

Detention Basin Naturalization

The Village of Glenview owns and maintains several small detention basins within the watershed of the West Fork of the North Branch of the Chicago River (West Fork). These basins are designed to reduce flood impacts during relatively large storm events, but typically do not address water quality or provide detention of small storms. The result is a high contribution of pollutants to the watershed through undeterred “first flush” through the urban environment during the most frequent types of rainfall events. To help this, three such basins were retrofit with naturalized vegetation. Water quality improvements are expected through a reduction in sediment, nutrients and pollutants discharged to the storm sewer system and ultimately to the West Fork.

Furthermore, the detention basin retrofits increase biodiversity, enhance aesthetics and accomplish pollutant reduction through increasing detention time, allowing uptake and infiltration by native vegetation and capturing smaller storm events.

The three basins that were retrofit are located off of Shermer Road, Pfingsten Road and Lindenwood Lane. The Lindenwood and Pfingsten detention basins (see picture below) had turf removed and were converted to a wet prairie environment.

Shermer Road’s basin was planted with a mix of native emergent, wetland and prairie plants. In total, 2.4 acres of turf was replaced by native wetland and prairie vegetation. These basins were selected for the pilot naturalization project because they are within the West Fork watershed, serve a relatively large drainage area, encompass relatively high impervious surface within the drainage area and have high public visibility.

The Village considers this project to be the first phase in an overall pilot plan to evaluate publicly owned detention basins for water quality and habitat improvements, and to encourage naturalization of private detention, either during initial design or as a retrofit. In addition to water quality benefits, such an approach should enhance habitat and aesthetics. It is consistent with the Village’s comprehensive natural resources plan.

Locations: Shermer Road, Lindenwood Lane, Pfingsten Road

Start of construction: May 5, 2010
Construction complete: May 29, 2010

Benefits:

- Less pollutants through reduced runoff and vegetative filtering
- Increased capture of water from small storm events
- Enhanced wetland habitat

Detention Basin: Stormwater management facility installed to protect against flooding and/or downstream erosion by storing water for a limited period of time

Retrofit: Changing/Improving existing infrastructure



Top: Lindenwood detention basin before retrofit
Bottom: After naturalization



The Village of
Glenview