

## LID RUNOFF CONTROL OBJECTIVES

- minimize disturbance
- preserve and recreate natural landscape features
- reduce effective impervious cover
- increase stormwater distribution
- increase drainage flow paths
- enhance off-line storage
- facilitate detention and infiltration opportunities

## QUESTIONS?

### FOR MORE INFORMATION, CONTACT:

**Westport Conservation Department**  
[www.westportct.gov](http://www.westportct.gov) 341-1170

**U. S. Environmental Protection Agency**  
[www.water.epa.gov](http://www.water.epa.gov)

**University of Connecticut—Rain Gardens**  
<http://nemo.uconn.edu/raingardens/>

**UCONN Home and Garden Education Center**  
<http://www.ladybug.uconn.edu/>

### FOR SOIL TESTING CONTACT:

**The Connecticut Agricultural Experiment Station**  
[www.ct.gov/CAES](http://www.ct.gov/CAES) 877-855-2237

**Soil Nutrient Analysis Laboratory**  
[www.soiltest.uconn.edu](http://www.soiltest.uconn.edu) 860-486-4274

Photos Credit: Julia Mally. Thank you to the Westport homeowners who let us take photographs of their landscapes.

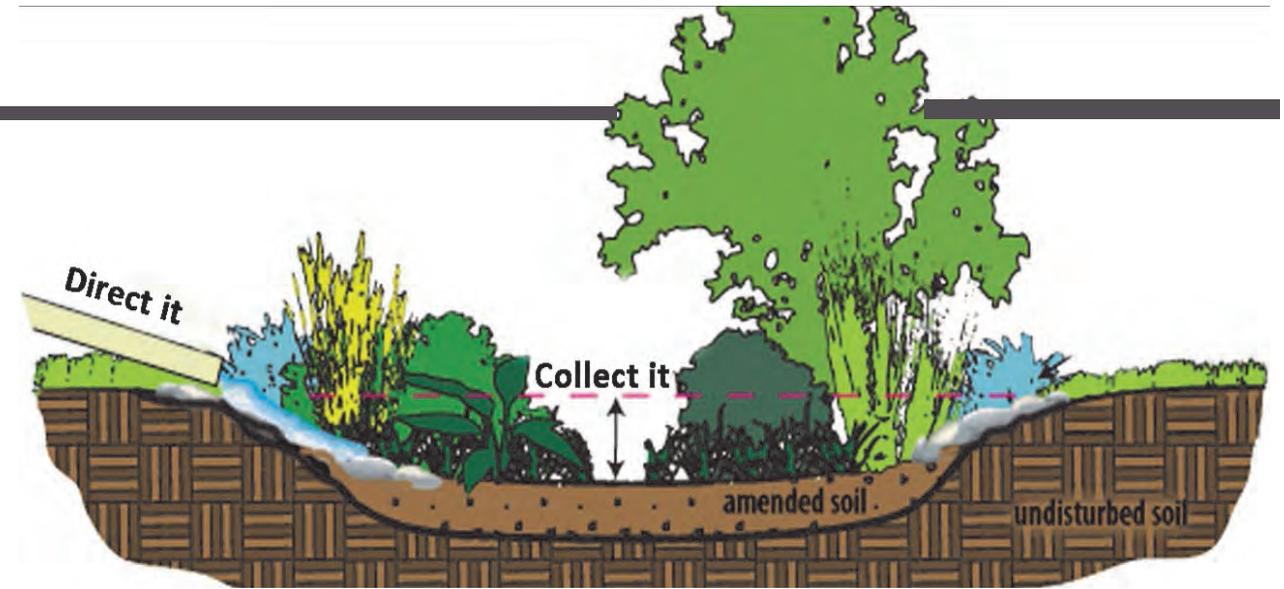
# LOW IMPACT DEVELOPMENT

## IS STORMWATER ECOLOGY



## HOW TO KEEP A “LID” ON IT!

**Low-Impact Development landscape features can help improve water quality in Westport**



### Cleanse and Return it!

Low-Impact Development (LID) has emerged as a highly effective and attractive approach to controlling stormwater pollution and protecting developing watersheds in already urbanized communities throughout the country.

It is an approach to land development that works with nature to manage stormwater as close to its source as possible.

LID is simple and effective. Instead of large investments in complex and costly engineering strategies



for stormwater management, LID strategies integrate green space, native landscaping, natural hydrologic functions, and various other techniques to generate less runoff from developed land.

The result is a landscape functionally equivalent to predevelopment hydrologic conditions, which means less surface runoff and less pollution damage to ponds, streams, and coastal waters.

*(from <http://www.nrdc.org/water/pollution/storm/chap12.asp>)*

**EVERYONE LIVES IN A WATERSHED!**

# HERE ARE SOME EXAMPLES OF WESTPORT HOMES USING LID LANDSCAPE FEATURES

## BIOSWALES

The purpose of a bioswale is to remove sediment, nutrients and pesticides from surface water runoff.

The stormwater's flow path is directed along a shallow linear channel which is designed to maximize the time stormwater spends in the swale and in turn enhances the treatment potential.

They are an attractive and ecologically-minded garden landscape feature.

Typical plants in the bioswale are hardy, strong-rooted shrubs, perennials and grasses able to tolerate both wet and dry conditions.



## PERMEABLE PAVING



Permeable paving consists of a range of porous materials and techniques with a base and subbase that allows the movement of stormwater through the surface while serving as a structural surface. The pavement acts as a component of a treatment train for capture, storage and reuse of stormwater.

As precipitation falls on the pavement, it infiltrates down into the storage basin where it is slowly released into the surrounding soil.

Permeable pavements function similarly to sand filters, in that they filter the water by forcing it to pass through different aggregate sizes.

Vacuum sweeping is highly recommended as part of routine maintenance to prevent void space clogging.

## RAIN GARDENS



A rain garden is a shallow depression in the landscape. It is a garden which takes advantage of rainfall and stormwater runoff in its design location and plant selection. It is designed to withstand the extremes of moisture and to adsorb concentrations of nutrients that are found in stormwater runoff.

It is planted with deep-rooted native plants and grasses and can be colorful landscaped areas in your yard.

A rain garden is not meant to be a wetland. In fact, the opposite is true. It reduces the amount of pollutants that wash into lakes, streams, ponds and wetlands. They can help protect communities from flooding and drainage problems.

The soil design and composition used in the rain garden installation allows it to drain a 1" rainfall event within 4 hours. Standing water should not occur for longer than 24 hours at most.

## VEGETATED BUFFER

A vegetated buffer is a transitional planted area located between a non-wetland area and a wetland area. They are uniformly graded and are typically located down slope from disturbed or impervious areas.

They are comprised of long strips of natural or managed vegetation such as shrubs, trees and plants, the purpose of which is to collect and slow runoff from upland areas, filter out sediments, nutrients and pesticides and to encourage infiltration.

Vegetated buffers enhance and protect the water quality of neighboring areas and can serve as an erosion control measure along the edge of a watercourse.

