



Green Infrastructure & Stormwater Management CASE STUDY

Sinclairs Restaurant Renovation

Location: Lake Martin, AL

Client: Russell Lands, Inc.

Design Firm(s): Russell lands, Inc.

Landscape architect/Project contact: Lawrence L. Bates, ASLA

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ASLA Chapter: Alabama



Project Specifications

Project Description: Sinclairs is a waterside restaurant on a peninsula projecting into Lake Martin. Business growth required expanding and paving the parking areas, which were adjacent to the shoreline. Two bioretention areas were created in very limited space to capture the pavement runoff, filter it and slowly release it into the lake. The bioretention areas were constructed to also function as wetlands with a range of typical native wetland vegetation. The

bioretention areas are highly visible to the restaurant's clientele and therefore serve a public education function as well.

Project Type:

Commercial

A retrofit of an existing property

Design features: Bioretention facility and bioswale. The facility was also constructed to function as a wetland with native vegetation.



This project was designed to meet the following specific requirements or mandates: Developer/client preference

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

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? The client, a developer that owns the facility, was very interested in enhancing the property value and public appearance of the property. The developer was also interested in making a public demonstration of their commitment to protecting and enhancing the water quality of the lake.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$10,000-\$50,000 (Public funding: None)

Was a green vs. grey cost analysis performed? Yes. Constructing the bioretention areas was significantly more expensive than simply allowing sheet flow into the lake from the parking areas. On the other hand, preserving an existing stand of trees rather than paving the entire area lessened paving costs and the need for mitigation. On balance, costs were slightly reduced.

Cost impact of conserving green/open space to the overall costs of the site

design/development project: The additional parking was integrated with an existing stand of mature trees, reducing the costs of grading and paving and lessening the need for stormwater mitigation.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly reduced costs (1-9% savings).

Number of jobs created: 0

Job hours devoted to project:

Planning and Design: 20 hours

Construction: 32 hours

Annual Maintenance: 30 hours annual est.

Performance Measures

Stormwater reduction performance analysis:

The bioretention areas are designed to hold 100% of the runoff of a 25-year storm. In almost three years, they have not overflowed.

Community & economic benefits that have resulted from the project: The highly visible location of the bioretention basins has attracted favorable public notice and has complemented and enhanced the shoreline location of the restaurant. It has also served as a model water quality management technique for subsequent developments on the lake and a tangible demonstration of the importance of maintaining water quality in the lake.



Project Recognition

Featured in Alabama Clean Water Partnership Publication

Additional Information

Links to images: <http://news.russelllandsonlakemartin.com/sinclairs/Sinclairs-Wetlands.zip>

Alabama Department of Environmental Management has featured this project as an example of water quality management in their 2011 On-Site Sewage Treatment and Disposal Conference.