



# Green Infrastructure & Stormwater Management CASE STUDY

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## Cedar Shoals High School Rain Garden

**Location:** Athens, GA

**Client:** Cedar Shoals HS

**Design Firm(s):** English Gardens,  
Robinson Fisher Associates & Lauren  
Zeichner

**Landscape architect/Project**

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**ASLA Chapter:** Potomac



### Project Specifications

**Project Description:** This is a vegetated retrofit of a failed stormwater basin at a high school in Georgia. Initially, the site was assigned as a 2nd year BLA planting design studio project. The products of that studio were voted upon by the faculty and students at the high school; the final design was developed by the design committee which integrated top concepts into a cohesive solution. The living spiral design concept integrates three curricular strands - Art, Math & Science into the design solution and expresses a very simple, low maintenance form.

#### Project Type:

Institutional/Education

A retrofit of an existing property

**Design features:** Rain garden. This is an example of planting an existing basin that had failed, using plants to correct the problem. A gravel walk does provide some filtering once water enters the basin in addition to the plant roots.

**This project was designed to meet the following specific requirements or mandates:** none.

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

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** 1 acre to 5 acres. This was actually an example of reclaiming green/open

space for use on a very impervious campus through a vegetated solution that manages stormwater and eliminates the prior problems of mosquitos and other pests.

**The regulatory environment and regulator was** indifferent to the project.

**Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements?** Yes. Eliminate mosquitoes and low maintenance.

## Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** >\$10,000 (Public funding: Local, private donations - very little cash)

**Related Information:** I assume the cost is supposed to be less than \$10,000. The initial budget was \$1,000. This paid for trees and shrubs - many shrubs were donated. Mulch was provided free. Labor was provided by students except for the tree pits which were augered by school district staff. An additional \$300 grant paid a local artist to create the sign. Subsequent years have added a wooden observation platform and gravel walk to improve physical accessibility.

**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.

**Number of jobs created:** It is unclear how many students career paths have been affected - labor has been almost exclusively volunteer.

### Job hours devoted to project:

Planning and Design: 30 (after the voting)

Construction: 1,000

Annual Maintenance: 240

## Performance Measures

### Stormwater reduction performance analysis:

Observational data would suggest that the project is successful; plants are growing, the initial year leaves had a shiny black appearance on some plants; in subsequent years, the leaves have been healthy and green. The garden grew through the 100-year drought in Georgia with no potable water added.

**Community & economic benefits that have resulted from the project:** This has been a tremendous community building opportunity with kids coming to work from many different areas/ groups in the high school. It improves morale daily since it is the first thing the students see when they drive into the school. It has also started to function as an informal dog park for the adjacent apartment dwellers and the improves their quality of life.



**Additional Information**

**Links to images:**

- <http://outdoors.webshots.com/album/578398922kpFWru>
- <http://good-times.webshots.com/album/561955488ZfYULW>
- <http://statebystategardening.com/enewsletters/2010-august/>
- [http://www.discoverlife.org/ed/si/GA/acc/cedar\\_shoals\\_hs/](http://www.discoverlife.org/ed/si/GA/acc/cedar_shoals_hs/)
- <http://www.discoverlife.org/mp>



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Not only has this retrofit project solved the stagnate water problem at the school, it has become a one-acre outdoor classroom used actively by both art and biology classes. It has become the site of the community eco-fair and tables were added because it is such a popular destination. What was once a public health hazard and eyesore has become a green oasis for the community that is now linked, via the Discover Life website, to an international network of biological data managed by the Smithsonian Institute. It has greatly expanded learning opportunities for the students while otherwise enhancing the local environment.

