



Federal Clean Water
Section 319 Grant
Tracking code: 2005-0103



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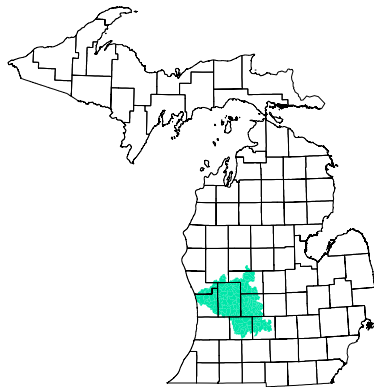
Low Impact Development (LID) Campaign for Greater Grand Rapids

January 3, 2006 - June 30, 2007

The Lower Grand River Watershed is 2,909 square miles and covered by urban areas (10.22%), forests (23.23%), wetlands (3.49%), agriculture (49.3%), and other land uses (13.76%). Urban areas include Grand Rapids, Muskegon, and Grand Haven metropolitan areas. Sediment, nutrients, thermal pollution, hydrocarbons, toxic substances, and pathogens found in storm water runoff impact the Lower Grand River Watershed. The Low Impact Development Campaign for Greater Grand Rapids addressed pollutant sources typically found in urban runoff and caused by construction activities. The goal of this project was to increase the use of low impact development techniques in Greater Grand Rapids.

Grant Amount: \$66,232
Match Funds: \$38,535

Total Amount: \$104,767

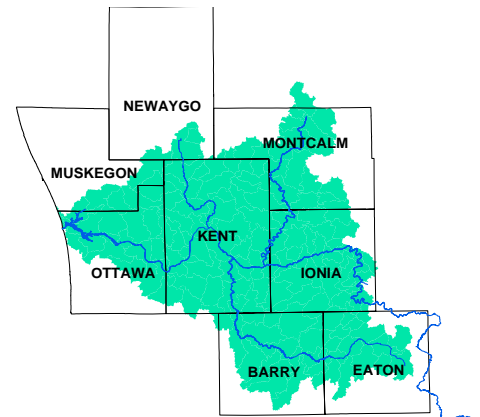


Partners Involved:

- A Place to Grow, Ltd.
- /Clearwaters of Michigan
- Bazzani Associates, Inc.
- City of Grand Rapids
- Fishbeck, Thompson, Carr & Huber, Inc.
- Grand Valley Metropolitan Council
- Home & Building Association of Greater Grand Rapids
- Homes by Legacy
- Kent County Drain Commissioner's Office
- Kent County Road Commission
- Metro Health Village
- Michigan Environmental Council
- Rain Gardens of West Michigan
- Sable Development
- West Michigan Environmental Action Council

Information and Education Activities:

- Realtor Workshop
- Engineer Workshop
- Developer Workshop
- Public Official Workshop
- Kent County Township Association Presentation
- Michigan Association of County Drain Commissioners Presentation
- Southwest Michigan Planning Commission Presentation
- Green Built Home Tour
- Porous Pavement Tour
- Printed Materials
 - LID Self-Guided Tour Brochure
 - LID Site Fact Sheets (11)



Green Development: The Next Wave in Housing

Low Impact Development Campaign
for Greater Grand Rapids
Green Built™ Michigan

September 28, 2006



Realtor Workshop: A workshop for Realtors® was held on September 28, 2006, at the Grand Rapids Association of Realtors®. The presentation focused on the various selling points of green built homes. There were 76 Realtors® who attended the workshop.

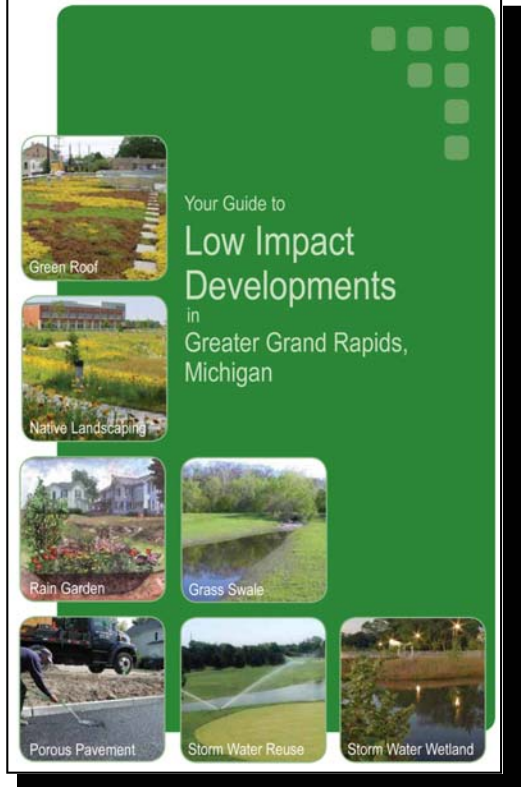
Design Greener, Design Better

Low Impact Development Campaign
for Greater Grand Rapids
Green Built™ Michigan

December 6, 2006



Engineer Workshop: An all-day workshop was held for engineers on December 6, 2006. The workshop not only highlighted several local case studies, but covered the technical aspects of installing and maintaining LID applications. The workshop was attended by 31 individuals.



Plan Greener, Plan Better

Low Impact Development Campaign
for Greater Grand Rapids
Green Built™ Michigan

January 29, 2007



Public Official Workshop: A workshop for public officials was held on January 29, 2007. The workshop covered policies to promote LID, smart growth initiatives, and sustainable community concepts. There were 34 individuals who attended the workshop.

Develop Greener, Develop Better

Low Impact Development Campaign
for Greater Grand Rapids
Green Built™ Michigan

February 27, 2007



Developer Workshop: A workshop for developers was held on February 27, 2007. Case studies highlighted several LID applications, including porous pavement, rain gardens, green roofs, storm water reuse, and bioretention swales. There were 25 individuals who participated in this workshop.

Your Guide to Low Impact Developments in Greater Grand Rapids

The Villas of Rosewood

Rose Ridge Drive, Rockford, Michigan



History

When Sable Developing first looked at the rolling hills, wooded acreage, and wetlands, there was no question this was a site that called out for preservation and protection. There are 62 acres of land with approximately 23 acres preserved for natural areas, and wetlands.

LID Features

Environmentally friendly residential living has taken shape in Rockford. The Villas of Rosewood is a single-family home, detached condominium community situated on 62 acres in Rockford. What makes the 105-unit development so unique is the careful planning and engineering devoted to protecting its natural environment and allowing its residents to connect with nature. To ensure continuing protection of the natural areas, all lawn care will be serviced by professionals using organic methods. The goal of Villas of Rosewood is to make the site as beneficial to the environment after development as it was prior to development.

Other Green Features

The community includes multiple rain gardens, ponds, and connecting streambeds combined with native species of trees, shrubs, water plants, and wildflowers. In traditional developments, retention ponds are built to capture runoff from pavement and roofs, often resulting in stagnant water that invites mosquitoes and flies. The Villas of Rosewood has an innovative ecosystem using a series of three bioretention ponds, connected by 1,700 feet of streambed, and surrounded by several rain gardens. This system will protect nearby wetlands by continuously cycling and filtering surface water. The ponds have aerators to provide water movement and oxygenation, and special plants known for their removal of organic and inorganic materials. These plants, which are all historically native to northern Kent County, will produce flowers, seeds, and fruit beneficial to wildlife. The rain gardens include several native plants, including pickerel weed (which produces beautiful spikes of purple flowers and removes heavy metals), switch grass, spice bush, water tilla, and blue lobelia.

The Villas of Rosewood

Rockford, Michigan
May 2006 — Phase 1

LID Features

- Integrated storm water management early in the site planning process
- Microscale techniques to manage precipitation
- Natural features in landscape
- Fewer pipe and underground infrastructure
- Flowing streams with water falls and retention ponds
- Preserved and improved wildlife habitat
- Enhanced wetlands and wetland protection
- Rain gardens and bioretention

Building Features

- Five Star Energy Star Construction
- Andersen LowE Window

Design, Construction

- Sable Developing, Inc.
- Visbeen Associates Inc.

Landscaping

- Clearwaters of Michigan/
A Place To Grow, LTD
- Appleland Landscape



www.rosewoodvillas.com