



City of Farmington Hills Longwood Basin Retrofit Demonstration Project

Contact Information

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Project Overview

The City of Farmington Hills rehabilitated a City-owned detention basin located on Longwood Drive, west of Farmington Road, just south of 9 Mile Road. The basin, situated within a residential subdivision, was originally constructed to alleviate downstream flooding. This pond provided only minimal water quality treatment and aesthetics were poor. Since the basin was designed for flood control, it only stored water during extreme rain events and only when the downstream storm sewer backs up. It was also overrun with invasive species, and became home to nuisance wildlife. The inlet/outlet structure was difficult to access and maintain due to its location and encroaching foliage. The old chain link fence bordering the basin was deteriorating and hindered maintenance and public access. The steep sloped embankments made it difficult to mow and maintain.

An inspection and maintenance checklist was developed and is currently being utilized by City staff to assist them with the overall maintenance needs of the basin throughout the course of the year.

The goal of the project was to retrofit this basin to provide storm water management for the small storms as well as larger storms. The City plans to use this basin as an example for how local subdivision associations can successfully improve and maintain their own facility.

The proposed project included: 1) extending the existing inlet/outlet to the north for easier access and maintenance; 2) installing a gravel filter berm; 3) diverting the storm water from the ditch to the north to create a step pool and two ponds with wet bottoms; 4) installing native aquatic species to replace the invasives and riparian plantings along

the side slopes for ease of maintenance; 5) educating subdivision homeowners and City residents alike on the importance of detention basin maintenance and low impact development alternatives; and 6) updating the existing operation and maintenance checklist to include retrofit features.

The project addressed several goals established in the Upper Rouge River Subwatershed Management Plan (November 2001) and Rouge River Watershed Management Plan (June 2011):

Upper Rouge River Watershed Management Plan

- Require effective storm water management for all development projects, increase maintenance and retrofitting of existing detention facilities, and construct new storm water detention facilities outside the floodplain, to the extent feasible and cost effective (Goal 4.2 – Reduce Excessive River Flows).
- Evaluate the cost effectiveness of the use of regional, off-channel, storm water detention facilities to reduce flood flows and velocities in current problem areas (Goal 4.2 – Reduce Excessive River Flows).
- Provide general educational materials to residents, public agencies, and businesses on how their activities can affect the quality of the river (Goal 4.3 – Protect and Restore River Ecosystem for Fish and Wildlife).

Rouge River Watershed Management Plan

- Implement measures to effectively manage storm water volume and flow rates. (Goal 2: Reduce runoff impacts through sustainable storm water management strategies and programs).
- Work to reduce water quality impacts from urban storm water runoff (Goal 2: Reduce runoff impacts through sustainable storm water management strategies and programs).
- Continue to conduct public education and participation programs (Goal 3: Inform and educate the public to become watershed stewards).

Project Cost

The overall construction costs were \$90,000, of which 50% was funded by the Wayne County Rouge Program Office through The Rouge River National Wet Weather Demonstration Project - United States Environmental Protection Agency (EPA) Grants #XP995743-06.

Before Photographs



After Photographs

