DC WATER PLANNING DIVISION, DEPARTMENT OF ENGINEERING AND TECHNICAL SERVICES

Park Drive RSC Gully Restoration Design Build

Southeast Washington, DC





top: After restoration; bottom left: Initial conditions; bottom right: During construction



S tormwater runoff is the primary source of degradation to local waterways within the District of Columbia. When the DC Water Planning Division needed to restore a 300-foot long, 15 to 20-foot deep gully on an ecologically sensitive

A highly unstable, eroded gully that was both a source of sediment and potential safety hazard is transformed into a series of boulder cascades and pools that infiltrate and filter stormwater and provide important wildlife habitat in an ultra-urban environment.

hillslope of Fort Dupont Park (National Park Service land) carved by heavy storm flows from an outfall located near two busy streets, they turned to Biohabitats for help.

The team began by conducting a physical and biological assessment of the degraded site. With a regenerative stormwater conveyance (RSC) approach, Biohabitats then developed a design that would not only improve stormwater attenuation and treatment, but restore ecological function and stability to the degraded ephemeral outfall channel in a way that enables it to continue developing habitat and natural water treatment as it evolves.

Crafted to ensure minimum disturbance to the site's existing forest resources, the design utilized the existing gully for construction access, filled the channel to the surrounding top of bank during construction using sand and mulch supplemented with biochar to further filter out pollutants, and created a series of cascades and pools to restore stable conveyance to the valley bottom. While attenuating and filtering polluted stormwater, the pools also provide aquatic and terrestrial habitat. After permitting the design, the design-build team of Biohabitats, ARRC, and ER&M constructed and planted the project for DC Water.

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