

Detention Pond Maintenance

- ❖ Schedule routine inspections on the pond after every storm event.
- ❖ Remove any trash or debris that may have accumulated.
- ❖ Make sure that the pond's banks and bottom are stable.
- ❖ Remove any obstructions (trash, sediment etc.) that may be blocking the inlet and outlet pipes or the emergency spillway.
- ❖ Properly and safely remove and dispose of any pollutants (oil, chemicals, etc.) that may have washed into the pond.
- ❖ Invasive or excessive vegetation (willows or other large trees, privet and shrubs/bushes) should be removed. **With questions about what should or shouldn't be removed or plant classification, please contact the City for assistance.
- ❖ Minimum maintenance requirements include two cuttings per growing season by bush hog or mower and sediment removal when required.
- ❖ Never use pesticides, herbicides or fertilizers in your pond to control the vegetation! These products are harmful to the environment at the local and regional levels.
- ❖ The proper drawdown time for the detention pond should be within 24-72 hours.
- ❖ Do not place yard waste such as leaves, grass clippings or brush in ponds.

The purpose of Dry Detention Ponds is to temporarily store stormwater runoff while allowing time for pollutants to settle and the water to recharge the ground. If water is still pooling after 72 hours then the pond is not functioning properly and maintenance is required. Some dry detention ponds may contain a permanent pool of water that would be considered a small wetland area. While a wetland may provide benefits for water quality and the surrounding ecosystem, the maintenance requirements differ from the standard detention pond. Refer to the construction drawings or As-Built certification or contact the City of Chattanooga for clarification.

Maintenance Concerns, Goals, and Objectives

- ★ Trash and debris removal
- ★ Vegetation overgrowth (invasive plants)
- ★ Zero standing water after 3 days
- ★ No obstructions at pond inlet(s) or outlet

Property Owner Inspections

Detention ponds, constructed prior to September 2006 and does not currently have a maintenance agreement, are the responsibility of the property owner to provide proper operation, inspection, maintenance and repair of stormwater management facilities. It is good general practice to keep a record of all inspections which will aid in the overall health of the BMP to ensure it is functioning as intended. **A good maintenance plan with regular inspections will reduce the potential of incurred costs in the future.**

When developing an inspection maintenance schedule, there are four types to consider:

- Spot - a lighter version to the routine, this is intended to be a quick visual check following storm events to remove any floatable debris that may have found its way into the pond. This will also determine if there is a need for an unscheduled routine maintenance.
- Routine - a routine maintenance should involve scheduling a monthly, quarterly or semi-yearly date for inspecting the pond. Developing a standard guide or checklist would be considered good practice in order to keep a record of the continued maintenance.
- Non-Routine - this type of maintenance will depend on the size of the pond and whether or not regular maintenance is performed. Generally, this type of maintenance occurs approximately every ten (10) years. Assessment of structures (inlet and outlet) and sediment deposit are the major indicators during inspection.
- Emergency - is an unexpected event that requires maintenance or repair generally occurring when the detention pond is not functioning properly. If constant neglect of detention pond persists, these repairs or maintenance could be very costly to restore the pond to proper function.

Sediment Removal

A primary function of stormwater treatment BMPs is to collect and remove sediments. The sediment accumulation rate is dependent on a number of factors including watershed size, facility sizing, construction upstream, nearby industrial, or commercial activities, etc.

Sediments should be identified before sediment removal and disposal is performed. Special attention or sampling should be given to sediments accumulated from industrial or manufacturing facilities, heavy commercial sites, fueling centers or automotive maintenance areas, parking areas, or other areas where pollutants are suspected. Sediment should be treated as potentially hazardous until proven otherwise.

Some sediment may contain contaminants for which TDEC requires special disposal procedures. Consult TDEC – Division of Water Pollution Control, Chattanooga Office, at (423) 634-5704 if there is any uncertainty about what the sediment contains or if it is known to contain contaminants. Clean sediment may be used as fill material, hole filling, or land spreading. It is important that this material not be placed in a way that will promote or allow resuspension in stormwater runoff. Some demolition or sanitary landfill operators will allow the sediment to be disposed at their facility for use as cover. This generally requires that the sediment be tested to ensure that it is innocuous.

The following is a list of Do's and Don'ts regarding the care for your stormwater BMP.

DO's

- Educate residents on the role of the stormwater facility. Many people do not know the water quality benefits provided by the facilities and do not treat them accordingly.
- Plan neighborhood lawn care to prevent the overuse of fertilizers. This can waste money and have a negative effect on water quality.
- Discourage others from dumping lawn clippings, leaves or other yard waste into the storm drain or stormwater facility.
- If you notice an oil leak under your vehicle, place a pan filled with kitty litter under it until the leak gets repaired. This is an absorbent material and will soak up the oil making it easy to dispose of properly.
- Dispose of your pet waste in the trash can. Animal wastes that enter the storm drain or the stream network contain e-coli that may spread bacteria.

DON'TS

- Do not dump grass clippings, leaves, loose soil or trash into a storm drain or into a stormwater facility. All of these materials will cause the stormwater facility to clog. The grass and leaves do not go away and end up in the receiving streams. This causes algae growth and will deplete the oxygen supply in the streams and river.
- Do not wash dirty vehicles on the street or driveways. The detergent will only end up in the storm drain.
- Do not dump used motor oil, antifreeze or other automotive by-products into storm drain inlets.
- Do not over fertilize your lawn with harsh chemicals and products.
- Do not dispose of paint, household chemicals, petroleum products or soaps in the storm drain.

Detention Pond Maintenance Activities	Suggested Frequency
Remove accumulated trash and debris from the basin, around the riser pipe, side slopes, embankment, emergency spillway, and outflow trash racks. The frequency of this activity may be altered to meet specific site conditions.	Quarterly, or more frequently,, as needed
Clear vegetation out of conveyances and remove sediment from forebay to reduce the frequency of main basin cleaning.	Annually, as needed, if applicable
Remove nuisance or invasive plant species.	Annually, as needed
Trim overgrown vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and mosquito control reasons.	Semi-annually, or more frequently, as needed
Keep access (easement) clear of obstructions and woody vegetation.	Annually
Mow side slopes	Twice during growing season, as needed during off season
Seed or sod to restore dead or damaged ground cover.	Annually, as needed
Repair erosion to banks and bottom as required.	Annually, as needed
Repair undercut or eroded areas.	Annually
Monitor structural components (pipes, riser structures, orifice plates or energy dissipaters) for signs of deterioration such as cracks, sinkholes, and separation.	Annually, as needed
Supplement wetland plants if a significant portion has not been established (at least 50% of the surface area).	Annually, as needed <i>(Enhanced-Extended Detention Only)</i>
Monitor sediment accumulation and remove accumulated sediment and re-grade about every 10 years or when the accumulated sediment volume exceeds 10-20% of the basin volume, or when accumulation reaches 6 inches or if re-suspension is observed. Clean in early spring so vegetation damaged during cleaning has time to re-establish.	Every 10-25 years, as needed