

# What is Low Impact Development (LID)?

Low impact development is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. Instead of collecting and piping runoff away, LID employs strategies that mimic or preserve natural landscape features and reduces runoff from impervious surfaces. LID treats stormwater as a resource rather than a waste product and includes practices such as bio-retention, rain gardens, vegetated rooftops, rain barrels and cisterns, permeable pavements and infiltration projects. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and restores the natural movement of water within a watershed.

## Why is LID a good idea?

As a community grows, so does the amount of surface area covered by parking lots, roads and rooftops. Rainfall cannot soak through these hard surfaces. Instead the runoff flows quickly across them, picking up pollutants along the way, and enters ditches or storm drains, which usually empty directly and without treatment into local waterways. Streams in urban areas are frequently overwhelmed by rain events. Flash flooding degrades stream habitats by scouring the stream bed and eroding the banks. Contrast this to an undeveloped watershed, where vegetation-covered soil soaks up rainfall rather than allowing it to run off the land.

Fortunately, by adding LID practices, communities can help their watersheds function more like undeveloped watersheds, despite the ever-expanding number of roads and rooftops. LID features such as swales and vegetated areas can capture and retain water onsite allowing it time to soak into the soil where it is naturally filtered before reaching an aquifer.

A few environmental and economic benefits of LID:

- **Improves Water Quality.** Stormwater runoff can pick up pollutants such as oil, bacteria, sediments, metals, hydrocarbons and some nutrients from impervious surfaces and discharge these to surface waters. LID practices help reduce the volume of pollutant-laden stormwater that reaches local streams and rivers. Better water quality increases property values and lowers clean-up costs.
- **Reduces Number of Costly Flooding Events.** In communities relying on traditional methods of stormwater conveyance, flooding can occur when large volumes of runoff enter surface waters too quickly. Incorporating LID practices reduces the volume and speed of stormwater runoff and decreases costly flooding and property damage.
- **Maintains Aquatic Habitat.** Rapidly moving stormwater erodes stream banks and scours stream channels, degrading habitat for fish and other aquatic life. LID practices reduce the amount of stormwater reaching a surface water system thus helping to maintain natural stream channel functions and habitat.
- **Improves Groundwater Recharge.** Stormwater runoff that travels through pipes and drains into surface waters cannot soak into the ground. LID practices retain more rainfall on-site, allowing it to infiltrate the soil and recharge an aquifer.
- **Enhanced Neighborhood Beauty.** Traditional stormwater infrastructure includes unsightly pipes, outfalls, concrete channels and fenced basins. Using LID can increase property values and enhance communities by making them more beautiful, sustainable and wildlife friendly.



## Where can LID be used?

LID works everywhere. It can be used around office buildings, in parks, shopping centers, commercial developments, single and multi-housing, along roadways and parking lots and even on roof tops.



### Additional Resources

Visit the Green Country Stormwater Alliance web site listed below for more details about stormwater protection.

**Green Country Stormwater Alliance**  
[www.stormwaterok.net](http://www.stormwaterok.net)

### Contact Information

For local information on how to protect stormwater quality contact your city or county stormwater coordinator.

For more information about stormwater regulations, contact the Oklahoma Department of Environmental Quality (DEQ) Water Quality Division at 405-702-8100 and request the stormwater department or visit the DEQ website at:

[www.deq.state.ok.us/WQDnew/Stormwater/index.html](http://www.deq.state.ok.us/WQDnew/Stormwater/index.html).

For stormwater related complaints, call the DEQ statewide hotline at 1-800-522-0206. This number is answered 24 hours a day, 7 days a week. Citizens may fill out a complaint form at the DEQ website at: [www.deq.state.ok.us/ECLsnew/Complaints/onINcmpl.htm](http://www.deq.state.ok.us/ECLsnew/Complaints/onINcmpl.htm) and submit it electronically to the DEQ. The site also provides contact links to DEQ.

For information concerning local pollutant collection events, contact The Metropolitan Environmental Trust at 918-584-0584 or visit

[www.metrecycle.com](http://www.metrecycle.com).

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## The Benefits of Low Impact Development (LID)

