



Steven Peck

Making Use of Roofs

Curtail costs, capitalize on scenery with vegetated building tops

In 1999, a research project on industry development barriers and the benefits of green roofs resulted in the formation of Green Roofs for Healthy Cities (GRHC), a small network of public and private organizations. Having since grown into a formally recognized nonprofit industry association, the group strives to promote the environmental solution throughout North America. In order to learn more about rooftop gardens and their role within the increasingly “green” storm water industry, Caitlin Cunningham, managing editor of *Storm Water Solutions*, asked Steven Peck, GRHC founder and president, to elaborate on their functions, future and more.

Caitlin Cunningham: Why implement a green roof as part of a storm water management plan?

Steven Peck: Green roofs are an important component of a storm water management plan for two reasons: They are

good at reducing, delaying and slowing runoff, and they offer other important benefits for building owners, namely energy efficiency from reduced heating and cooling, noise reduction and the extension of the life expectancy of waterproofing.

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Cunningham: *Can use of this best management practice contribute to a site's U.S. Green Building Council LEED credits?*

Peck: Yes. Depending on the degree of integration with other systems such as heating and cooling, green roofs can provide a number of direct credits and contribute to earning others—as many as 15. Under sustainable sites, there are credits for reduced site disturbance, protecting and restoring open space and landscape design that reduces the urban heat island, thereby cooling cities.

Cunningham: *Is any innovative green roof research being conducted today? Please explain.*

Peck: Over the past six years, there has occurred an explosion of green roof research at different levels. Product-level research has focused on combining different function layers of the systems, such as drainage and providing additional moisture to plants during dry periods. Building performance research has looked at

plant survival under different conditions and regions, as well as storm water quality and quantity benefits and energy-efficiency benefits.

At the community level, there have been many studies exploring the benefits of widespread green roof implementation, calculating benefits such as storm water management in Washington, D.C., the urban heat island reduction in New York City and air quality improvements in Chicago and Detroit. This type of research is key to understanding how regions can tangibly benefit—economically and environmentally—from investing through regulations and financial incentives in the widespread adoption of green roof systems.

Research is also under way on green or “living” walls, a variety of technologies that facilitate the growing of plants on the sides of buildings.

Cunningham: *I'm ready to initiate an installation. Where to begin?*

Peck: If it's an existing building, you

need to determine if the roof is able to withstand the additional structural loading required to support a fully saturated green roof assembly.

The lightest systems on the market come in around 10 lb per sq ft but are not suitable in all regions. Green roofs are not a do-it-yourself type of installation, which is why we have been working for five years to develop the accredited Green Roof Professional designation. **[SWS]**

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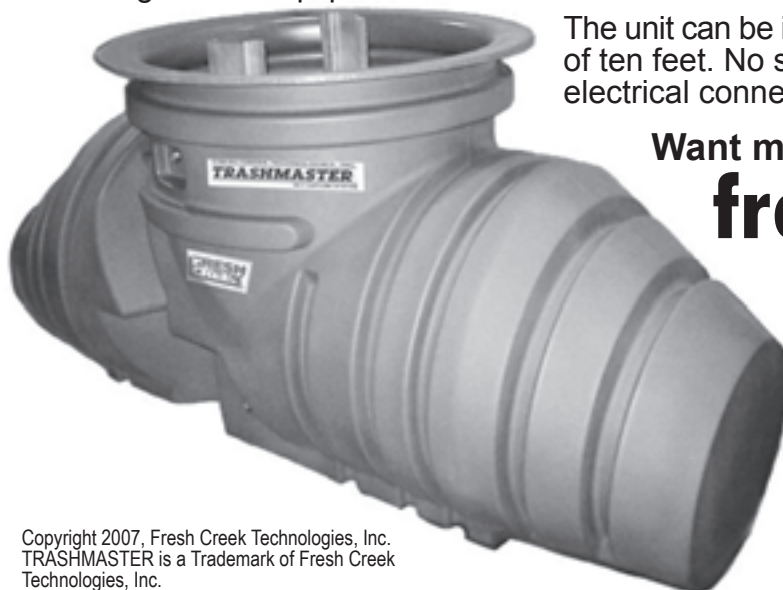
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