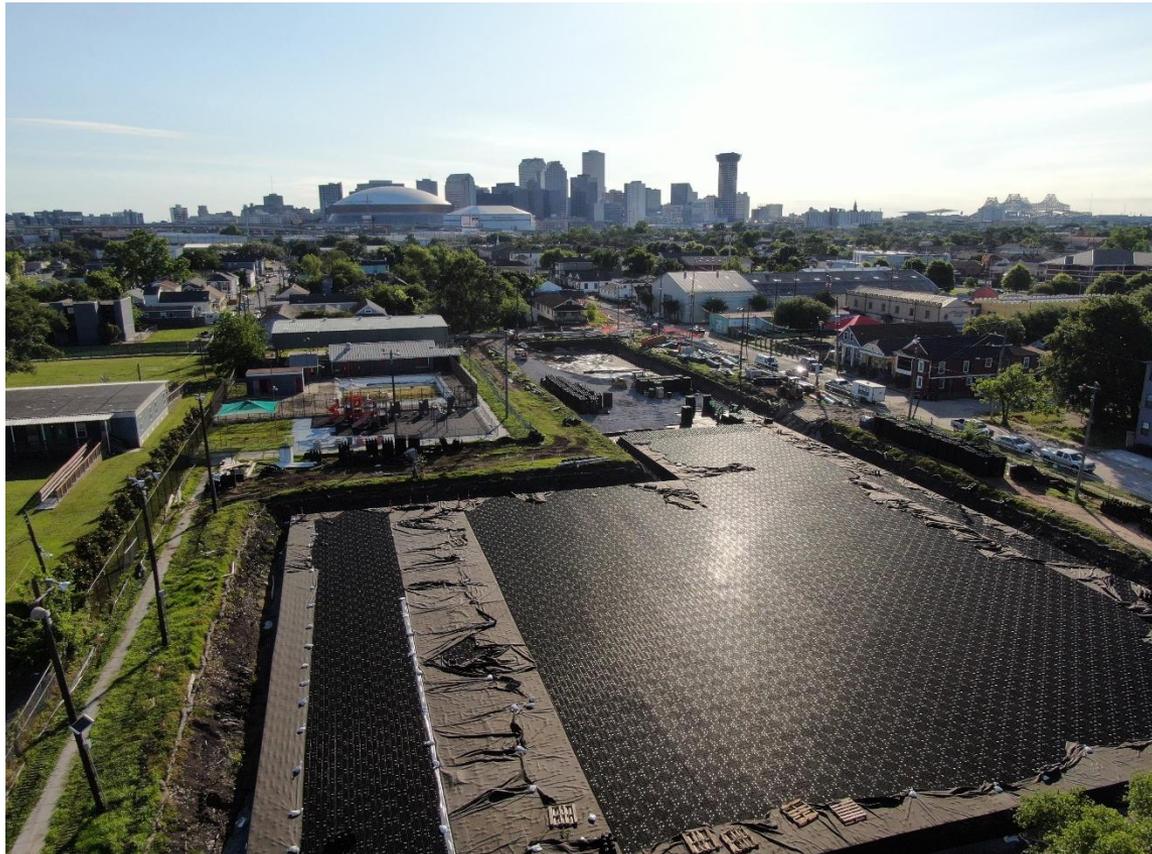
50
YEARS
DESIGN LIFE



DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER PARKS

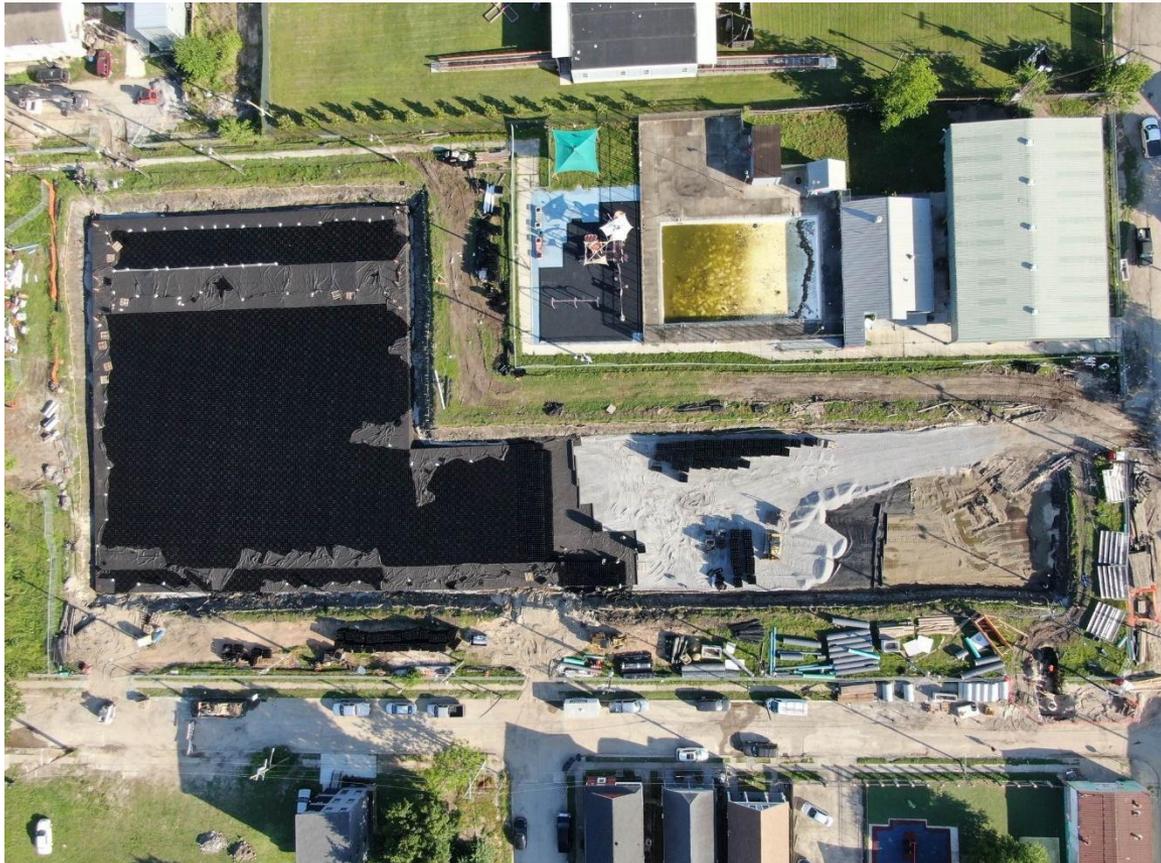
Taylor Playground



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PROPOSED SOLUTIONS: STORMWATER PARKS

Taylor Playground



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PROPOSED SOLUTIONS: STORMWATER PARKS

Taylor Playground



DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: STORMWATER LOTS

- Two vacant lots will be designed as Stormwater Lots
- Lots take water off the streets & temporarily store on site
- Water drains within 48 hours, therefore preventing the breeding of mosquitos
- Provide usable green space when not holding water



3200 JACKSON AVENUE



3623 3RD STREET



DPS 01 Watershed Project Phase I (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: *STORMWATER LOTS*

BENEFIT RECAP:

- ***Reduces street flooding***
- ***Improves water and air quality***
- ***Enhances the visual character of the neighborhood***
- ***Increases property values***



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: GREEN INTERSECTIONS

- *2 intersections will be redesigned with Street Basins, Pervious Crosswalks, and Pervious Gutters*
- *Intersection Improvements will temporarily store runoff*
- *Located where it is currently illegal to park*
- *Planted vegetation will not restrict the line-of-sight for drivers*



STREET BASIN EXAMPLES FROM OTHER CITIES

St. Roch Drainage Project

PROPOSED SOLUTIONS: GREEN INTERSECTIONS/STREET BASINS



St. Roch Drainage Project

PROPOSED SOLUTIONS: GREEN INTERSECTIONS/STREET BASINS

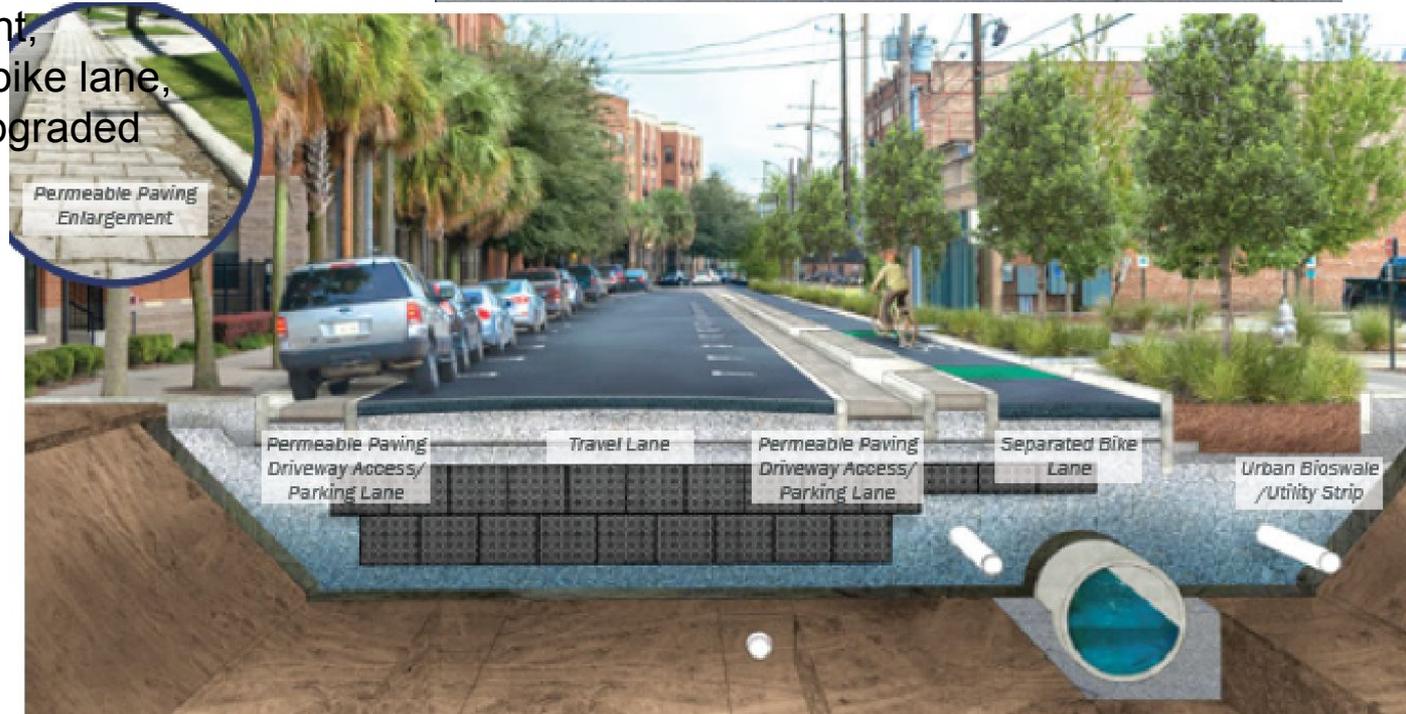


DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: COMPLETE STREETS

Baronne Street:

- 179,470 CF of storage, which equates to:
 - 3'-2" over a football field
 - **1,342,436 gallons**
 - 26,849 filled bathtubs
- Streets upgraded with stormwater storage, pervious pavement, pervious asphalt bike lane, bioswales, and upgraded drainage pipes



Proposed improvements to Baronne Street from MLK Jr. Boulevard to Philip Street

DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 0.5" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 1" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 1.5" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 2" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 2.5" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

PROPOSED SOLUTIONS: BARONNE STREET 3" STORM SIMULATION



DPS 01 Watershed Project Phase II (aka: Broadmoor HMGP)

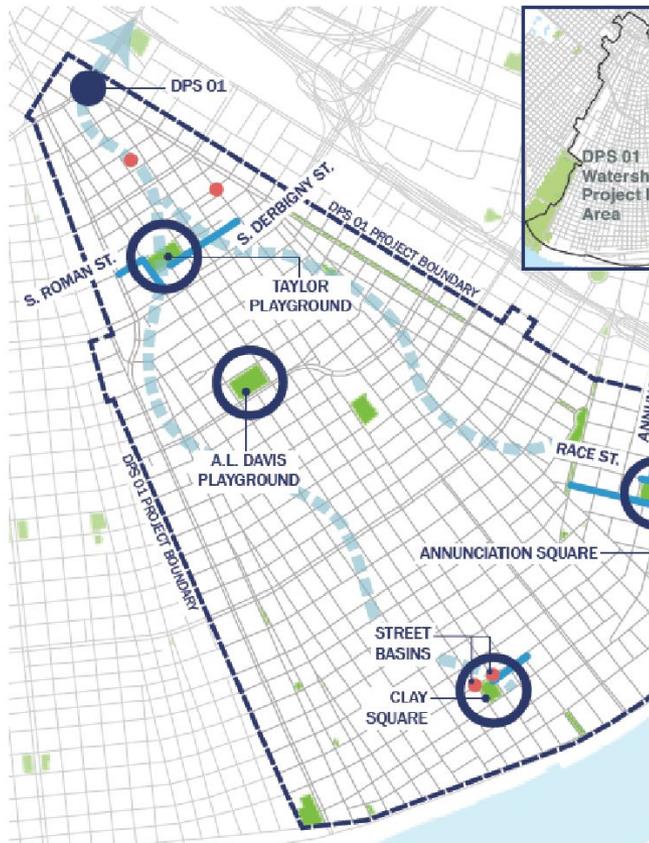
PROPOSED SOLUTIONS: BARONNE STREET 3.5" STORM SIMULATION



DPS 01 Watershed Project (aka: Broadmoor HMGP)

Phase I

Phase II



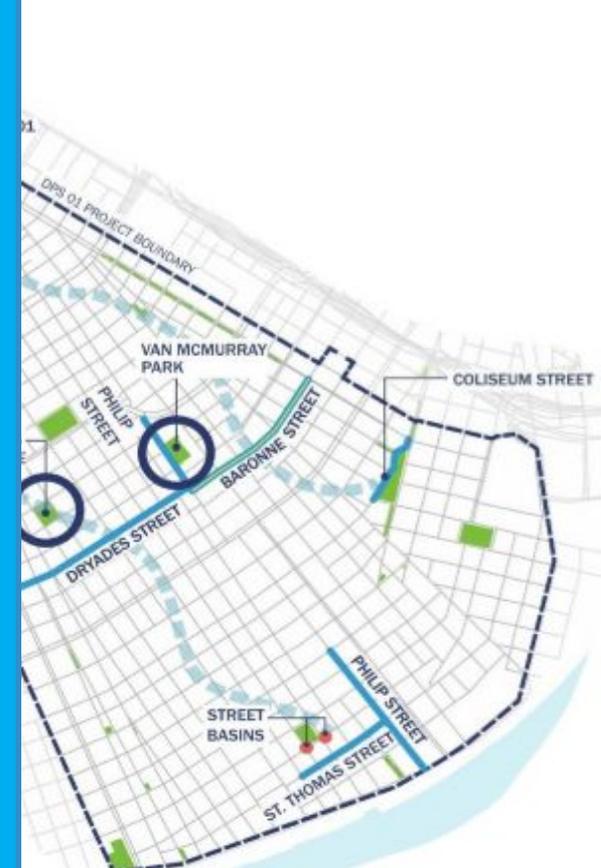
Project Area

The projects proposed within the Drainage Pump Station 01 Watershed will significantly reduce potential flooding within the project boundary and beyond.

The projects include a variety of green infrastructure typologies that will store stormwater closer to where it falls, reducing the load on the drainage system and allowing it to function in a storm that would currently overwhelm it.

The projects will reduce flow to the Louisiana, 3rd Street, and MLK canals, allowing other stormwater outside the project area to enter these canals and DPS01 to pump that water out sooner, and therefore creating a reduction of **29 MILLION GALLONS** in total flooding that is 2.5 times the storage provided by the projects.

The project removes **520,000 GALLONS** from ever getting to the pump station.



- Stores 12.9M gallons of stormwater
- Phase I Construction started in June 2024

Phase II Bid advertisement is projected to start on 4 QTR 2025



Thank You

Any Questions?

City of New Orleans

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Stormwater and Green Infrastructure

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