



**G** Greater  
**L** Lansing  
**R** Regional  
**C** Committee  
For Stormwater Management

# LOW IMPACT DEVELOPMENT:

## WHAT IS LID?

## WHERE CAN I GET MORE INFORMATION?



Source: stock.xchng

PREPARED BY GLRC ORDINANCE COMMITTEE  
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[WWW.MYWATERSHEDS.ORG](http://WWW.MYWATERSHEDS.ORG)

# What is Low Impact Development?



Source: stock.xchng/Susan McManua

## Basic LID Techniques Include:

**Vegetative Swales:** a vegetated open drainage channel designed to detain or infiltrate stormwater runoff.

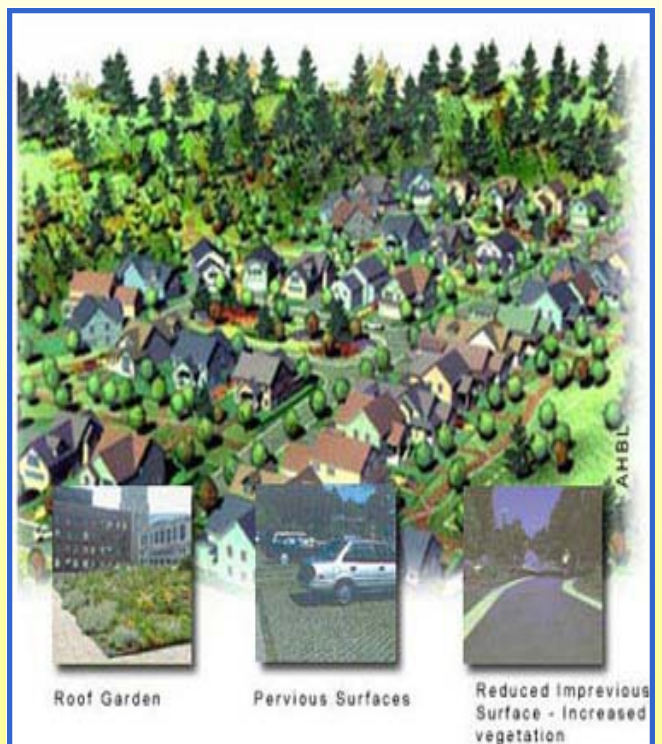
**Bioretention:** on-lot retention of stormwater through the use of vegetated depressions engineered to collect, store, and infiltrate runoff.

**Filter/Buffer Strips:** a vegetated zone adjacent to a stream, wetland, or shoreline where development is restricted or controlled to minimize the effects of development.

**Infiltration Trenches:** trenches that enhance the downward movement of water from the land surface into the soil.

Source: Low-Impact Development Design Strategies *An Integrated Design Approach*

**Low Impact Development (LID)** is an innovative stormwater management approach with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed controls. The goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.



Source: [www.pierce.wsu.edu/Water\\_Quality/LID](http://www.pierce.wsu.edu/Water_Quality/LID)



Source: [www.fcwc.org/WEArchive/010203/roofs.htm](http://www.fcwc.org/WEArchive/010203/roofs.htm)

## Some benefits of LID include:

- Reduced infrastructure costs for ponds, curbs and gutters, inlets, and pipes
- Increased lot yield
- Reduced life-cycle costs
- Increased marketability
- Increased property values

Source: [www.wbdg.org](http://www.wbdg.org)

# Where can I get more information?

## Web Resources

### EPA LID Webpage: Many resources

<http://www.epa.gov/nps/lid/>

### Michigan Lake Info: LID page

<http://www.michiganlakeinfo.com/CategoryView.category,Low%20Impact%20Development.aspx>

### Green Built Michigan: LID page

<http://www.greenbuiltmichigan.org/BuildingProfessionals/GreenDevelopmentLID/tabid/88/Default.aspx>

### Low Impact Development Center

<http://www.lowimpactdevelopment.org/>

### Environment Michigan: Waterways at Risk

<http://www.environmentmichigan.org/reports/clean-water/clean-water-program-reports/waterways-at-risk-how-low-impact-development-can-reduce-runoff-pollution-in-michigan>

### Whole Building Design Guide: LID

<http://www.wbdg.org/design/lidtech.php>

### Low Impact Development Center, Inc.

<http://www.lid-stormwater.net/intro/background.htm>

### Rain Gardens of West Michigan

<http://www.raingardens.org>

### United States Green Building Council

<http://www.usgbc.org/>



Source: [www.codepublishing.com](http://www.codepublishing.com)



**LID is simple and effective.** Instead of large investments in complex and costly centralized conveyance and treatment infrastructure, LID allows for the integration of treatment and management measures into urban site features.

**LID is economical.** It costs less than conventional stormwater management systems to construct and maintain, in part, because of fewer pipes, fewer below-ground infrastructure requirements, and less imperviousness.



Source: [www.sc.edu/sustainableu/LID1003Conf.htm](http://www.sc.edu/sustainableu/LID1003Conf.htm)

**LID is flexible.** It offers a wide variety of structural and nonstructural techniques to provide for both runoff quality and quantity benefits. LID works in highly urbanized constrained areas as well as open regions and environmentally sensitive sites.

**LID is a balanced approach.** LID is an advanced, ecologically-based land development technology that seeks to better integrate the built environment with the natural environment.



Source: stock.xchng/Sue RB



For more information on stormwater management efforts in the Greater Lansing Area, visit [www.mywatersheds.org](http://www.mywatersheds.org) or contact the Tri-County Regional Planning Commission at 517-393-0342.