



## What is LID?

Low impact development (LID) is a cost-effective and environmentally friendly approach to stormwater management and design. LID practices aim to imitate natural drainage patterns by minimizing impervious surfaces and utilizing a system of small-scale, decentralized treatment practices to infiltrate and/or evaporate runoff close to its source. LID reduces the environmental impacts of urban stormwater, such as excess flooding and decreased water quality of waterbodies.



*Above: A rain garden that infiltrates runoff.*

*Below: A curb cut that allows runoff into a swale.*

# Design Your Site to Include Low Impact Development (LID)

## What are the benefits?

### **Cost-effective**

- LID requires less infrastructure (e.g., curb, storm sewer) and less land use than typical drainage infrastructure, reducing costs of clearing, grading, building materials, and maintenance.

### **Increases property's market value**

- LID improves aesthetics, reduces flooding risk, and is appealing to prospective buyers and/or customers who value environmental responsibility.
- In addition, space once dedicated to large, centralized stormwater treatment practices can be used for additional development to increase lot yields.

### **Reduces flooding**

- Reducing impervious surfaces, increasing vegetation, and infiltrating stormwater results in less runoff.

### **Reduces pollution in local water bodies**

- LID filters and cleans stormwater, which contains pollutants, before this water enters local rivers and lakes.

### **Enhances aesthetics**

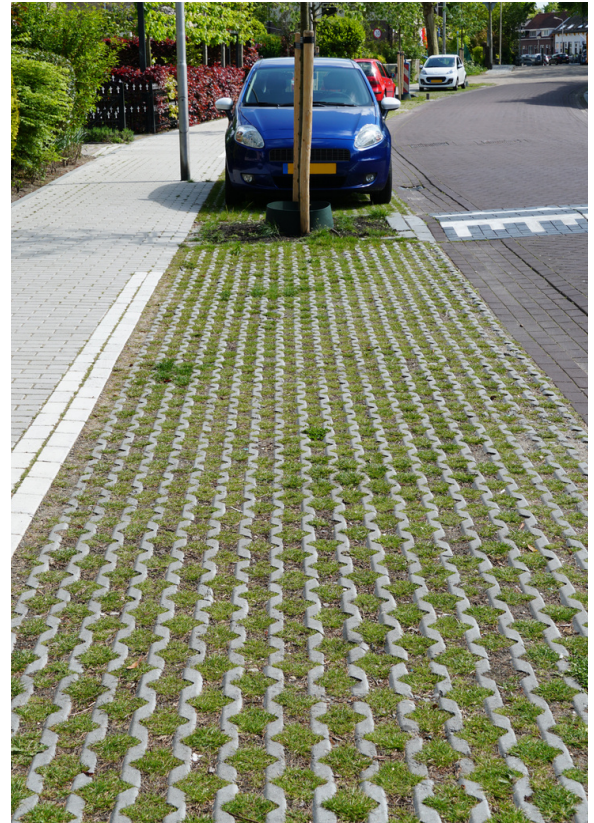
- Rain gardens, bioswales, and stormwater wetlands make for beautiful, green areas.

### **Improves quality of life**

- LID is more visually pleasing than conventional stormwater infrastructure, and has been shown to boost mental and physical health of residents.

## Why does Maynard need LID?

Much of Maynard's land area is covered by parking lots, roads and rooftops. Rainfall cannot soak through these impervious surfaces and instead, flows quickly across them, carrying pollutants from these surfaces to local waterbodies like the Assabet River. LID practices slow down this stormwater and encourage it to soak into the ground, where it can be filtered before reaching natural waterbodies. LID practices also minimize impervious surfaces in the first place. Because the Assabet River and downstream waters like the Merrimack River already suffer from pollution (e.g., phosphorus, bacteria), it is important that new development or redevelopment projects do not create additional stormwater that exacerbates this problem.



*Permeable pavement parking spaces.*

## How do I implement LID?

### **Utilize techniques that encourage infiltration close to the runoff source:**

- Rain gardens
- Stormwater wetlands
- Green roofs
- Rain barrels and cisterns
- Permeable pavement

### **Minimize impervious surfaces:**

- Narrower roads
- Alternative cul-de-sacs
- Shared driveways
- Conserve natural features



*A cistern to capture roof runoff for irrigation.*

## References

- EPA Municipal Guide to Low Impact Development [www.epa.gov](http://www.epa.gov)
- USDA Low Impact Development Fact Sheet [www.nrcs.usda.gov](http://www.nrcs.usda.gov)
- SEMCOG Developers Guide to LID [www.semco.org](http://www.semco.org)
- Planners Web Putting the LID on Your Community's Stormwater [www.plannersweb.com](http://www.plannersweb.com)
- Mass Audubon LID Fact Sheets [www.massaudubon.org](http://www.massaudubon.org)
- Town of Ludlow Slow the Flow with Low Impact Development Practices <http://www.ludlow.ma.us/>
- West Virginia DEP Green Infrastructure and Low Impact Development [www.dep.wv.gov](http://www.dep.wv.gov)