

The Benefits of Low Impact Development



Low Impact Development (LID) is an innovative approach to stormwater management that is based on the principle of managing runoff at the source.

The goal of LID is to mimic the predevelopment hydrology of a site using a combination of site planning and structural design strategies to control runoff rate and volumes.

LID approaches can be used in any type of development scenario:

- new development,
- redevelopment, or
- existing condition retrofitting.



LID IS:

- A balanced watershed approach to managing altered hydrology
- A science-based solution to mitigating the impacts of smart development
- A way to decentralize and integrate stormwater best management

LID IS NOT:

- A silver bullet
- A substitute for proper planning
- A way to permit unfavorable development
- A single best management practice

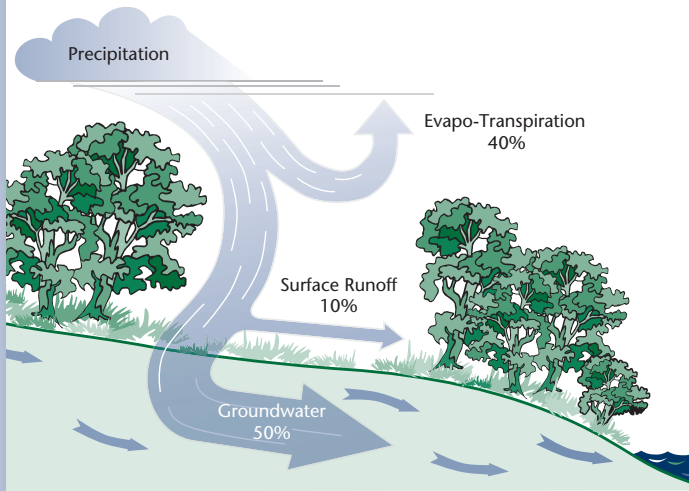
WHY LID, WHY NOW?

Historically, wetlands, rivers, lakes, and estuaries provided the work of cleaning and protecting water resources.

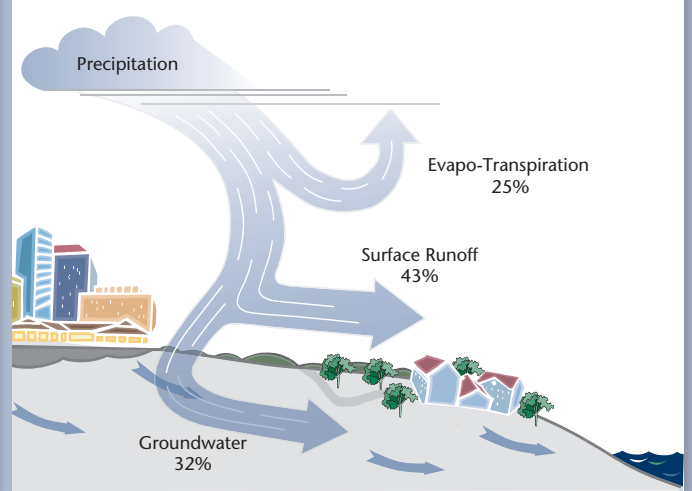
Intense development can significantly impair water quality and change how surface and groundwater interact.

Increases in impervious surfaces result in increased runoff, making it harder and harder to protect receiving waters.

NATURAL WATERSHED



DEVELOPED WATERSHED



TYPICAL PRE- AND POST-DEVELOPMENT HYDROLOGY PATTERNS

OLD DESIGN APPROACHES

Detention basins do an effective job of addressing flood protection requirements by detaining larger volumes of runoff from high levels of impervious surfaces. However, research has shown that sole reliance upon basins to manage stormwater has proven to be ineffective in protecting water resources.

TOWARD A BETTER APPROACH

The work of community board members and municipal decision makers in towns and cities throughout the country is critically important for shaping community character and protecting local natural, cultural and economic resources. This can be done by requiring effective LID designs that:

- attempt to decentralize drainage infrastructure,
- maximize onsite storage filtration and infiltration
- make use of natural landscape features to best manage runoff
- reduce the need for large detention structures



FORGING THE LINK: Linking the Economic Benefits of Low Impact Development and Community Decisions • www.unh.edu/unhsc/forgingthelink
Chapter 2: The Benefits of Low Impact Practices

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