How to Affect Change in Policy to Eliminate Barriers to Implementation of LID

NEIWPCC - May 18, 2009
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What is Low Impact Development?

- Sustainable approach that starts at the site planning stage
- Mimic pre-development hydrology (maintain natural drainage, cluster buildings, minimize land clearance, reduce impervious surface)

Rain Garden in Burnsville, MN

Tree Box Filter
Washington, DC Navy Yard
Why is LID Important?

- Polluted runoff often impacts our waterbodies
- Long term effect of reduced infiltration on groundwater resources unknown
- “Quality of Place” is often defined by our natural features
- Need to protect natural features
- Use land more efficiently
- Reduce energy costs
- Decrease infrastructure/development costs
Regulator Perspectives on LID

- Is there an identifiable and measurable need to change?
- Challenges for Regulators
  - Difficulty in modifying policy, standards, and ordinances
  - Process to build consensus among stakeholders
  - Who will champion the change?
  - Unproven technologies
Developer Perspectives on LID

- Expensive
- Will it work?
- Will it last?
- Unknowns in the regulatory process
- Waivers are required, and could delay project
- Potential to go to ZBA

- Challenges for Developers
  - Not all regulatory staff are accepting
  - More Expensive?

Example of a Green Roof
Let's just do it…LID is fantastic!

- Challenges for Engineers
  - Regulatory restrictions
  - Educating regulators is often required
  - Engaging stakeholders is timely
  - Developers prefer certainty
  - Design standards in cold climates are limited
Conflict Examples – Public Property

- Right of Way (ROW) Width
- Travel Lane/Pavement Width
- Sidewalks and Esplanades in ROW
- Sidewalk and Esplanade Grading
- Who maintains these BMPs?
Conflict Examples – Public Property

- Mandatory Curbing
- Driveway Widths
- Materials of Construction
- Cold Climate Issues
Conflict Examples – Private Property

- Parking Area Buffering
- Drive Widths
- Parking Supply
- Parking Stall Dimensions
- Materials of Construction
The Need to Affect Change in Policy

- Clean Water Act (1972)
- National Pollutant Discharge Elimination System (1972)
- Municipal Separate Storm Sewer System (1990/1999)
- Other state and federal regulatory drivers
- Informed citizens asking for change
Methods to Affect Change in Policy

- Know the positives and shortcomings of LID
- Create opportunities for dialog
- Build trust and support for process
- Stakeholder Engagement (public safety, planning, public services, engineering, private sector together)
- Engage policy makers
- Advocate
Methods to Affect Change in Policy

- Don’t avoid land use issues
- Don’t prohibit or discourage LID
- Build demonstration projects
- Cite examples of success
- Use available published resources
Methods to Affect Change in Policy

- Other available published resources
  - **STORMWATER STRATEGIES**: Community Responses to Runoff Pollution, Natural Resources Defense Council, May 1999 and reissued in October 2001
  - Stormwater BMP Design Supplement for Cold Climates, Center for Watershed Protection – 1997
  - Improving Construction Site Runoff Quality with Fiber Check Dams and PAM, NC State University, Journal of Soil and Water Conservation March/April 2009
  - New research is being completed every day!
Success Stories: University Commons
USM, Portland, ME (Pre-Development)

Total Site = 4.56 Acres
Total Impervious Area 4.05 Acres
88.8% Impervious
Success Stories: University Commons
USM, Portland, ME (Post-Development)

Total Site = 4.56 Acres
Total Impervious Area 2.81 Acres
61.6% Impervious
Demonstration Project: Sewer Separation
Soil Filter Cross Section
Demonstration Project: Sewer Separation
Codman Street, Portland, ME
Street Reconstruction / Drainage Improvements
Questions

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