

## DETENTION BASIN DO'S AND DONT'S

- **DO** inspect inlet and outlet facilities initially on a monthly basis until the appropriate timing of maintenance is established; prepare a maintenance schedule that assures proper function.
- **DO** conduct maintenance per schedule, or on an as-needed basis after a storm event.
- **DO** keep screen and/or trash rack free from debris using established maintenance schedule or on an as-needed basis after a storm event.
- **DO** report damage to side slopes, basin banks, inlet pipe, outlet structure; prepare a repair schedule and complete repairs.
- **DO** remove vegetation adjacent to outlet works that may interfere with operation; if noxious weeds are present, schedule treatment and remove.
- **DO** remove debris and trash from the detention basin and surrounding area and dispose properly.
- **DO** collect grass clippings and other trimmings and take offsite for disposal or dispose in trash on site.
- **DO** notify owner of any hazardous conditions or materials found during inspection.
  
- **DO NOT** mow detention basin too close to the surface. Height should be 4 to 6 inches to maintain healthy grasses.
- **DO NOT** clean equipment or conduct maintenance on equipment in the detention basin, or near a storm drain or other stormwater conveyance feature.
- **DO NOT** leave grass clippings or trimming residue near basins; collect and dispose of in trash.
- **DO NOT** apply landscaping chemicals in basin area, or in areas where the residue could flow into the basin during a storm event.
- **DO NOT** attempt to clean up any unidentified or possibly hazardous materials found in or around basin during inspections; notify owner immediately upon discovery of hazardous materials.

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Village of Schaumburg

# Storm Water Management Systems



VILLAGE OF SCHAUMBURG

— PROGRESS THROUGH THOUGHTFUL PLANNING —

## DO YOU HAVE A DETENTION BASIN ON YOUR PROPERTY?

### Detention basins are used to:

- Reduce peak stormwater runoff rates by providing temporary storage during larger storm events
- Improve the quality of urban runoff from roads, parking lots, residential neighborhoods, commercial areas, and industrial sites

If the detention basin on your property was constructed early in the development process, it was probably used to trap sediment from construction activities in the tributary drainage area, a very effective way to collect and remove pollutants. In addition, the basin on your property may provide other benefits such as passive recreation and open space opportunities in addition to reducing peak runoff rates and improving water quality.

## WHO'S RESPONSIBLE FOR YOUR BASIN?

Designation of a responsible party is important to assure proper operation of your detention basin feature. In some instances this may be a shared responsibility. In the majority of cases, the commercial property owner or the HOA is responsible for the correct operation and proper maintenance of the 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.

**Tributary drainage area** ■ the total land area that drains to the basin.

## WHY MAINTAIN YOUR BASIN?

Stormwater runoff is a significant source of water pollution in urbanizing areas. In addition, the increased volumes of flow resulting from added impervious areas during urbanization results in increased runoff volumes. Detention facilities mitigate both scenarios in providing a treatment basin for pollutant removal as well as a collection basin to retain the larger flows and thus reduce the peak runoff rates downstream. Properly maintained detention basins can be very effective at removing certain pollutants and providing necessary storage volumes during larger storm events. Improperly maintained basins can increase the discharge of pollutants downstream, increase the risk of flooding downstream, increase the instability of downstream channels, and lead to aesthetic and nuisance problems.

## WHY SOME DETENTION BASINS FAIL

### Detention basins may fail due to:

- Clogged inlets or outlets resulting from trash and debris, sediment accumulation
- Failed side slopes
- Inadequate access for routine maintenance activities

Knowing why this basin was built at your commercial site or in your subdivision community and the importance of all the components working together should reduce the chance of basin failure.

**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.

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

## MAINTENANCE CONSIDERATIONS

Routine maintenance, like mowing and debris removal is vital to the proper operation of the detention basin, and needs to be done on a frequent basis. Non-routine maintenance, like slope stabilization and sediment removal may be required on an annual basis.

### Routine maintenance shall include:

**Inspections** ■ Periodic scheduled inspections with a specified checklist, and inspections after major rainfall events to check for obstructions/drainage and to remove debris/trash.

**Vegetation management** ■ Mowing on a regular basis to prevent erosion or aesthetic problems. Limited use of fertilizers and pesticides in and around the basins to minimize entry into the detention feature and subsequent downstream waters.

**Trash, debris, and litter removal** ■ Removal of any trash and debris causing obstructions at the inlet, outlet, or orifice during periodic inspections and especially after every runoff producing rainfall event. General pickup of trash, in and around the basin during all inspections.

**Mechanical equipment check** ■ Inspection of any valves, pumps, fence gates, locks or mechanical components during periodic inspections and appropriate replacement or repair.

**Structural component check** ■ Inspection of the outlet works, inlet, orifice, and trash rack, on a regular basis.

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

**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.

**Easements** ■ An area with various restrictions to provide open access for inspection or repair of drainage features.