

Dry Detention Basins

A dry detention basin is a storage basin designed to provide water quantity control through detention of stormwater runoff. The purpose of detention is to allow some of the water to exfiltrate into the ground and the remainder of the water to release slowly over a period of time to reduce downstream water quantity impacts. Dry detention basins are designed to completely drain following a storm event and are normally dry between rain events. They provide limited pollutant removal benefits and are not intended for water quality treatment alone.



There are some common problems to be aware of when maintaining a dry detention basin. They include, but are not limited to, the following:

- Sediment build-up
- Trash, litter, and debris accumulation
- Clogging and structural repairs in the inlet and outlet structures
- Establishing vegetation within the dry detention basin
- Erosion
- Mowers compacting and rutting the basin bottom
- Mosquitoes breeding in the practice
- Ant mounds

Routine maintenance should be performed on the dry detention basins to ensure that the structure is properly functioning. Note that during the first year the dry detention basin is built, maintenance may be required at a higher frequency to ensure the proper establishment of vegetation in the practice. In the event of snow, check to make sure that the materials used to de-ice the surrounding areas stay out of the practice to avoid clogging and further pollution.

Dry detention basins should be inspected after a large rainstorm. Keep drainage paths, both to and from the BMP, clean so that the water can properly infiltrate into the ground. Note that it might take longer for the water to infiltrate into the ground during the winter months and early spring. If the dry detention basin is not draining properly, check for clogging of the inflow and outflow structures.

If the forebay or dry detention basin has received a significant amount of sediment over a period of time, then the sediment at the bottom of the forebay or dry detention basin may need to be removed. Accumulated sediment in the practice decreases the available storage volume and affects the basin's ability to function as it was designed.

If designed and maintained correctly, dry detention basins should not become a breeding ground for mosquitoes. A mosquito egg requires 24-48 hours to hatch. In addition, it takes 10-14 more days for the egg to develop and become an adult. By having a dry detention basin that drains properly, it is unlikely that a dry detention basin would provide a habitat that could become a breeding area for mosquitoes. Should the dry detention basin become a breeding ground for mosquitoes, the problem is likely with the overflow structure which may need to be addressed.

The table below shows a schedule for when different maintenance activities should be performed on the dry detention basins.

Dry Detention Basin Typical Routine Maintenance Activities and Schedule

Activity	Schedule
<ul style="list-style-type: none"> • Remove debris from basin surface to minimize outlet clogging and improve aesthetics. • Note erosion of detention basin banks or bottom • Inspect for damage to the embankment. • Monitor for sediment accumulation in the facility and forebay. • Examine to ensure that inlet and outlet devices are free of debris and operational. 	Annually and following significant storm events
<ul style="list-style-type: none"> • Remove sediment buildup. • Repair and revegetate undercut and/or eroded areas. • Perform structural repairs to inlet and outlets. • Repair undercut or eroded areas. • Mow side slopes. • Seed or sod to restore dead or damaged ground cover. 	As needed based on inspection
<ul style="list-style-type: none"> • Mow to limit unwanted vegetation. • Litter/ Debris Removal. 	Routine