



# Green Infrastructure & Stormwater Management CASE STUDY

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## Experimental Green Roof

**Location:** Norman, OK

**Client:** Oklahoma Water Resources Board

**Design Firm(s):** University of Oklahoma

**Landscape architect/Project contact:** Reid Coffman, ASLA

**Email:** [rcoffman@ou.edu](mailto:rcoffman@ou.edu)

**ASLA Chapter:** Oklahoma



Photo: [Greenroofs.com](http://Greenroofs.com)

## Project Specifications

**Project Description:** As green roofs are increasingly implemented in the semi-arid North American plains new applications of the technology will be required for contextualization. These climate conditions may alter the standard performances of green roof systems. Therefore, we initiated an interdisciplinary research project aimed at investigating the ecological performance of green roof systems and their impact on the surface energy balance. Primary investigation areas include plant performance, changes in the radiation balance, cooling efficiency for various climatic conditions, and impacts on building daylighting. These studies will commence in 2010 and continue for three years. Results will be disseminated in public and academic forums.

**Project Type:**

Institutional/education

A retrofit of an existing property

**Design features:** Green roof. Recording the full water balance with energy impacts is currently underway.**This project was designed to meet the following specific requirements or mandates:** Not applicable**Impervious area managed:** less than 5,000 sq/ft**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** Not applicable**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?** Energy studies**Cost & Jobs Analysis****Estimated Cost of Stormwater Project:** \$50,000-\$100,000 (Public funding: Federal)**Related Information:** \$40,000 materials \$40,000 labor**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)?** Not applicable**Number of jobs created:** 1**Job hours devoted to project:** Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

**Performance Measures****Stormwater reduction performance analysis:**

In process

## Project Recognition

Environmental Excellence Award Keep Oklahoma Beautiful 2010

## Additional Information

Links to images: <http://www.greenroofs.com/projects/plist.php>

<http://www.greenroofs.com/projects/pview.php?id=1103>