Examples of LID practices

- Bioretention (rain gardens),
- Vegetated roofs,
- Native plantings,
- Pervious pavement, and
- Cluster development.

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, 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 communities throughout Michigan are also included.

Rain gardens can filter stormwater in downtown areas.
Source: Tetra Tech

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/lid

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: Communities can plant native landscaping on municipal properties.

Source: Macomb County Planning and Economic Development

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Local Government 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. Stormwater runoff can cause a number of problems in communities, which can impact property value and quality of life.

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

Grow Zones that include native plants assist in stormwater runoff.
Source: Wayne County Department of Environment

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

LID uses a basic principle modeled after nature: manage rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain stormwater runoff close to its source.

Is LID a worthy investment?

The short-term cost of implementing LID will vary from parcel to parcel. Using LID techniques can reduce a community's long-term capital costs resulting in numerous local community benefits:

- Improves water quality,
- Reduces municipal infrastructure and utility maintenance costs (e.g., streets, curbs, gutters, storm sewers),
- Decreases flooding and streambank erosion,
- Decreases stormwater management costs,

Kayakers enjoying the Clinton River.
Source: Macomb County Planning and Economic Development

- Saves money on heating, cooling, and irrigation,
- Increases groundwater supply,
- Helps meet regulatory obligations,
- Increases recreational opportunities,
- Increases environmental education opportunities,
- Protects community character and aesthetics, and
- Protects and enhances sensitive habitat, including fisheries.

Where can LID be successfully applied?

LID's versatile approach can be applied equally well to new development, urban redevelopment, and in limited space such as along transportation corridors. Applications include open space, rooftops, streetscapes, parking lots, sidewalks, and medians. Also, if stormwater is not properly managed, often more expensive retrofitting of infrastructure will be needed to restore and protect water quality.

What are the key components of a successful LID program?

- Plan stormwater management during the initial stages of site design.
- Manage stormwater close to where the rain falls.
- Conserve and restore natural areas.
- Minimize impervious surfaces.
- Implement structural practices to manage runoff.
- Provide maintenance and education.