

Nate Downey



Let It Fall

How rainwater harvesting can benefit both water quantity and quality

*In a time of ever-increasing costs and growing environmental consciousness, rainwater harvesting and reuse remains a viable solution for businesses and utilities looking to shrink their water bills and prevent pollution. Here, SWS Associate Editor Nicole Bowling speaks with Nate Downey, landscape architect and designer, permaculture columnist and author of *Harvest the Rain*, a book about how businesses and utilities can harvest rainwater and why more should implement such practices.*

Nicole Bowling: Please explain some methods to harvest and reuse rainwater.

Nate Downey: There are two forms of rainwater harvesting. The first is active water harvesting, where you store storm water in a tank and pump it out. We call it active because it uses moving parts to remove the water from the pump. The second form is passive water harvesting, which is simply when you store storm water collected from a roof, road or slope in the soil. Passive rainwater harvesting obviously is much less expensive, but you don't get the opportunity to use that water whenever you want to as [you do] with active water harvesting.

Bowling: How does rainwater harvesting tie into storm water management?

Downey: Storm water traditionally has been viewed by development—and, up until recently, even by government regulators—as being a waste product that we need to quickly get away from structures. And although it is true that you do not want storm water to seep under foundations and make buildings settle, it is also true that it is a resource.

Storm water has been neglected for much of the last century, and we should not be so afraid of it. We don't want it to damage structures, but we do want to slow it down as close as we can to structures so we can benefit. We can use storm water to increase the growth rate of trees to shade buildings or

parking lots, for example. Storm water should be viewed as a resource, not a waste product.

Bowling: What are the benefits of rainwater harvesting? Are there any downsides?

Downey: Business owners can conserve water [through] rainwater harvesting, so their water bills will shrink. Rainwater harvesting also reduces the amount of sediment that ends up in rivers by slowing the flow of water and allowing it to percolate into the soil, preventing a whole lot of pollutants from entering the river system. It can help business owners reduce the pollutants emitted by their operations by holding back that sediment. So while they are helping the river system downstream, they are simultaneously helping the soils locally around the business.

If done incorrectly, rainwater harvesting can damage buildings or roads, but if done properly, there are no downsides. It is an upsell for any project. Because rainwater harvesting has so many benefits—beautifying a site, conserving water and creating more shade with plant material that grows because of the water—endless benefits come back to the property owner. All of these rainwater harvesting projects are a way to make businesses and utilities more successful, so yes, it might cost

a customer some money to install, but it will benefit the business in the long run.

Bowling: What is the easiest way to start harvesting rainwater?

Downey: It really depends on the business. Look to the water coming off roofs and roads, and rather than diverting it away, divert it along the contours of the slope. Instead of having it quickly go away from a project, pay attention to the grades on the property and use them to your advantage. Plant material in the ditches and just above the ditches so that the collected water will be conveyed and stored in the soil. A quick and easy turn of a shovel can really make all the difference. Rather than taking the valuable sediment and nutrients with it, the water can be turned slightly and percolate into the soil. **SWS**

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