

A common conventional method for managing stormwater is a stormwater basin. Basins are meant to collect stormwater and slowly release it at a controlled rate so that downstream areas are not flooded or eroded.

A **DETENTION** basin is an area where excess stormwater is stored or held temporarily and then slowly drains when water levels in the receiving channel recede. In essence, the water in the detention basin is temporarily detained until additional room becomes available in the receiving channel.

A **RETENTION** basin also stores stormwater, but the storage of the stormwater would be on a more permanent basis. In fact, water often remains in a retention basin indefinitely, with the exception of the volume lost to evaporation and the volume adsorbed into the soils. This differs greatly from a detention basin, which typically drains after the peak of a storm has passed, sometimes while it is still raining.

Both detention and retention basins are ways in which flood damage deduction can be accomplished.

THE IMPORTANCE OF DETENTION BASINS

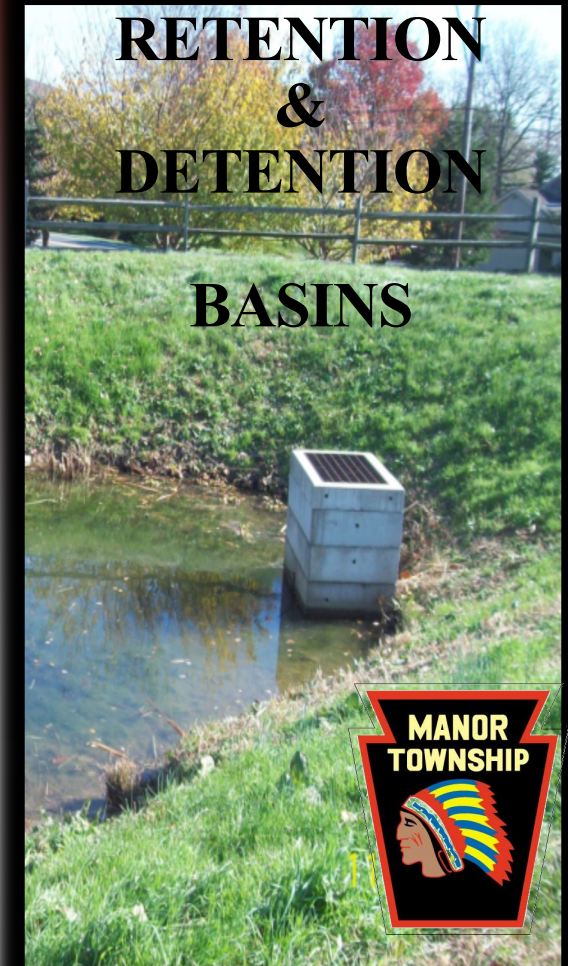
Urbanized areas produce large stormwater runoff volumes due to large amounts of impervious surfaces. Stormwater runoff can pick up pollutants such as sediment, nutrients, pesticides and other waste, becoming a significant source of water pollution. A detention basin is designed to reduce the impacts on urbanization on local streams and rivers by collecting and slowly releasing stormwater, thereby improving stormwater quality as well as reducing peak flows.

Properly maintained detention basins can provide effective pollutant removal and necessary storage volumes during larger storm events. Improperly maintained detention basins can result in increased pollutants discharged downstream, risk of localized flooding, instability of downstream channels, and aesthetic and nuisance problems. It also is often very expensive to repair failed detention basins.

Other Helpful Resources:

Environmental Protection Agency
www.epa.gov

PA Department of Environmental Protection
www.depweb.state.pa.us



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Manor Township will routinely check these basins. Below are some tips to ensure proper maintenance.

For Detention Basins:

- ◆ Remove trash and debris.
- ◆ Mow grass at least twice per year.
- ◆ Manually remove trees and woody vegetation from the dam, channels and outlet.
- ◆ Don't apply fertilizers, pesticides or herbicides.



Detention	Basin	Types
<ul style="list-style-type: none">◆ <u>Dry detention basins</u> - Typically dry depressions that temporarily fill with stormwater after a major rain storm. Dry detentions basins are less effective at removing pollutants because the stormwater passes through quickly.◆ <u>Wet detention basins</u> - Typically have a permanent pool of water and more native wetland plant life. These basins are more effective at removing pollutants.◆ <u>Stormwater wetlands</u> - Similar to wet detention basins, but contain more wetland native plants. They also provide fish and wildlife habitat.		

Benefits of Detention Basins:

- ◆ Reduces peak rate of runoff.
- ◆ Alleviates flooding.
- ◆ Cost effective.
- ◆ Can be designed to address water quality.
- ◆ Space surrounding pond can be landscaped to enhance aesthetics and provide habitat for wildlife.

For Retention Basins:

- ◆ Remove trash and debris.
- ◆ Mow grass in the dry area around the pond twice per year.
- ◆ Manually remove trees and woody vegetation from the dam, channels and outlet.
- ◆ Use certified contractor to work in pond.
- ◆ Don't apply pesticides.

