www.ecohusky.uconn.edu

LID and Sustainable Development at UConn

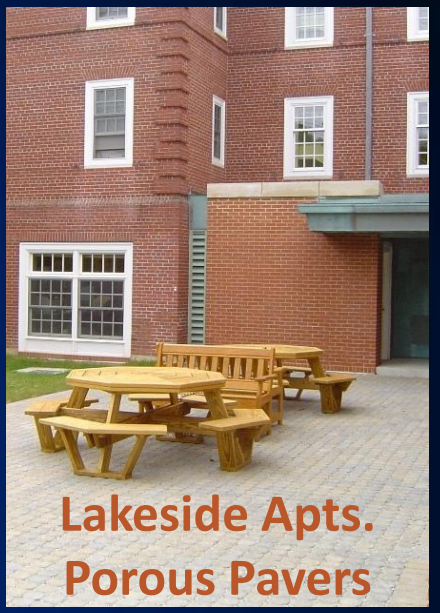
Green Infrastructure Symposium

September 19, 2013

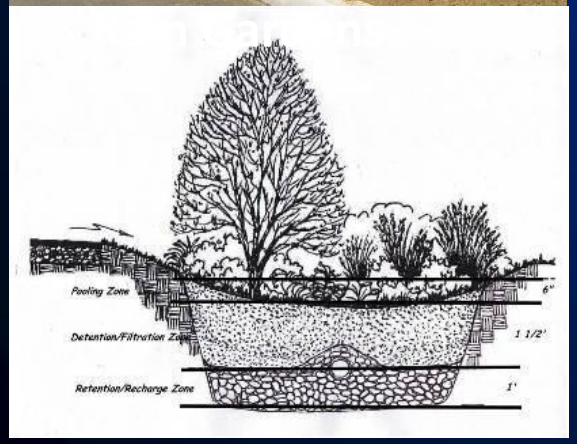
Rich Miller, Director, Office of Environmental Policy

UConn's First LID Projects

Towers Dorm
Rain Garden - 2004 and today



Lakeside Apts.
Porous Pavers



2006 - UConn's First LEED-Certified Project
LID Earns Sustainable Site LEED Credits

Southern Bio-Retention Swale

Northern Rain Garden

- Rain Gardens & Bio-Retention Swales:
  - **Retain Site Stormwater Runoff – Minimize Downstream Impacts**
  - **Remove Stormwater Pollutants Naturally Through Soil and Plants**
- Integrated Pest Management (IPM) Also Protects Water Quality

LID Earns Sustainable Site LEED Credits

GrassPave Grid Stabilizes Un-Paved Delivery Entrance

Reduced Impervious Cover in Plaza

- Less Impervious Surface Also Reduces “Heat-Island” Effect
  - Light-Colored Pavement, GrassPave
- 50+% of Entire Site Preserved as Open Space

Lesson learned on grass driveway…

Delivery entrance for practice facility used more often than expected; no "down time" that enabled grass seed to grow → grid removed

TMDL for Eagleville Brook

Regulatory Stimulus for LID

Sedimentation After Storm

Streambank Erosion Caused by High Flow

Channel down cutting and bank erosion observed at site 1, Eagleville Brook downstream of Hunting Lodge Road on July 6, 2005.

Gant Plaza Green Roof – Sept. 2009

- 334 modules
- 2 ft by 4 ft
- 79% cover
- New gathering place

Student Volunteers Installed CT DEP Acting Commissioner Amey Marella at Dedication Ceremony

Green Parking Lots – August 2009

Workers Installing Porous Concrete Parking Lot at Greer Field House

http://www.youtube.com/watch?v=ScsQYHMfabU

Green Parking Lots – August 2009

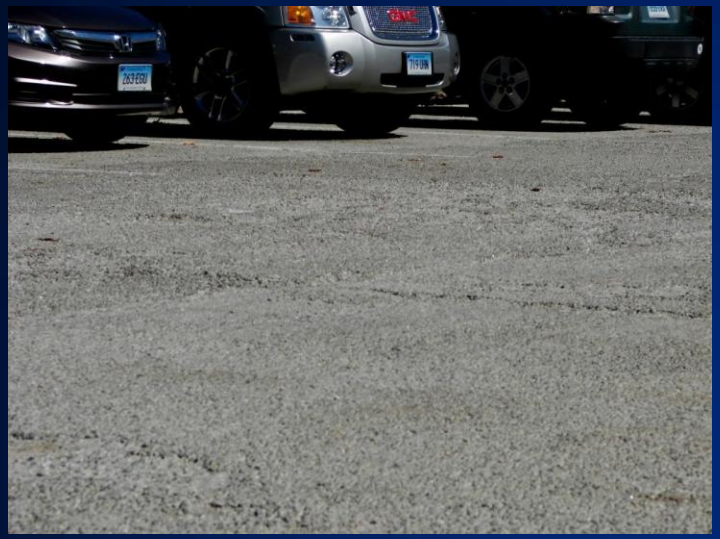
Permeable Asphalt

Permeable Asphalt Parking Lot Installed at Towers Residence Halls

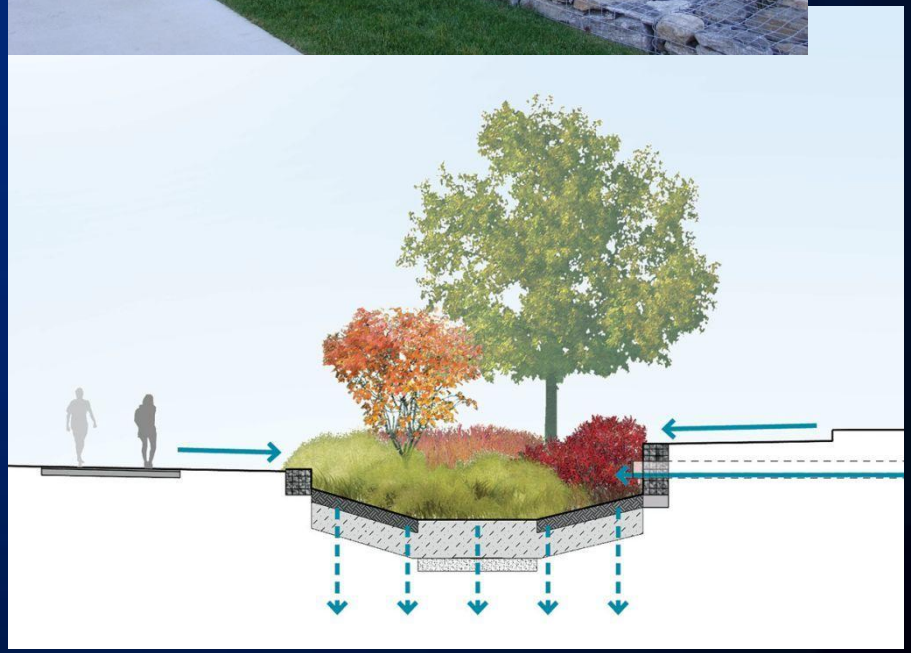
Permeable asphalt has held up well…

4 years later…
Sept. 2013

Porous concrete, not so much…



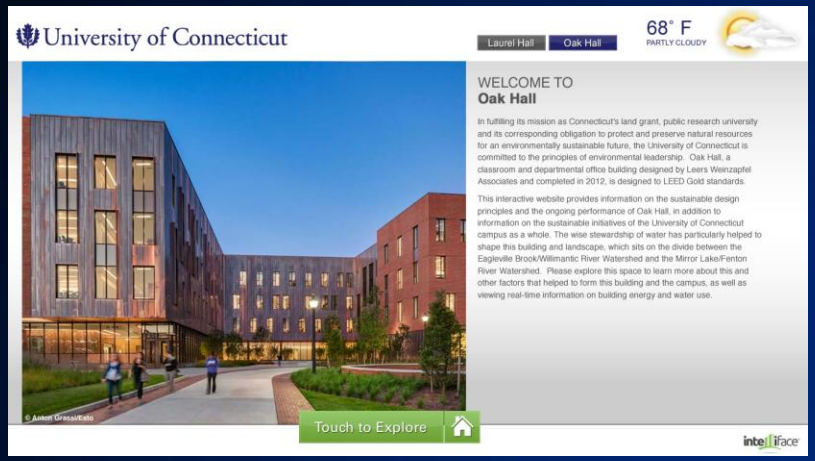
Momentum builds for LID

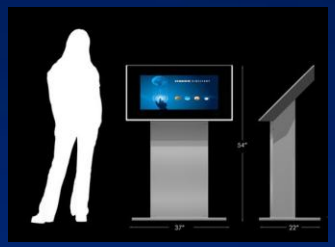


Storrs Hall Addition – Green Roof & Parking Lot

Whetten & Dodd Center Landscape/Hardscape Improvement Projects – LID Opportunities

Education & Outreach





LID featured on new dashboards and Green Campus virtual tours

About LID at UConn

Low impact development (LID) is a practice used to reduce impacts of storm water runoff on water quality. As part of UConn's commitment to sustainability, LID practices have been implemented at numerous locations around campus. Such practices have potential to greatly reduce the impacts of the university on the quality of water in nearby streams and rivers.

The LIDS Team

The LIDS Team is a part of the Natural Resources Conservation Academy. The dynamic group is comprised of five students and three mentors. Although the team members come from different corners of the state, they are united by a common purpose to inform the public on UConn's low impact development practices which reduces the campus' environmental footprint on Connecticut's waterways.

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Low Impact Development at UConn

Protecting water quality through innovative practices

Natural Resources Conservation Academy

Key to map

Starting Point: Visitor's Center
1. Gant Plaza Green Roof
2. Greer Field House Parking Lot
3. Gampel Pavilion Snow Shelf
4. Burton Family Football Complex
5. Laurel Hall Green Roof
6. Laurel Hall Bioretention cell
7. Oak Hall Permeable Pavers
8. Oak Hall Bioretention Cell
9. Storrs Hall Green Roof
10. Storrs Hall Permeable Asphalt
11. Lakeside Bldg Permeable Pavers
12. Towers Permeable Asphalt
13. Towers Rain Garden

LID practices have been implemented at many sites across the UConn campus. The above map illustrates a tour of twelve of these practices which include rain gardens, bioretention cells, green roofs, and permeable pavements. This tour of LID practices is 2.5 miles in length and should take approximately one hour. An interactive online version of this map can be found at http://s.uconn.edu/lidmap.

A focus for HS students at UConn's Natural Resources Academy

Keys to continued success with LID

- Strong Institutional commitment
  - Support & leadership at multiple levels – education, research, outreach & operations
  - Expert staff driving day-to-day projects, plans and designs
- Well-functioning, sustainable & aesthetically pleasing projects
- Regulatory push and acceptance for LID in permitting and campus drainage plan

NEMO

Sea Grant Connecticut

CONNECTICUT ENERGY ENVIRONMENT