

## **Stormwater Management Using Low Impact Development Techniques: Feasible for Houston Area?**

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Low Impact Development (LID) is an emerging stormwater management approach that seeks to manage rainfall at the source using uniformly distributed decentralized micro-scale controls. LID's goal is to have post-development hydrology mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Instead of conveying and managing stormwater in traditional pipes and ditches and treating runoff in end-of-pipe facilities, LID addresses stormwater quantity and quality concerns through small landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMPs), are the building blocks of LID. Almost all components of the urban environment have the potential to serve as an IMP. This includes open space, but also rooftops, streetscapes, parking lots, sidewalks, and medians. LID is a flexible approach that can be applied equally well to new development, urban retrofits, and redevelopment / revitalization projects. (Low Impact Development Center, 2005)

The presentation will provide an overview of how development can impact stormwater runoff quality and quantity; a summary of traditional approaches to stormwater management and some concerns about these approaches; an overview of pre and post development hydrology; and a summary of various LID designs and techniques. The presentation will also provide a cost comparison between traditional and LID approaches. Advantages and disadvantages of LID will be discussed and LID's possible application in the Houston area will be explored.