Canal Park

WASHINGTON, D.C.

QUICK FACTS

Location: Washington, D.C.

Project type: Park, adjacent to office and residential development sites

Status: Completed in 2012

Project cost: $20 million

Site size: 3 acres

Developer: WC Smith

Designers: OLIN, Studios Architecture, Vika Capitol, Nitsch Engineering, SK&A Structural Engineering, Atelier Ten, Joseph Loring & Associates

Water management features: Bioretention swales, filtration system, green roof, rain gardens, rainwater cistern, ice rink, reuse system, tree boxes

Located along a portion of Washington, D.C.'s historic canal system, Canal Park uses innovative water management practices and has been a catalyst for the broader revitalization of the bustling Navy Yard neighborhood. A stormwater system including cisterns, rain gardens, and bioretention tree pits captures, treats, and reuses water for up to 95 percent of the park's needs, including irrigation, splash park–style fountains, and an ice rink. The park has become a key focal point of activity in the city, hosting regular events and seasonal festivities.

Context

Developer and property manager WC Smith led the creation of the park as a component of the District of Columbia's Anacostia Waterfront Initiative, which sought to reinvigorate the neighborhood and improve water quality in the Anacostia watershed. Today, WC Smith retains interest in the park and anticipates that the park will mitigate stormwater for the development of an adjacent multi-family property to be developed by the company.

Canal Park's origins date to 1999, when WC Smith was acquiring properties in the neighborhood. At the time, the paved site was a parking lot for school buses, but it was once part of the Washington City Canal System that connected the Potomac and Anacostia rivers and ran through the National Mall.[21] The park proposal later became a key part of the Anacostia Waterfront Initiative and a demonstration project for the District's Department of Energy & Environment.

A view from WC Smith's office building shows Canal Park (on the lower diagonal) and the adjacent parking lot, which will also be developed by WC Smith. *(© Olin/Karl-Rainer Blumenthal)*

"Canal Park is a popular meeting spot for residents, workers, and visitors. The project would not have been successful without the partnerships with private developers, the city and federal governments, and the Capitol Riverfront BID." | BRAD FENNELL, SENIOR VICE PRESIDENT OF DEVELOPMENT, WC SMITH

In winter months, rainwater collected in underground cisterns is used to replenish the park's ice-skating rink. *(© OLIN/Sahar Coston-Hardy)*

To pursue a public/private partnership for the park construction, WC Smith formed the Canal Park Development Association (CPDA) in 2000, which ultimately secured the site from the city and led the development process. A design competition led by CPDA, along with the Anacostia Waterfront Corporation and the District's deputy mayor for planning and economic development, chose OLIN as the design team to advance the project.[22]

Given the site's history and the ongoing water quality concerns with the Anacostia River (partially because of combined sewer overflow), water management was a top priority in the design competition. "The park naturally became a focal point of sustainability and a regional stormwater facility," explains Brad Fennell, senior vice president of development at WC Smith. The potential for the site as a community and social hub also evolved as a number of catalytic developments occurred in the area, including the Washington Nationals ballpark, the U.S. Department of Transportation headquarters, and the redevelopment of an adjacent public housing site.

Today, WC Smith maintains connections to the park, while the local business improvement district (BID), Capitol Riverfront, manages day-to-day maintenance and programming. WC Smith has continued development momentum around the park and anticipates using the water management capabilities of the park to adhere to the District's on-site water retention requirements for the development of an adjacent parcel. "We are really excited for the next ten years, when you will see more buildings fronting on the park and the development of new retail in the area," says Fennell.

Innovative Water Management Features

- **Stormwater collection and reuse system.** Stormwater that falls on site is collected and treated through a bioretention, ultraviolet disinfection, and filtration system that removes 100 percent of biological pollutants and reduces total suspended solids.[23] Collected stormwater then meets up to 95 percent of the park's needs for irrigation, its ice rink, and its fountain, saving an estimated 1.5 million gallons per year.
- **Rain gardens and bioretention tree pits.** Rain gardens run along the eastern edge of the park, and captured rain is subsequently filtered and reused. Forty-six bioretention tree pits also filter out contaminants.[24]
- **Cisterns.** Two underground cisterns hold 80,000 gallons of water, in addition to the roughly 8,500 gallons that the rain gardens can hold.
- **Ice rink and water features.** The ice rink and 42-jet fountain splash park are among the most popular aspects of the park—and their water needs are met entirely by stormwater.

Value Proposition

Canal Park has greatly contributed to the revival of the Capitol Riverfront neighborhood. Perceptions of the neighborhood have changed with this revitalization; for example, a survey by the BID found that 90 percent of local residents considered the area "clean and safe" in 2015, compared with 30 percent in 2009. For WC Smith, the investment in Canal Park has enhanced the value of adjacent properties, which now overlook a valuable and vibrant public amenity. The park's ability to manage stormwater for a future adjacent development has been an added bonus.

LESSONS LEARNED

- **Public/private partnerships can be excellent vehicles for delivering innovation in stormwater management.** The Anacostia Waterfront Initiative provided the initial vision for the area's revitalization, and Canal Park came to fruition through a public/private partnership with funds from tax increment financing and New Markets Tax Credits. Today, the Capitol Riverfront BID manages a robust program of activities that draw people to the park from both the neighborhood and the city at large. Fennell describes the BID's work as contributing to the "energy that helps make the park a special place."
- **Water management can inspire community engagement and local conservation.** "The whole concept of environmental conservation in the park is what has captured people who live around here," explains Janet Weston, the park manager at WC Smith. The design and development team proactively developed educational signage about the park's stormwater management functions and has worked with the BID to get the message out to a wider audience.