CATCHING RAIN:
Washington's New LID Stormwater Regulations

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Washington State has new rules for how cities and counties manage stormwater runoff. Washington cities and counties under a Municipal Stormwater Permit have a legal obligation to prevent pollution from rainwater that washes over roofs, driveways and developed areas. The new rules will require many future developments to incorporate certain Low Impact Development (LID) techniques.

LID techniques imitate the natural processes that help rainfall absorb into the ground, instead of running into pipes and large holding ponds that drain to streams and water bodies. LID measures, such as rain gardens, bioretention facilities, and permeable pavements, treat and retain stormwater at the source. These practices help preserve fish and wildlife by keeping natural waters clean.

Washington State Municipal Stormwater Permits, administered by the Department of Ecology, govern how cities and counties manage stormwater runoff. Three separate permits covering different parts of the state were recently updated, and LID requirements were added. The Phase I permit applies to Tacoma, Seattle, and the four most populous counties in Western Washington. The Phase II permit for Western Washington covers 80 cities and the urban portion of four counties. The Phase II permit for Eastern Washington covers 18 cities and urban areas of six counties.

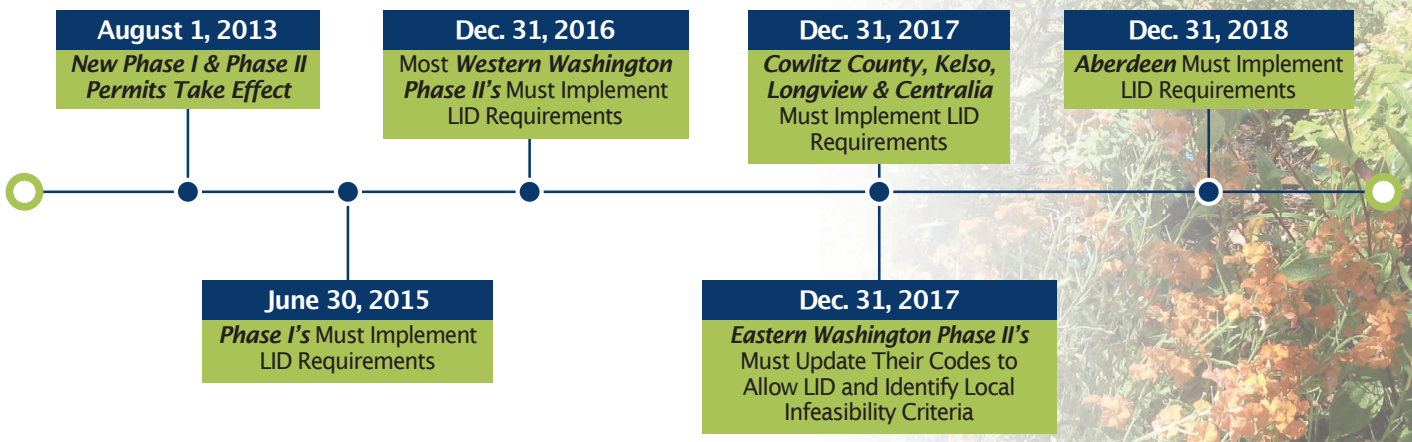
Look for the other helpful fact sheets in this series:

1. Low Impact Development
2. ✔ LID Stormwater Regulations
3. LID Development Process
4. Pavement Maintenance
5. Rain Garden Maintenance
6. Rain Garden Construction Checklist
7. Rain Garden Construction Sequencing

Local Development Codes will be Revised to Include LID Measures

The new permits require Phase I cities and counties to enact codes incorporating LID measures by June 30, 2015, and most Phase II jurisdictions in Western Washington must follow suit by the end of 2016. The Stormwater Manual for Western Washington, revised in 2012, contains the LID design details. The Eastern Washington permittees must update their codes, if needed, by December 31, 2017. The Department of Ecology, in collaboration with Eastern Washington permittees, is still developing a stormwater manual with LID practices for the east side of the state.

Timeline for New LID Requirements in Washington State



The permits for eastern and western portions of the state take substantially different approaches, because the soil, climate and geology vary substantially between the two regions, and these factors have a major influence on how stormwater runoff behaves. The LID measures for Eastern Washington are less developed, requiring only that initial steps be taken to implement LID techniques. For example, new developments in Eastern Washington will be required to retain runoff on-site or in regional stormwater facilities. Most Eastern Washington cities and counties covered by the permit already meet this requirement; the others can develop criteria for when LID measures are not feasible. LID measures must be allowed in Eastern Washington, but will not be required.

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Western Washington LID Measures are Keyed to Size of Development

In Western Washington most new developments that create 2,000 square feet of hard surface area or disturb more than 7,000 square feet of land will have some LID requirements. Limited circumstances such as projects that discharge directly to large water bodies may reduce or eliminate the need for LID. Projects in Western Washington will have two options for complying with LID requirements: choose from a prioritized list of LID Best Management Practices (BMPs), or meet the "Low Impact Development Performance Standard." Projects of 5 acres or greater located outside urban growth areas must meet the LID performance standard.

Prioritized Western Washington BMPs

Lawns & Landscaped Areas:

Retaining undisturbed native soil and vegetation receives top priority in the new rules. If that is not possible, the BMPs set standards for the depth and quality of the soil following construction, and spell out methods to restore good drainage characteristics to disturbed soil by methods such as adding compost and mulch. The BMPs will alter the site preparation and landscape construction techniques used in some new developments. Landscape maintenance procedures will also be affected.

Roofs:

The new rules offer a prioritized suite of options for dealing with roof runoff on-site. Top priority measures include dispersing runoff over native vegetation or into dry wells. The next highest priority techniques include directing runoff into rain gardens or bioretention facilities. Rain gardens and bioretention facilities employ the same principles, but rain gardens are non-engineered facilities and bioretention facilities require engineering because they usually handle more runoff. Rain gardens and similar facilities will likely become more common once the new rules are implemented. The rules offer other options for partial dispersion or infiltration in sites with more challenging conditions.

Other Hard Surfaces:

BMPs for runoff from other hard surfaces like driveways include some of the same techniques as for roofs, such as full dispersion, rain gardens and/or bioretention facilities. These BMPs also include permeable pavements, which are hardened surfaces that allow rainfall to penetrate into the ground beneath. Permeable pavements include a range of products from grid-like pavers with grass growing in the spaces, to special types of concrete that allow water to pass through. Larger developments will be required to prioritize permeable pavements over bioretention facilities. Different practices may be needed for maintaining permeable pavements.

Low Impact Development Performance Standard

The LID Performance Standard allows a project to bypass the BMP list by demonstrating that post-development stormwater discharge from the site matches pre-developed discharge for specific storm events. Meeting this standard usually requires hydrologic modeling by an engineer.

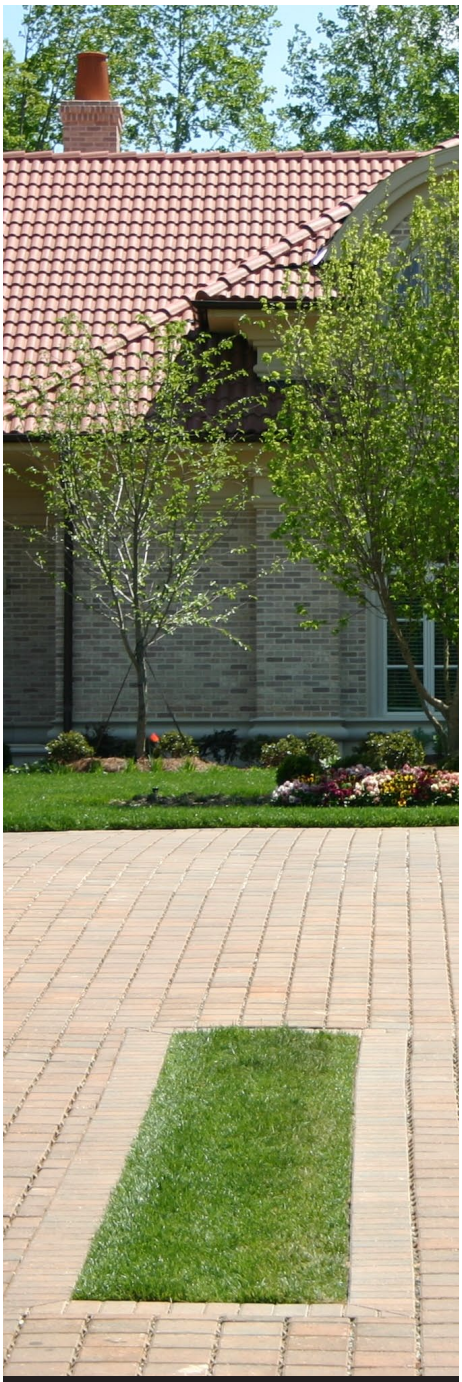

Photo: Interlocking Concrete Pavement Institute

Resources:

List of permittees: http://www.ecy.wa.gov/programs/wq/stormwater/municipal/munistrmwtrpermlist.html
Stormwater permits: http://www.ecy.wa.gov/programs/wq/stormwater/municipal/PermitsPermittees.html
W. WA Stormwater Manual: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html
LID information: http://www.wastormwatercenter.org/low-impact/

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SOUND NATIVE PLANTS

Developed by Sound Native Plants, Inc., with funding from the Washington State Department of Ecology.
Author: Ben Alexander, Sound Native Plants, Inc. Sources: *Washington Phase I Municipal Stormwater Permit, Western Washington Phase II Municipal Stormwater Permit, Eastern Washington Phase II Municipal Stormwater Permit.*