

Program Summary:

A park defined by water celebrates this important asset while mitigating neighborhood flooding.

Program Statement:

This 80-acre park is the first completed pilot project of a HUD-funded coastal resilience program for six Louisiana parishes, the urban complement to the State's ambitious Coastal Master Plan. Our firm led the master planning of this prior effort and put its regional resilience principles into practice designing this park to address an area of high repetitive losses from stormwater flooding.

Two stormwater ponds and a soggy, degraded forest existed in the park prior to the project. Stormwater models indicated a need for additional runoff storage to reduce neighborhood flood impacts, so the first challenge was where to put water in a wooded urban wilderness, and how to get it there.

Passive recreation and native habitat define the new park: acres of wildflowers, hundreds of new trees, aquatic plantings, shade pavilions, piers, and miles of walking paths ring a series of ponds and lagoons. All these features help remediate water-logged areas and demonstrate ecosystem services. When it rains, the landscape channels and holds 6.5 million gallons of stormwater from surrounding streets and homes. In addition to water, the project also managed dirt, reusing all excavated material on-site. And all structures in the park are located at prominent points of water movement, connecting people to the region's greatest asset.

SP-180.01

Building Area: (sf)

80 acres (park)

1500 sf (main pavilion)

Cost per Square Foot:

N/A

Construction Cost

\$5.5 million

Date of Completion:

March 2023



SP-180.02

Small Structure, Big Picture

Occupying 80 acres on the west bank of greater New Orleans, this neighborhood park sits within the levees but largely below sea level and is prone to urban flooding. Through a renovation of the park, its lagoons and landscape were retrofitted to add 6.5 million gallons of stormwater storage, all while building new trails and pavilions to enhance the park's amenities:

- 1.5 miles of accessible trails
- 5 new pedestrian bridges
- New lagoon extension and open-water pond connection
- Shade canopy at existing outfall weir structure
- 1,500 square foot open-air pavilion
- 45 zero runoff parking spaces
- New entrance, wayfinding, and educational signage program
- Low-maintenance aquatic aeration system throughout the ponds
- 400+ new trees

SP-180.03

Small Budget, Big Impact

With a construction budget of \$5.5 million, the redesign of this underutilized park sought to create both a stormwater sponge and a great public space on the water. To that end, our team identified opportunities to excavate new lagoons and detention basins in low-lying areas where the tree cover was most degraded and invasive species had taken root. The excavation of this area into meadows and bog gardens helped the park provide 6.5 million gallons of stormwater storage, the highest-performing stormwater park yet constructed in the New Orleans region. By focusing on the relationship between people and water through the careful placement of pavilions, bridges, and weirs, the perception of small interventions are multiplied across the site, giving a rich identity to a formerly hidden landscape gem.



SP-180.04

From Coast to Curb

This project began with an ambitious planning initiative led by our firm, a regional adaptation program for six of the most flood-vulnerable parishes in the state. Starting from the coastal scale, we developed resilience strategies and conceptualized 36 resilience pilot projects for buildings and landscapes. One project in each parish was selected by community members for implementation, including this one. Our firm then led the master planning, stormwater design, and architecture of the park. As a pilot project, the park serves not only as an important adaptation measure for local flooding, but as a regional model of nature-based best practices.

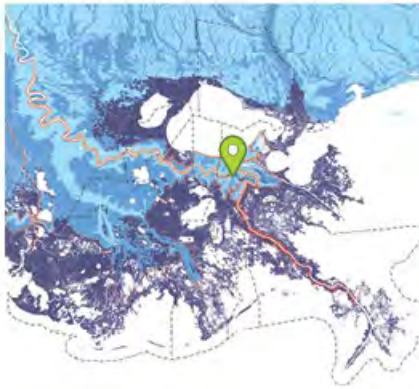
Regional Adaptation Program



Jefferson Parish Adaptation Strategy



Stormwater Park Pilot Project

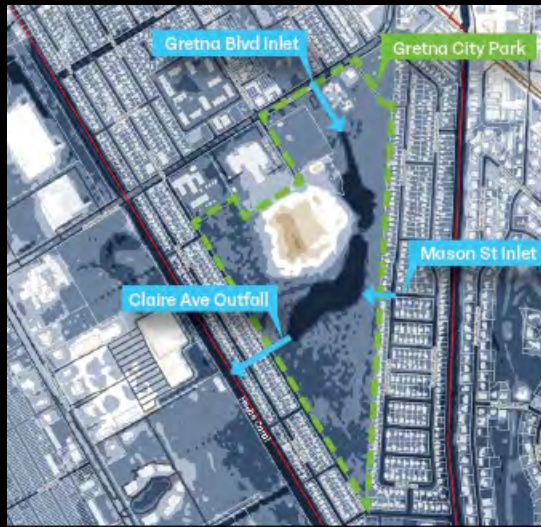


SP-180.05

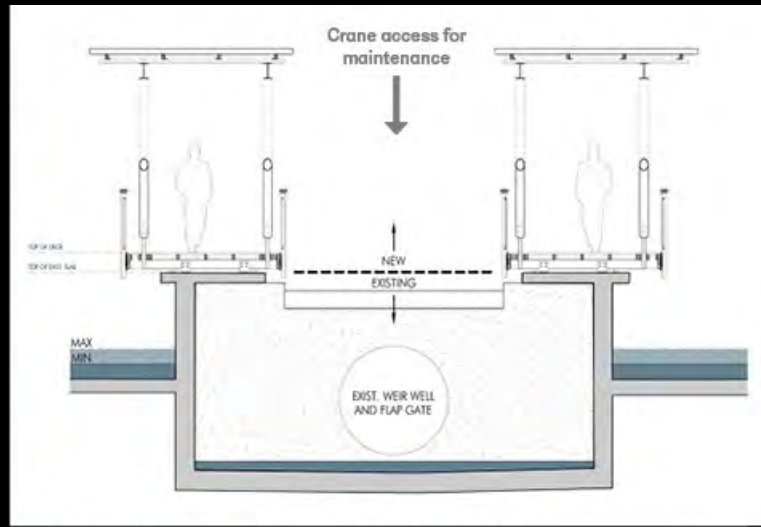
Arrival and Entry

The park's main entry includes a new gravel parking lot showcasing best practices for stormwater management. Carefully placed cypress trees bring the landscape up to the visitor's car door. Near the water's edge, a series of benches form a threshold between cars and pedestrians, and a two-piece shade pavilion juts into the lagoon, providing access to an existing outfall structure. To the right, a kayak launch offers easy access to the water for paddlers close to the main parking lot. And in the background, the park's main pavilion beckons visitors to explore deeper into the park.





Park hydrology diagram on elevation map



Existing outfall weir with new shade canopies above



SP-180.06

People and Water

A new shade pavilion sits on the structure of the Claire Avenue outfall weir, an existing sill that drains the park's lagoon system. This operable control structure sets the level of the lagoons and allows stormwater to slowly filter back into the urban drainage system. By locating the shade pavilion here, the design allows visitors to interact with and appreciate this formerly fenced-off piece of infrastructure. It also saves money by building on existing foundations. V-shaped trusses allow the new piers to bear on two existing walls of the weir structure, enabling the construction of the canopies without any new foundation work. This structural necessity led to a truss shape that became a motif across the park, and a split form to allow maintenance and crane access to the sill below.

SP-180.07

Earthwork and Architecture

Key to the project's success were the strategic use of earthwork and architecture, maximizing impact relative to a modest budget. Close collaboration with the landscape architect and engineers facilitated a holistic conception of the site, using views across the water to shape a whole that was worth more than the sum of its parts.

Pavilions were sited to be visible across the park from multiple angles, enticing the visitor to keep walking as the landscape unfolds. And earthwork was concentrated where existing forests were most degraded, allowing for expanded wetlands and stormwater storage while preserving the site's healthiest native forest. Equalizing the cut/fill balance on-site saved money on soil transport and disposal and extended project impact.

Structures



Pre-existing weir with failing maintenance deck

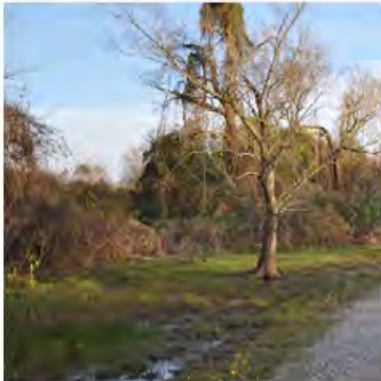


Structures are designed to minimize bearing points



Weir is made occupiable, with views across waterway

Site



Degraded portions of lowland forest identified for clearing



New lagoons & bog gardens fix site flows and store stormwater



Water control structures interlace with the paths and landscape



SP-180.08

Bring Water to the People

Two smaller weirs separate the new bog garden from the lagoon, increasing the park's stormwater capacity above the standing water level. Taking these normally utilitarian structures as a design opportunity, we developed a cascading weir structure that interlocks with the park's path network to celebrate the movement of water. By crossing the paths of people and water, the weirs become a mechanism for educating the public on how the park works.

Along this stretch of new constructed lagoon, the path weaves along the high ground between the water and the bog garden. Critically, the bog garden is not just a hole-in-the-ground detention basin planted over with turf grass, but an integral part of the landscape, hosting native wildflowers and wetland flora to elevate the park's ecology.

SP-180.09

Bring People to the Water

Two pre-fabricated bridges were constructed to complete the park's path network. Where the new lagoon was dredged, a bridge connects people from the parking lot to the main pavilion. And a new open water connection was established between two existing ponds, making way for a new bridge with piers overlooking the water on both sides.



SP-180.10

The Main Pavilion

Simple in form and elegant in its detailing, the main pavilion sits at a key nexus in the site. Its siting makes the structure visible from four sides, and its galvanized roof contrasts against the dark forest beyond. Careful study of the pavilion's orientation allows this flagship piece of architecture to have a high impact on the site from across the water and connect event goers to Bird Island.

The park's lighting and power strategy anticipates multiple future event uses at the pavilion. Bollard lighting along the paths connect all new parking areas the perimeter across bridges to the pavilion, and uplighting within the structure creates a glowing beacon visible from across the water.



SP-180.11

Looking Out

If the form of the pavilion is designed to be a landmark visible from across the site, its interior is designed to direct the view back to the park. A shady respite in the humid summer, the pavilion offers a place to pause and gather with commanding views of the water. The truss structure nods to the shade pavilion across the lagoon and continues the triangular column motif across the site. A refined material palette, including sand-blasted concrete, steel, and glulam beams, lends the pavilion warmth and architectural character without breaking the bank.



SP-180.12

Community Leadership

Key to the project's success was an early and ongoing collaboration with the park's neighbors. These community members, some of whom grew up alongside the park, knew it mostly as an underutilized open space with a couple lagoons for fishing, and played a central role in deciding the amenities that would supplement stormwater storage. From the early days of the regional planning effort, these neighbors helped select the park as Jefferson Parish's pilot project, and many stayed involved in implementation right up through an iris planting event the weekend before opening, photographed below.



SP-180.13

Small Structure, Big Picture

As the highest capacity stormwater park in the New Orleans region, this project offers a model for how to pair infrastructure with amenities, risk reduction with quality of life. Its architecture is simple but distinctive, marking the park with a distinct sense of place while maintaining its roots in the Louisiana vernacular. And its landscape treasures water as an asset rather than a threat, the ultimate resource that gives life to the delta and the people who call it home.

The park highlights the benefit of designing infrastructure and amenities in tandem, maximizing benefit relative to cost. By embracing the design of weirs, detention ponds, and water control structures, infrastructure that is typically the purview of engineers, architects can elevate the quotidian and make legible the forces of water, turning simple neighborhood spaces into beautiful, one-of-a-kind parks.



Project Name:
Gretna City Park

Project Location:
3144 Claire Ave,
Gretna, LA 70053

Owner/Client:
City of Gretna

Architect(s) of Record:
(names and addresses)
Waggonner & Ball
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New Orleans, LA, 70130

Project Team:
Andy Sternad
Paul Gamard
Brian Cash
David Waggonner

Landscape Architect:
CARBO

Consultants:
Batture Engineers (Civil & Structural; Mary
Schambeau Johnson, Andrew Doyle, Lauren
Williams, Bob Mora)
Synergy Engineers (Steve Pinto)

General Contractor:
CM Combs Construction (Josh Beasley,
Brandon Schaeffer)

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SP-180.14

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