

# Low Impact Development (LID) <sup>[1]</sup>

## Current Newsletters

[Kelso LID Newsletter Issue #1](#) <sup>[2]</sup>

[Kelso LID Newsletter Issue #2](#) <sup>[3]</sup>

[Kelso LID Newsletter Issue #3](#) <sup>[4]</sup>

[Kelso LID Newsletter Issue #4 - FINAL](#) <sup>[5]</sup>

## Upcoming Events

Stormwater Regulations Training: Council Chambers, 1:00-3:30pm, Wednesday December 13th, 2017

## Urban Runoff



Urban

stormwater runoff is a major cause of water pollution.



Prior to urbanization, when rain fell on undeveloped fields and forests, the water was absorbed and filtered by soil and plants.

After we built cities and suburbs, rain that fell onto roofs, streets, and parking lots cannot soak

into the ground. Instead, stormwater drains through storm sewers and is discharged quickly into nearby water bodies. Along the way runoff picks up oil, trash, bacteria, and other pollutants. More and faster runoff can also cause erosion and flooding in urban streams, causing damage to habitat and property.

## **LID Concept**

Low Impact Development (LID) is an approach to land development that mimics a site's natural pattern of runoff. LID is a way to slow runoff down, spread it out, and soak it in.

LID emphasizes retaining trees, reducing impervious surfaces, and allowing runoff to soak into the ground close to where the rain falls. Dispersion spreads runoff over landscaped areas to slow it down and spread it out. Rain gardens and bioretention are vegetated depressions that allow water to soak into the ground. Small underground drywells also allow rain to soak into the ground. Small, distributed stormwater facilities slow runoff down and reduce the total amount of runoff that leaves the site.

Capturing runoff prevents it from collecting pollutants and carrying them to streams and rivers. Slowing runoff reduces erosion and flooding. LID protects stream habitat and water quality.



## **Regulatory Process**

Most stormwater runoff in Kelso is conveyed through a network of pipes, ditches, catch basins and some water quality treatment facilities to the City's drainage channels and rivers ? the Columbia, Cowlitz, and Coweeman. This network is called a municipal separate storm sewer system (MS4).



Kelso operates the MS4 under a permit from the Washington Department of Ecology as part of the federal Clean Water Act. Under the Permit, Kelso is required to incorporate LID into its development codes, update the Kelso Engineering Design Manual (KEDM), and adopt the 2014 Stormwater Management Manual for Western Washington to meet state standards for stormwater control.



## Schedule

### Complete

- Review Kelso's zoning, development codes, and KEDM for gaps in allowing LID
- Present "gap analysis" to Kelso Stormwater Advisory Committee (KSAC)
- Draft proposed updates to zoning, development codes, and KEDM
- Planning Commission meeting on Unified Development Code: January 10, 2017
- Open House: January 25, 2017 from 4 pm - 7 pm
- City Council Hearing on the Unified Development Code: February 21, 2017
- City Council Hearing on the Unified Development Code: March 21, 2017
- City Council Presentation on development code and KEDM: April 18, 2017

## City Council Meetings are held at:

City Hall Council Chambers  
Kelso City Hall  
203 S Pacific Ave  
Kelso, WA 98626

## Documents and Links

Stormwater Management Manual of Western Washington 2014  
<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html> [6]

[Phase II Western Washington Municipal Stormwater Permit](#) [7]

[Summary of LID concepts in revised United Development Code](#) [8]

## For More Information

Contact Catherine Morey, Senior Engineer  
360-423-6590 x3323

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**Source URL:** <https://www.kelso.gov/stormwater/low-impact-development-lid>

### Links

[1] <https://www.kelso.gov/stormwater/low-impact-development-lid>

[2] [https://www.kelso.gov/sites/default/files/images/stormwater/kelso\\_lid\\_newsletter\\_issue\\_1.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/kelso_lid_newsletter_issue_1.pdf)

[3] [https://www.kelso.gov/sites/default/files/images/stormwater/kelso\\_lid\\_newsletter\\_issue\\_2.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/kelso_lid_newsletter_issue_2.pdf)

[4] [https://www.kelso.gov/sites/default/files/images/stormwater/kelso\\_lid\\_newsletter\\_issue\\_3.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/kelso_lid_newsletter_issue_3.pdf)

[5] [https://www.kelso.gov/sites/default/files/images/stormwater/newsletter\\_issue\\_4\\_final.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/newsletter_issue_4_final.pdf)

[6] <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

[7]

[https://www.kelso.gov/sites/default/files/images/stormwater/2019\\_western\\_wa\\_phase\\_2\\_municipal\\_sw\\_permit\\_1.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/2019_western_wa_phase_2_municipal_sw_permit_1.pdf)

[8] [https://www.kelso.gov/sites/default/files/images/stormwater/m-udc\\_lid\\_revisions\\_summary\\_memo.pdf](https://www.kelso.gov/sites/default/files/images/stormwater/m-udc_lid_revisions_summary_memo.pdf)