



# Green Infrastructure & Stormwater Management CASE STUDY

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## Cliveden Park

**Location:** Chew Ave. & Cliveden St., Philadelphia, PA

**Client:** Philadelphia Water Department

**Design Firm(s):** Pennsylvania Horticultural Society, Duffield Associates

**Landscape architect/Project contact:** Glen Abrams, Affiliate ASLA

**Email:** [glen.abrams@phila.gov](mailto:glen.abrams@phila.gov)



Photo: Pennsylvania Horticultural Society

## Project Specifications

**Project Description:** The stormwater demonstration project at Cliveden Park captures runoff from adjacent streets and uses the park's natural topography to detain stormwater before it flows into the combined sewer system. Small upland depressions provide water quality treatment and infiltration of stormwater, and a modified outlet structure allows water to pond in the existing wetland before it is slowly released. The system provides stormwater volume removal through evapotranspiration and infiltration, and will reduce the flow rate to the

combined sewer system during the small, frequent storms that cause the majority of combined sewer overflows.

**Project Type:**

Open space - park

A retrofit of an existing property

**Design features:** Rain garden and stormwater wetland.

**This project was designed to meet the following specific requirements or mandates:**

Local Ordinance

**Impervious area managed:** 1 acre to 5 acres

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** less than 5,000 sq/ft

**The regulatory environment and regulator was** supportive of the project.

## Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** \$100,000-\$500,000 (Public funding: State, local)

**Was a green vs. grey cost analysis performed?** No

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Did not influence costs.

## Performance Measures

**Stormwater reduction performance analysis:**

Philadelphia designs their systems to manage the first inch of every storm from the drainage area. The metric used is acre-inches. This project manages 1.80 acre-inches.

## Additional Information

**Links to images:**

[http://www.phillywatersheds.org/img/ASLA/Cliveden\\_ParkCredit\\_Pennsylvania\\_Horticultural\\_Society.JPG](http://www.phillywatersheds.org/img/ASLA/Cliveden_ParkCredit_Pennsylvania_Horticultural_Society.JPG) Please cite credit for photo if used: Pennsylvania Horticultural Society