

عنوان مقاله:

The Green Roof Strategy for Sustainable Development

محل انتشار:

اولین کنفرانس معماری و فضاهای شهری پایدار (سال: 1392)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Increasing worldwide environmental concerns have led to the development of environmentally friendly construction practices and Green roof technology is one possibility for reducing the environmental impact of a building. Research has shown that significant environmental benefits can be achieved from rooftop gardens in terms of storm water runoff quantity and quality control. For example, at a green roof site in Hannover- Herrenhausen , Germany it was determined that 5 to 10 cm soil layers retained approximately 65-70% of precipitation runoff during the summer and approximately 50% during the winter .In general, the garden performs better during the spring/summer months than in the fall. Results indicate that the green roofs are capable of removing 50% of the annual rainfall volume from a roof through retention and evapotranspiration. Rainfall not retained by green roofs is detained, effectively increasing the time to peak, and slowing peak flows for a watershed. There are seasonal considerations as more runoff is generated during winter and for many summer storms there was no runoff. Green roof runoff does contain concentrations of some nutrients and other parameters, but values are in line with other planted systems. Due to the volume reduction, actual nutrient loadings from green roofs are less than asphalt roofing runoff or otherwise manageable at the downspout.[1]Green roofs have been suggested as a means to reduce the storm water impacts of development because they have been shown to both detain and retain storm water. The purpose of this study was to quantify runoff reductions resulting from This project investigated design specifications and materials of green roofs used as storm [water control devices. the use of extensive green roof systems.[9

کلمات کلیدی:

Green architect, sustainability, green roof

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