

charleston

July 2008

Of Tides & Time

*Exploring the past and present
of the Lowcountry coast*

Morris Island

Dig into the history—from shipwrecks and wars to the lighthouses and their keepers—of this ever-eroding sliver of sand that guards the harbor

Wave Runner

Catch the wake of champion slalom water-skier and coach Seth Stisher

The Last Drop

Learn how two recent droughts and a Carolina water war are raising the stakes for conservation in the Lowcountry

Plus: A ticket to Charleston's grand movie palaces, coastal living on Sullivan's Island, therapeutic surfing for autistic children, & fishing with the family



Good to the Last Drop

James Island resident Mike Arendt catches the new wave of water reuse and conservation



Mike Arendt uses water from his rainwater collection and filtering system to fill his pool.

A fisheries biologist and surfer in his early 30s, Mike Arendt had noticed rain barrels and cisterns in even the most remote surf spots in places like Nicaragua and Puerto Rico. He wondered what was possible here, did some research, and hired Ben Hilke of Hilke Development to help design and install a rainwater catch system at his 1990s house on James Island.

That was last year. Ever since, it's been pretty cool to be at Arendt's house after a rain. That's when he walks around and checks on the amount of rainwater in the 12 55-gallon drums he had installed in the elevated crawl space under his house. The rain that hits the roof of his 1,700-square-foot marshfront house—he claims he can catch 1,000 gallons in an inch of rainfall—washes into gutters that lead to filtered drains, where a simple pipe system carries it to the storage drums or to the 360-gallon cistern hidden under the steps of his back porch. Then, when Arendt wants to water his tomato plants, add water to his swimming pool, or do any other landscape watering, he simply flips the switch on a small pump and turns on any of four outdoor spigots.

His savings? Arendt's paid water use has dropped 50 percent since 2006. To be fair, there are other

"People's awareness of conservation has been heightened. There are now so many options and products out there, anyone can use less water."

—Ben Hilke, Hilke Development

factors to consider: a roommate has left, and he's started being more conscientious about his indoor water use. Still, he credits much of the savings to catching and reusing raindrops instead of turning on the municipal tap to water his plants.

Hilke, whose firm focuses on sustainable design and construction, says new equipment can make a system such as Arendt's essentially seamless. The premise is similar to a garden rain barrel, "but we can take that one step further to make things easier by hooking up all outside spigots to run off rainwater."

Hilke's also worked with "gray water" systems in new homes, where the water that drains from sinks and washing machines is filtered and recycled to be used again within the house. "People's awareness of conservation has been heightened," Hilke says. "There are now so many options and products out there, anyone can use less water if they make that choice."



After funneling into 12 55-gallon collection barrels hidden in the crawl space or the 360-gallon cistern beneath the back porch steps, rainwater is pumped to a number of outdoor spigots around Arendt's house and can then be used to water tomato plants, wash his car, or fill his pool. Learn about implementing a rain barrel program through Sustainability Institute workshops (www.sustainabilityinstitutesc.org).