

BENTON COUNTY STORMWATER PROGRAM

-Low Impact Development and Green Infrastructure-

What does 'Low Impact' mean?

Low Impact Development (also commonly called LID) refers to a set of systems and practices which rely upon natural processes to encourage the infiltration and evaporation of stormwater in a way that prevents untreated stormwater from affecting water quality and the health of rivers and streams.

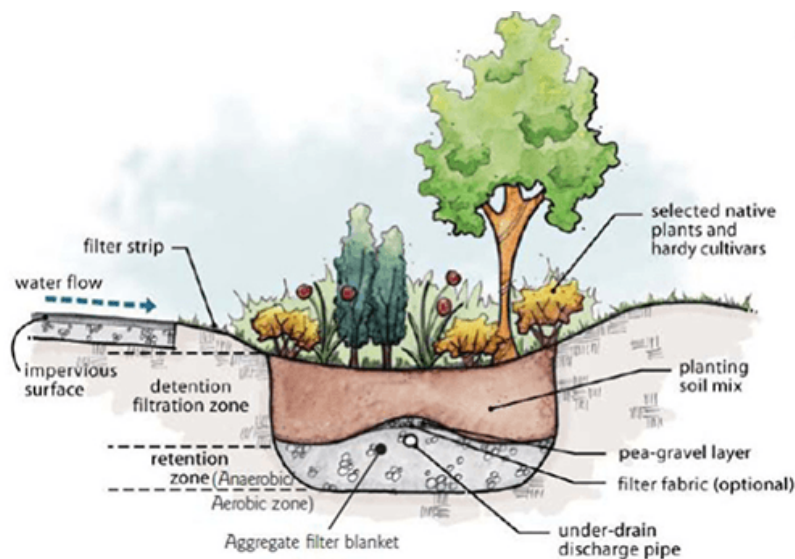


Figure 1. Low Impact Development feature. Image: Yakima County, WA

LID is a type of building system referred to as 'green infrastructure'

Green infrastructure (GI) refers to nature-based management and treatment of wet weather drainage before it flows to the patchwork of natural areas, wetlands, streams and creeks that provide healthy habitat for aquatic organisms and the ecosystems they support.

Green infrastructure provides flood protection and cleaner air and water. At the residential and regional scale, LID/GI practices and systems aim to preserve, restore and create green space using soils, vegetation, and rainwater harvest techniques. LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing impervious surfaces (like concrete or asphalt pavement) to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product.

Diverse array of options

There are many practices that fall within the spectrum of LIDs including: bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, infiltration swales, shallow detention facilities, and permeable pavements. When green infrastructure is installed throughout a community they have significant value as flood protection, diverse habitat, and beautiful green spaces.

Why use LID/GI?

By implementing LID practices, water can be managed in a way that reduces the impact of the built environment and promotes the natural movement of water within a watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.

Runoff from stormwater continues to be a major cause of water pollution in urban areas. It can carry trash, bacteria, heavy metals, and other pollutants through storm systems into local waterways. Heavy rainstorms can cause flooding that damages property and infrastructure.

Because they can build up with trash and other items over time, witch hats and storm drains must be maintained to function properly. To do this, Benton County keeps an inventory of all of these features and regularly monitors and maintains our storm drains in good working order. We can all agree that only spooky thing about storm drains is the pollution that might end up in our rivers and streams!



Figure 2 The OSU OSGIR Facility at the Benton County Avery Building is an example of green infrastructure. Visit it onsite, or learn more at: <http://research.engr.oregonstate.edu/hydroinformatics/ogsir>

- **Green infrastructure elements can be woven into a community at several scales.**
- **Urban scale green infrastructure** could include a rain barrel, a row of trees along a major city street, or greening an alleyway.
- **Neighborhood scale** green infrastructure could include acres of open park space outside a city center, planting rain gardens or constructing a wetland near a residential housing complex.
- At the **landscape or watershed scale**, examples could include protecting large open natural spaces, riparian areas, wetlands, or greening steep hillsides.
- **Rural green infrastructure** is important as well – this can include surrounding dirt or gravel parking lots with berms and swales; ditch buffer zones before water can enter streams or waterbodies; and maintaining healthy, native vegetation in a ditch or swale can help promote natural infiltration and prevent runoff.

Learn More!

Marys River Watershed Council
Luckiamute Watershed Council
Mid-coast Watershed Council
Long Tom Watershed Council

<https://www.mrwc.org/>

<https://www.luckiamutelwc.org/>

<http://www.midcoastwatersheds.org/>

<https://www.longtom.org/>

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Or visit to learn more:
pw.bentoncountyor.gov/stormwater