

# LID and Sustainable Development at UConn



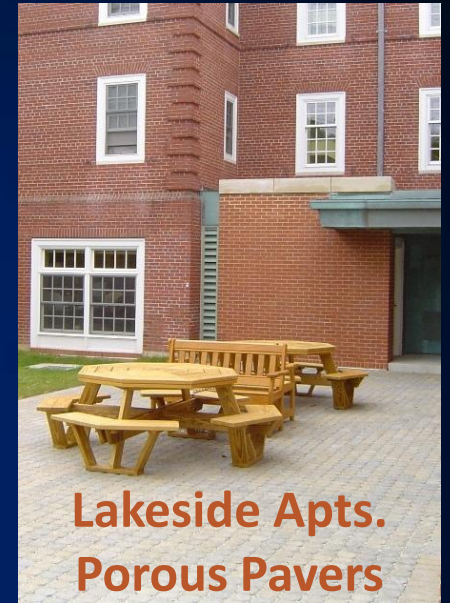
Green Infrastructure Symposium  
September 19, 2013

*Rich Miller, Director, Office of Environmental Policy*

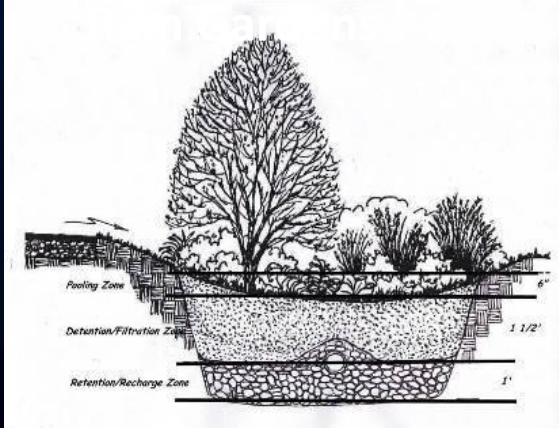
# UConn's First LID Projects



**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

**Eagleville Brook Upstream of Separatist Road  
During Storm Event**



**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*



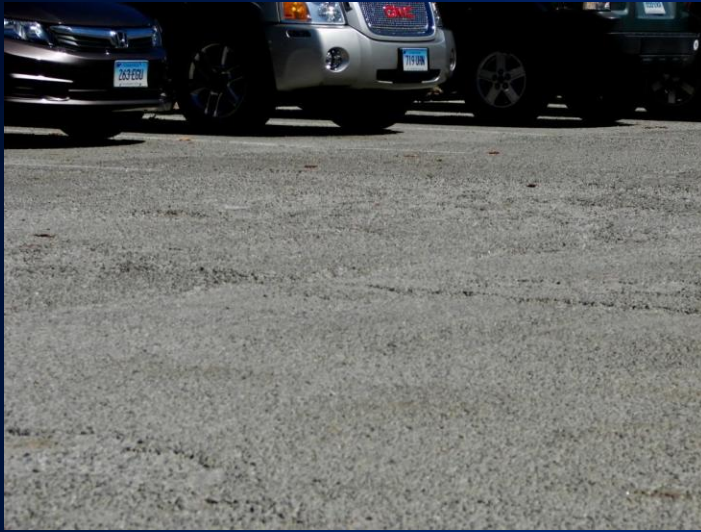
# Permeable asphalt has held up well...



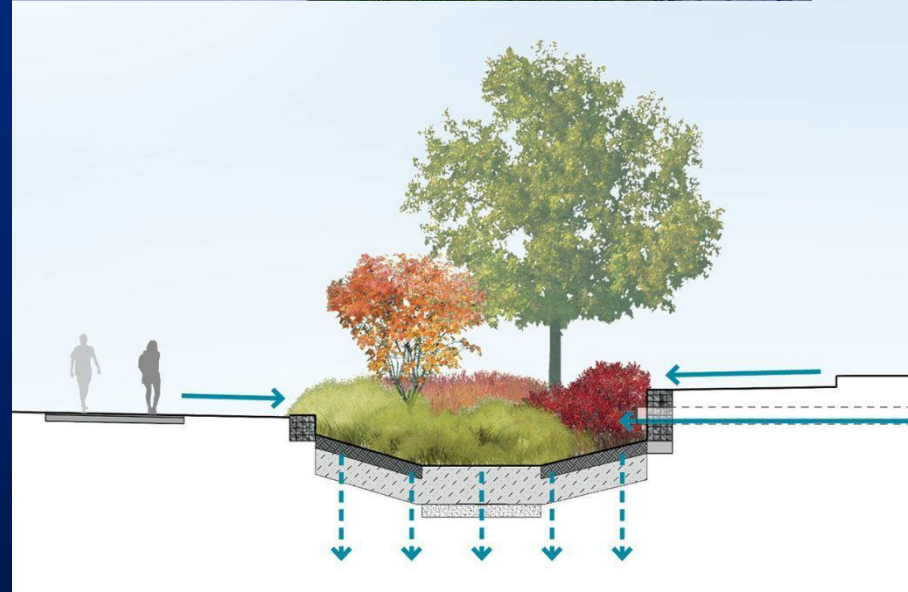
*4 years later...  
Sept. 2013*



# 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

University of Connecticut

68° F  
PARTLY CLOUDY

Laurel Hall Oak Hall

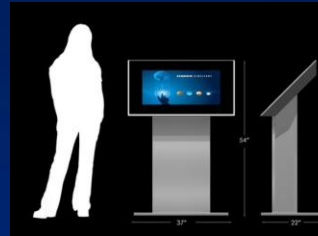
## WELCOME TO Oak Hall

In fulfilling its mission as Connecticut's land grant, public research university and its corresponding obligation to protect and preserve natural resources for an environmentally sustainable future, the University of Connecticut is committed to the principles of environmental leadership. Oak Hall, a classroom and departmental office building designed by Lewis Weierzapfel Associates and completed in 2012, is designed to LEED Gold standards.

This interactive website provides information on the sustainable design principles and the ongoing performance of Oak Hall. In addition to information on the sustainable initiatives of the University of Connecticut campus as a whole. The wise stewardship of water has particularly helped to shape this building and landscape, which sits on the divide between the Eagleville Brook/Willemantic River Watershed and the Mirror Lake/Fenton River Watershed. Please explore this space to learn more about this and other factors that helped to form this building and the campus, as well as viewing real-time information on building energy and water use.

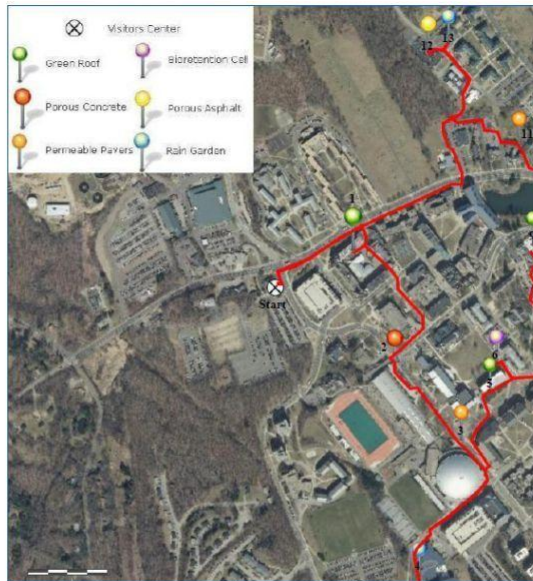
Touch to Explore

intelliface



**LID featured on new dashboards and Green Campus virtual tours**

- ### Key to map
- Starting Point: Visitor's Center
1. Gant Plaza Green Roof
  2. Greer Field House Parking Lot
  3. Campel 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. Storms Hall Green Roof
  10. Storms 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>.



### The LIDS Team



### 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.

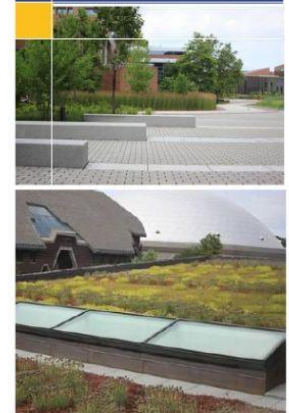


The LIDS Team is a part of the Natural Resources Conservation Academy. The dynamic group is comprised of five students and three mentors. Although the team members come from different corners of the state, they are united by a common purpose to inform the public on UConn's low impact development practices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



**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

