

Maintaining Your Detention Basin: A Guide for Macomb Township Residents



What is the Purpose of a Detention Basin and Why Do I Need to Maintain It?

Detention basins improve stormwater quality and reduce peak stormwater runoff from parking lots, streets, and roof tops by providing stormwater storage during large storm events. Detention basin maintenance is critical in helping to remove pollutants from stormwater, providing the required designed storage volume, and reducing flooding. Additionally, poorly maintained basins create unpleasant odors, nuisance insects, algae blooms, and an undesirable aesthetic appearance.

Who is Responsible for Maintenance of the Basin?

The property owners Association is responsible for the correct operation and proper maintenance of detention basins in residential areas. In commercial and industrial areas, individual property owners are responsible for the detention basin operation and maintenance except where property owners Associations or separate agreements exist. Macomb Township does not provide regular maintenance for detention basins.

What Needs to be Done to Maintain a Basin?

In general, a basin should be monitored to ensure it is properly functioning. Keeping the basin clear of debris is good practice. A general maintenance schedule for maintaining your basin is provided on the next page.



Detention Basin Definitions

Wet Detention Basin: A basin designed to have a remaining permanent pool of water after a storm event.

Dry Detention Basin: A basin designed to NOT have a significant pool of water remaining after a storm event.

Regional Basin: A basin designed to capture stormwater runoff from a larger, regional area, such as multiple developments.

Tributary Drainage Area: The total land area that drains into a basin.

Impervious Area: A solid surface that does not allow rain to be absorbed.

Stormwater Runoff: Runoff that occurs as a result of a rain or storm event hitting an impervious surface and running off.

Inlet: The point where stormwater enters the basin.

Forebay: A smaller basin located at the inlet of a larger basin to trap and settle out sediment and heavy pollutants before they reach the main basin.

Outlet: A structure that controls the rate of release from the basin and the water depth and storage volume in the basin.

Restrictor/orifice: A controlled opening on the outlet structure through which stormwater is discharged from the basin.

Trash Rack: A structural feature of the outlet that filters stormwater by trapping debris before runoff is discharged.

Riprap: Rock material typically used to stabilize conveyance channels or inlet pipes.

Emergency Spillway: Conveyance feature of a detention basin to discharge excess stormwater flows to maintain the integrity of the basin structure during extreme runoff events.

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Recommended Maintenance Schedules:

Storm Sewer System	
<i>Task</i>	<i>Frequency</i>
Inspect for trash or other debris blocking inlet/outlet pipes, riser/standpipe cover, and emergency spillway	Monthly and after rain events
Inspect for sediment accumulation at the inlet pipes	Semiannually and after rain events
Inspect stone around the riser/standpipe (outlet pipe)	Semiannually and after rain events
Remove accumulated sediment at basin inlets or in forebay	Semiannually or after rain events
Inspect inlet/outlet pipes for structural integrity	Annually
Inspect riprap at inlet pipes	Annually
Inspect for excess sediment accumulation in the basin	Annually
Have the basin and outlet control structures inspected by a Professional Civil Engineer to ensure it is functioning properly	Annually
Inspect and clean storm sewer system and catch basins upstream of the detention basin	Every 5 years or as needed

Detention Basin Vegetation	
<i>Task</i>	<i>Frequency</i>
Inspect side slopes, berms and spillways for erosion	Annually and after significant rain events
Re-establish permanent native vegetation on eroded slopes	Annually and after rain significant events
Maintain 15—25 foot “no mow and chemical-free” zone around basin edge	Annually
Mow the “no mow” buffer zone once a year	Annually – late April/early May
Inspect basin and “no mow” zone for invasive species*	Annually – July
Have a qualified professional selectively herbicide invasive species	Annually – July/August
Increase plant diversity by planting additional vegetation around basin	Annually – fall or early spring

Property Management	
<i>Task</i>	<i>Frequency</i>
Inspect basin for signs of chemicals; identify and remove/dispose of properly**	Monthly and after rain events
Street sweeping	Semiannually
Maintain common areas	Annually
Review maintenance plan	Annually

*Invasive species such as purple loosestrife, phragmites, buckthorn, honeysuckle and autumn olive that out-compete native vegetation.

**Chemicals such as solvents, gas, diesel, paint, natural gas, etc.