

Storm Water Detention Structures

Have you ever noticed or wondered what the pond area in your neighborhood is? Since the mid 1970s, Municipalities have required dry extended detention basins or ponds to be incorporated into new development projects.

Detention ponds are designed to temporarily detain or store storm water run-off to reduce the peak rate of flow into a stream during a rain event. The ponds help to prevent localized flooding downstream and reduce streambank erosion. During plan review, the Developer must show that the rate of storm water leaving the area after development will be no greater than the rate of storm water leaving the property before development. Detention ponds are designed to release captured storm water over time, typically over a 24-hour period, and do not allow for the permanent pooling of water.

Therefore, the size of the pond will vary from project to project. Typically, detention basins, or ponds, are earthen structures constructed by excavating existing soil or impoundment of a natural depression. In some developments there may be an underground oversize pipe or tank, designed with the same intent to temporarily collect and slowly release storm water into a stream.

Storm Water regulations associated with the Federal Clean Water Act (CWA) are administered under the Municipal Separate Storm Sewer System (MS4) Program. The MS4 Program is managed by the Pennsylvania Department of Environmental Protection (PADEP).

One of the six Minimum Control Measures (MCMs) required under the MS4 Program is MCM # 5, Post Construction Storm Water Management. Detention ponds and tanks are inventoried structural Best Management Practices (BMPs). They are a DEP reporting requirement. Currently, there are sixty-four (64) detention ponds or tanks within the Township. Fourteen (14) are owned and maintained by the Township. The remaining sixty (50) ponds and tanks are privately owned. The majority are owned by Homeowners Associations. Each year, detention ponds and tanks are inspected by the Township. Maintenance deficiencies are noted and referred to Code Enforcement. It is important to understand that maintenance and remediation of a detention pond or tank is the responsibility of the owner.

Maintaining Your Detention Pond

A consistent maintenance program is the best way to ensure that a detention pond will continue to perform its design function. Regular detention pond maintenance will ensure that your detention pond is aesthetically pleasing, functional and safe.

Vegetation Management

- Grass is the most common groundcover in and around a detention pond. Grass should be regularly mowed to maintain consistent growth.
- It is ok and recommended to cut any Cattails growing within the internal pond area.
- All “wild” trees and woody bushes should be removed from the pond sides, embankment and internal pond area.
- Seed any areas without vegetation growth to help prevent erosion

Debris and Trash Removal

- Remove any debris or trash that may blow or wash into the pond area
- Remove any trash or debris blocking orifices, grates, trash racks, outlet pipes or the emergency spillway.
- Remove any fallen trees or limbs
- Do not place or allow yard waste such as grass clippings, leaves or brush to be disposed of around the pond area.
- Do not allow pet waste to be discarded around the pond area

Structural Integrity of the Pond or Piping

- Significant sedimentation accumulation in the pond bottom that may impede water flow or block the discharge pipe should be removed
- Check embankment conditions for signs of erosion. Repair as needed
- Check the control structures and piping. Replace any deteriorated piping
- Check the outfall structure. Add rip-rap or repair as needed.
- Check the structural integrity of hatch doors for underground tanks. Replace hatch doors with broken hinges or those that are severely rusted.
- Accessways should remain open and free of debris

Everyone has a stake in and responsibility for storm water control under the MS4 Program, the Township, Homeowners Associations, Businesses and residents. These are your detention ponds, typically located in your green space. We need to keep our storm water detention facilities aesthetically pleasing and functional, allowing them to perform as designed.