

# Stormwater Basin Retrofit

**Stormwater basin retrofits** consist of modifying the stormwater basin to provide greater water quality and quantity benefits. This can include removing concrete low flow channels, reducing the size or raising the elevation of the orifice on the outlet structure, extending the flow path in the basin, or naturalizing with native plants.



This basin in Plymouth Township, Montgomery County was naturalized by planting trees and shrubs to absorb and filter stormwater.

The landowners are managing the basin as a meadow and saving money on their mowing costs.

## Recommendations for Maintaining Stormwater Basins

**Introduce native vegetation, such as trees/shrubs, grasses and flowering plants.**

**Reduce mowing to once or twice a year.**

**Check basin and outlet structure after each storm event for maintenance needs.**

**Install a sediment forebay to filter pollutants such as sediment, oils, grease, nutrients, and pesticides.**



**BEFORE:** Traditional stormwater basin with concrete low flow channel and large orifice on outlet structure.

- **Traditional basins provide limited volume control. They allow the same volume entering basin to discharge from basin.**
- **Stormwater discharges quicker from basins with concrete low flow channels.**
- **Shallow rooted turfgrass can cause erosion to occur and provides little opportunity for filtering of pollutants.**
- **Traditional basins require more mowing and maintenance than naturalized basins.**



**AFTER:** Stormwater basin retrofitted with sediment forebay and berm to extend flow path.

- **Retrofitted stormwater basins improve opportunities for groundwater recharge.**
- **Native trees, shrubs, and plants utilize more runoff than turfgrass because of the deeper roots.**
- **Planting vegetation in a basin slows down the velocity of stormwater runoff flowing through the basin, and allows for increased filtration of pollutants.**
- **Sediment forebays are small pretreatment areas used to trap pollutants from runoff before entering basin.**