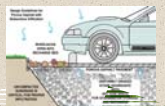


Low Impact Development Utility Advisory Committee



Making LID the preferred and commonly-used approach to site development

January 7, 2014

City of Olympia | Capital of Washington State

Low Impact Development Code Revisions

Why We Are Here

Issuance Date: August 1, 2012
 Effective Date: August 1, 2013
 Expiration Date: July 31, 2018

Western Washington Phase II Municipal Stormwater Permit

National Pollutant Discharge Elimination System and State Waste Discharge General Permit for discharges from Small Municipal Separate Storm Sewers in Western Washington

Low Impact Development Code Revisions


Why We Are Here

S5.C.4.f(i): "No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs....."

The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations."

Low Impact Development Code Revisions


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Low Impact Development Code Revisions

Low Impact Development Concepts

- Conserve natural areas (native vegetation and soil) wherever possible
- Minimize soil disturbance and compaction
- Minimize impervious surfaces
- Construct the developed landscape to function like absorbent undisturbed land
- Construct decentralized stormwater best management practices that *infiltrate*, store, evaporate, and/or detain runoff close to the source.



Runoff Volume with Current Standard



Runoff Volume with LID

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Olympia's Current Standards


- Flow control
- Water quality treatment
- Low Impact Development
 - Compost-amended soils
 - Roof downspout control (dispersion, infiltration trenches)



Low Impact Development Code Revisions

LID Infeasibility Criteria

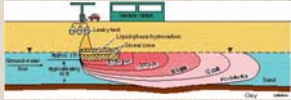
- Where slopes exceed
 - 8% bioretention
 - 5% porous asphalt
 - 10% pervious concrete
 - 12% permeable interlocking pavers
- Within 50 feet from the top of steep slopes.



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LID Infeasibility Criteria

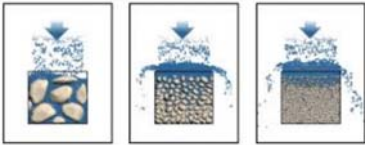
- Where there is known soil or ground water contamination
- Within 100 feet of a landfill, drinking water well or an underground storage tank.
- Within 10 feet of small on-site sewage system drainfield
- Where there is inadequate separation from seasonal groundwater



Low Impact Development Code Revisions

LID Infeasibility Criteria


- Where native soil infiltration rate is less than 0.30 in/hour
- Where there is no safe overflow route



Low Impact Development Code Revisions


LID Infeasibility Criteria

- Permeable Pavements only:
 - Arterial and collector streets or where there is heavy vehicle or industrial traffic.
 - When replacing existing pavement.
 - Where fill soils are used that can become unstable when saturated.
 - Where there is likely to be long-term excessive sediment deposition



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Site Planning



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Preserve Native Vegetation



Without LID **With LID**

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Roadside Bioretention Facilities

Bioretention Facility = Engineered Rain Gardens

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Reduced Impervious Surfaces

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Permeable Pavements

Porous Asphalt

Pervious Concrete

Permeable Pavers

Typical Residence

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Soil Quality and Depth

Compost-amended soils in all landscaped areas

Typical Residence

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Roof Downspout Infiltration via Trenches or Rain Gardens

Typical Residence

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Low Impact Foundations

Typical Residence

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Vegetated Roofs



Rainwater Harvesting



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Low Impact Development Code Revisions

Olympia

Codes and Standards

- City of Olympia Municipal Code
 - Bulk, Density, Lot coverage, Grading, Landscape and Tree Regulations
- Engineering Design and Development Standards (EDDS)
 - Street Layouts, Street Sections and Pavement Standards
- Drainage Design and Erosion Control Manual
 - Low Impact Development BMP design guidelines
- City of Olympia Special Provisions (Construction Specifications)
 - Porous Asphalt, Pervious Concrete and Bioretention Soil Mix

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Low Impact Development Code Revisions

Olympia



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Low Impact Development Code Revisions

Olympia

Possible UAC considerations:

- Invite Planning Commission members to participate.
- Create a LID subcommittee to meet as needed and make recommendations to the larger group.
- Meet jointly with the LID technical workgroup and/or the Planning Commission to discuss final recommendations.
- Share recommendations publicly through the local Northwest EcoBuilding Guild.