

Gowanus Canal Sponge Park™

Brooklyn, New York, U.S.A.

Located in Brooklyn, New York, the Gowanus Canal Sponge Park™ is a planned network of public parks and neighborhood green spaces along the historic yet highly-polluted Gowanus Canal. Originally a shallow tidal inlet of saltwater marshland, Gowanus Creek was once a thriving habitat for fish, wildlife, and wetland plants. During the industrial revolution, the creek became a hub for Brooklyn's maritime and commercial shipping industries. In 1849, to accommodate larger vessels and industrial shipping docks, the marshes were drained and the creek bed was dredged and reinforced with concrete bulkheads. Factories, warehouses, tanneries, coal stores, and gas refineries popped up along its edges, taking advantage of the waterway's valuable connectivity to the region and beyond. For years, these industrial sites dumped toxic waste, polluted runoff, and raw sewage directly into the water. Over time, residential neighborhoods replaced factories and warehouses, as businesses relocated to cheaper land. Today, New York City's combined sewer system continues to pollute the Gowanus Canal. During heavy rainfalls, stormwater combines with raw sewage, overflowing directly into the canal. Its crumbling infrastructure and contaminated water drag down local real estate values, form a barrier between urban neighborhoods, and create a toxic environment dangerous for people and wildlife.

The Gowanus Canal Sponge Park™ emerged as a vision to restore the water quality of the canal and engage citizens with its shoreline through a series of interconnected public spaces. This innovative idea gains its name "sponge park" from its functional ability to slow, absorb, and filter surface water runoff through a series of landscape buffers and constructed wetlands. Underground tanks will intercept street sewer drains in order to capture and store polluted runoff. The tanks will release collected water slowly into the artificial wetlands, where it will be filtered and cleaned before entering

the canal. While built neighborhoods and infrastructure prevent the saltwater marsh from being restored to its 17th century state, the landscape architect plans to reintroduce plant communities and processes that historically helped control flooding and water quality in the Gowanus Bay. Plants included in the design thrive at different levels of inundation, and draw heavy metals out of contaminated water. In addition, floating remediation wetlands and oyster beds incorporate a mixture of aquatic organisms that work in concert to absorb and break down organic toxins, heavy metals, and 21 species of bacteria found in the water. By using natural systems to remediate highly polluted water, this design demonstrates how low impact techniques can offer viable alternatives to expensive, highly engineered solutions.

Beyond improving water quality, the Sponge Park™ would create needed parkland and recreational spaces for underserved communities, enriching neighborhood social connectivity and enhancing the value of surrounding real estate. Now a barrier between neighborhoods, the canal will become a convenient pedestrian corridor for local residents. A linear esplanade, or canal walk, will meander along the edge of the canal, weaving together a fabric of street end parks, existing parkland, historic sites, and new public outdoor spaces, such as community gardens, dog runs, performance spaces, cafes, seating areas, boat launches, and exhibition spaces. The scenic walkway will frame views into the colorful filtration basins, remediation wetlands, and restored canal beyond.

Project Resources

DESIGN TEAM

dlandstudio llc

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