

EPA Honors Winners of First-Ever Campus RainWorks Challenge

Published on **22 Apr 2013**

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Junction Middle School in Junction, Texas. Photo credit: Scott Richardson

University of Florida and Illinois Institute of Technology lead in design of green infrastructure on campus

WASHINGTON – The U.S. Environmental Protection Agency (EPA) today announced the four winners of the Campus RainWorks Challenge, a new design challenge created to inspire the next generation of landscape architects, planners and engineers to develop innovative green infrastructure systems that reduce stormwater pollution and support sustainable communities.

Stormwater is one of the most widespread challenges to water quality in the nation. Large volumes of stormwater pollute our nation's streams, rivers and lakes, posing a threat to human health and contributing to downstream flooding.

The Campus RainWorks Challenge engages students and faculty members at colleges and universities to apply green infrastructure principles and design, encourage interdisciplinary collaboration, and increase the use of green infrastructure on campuses across the nation. Teams of undergraduate and graduate students, working with a faculty advisor, developed innovative green infrastructure designs for a site on their campus showing how managing stormwater at its source can benefit the campus community and the environment.

The selected challenge winners are:

▫ **University of Florida, Gainesville, Fl. (1st prize, large institution)**

The team's design plan centers on the redevelopment of Reitz Lawn, an 11-acre open area and pedestrian corridor on campus. The plan aims to remove pollutants from stormwater before they reach nearby Lake Alice, which drains directly into the Floridian Aquifer. The team's plan incorporated student input into the project design and will include an educational component to raise awareness about how water travels through the urban environment.

▫ **Illinois Institute of Technology, Chicago, Ill. (1st prize, small institution)**

The team's design plan centers on the redevelopment of a 1,200-foot long section of Dearborn Street on campus. The plan incorporates a number of green infrastructure design elements, including rain gardens that double as outdoor seating areas and permeable walkways. The plan estimates that, through collection, infiltration, and storage, stormwater runoff will be reduced from the site by 70 – 80 percent.

▫ **University of Arizona, Tuscon, Ariz. (2nd prize, large institution)**

The team's design plan centers on the redevelopment of a 70,000-square-foot parking lot located within a cluster of academic buildings. The design will replace the parking lot with a campus common area featuring two rings of retention basins to infiltrate stormwater runoff, five underground cisterns to harvest runoff and HVAC condensate from the adjacent buildings, and a translucent shade structure with an ephemeral water feature. Water collected in the underground cisterns is used to irrigate the landscape, reducing potable water use from 700,000 to 90,000 gallons/year.

▫ **Missouri University of Science and Technology, Rolla, Mo. (2nd prize, small institution)**

The team's design plan focuses on three green infrastructure projects: green roof, rain garden, and permeable pavement projects. Phased implementation will take advantage of existing plans for university projects, allowing for cost-effective improvements in campus stormwater management that will mitigate eutrophication and sedimentation in Frisco Lake.

▫ Teams from Kansas State University, Columbia University, California State Polytechnic Institute at Pomona and University of Texas-Arlington were recognized as honorable mentions for their entries.

The challenge received submissions from 219 teams, which were reviewed by more than 20 expert judges from EPA, the American Society of Landscape

The challenge received submissions from 218 teams, which were reviewed by more than 30 expert judges from EPA, the American Society of Landscape Architects, the Water Environment Federation, and the American Society of Civil Engineers. Many of the submissions proposed transformative additions to the campus landscape that would reduce stormwater impacts while educating students about the movement of water through the urban environment. The winning teams were selected based on six criteria: analysis and planning; preservation or restoration of natural features; integrated water management; soil and vegetation management; value to campus; and likelihood of implementation.

Green infrastructure helps communities to maintain healthy waters, support sustainable communities, and provide multiple environmental benefits. Green infrastructure captures and filters pollutants by passing stormwater through soils and retaining it on site. Example of effective green infrastructure include green roofs, permeable materials, alternative designs for streets and buildings, trees, rain gardens and rain harvesting systems.

Learn more at epa.gov/campusrainworks.

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