

## The Discovery Museums

### AQUIFER RECHARGE PROJECT

#### Resources

Low Impact Development Center  
301-982-5559  
[www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)

Residential uses of LID from the Low Impact Development Center  
[http://www.lid-stormwater.net/general/general\\_residential.htm](http://www.lid-stormwater.net/general/general_residential.htm)

Pervious Paving – Uni Eco-Stone Pavestone  
508-947-8001  
[www.pavestone.com](http://www.pavestone.com)  
*(Uni Eco-Stone at Science Discovery Museum generously donated by Pavestone)*

The Friends of Alewife Reservation quick guide to pervious surfaces  
[http://www.friendsofalewifereservation.org/2004\\_10\\_perviouspavement.htm](http://www.friendsofalewifereservation.org/2004_10_perviouspavement.htm)

Pervious Paving Materials, from the Sustainable Building Sourcebook  
<http://www.greenbuilder.com/sourcebook/PerviousMaterials.html>

Gravel Pave & Grass Pave  
Invisible Structures, Inc.  
[www.invisiblestructures.com](http://www.invisiblestructures.com)

Rain Barrels  
New England Rain Barrel  
978-977-3155  
<http://nerainbarrel.com/Benefits.html>  
*(Rain Barrels at Science Discovery Museum generously donated by Acton Water District)*

Pollution Prevention Fact Sheet: Rain Barrels from the Stormwater Center  
[http://www.stormwatercenter.net/Pollution\\_Prevention\\_Factsheets/rain\\_barrels.htm](http://www.stormwatercenter.net/Pollution_Prevention_Factsheets/rain_barrels.htm)

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#### Resources (cont.)

The Rain Barrel Guide <http://rainbarrelguide.com/>

How to Build and Install a Rainbarrel and How to Plant a Rain Garden, from the Center for Watershed Protection  
[http://www.cwp.org/Community\\_Watersheds/brochure.pdf](http://www.cwp.org/Community_Watersheds/brochure.pdf)

Acton Water District <http://www.actonh2o.com/>

Acton Citizens for Environmental Safety  
[www.Actonaces.org](http://www.Actonaces.org)

Organization for the Assabet River  
[www.assabriver.org](http://www.assabriver.org)

#### Engineering

GeoSyntec Consultants  
[www.geosyntec.com](http://www.geosyntec.com)  
978-263-9588

#### Installation

Call Corporation  
508-653-3526

*Watch The Discovery Museums' newsletter and website for upcoming programs and information:*

**The Discovery Museums**  
**177 Main Street**  
**Acton, MA 01720**

**978-264-4200**

**[www.discoverymuseums.org](http://www.discoverymuseums.org)**

## The Science Discovery Museum



# AQUIFER RECHARGE PROJECT

## A Demonstration Site for Low Impact Development (LID) Technologies

Funded through the generosity of

Intel, Massachusetts

in collaboration with  
Acton Citizens for Environmental Safety  
and the  
Organization for the Assabet River

intel.

**Did you know that stormwater runoff is currently the major source of pollution in US rivers<sup>1</sup>?**

**Did you know that much of this non-point source pollution comes from homeowners!**

In a recent nationwide analysis of impervious surfaces areas, USGS and EPA research showed that driveways, sidewalks, patios, and pools made up about 14 percent of urban and suburban watersheds' impermeable surfaces<sup>2</sup>. Reassuringly, Science News reports "However, scientists suggest that innovative landscaping and architecture could alleviate some of the detrimental effects of this sprawl."<sup>3</sup>

### What can you do?

There are Low Impact Development (LID) Technologies that homeowners, schools, municipalities, and businesses can use in their landscaping projects. LID increases groundwater recharge and clears out particulates and pollutants from rain water. These technologies decrease storm water run-off and help provide cleaner water to the underlying aquifers and watersheds. The Discovery Museums demonstration site contributes to higher-quality water in the Assabet River watershed.



<sup>1</sup> <http://www.epa.gov/owow/nps/qa.html>

<sup>2</sup> Elvidge, Christopher, et. al, EOS, Volume 85:233, June, 15, 2004

<sup>3</sup> Perkins, Sid, Science News, Volume 166:152-153, August, 4, 2004

## Rain Barrels

Rain barrels capture rain water that falls on the roof and stores it for use in watering gardens or lawns. This natural water supply is particularly beneficial during low rainfall periods and summer water bans.



## Rain Garden

A slightly depressed garden captures runoff from surrounding areas and contains native species of plants. It naturally holds water and allows it to seep slowly into the ground. It is an attractive and natural way to control storm water run-off.



## Pervious Paving

The concrete pavers used on the Museum walkways and entrance have funnel shaped openings that are filled with coarse gravel. This allows storm and rainwater to permeate into the ground slowly, reducing storm run-off into the Assabet River.



## Gravel Pave

Gravel pave is a porous paving system that uses a load bearing structure with open cups that contain and keep gravel in place. This design creates a porous surface for storm water runoff. It can be used in heavy traffic areas such as driveways and parking lots.



## Grass Pave

This state-of-the-art technology reduces and slows movement of storm water runoff. As rain water passes through a layer of grass and soil, pollutants and fine particulates are reduced. Grass Pave's high compressive strength makes it ideal for heavy use areas such as parking lots or along public areas.