

# BOROUGH OF FOX CHAPEL

## Owner's Guide: Maintaining Storm Water Management Facilities

This information is designed to help you gain some general knowledge of proper Storm Water management facility maintenance requirements. By making sure your facility is properly maintained, you can help prevent serious flooding problems and protect your local environment.

### Private Storm Water Management Facility Requirements

Regular maintenance of storm water management facilities helps ensure proper functioning, longevity and public safety. There are 195 storm water management facilities Borough wide with 166 of these facilities maintained by individual residents. Installation and maintenance of storm water management facilities is required as a condition for a building permit including in recent years execution of a Private Maintenance Agreement. This Agreement creates a legally binding obligation for private owners to maintain their facilities on a regular basis. To assess conditions, once a year the Borough is required by DEP to inspect each privately maintained facility. Results of inspections are given to the land owner for corrective action, if any.

### Maintenance Information for Storm Water Management Facilities

- **Detention Ponds**
- **Underground Detention**
- **Infiltration Trenches**
- **Manufactured Facilities**
- **Rain Gardens**
- **Permeable Pavement**

#### Detention Ponds

Detention ponds are designed to detain storm water runoff generally less than 24 hours after a rain event and slowly release it into a swale or stream. Water that drains too quickly from a dry pond does not have adequate time to filter and can damage the banks of downstream creeks. Water retained on site too long can impact the dam or lead to algal problems (particularly during the summer).

Maintenance is required when:

- too much sediment accumulates and interferes with volume capacity,
- trees or other shrub vegetation grow on the dam embankment, or pond base,
- the dam embankment becomes denuded or otherwise presents an erosion problem,
- visible damage to any of the mechanical equipment is present,
- the low flow orifice, forebay or concrete trickle ditch is blocked by trash, debris or sediment,
- animal burrows are present on the dam embankment, or
- standing water remains longer than 72 hours after a rain event.



#### Underground Detention

Consisting of a series of large underground pipes or chambers, underground detention facilities detain storm water runoff and slowly release it into a swale or stream. Newer underground detention facilities are usually coupled with other treatment facilities to remove pollutants while the runoff is detained. Maintenance is required when:

- there is visible damage present to any of the inlets, pipes or outlets, or
- if excessive sediment and/or debris has accumulated in the inlet, pipes or outlets.

### Infiltration Trenches/Pits

Usually composed of limestone or gravel, these trenches are designed to give storm water runoff an opportunity to seep into underlying soil. Maintenance is required when:

- woody vegetation begins to grow in the trench or pit,
- visible damage to any of the mechanical equipment is present,
- standing water is present 24 hours after a rain event, or
- if runoff no longer infiltrates into but flows out of the trench or pit.



### Manufactured Facilities

Also called manufactured Best Management Practices and often difficult to locate, these facilities appear to be nothing more than manholes. Manufactured facilities are subterranean chambers that use various techniques to retain storm water and filter pollutants. Maintenance is required when:

- trash and/or other debris is present at or inside the inlet or outlet,
- the accumulation of sediment is greater than the manufacturer's recommendation, or
- if runoff no longer enters the facility.

### Rain Gardens

Mimicking natural vegetative cover, rain gardens absorb and treat runoff from pavement or yard areas through mulch, layers of soil and certain microbes. Rain gardens are maintenance intensive and require regular mulch replacement. Maintenance is required when:

- vegetation becomes discolored, wilted or dies,
- erosion is present on the berms or slopes,
- the overflow riser or grate is blocked with debris, or
- standing water is present in the basin 72 hours after a rain event.



### Permeable Pavement

Made of pervious materials like bricks and/or gravel, permeable pavement is typically used in driveways to provide storm water runoff a chance to percolate into the underlying soil, while still maintaining the structural integrity of pavement. Maintenance is required when:

- standing water is present 48 hours after a rain event, or
- if too much sediment has accumulated inside the pavers so that the stormwater runoff absorption rate is affected.



### Public Pond Maintenance Practices

If a storm water maintenance pond on your property or in your community is maintained by the Borough, please observe the following guidelines:

- Publicly maintained ponds have easements for maintenance access, thus all easements must be clear of obstructions. No structures are permitted within an easement.
- As part of a routine maintenance program, the Borough ensures dam embankments of all publicly maintained ponds are mowed twice a year for function and safety. The Borough encourages property owners to allow vegetation to grow on the pond floor as a pollutant filter.
- Publicly maintained ponds often exist on privately owned land; it is the land owners' responsibility to perform routine maintenance outside the pond easement.

