



## U.S. Environmental Protection Agency

# Polluted Runoff (Nonpoint Source Pollution)

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## Stormwater Management at EPA Headquarters

What is NPS Pollution

NPS Categories

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State-EPA NPS Partnership

Training/Meetings



The Ariel Rios South Building Courtyard project is part of a larger effort to beautify the EPA Headquarters complex and also demonstrate more environmentally sound building and landscaping techniques. The Facilities Management Division, the Office of Water and the General Services Administration have been working on a plan to exhibit stormwater management techniques, sustainable design and [low impact development \(LID\)](#) at the Federal Triangle complex. We hope that this plan will serve as a model for the federal community and will demonstrate many of the practices that can be employed to mitigate the effects of stormwater runoff and reduce [combined sewer overflows](#) into our rivers, streams and coastal waters. It will also demonstrate that sustainable design and LID can be utilized in high profile, urban sites that must pass through rigorous aesthetic design reviews. Some of the techniques that we are demonstrating include:

- low maintenance/native plants
- cisterns to collect and reuse runoff
- [bioretention cells \(PDF\)](#) (134K, [About PDFs](#))
- [permeable pavers \(PDF\)](#) (66K, [About PDFs](#))
- [permeable concrete](#)



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### Demonstration Project Details

EPA Headquarters is located as part of the larger [Federal Triangle Complex \(PDF\)](#) (135K, [About PDFs](#)) in downtown Washington. The demonstration project involves three sites:

#### Ariel Rios South Courtyard

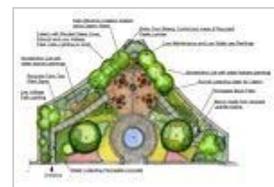


At the Federal Triangle Complex's eastern end, the [Ariel Rios South Courtyard \(PDF\)](#) (135K, [About PDFs](#)) features two biofilters (often called rain gardens) and permeable concrete and permeable pavers, which

allow stormwater to filter into the ground rather than wash off the surface and into storm drains and combined sewers. In addition, the South Courtyard has a cistern to recycle stormwater for irrigation. Sustainable planting is also included in the courtyard landscape. Plants take up stormwater and provide valuable wildlife habitat. Other sustainable best



Click for PDF version of large map of Federal Triangle Complex



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#### Quick Links

- [Fact Sheet \(PDF\)](#) — Stormwater Management at EPA Headquarters (4pp, 2MB, [About PDFs](#))
- [Questions and Answers \(PDF\)](#)—EPA Headquarters Low Impact Development Demonstration Project ( 5pp, 37K, [About PDFs](#))

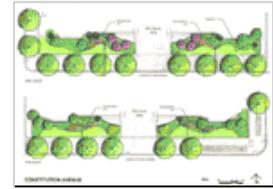
management practices include reuse of an historic granite curb as a bench, recycled farm tool plant signs, and recycled glass in the cistern cover and artwork.

Click for PDF version of larger view of Ariel Rios South Courtyard

### Constitution Avenue



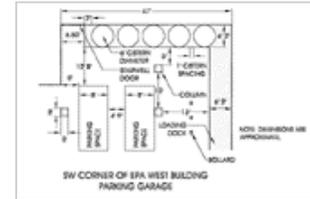
The south end of the Federal Triangle Complex is bordered by Constitution Avenue, 12th Street, and 14th Street. [Four additional rain gardens are located here \(PDF\)](#). (135K, [About PDFs](#))



Click for PDF version of larger view of Constitution Avenue diagram

### West Building Parking Garage (Planned)

Near the EPA West Building along 14th Street, stormwater runoff will be diverted from the building roof into six 1000 gallon cisterns located in the below grade [parking garage \(PDF\)](#). (45K, [About PDFs](#)) Cistern water will be used to irrigate the West Building's Constitution Avenue planting beds and grass.



Click for PDF version of larger view of West Building Parking Garage Cisterns

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## More Information

- [Fact Sheet \(PDF\)](#)—Stormwater Management at EPA Headquarters ( 4pp, 1.6MB, [About PDFs](#))
- [Questions and Answers \(PDF\)](#)—EPA Headquarters Low Impact Development Demonstration Project ( 5pp, 37K, [About PDFs](#))
- EPA Facilities—[Greening EPA](#)
- EPA Office of Water—[Low Impact Development](#)
- EPA Office of Water—[Green Infrastructure](#)
- [National Pollutant Discharge Elimination System \(NPDES\) LID and Other Green Design Strategies](#)
- [Low Impact Development Center](#) [EXIT Disclaimer](#)

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## Project Partners

This demonstration project is a collaborative effort involving EPA's Office of Water, the Facilities Management Division of EPA's Office of Administration and Resources Management, and the General Services Administration. Other partners joined as this project evolved, including the U.S. Commission of Fine Arts, the National Capital Planning Commission, the DC Water and Sewer Authority, and a variety of contractors.

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## Viewing the Demonstration Project

If you are interested in more information on the demonstration project or a tour, please contact [LIDHQ@epa.gov](mailto:LIDHQ@epa.gov).

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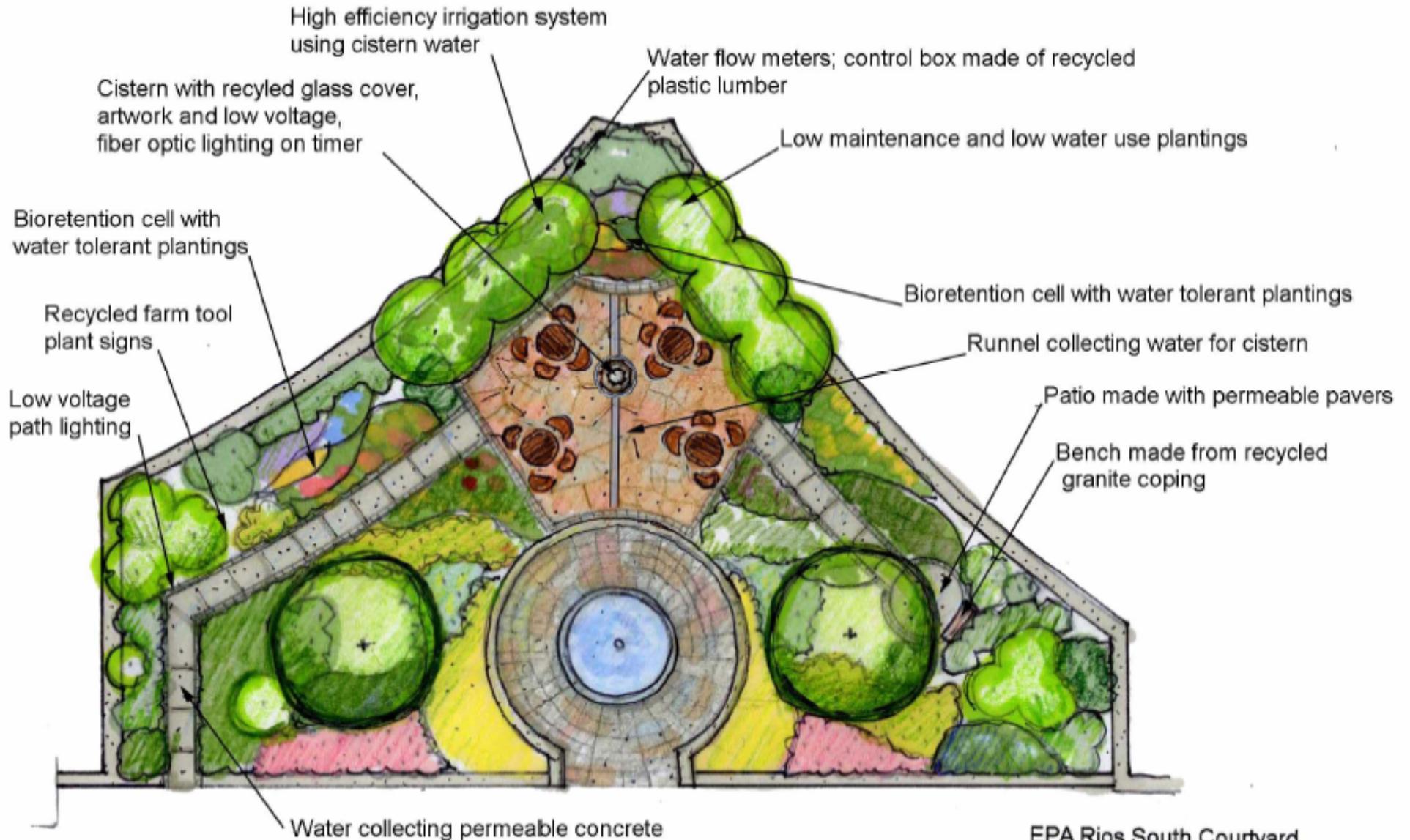
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Last updated on Friday, May 25th, 2007  
URL: [http://www.epa.gov/owow/nps/lid/stormwater\\_hq/](http://www.epa.gov/owow/nps/lid/stormwater_hq/)



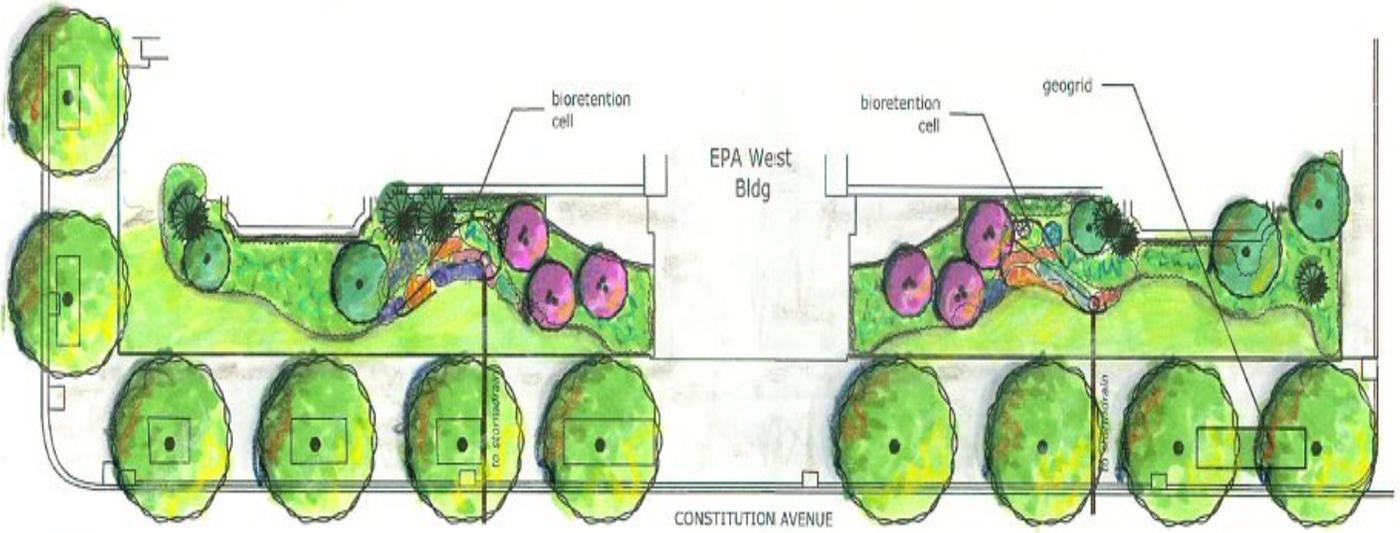


# Ariel Rios South Courtyard

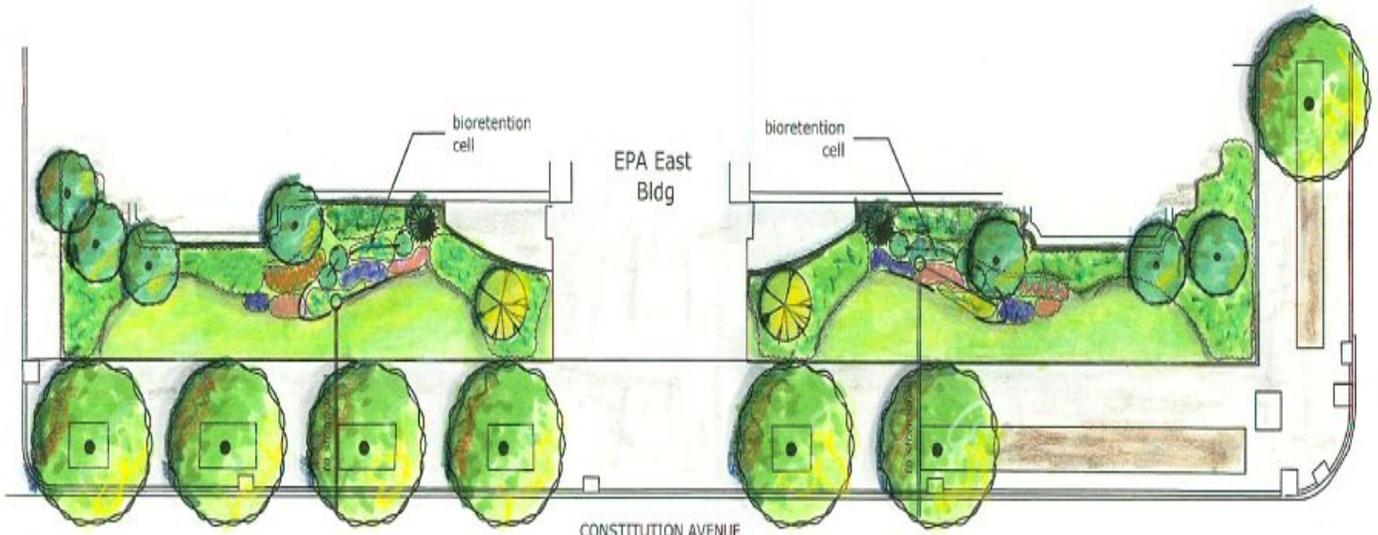


EPA Rios South Courtyard

SCALE: 1" = 20'  
0 5 10 15 20 25



EPA WEST



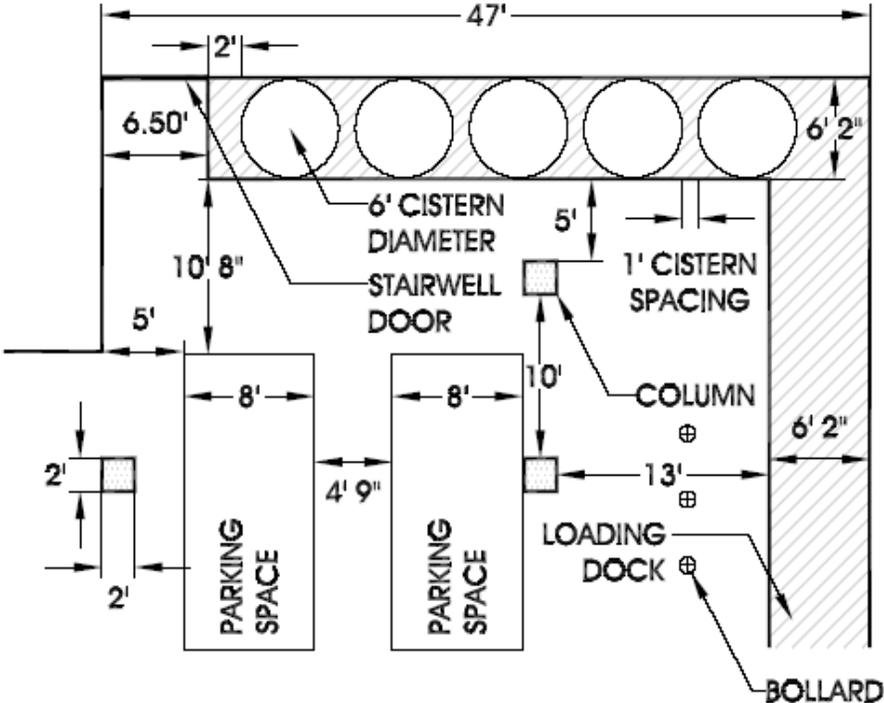
EPA EAST

CONSTITUTION AVENUE



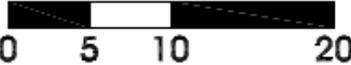
**Constitution Avenue Bioretention Sites**

# STORMWATER COLLECTION CISTERNS



SW CORNER OF EPA WEST BUILDING  
PARKING GARAGE

SCALE 1" = 10'



DATE: 8-23-04 LID CENTER #2099