My husband and I are tearing up our 15 year-old landscape. No, it is not ugly or overgrown. On the contrary, it has never looked better. In 2011, our property was even on tour for the APLD International Design Conference.

We are taking action because we care about the earth and the important natural resource, water. Sustainable landscaping is a primary focus of our firm. We’ve built natural systems for clients; now we want to take further steps towards sustainability with a water-smart retrofit on our tiny urban lot, without tearing out the entire garden. Instead of our rainwater rushing into the storm sewer—or worse yet, the sanitary sewer—we will soon be capturing 100% of the rainwater from a one inch storm, providing us with water for our garden and recharging the groundwater below.

My husband, Samuel L. Salsbury, FAPLD, is my partner in Salsbury-Schweyer, Inc. Fortunately his talent includes water. Whether problematic or ornamental, Samuel has a way of making water work in poetic ways.
Samuel has calculated the amount of water that falls on our roof and flows into the gutters and downspouts during a storm. Using tools of "green infrastructure" (GI) we will slow the flow of rainwater and retain it on our property. Our green infrastructure plan includes a green roof, rain gardens, multiple rain barrels, pervious paving and a gravel path that functions as water storage/dry well. Rainwater from more substantial storms will be slowed down, its volume reduced and the overflow released back into the system, much like the workings of nature’s hydrology.

On our nearly flat back roof, a green roof of tough perennials, mostly sedums, will create an attractive mosaic. They will absorb most of the water that falls there, possibly as much as 60-90%. They will also keep our kitchen and bathroom warmer in the winter, cooler in the summer and extend the lifespan of our roof—not to mention a multitude of other environmental benefits. The saturated weight of these plants and their three to four inch lightweight growing media is typically too heavy for most residential roofs. Fortunately Samuel used to be a builder, so he's quite capable to shore up the support for the roof. Fully saturated, even three to four inches of plants in lightweight growing media can be heavy for residential roofs. Of course this means we will need to finally move forward on that bathroom renovation that we've been planning for years!

Additional roof water from our house and garage will flow into rain barrels that are tied into the downspouts. These (100% recycled) rain barrels will be used to water our garden between rainstorms. Samuel has worked up solutions for easy winterization and for removing contaminants from the roof, using a “first-flush system” on those rain barrels intended for edibles. Overflow will be directed into raingardens in front of our house.

Did we have water problems before, you may wonder. Yes! Recently, after 100 years of withstanding water, the stone walls of our basement began to seep. We remedied the basement seepage with French drains, which will drain into our new raingardens.

In addition, a gravel parking lot behind our property was recently paved; this caused a significant amount of water that previously was absorbed into the earth to flow onto our property. During torrential downpours, stormwater rushed down our garden path, dumping contaminated, muddy water and mulch into our beautiful, biologically balanced pond. Not a pretty site!

Our solution was to create a deep drainage path by replacing the existing path with a 12 inch to 36 inch deep bed of gravel, topped with decorative stone. Now stormwater is captured in the gravel below the path’s surface, filtered and infiltrated into the ground; any overflow travels into a drainage pipe leading to a rain garden.

Our raingardens will consist of three slightly indented beds where excess water from the roof and the back of our property can be routed and held. Raingardens are designed to hold water for one day, maybe two, before being fully absorbed into the earth. These raingardens will be located in front of our house and will be specifically designed and plumbed to protect our retaining walls and basement.
Planting the raingardens will be a pleasure. They will not look much different from the existing plantings. Our garden is eclectic, some of it designed as a permaculture “food forest” incorporating edible trees, shrubs and perennials along with traditional vegetables and ornamentals. For the lowest areas of the raingarden we will select plants that can tolerate standing water for a day or two, but which also survive dry weather. Our turtlehead and Joe Pye weed should be happy with additional water. Our huge maple will be delighted; evapo-transpiration is what it does best, sucking water up into the canopy like a giant water elevator. Nature works in its own perfect systems.

Our concrete driveway needs to be replaced, so now is a good time to make it pervious. Large areas of concrete will be replaced with special permeable clay brick pavers, which will allow water to flow into the ground rather than run off. Brick is historically appropriate, as well as very attractive for the long term.

We live in a historic neighborhood of 100 year old houses, so our entire system of green infrastructure will need to fit aesthetically. With thoughtful design and lush plantings, our neighbors might not notice the difference... but we will. We hope to inspire others to utilize the systems of nature to beautify their own properties, whether a business, an institution or a home on a tiny lot in the middle of a city.

We believe trees have stories to tell.
They enhance our communities and bear witness to the moments in our lives, both the exceptional and the ordinary.
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