Journal of Civil & Environmental Engineering

Tansel, J Civil Environ Eng 2013, 3:1
DOI: 10.4172/2165-784X.1000e112

Editorial Open Access

Value Added Refunctionalization of Landscapes: Tuning Dynamics of Land Use Cycles Towards Sustainable Engineering Practices

Berrin Tansel*

Florida International University, Miami, Florida, USA

Depressed urban areas are often considered as a liability from environmental, social, and economic perspectives. Depending of the urban development in neighboring areas and available design tools and techniques; some low value areas can be revitalized for functional and creative uses while contributing to economic development, public education and well being of communities. Current population increase and land development patterns (both high density urban and sprawling) have affected the ability of our water resources to naturally renew themselves, adding to future water and environmental costs.

In built environments, there is a significant impact as a consequence of the extensive use of impervious surfaces (e.g., roads, driveways, and structures) that prevent rainfall from infiltrating into the ground, forcing it instead to runoff at unnaturally high rates or be directed into storm water management systems. Storm water runoff and excessive loading to wastewater collection systems (separate or combined) typically overload treatment facilities, causing nutrients, metals, organic contaminants, and pathogens to be released into aquatic ecosystems and affect overall environmental quality. Runoff from storm water and overflows from water treatment systems are considered to be one of the leading sources of impairment of water quality in rivers, lakes, and estuaries, and contribute in turn to the increased cost of producing drinking water from these sources.

Building and site development practices have the potential to not only reduce the water demand from the local hydrologic system, but also improve the chances that future repurposing of the land can facilitate natural processes and human activity. Harvesting rainfall to augment traditional water supplies, optimizing in-building water use, recycling in-building water, and developing innovative new approaches for direct reuse of water are as important as rethinking how landscapes can respond to the inevitable pressures of development and industry that necessarily transform environments. A key to the success of sustainable water-independent building systems and sound design solutions is to develop a better understanding of parameters that affect public acceptance and that clearly communicate the performance and complex relationships between natural processes and human activity.

***Corresponding author:** Berrin Tansel, Florida International University, Miami, Florida, USA; Tel: 305 348 2928; E-mail: tanselb@fiu.edu

Received September 27, 2013; **Accepted** September 30, 2013; **Published** October 02, 2012

Citation: Tansel B (2013) Value Added Refunctionalization of Landscapes: Tuning Dynamics of Land Use Cycles Towards Sustainable Engineering Practices. J Civil Environ Eng 3: e112. doi:10.4172/2165-784X.1000e112