Examples of LID practices

- Bioretention (e.g., rain gardens),
- Vegetated roofs,
- Native plantings,
- Pervious pavement, and
- Clustering development and providing open space.

How to get started with LID

SEMCOG developed a technical manual to provide local governments with the necessary tools to implement LID in Michigan. The manual outlines numerous best management practices (BMPs), and provides implementation guidelines. In addition, the manual describes how LID can be linked to other municipal planning activities and includes a draft LID model ordinance. Detailed case studies from developments throughout Michigan are also included.

Canoeing in Anchor Bay, Ira Township
Source: SEMCOG

To obtain the LID manual

SEMCOG
www.semcog.org

For more LID information

Michigan Department of
Environmental Quality
www.michigan.gov/deq

Rain Gardens of West Michigan
www.raingardens.org

U.S. Environmental Protection Agency
www.epa.gov/owow/nps/urban.html

Green Built Michigan
www.greenbuiltmichigan.org

This project was funded by the Michigan Department of Environmental Quality through a grant from the U.S. Environmental Protection Agency.

Cover photo: Cluster Housing conserves open space and reduces infrastructure costs

Source: SEMCOG

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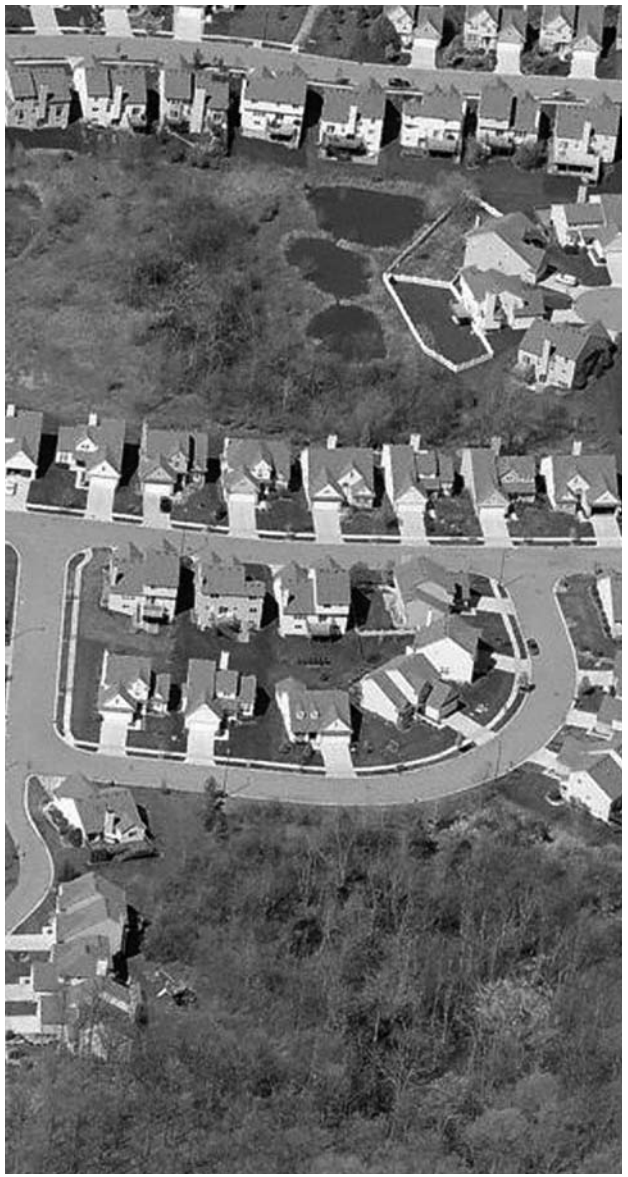
Developers Guide to Low Impact Development



How is stormwater runoff affecting our water resources?

Stormwater runoff is rainfall or snowmelt that runs off the land and ends up in our rivers and lakes, often through storm drains in our streets. The impact of runoff is based on both the quantity and quality of the stormwater reaching rivers and lakes. Stormwater runoff can cause a number of problems in communities:

- Impaired water quality,
- Increased flooding and property damage,
- Decreased recreational opportunities,
- Degradation of streams,
- Less groundwater recharge, and
- Loss of fisheries and habitat.

Wetlands treat stormwater runoff and provide aesthetic and wildlife benefits.
Source: SEMCOG

What is Low Impact Development (LID) and how does it help?

Clean water resources are essential to the economic vitality of local communities and the future of Michigan. Proper stormwater management is an important component of water quality protection. Low impact development is a way to address the public's interest in protecting water resources and the private sector's interest in fostering economic growth.

LID uses a basic principle modeled after nature: manage rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. LID provides stormwater benefits, such as groundwater recharge and cleaner streams, increases the urban forest, reduces the urban heat island, improves air quality, reduces thermal stream pollution, and enhances communities by making water resources a focal point that residents value.

Bioswales slow, cleanse, and cool surplus rainwater on site.
Source: Conservation Design Forum

Is LID a worthy investment?

The cost of implementing LID will vary from parcel to parcel. At the site level, LID techniques can significantly reduce land development costs while protecting natural features and water resources. Specific costs savings often include:

- Reduces inland clearing and grading costs,
- Reduces infrastructure costs (e.g., streets, sidewalks; curbs, gutters, and storm sewers),
- Increases lot yield,
- Increases community marketability, and
- Creates more appealing development that is consistent with the public's desire for environmental responsibility.

Where can LID be successfully applied?

LID's versatile approach can be applied equally well in new development, urban redevelopment, and in limited space such as along transportation corridors. Applications include open space, rooftops, streetscapes, parking lots, sidewalks, and medians.

What are the key components of a successful LID program?

- Manage stormwater close to where rain falls.
- Conserve and restore natural areas.
- Minimize impervious surfaces.
- Manage runoff with structural practices.
- Provide maintenance and education.