UMD Watershed
redefining what it means to be green

By: Emily Jones

On a rainy fall afternoon, as one crowd in College Park cheered the Terps to a football victory, another crowd huddled in white tents on the Tidal Basin in Washington, D.C., cheering on another team of Terps to an engineering victory as they won the 2011 Solar Decathlon.

The Solar Decathlon was designed by the U.S. Department of Energy in 2002 to educate students and the public about renewable energy solutions that can be feasibly implemented in today’s homes. Colleges from across the globe design and build houses which are evaluated based on ten criteria: architecture, market appeal, engineering, design communication, affordability, comfort, hot water use, appliance selection, home entertainment, and energy use. This year, Maryland took first place in architecture, hot water use and energy use; second in market appeal and appliances; and third in communication, home entertainment and comfort, leading them to their first overall victory.

Maryland’s winning entry, Watershed, was inspired by the Chesapeake Bay and focused on water conservation. The house is divided into two living modules, separated by a central axis. At this axis, water collects from the two facets of the roof, which host a garden and a solar panel array. Surrounding the structure is a reconstructed wetland of native species, which filters greywater and rainwater for reuse.

Inside the home, a patent-pending liquid desiccant waterfall controls the humidity, and reconfigurable furniture allows flexibility in use of space.

The judges were impressed by the energy efficiency and focus of the design. In the award announcement, they praised the sustainability features of the team’s house, specifically stating that “the team’s fully scoped attention to water conservation and the seamless integration of the elements of the sustainable design are perfectly relevant, timely, and beautiful.”

At the close of the competition, the Secretary of Energy Stephen Chu spoke of how the competition inspired him. “The ingenuity, the creativity, the talent you have displayed this week give me hope for the future,” he said. “You only have to look at these great teams here to see that American innovation is alive and well.” Through their unique water conservation design, Team Maryland proved that sustainability can be achievable and affordable.