

# Environmentally Friendly Mixed Use Development, Northville, Michigan

THE ROUGE RIVER PROJECT  
A WORLD CLASS EFFORT



BRINGING OUR RIVER BACK TO LIFE

*A publication of the Wayne County Rouge River National Wet Weather Demonstration Project*

**Information Date: February 2000**

## Objective

The purpose of the environmentally friendly mixed-use development project is as follows:

- Design creative solutions for managing storm water within a mixed use development.
- Prepare plans and specifications of the details and requirements of the storm water detention, bidding and construction.
- Provide technical materials to Northville

National Wet Weather Demonstration Project.

- Construct a storm water control system that incorporates best management practices ( into the design.

## Owner

Wayne County Jobs and Economic Development

## Location

## Dates

December 1997 – April 1999

Planning/Design      \$249,900

- BMPs can be incorporated in a mixed-use development by the
- demonstrated.

- All of the elements of the demonstration project have the potential to be used in other storm water management guidelines documents are designed to provide background information



**Treatment Basin,  
Northville Hills Development**

## Project Highlights

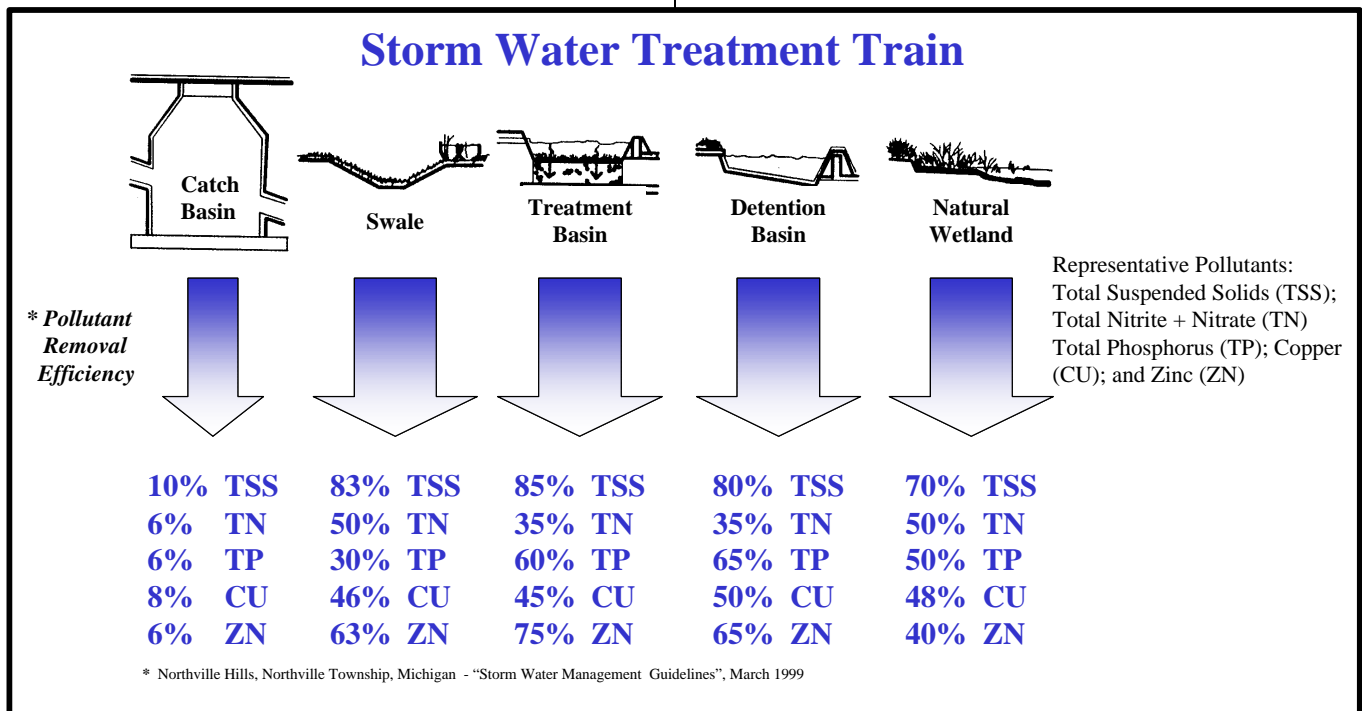
- Northville Hills is a 900-acre mixed use development containing single-family housing, neighborhood shopping, professional offices and significant recreational and open woodlands, wetlands, ravines and a trail system.
- This project developed specific guidelines for storm water management maintenance and operations which outline pest management, storm water best management practices (BMPs), water quality protection and landscape

treatment. These can be provided to the developer and community for their use as an aid to storm water management facility planning.

- The project helped to mitigate adverse impacts and enhance environmental quality within and beyond development boundaries.
- Institutional framework to provide for long-term maintenance of system.

management issues and methods and can be used by developers, agencies and the public to improve water quality of the Rouge River.

- *Institutional/Financial Framework:* A storm sewer easement encompassing the overland conveyance swales, treatment basins, and detention basins within the planned unit development (PUD) was granted to provide a mechanism for maintaining and monitoring the storm water management system in perpetuity.



## Major Elements

This project is divided into four major elements:

- *Creative Storm Water Management System:* A storm water treatment train consisting of several BMPs such as planning of home sites, overland conveyance via vegetated swales, native landscaping, soil erosion and sedimentation control, etc.
- *Public Education Program:* Graphics illustrating the proposed BMPs were presented at Township meetings; and two publications ("Storm Water Management Guidelines" and "Managing Storm Water and Improving Water Quality: A State-of-the-Art Water Demonstration Project"), were designed to disseminate information about storm water

- *Agency/Developer Coordination:* The land uses within the PUD are constructed by a number of different builders. Furthermore, three different agencies (Wayne County, Northville Township, Michigan Department of Environmental Quality (MDEQ) were involved in reviewing and ultimately approving different components of the project.

## Project Results

This mixed use development resulted in 1,292 residential units, senior housing, neighborhood commercial, research and development, 307 acres of inter-linked open space and golf course, and a storm water management system that has been designed with a storm water "treatment train" that will improve water quality and reduce the discharge

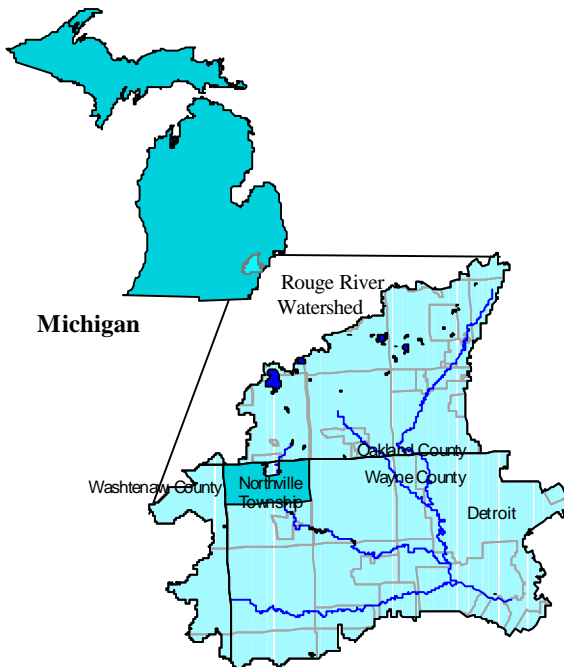
to almost half the current allowable rate. This will protect the water quality and hydrologic integrity of the receiving tributary. The cost of implementing this project is estimated ten to fifteen percent higher than the traditional storm water system. However, the project has the benefit of maintaining water quality and preserving and enhancing the Rouge River watershed.

To obtain further information on the Rouge Project, including documents, maps and general information, visit us at:

<http://www.rougeriver.com>

### ***ACKNOWLEDGEMENT***

The Rouge River National Wet Weather Demonstration Project is funded, in part, by the United States Environmental Protection Agency (EPA) Grant #X995743-01, 02, 03 and 04 and #C995743-01.



**Rouge River Watershed**

**Project Location**