U.S. Environmental Protection Agency
2012 Campus RainWorks Challenge Winner

University of Arizona, 2nd Prize, Large Institution

The University of Arizona, located in Tucson, Arizona was awarded second prize among large institutions in EPA's first-ever Campus RainWorks Challenge competition. The competition was created by EPA to inspire the next generation of landscape architects, planners, and engineers to develop innovative green infrastructure systems that mitigate the impacts of urban stormwater while supporting vibrant and sustainable communities.

The goals of the team's design plan were:

- To design a site that simultaneously reduces the amount of surface runoff from infrequent but intense desert storms, adds green space, and reduces potable water use
- To create an inviting gathering space that also serves to educate students about the urban water cycle, and about the use of rainwater harvesting to reduce groundwater depletion

The team's design plan centers on the redevelopment of a 70,000 square foot parking lot located within a ring of academic buildings south of Speedway Boulevard. The design replaces the parking lot with a campus common area featuring two rings of retention basins to infiltrate runoff, five underground cisterns to harvest runoff and HVAC condensate from the adjacent buildings, and a translucent shade structure with an ephemeral water feature. The retention basins and rings of plantings and seating are arranged in a spiral around the central shade structure to mimic the form of the agave or the eye of a storm. Water collected in the underground cisterns is used to irrigate the landscape, reducing potable water use from 700,000 to 90,000 gallons/year.

To help educate students about the urban water cycle and the benefits of rainwater harvesting in an arid environment, the team proposed several innovative features for the new common area. The underground cisterns would be fitted with ground level viewing windows to allow passers-by to see how much water was diverted from the adjacent rooftops and HVAC systems. When all cisterns are at capacity, excess flow would bubble through a water feature beneath the central shade structure.