

Why do I have a stormwater basin? Who is responsible for maintenance?

As properties are developed in Cuyahoga County, they are required to permanently address stormwater impacts. Stormwater runoff is water from rain or melting snow that “runs off” across the land instead of seeping into the ground. It comes in contact with pollutants which are carried to nearby storm drains and local streams untreated.

Development typically results in the construction of an engineered stormwater control measure (SCM) to provide flood control and remove pollutants from stormwater runoff before draining to nearby waterways. The engineer who designed your stormwater basin should have provided you with a long-term operation and maintenance manual.

In most Northeast Ohio communities, the required long-term operation and maintenance of the SCM falls on the property owner or property owners association. This brochure is a guide to meet those obligations.

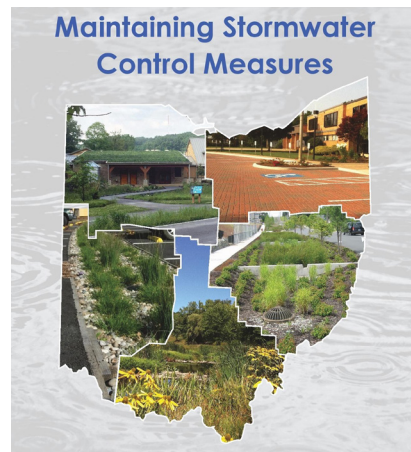


Where can I find more information?

For more detailed information about routine and non-routine maintenance of stormwater control measures (SCMs), download the *Maintaining Stormwater Control Measures Manual* here:

www.neohiostormwater.com

- Dry basin details can be found on page 9
- Wet basin details can be found on page 11
- Routine and non-routine maintenance details can be found on page 30
- Basin maintenance details can be found on pages 33 and 34
- A dry basin inspection checklist can be found on page 55
- A wet basin inspection checklist can be found on page 57



For additional questions regarding SCM maintenance, please contact:

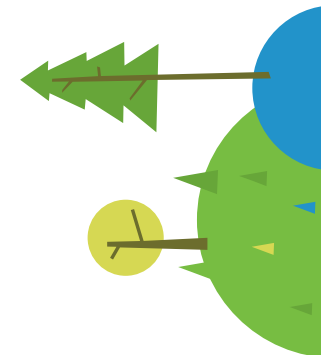
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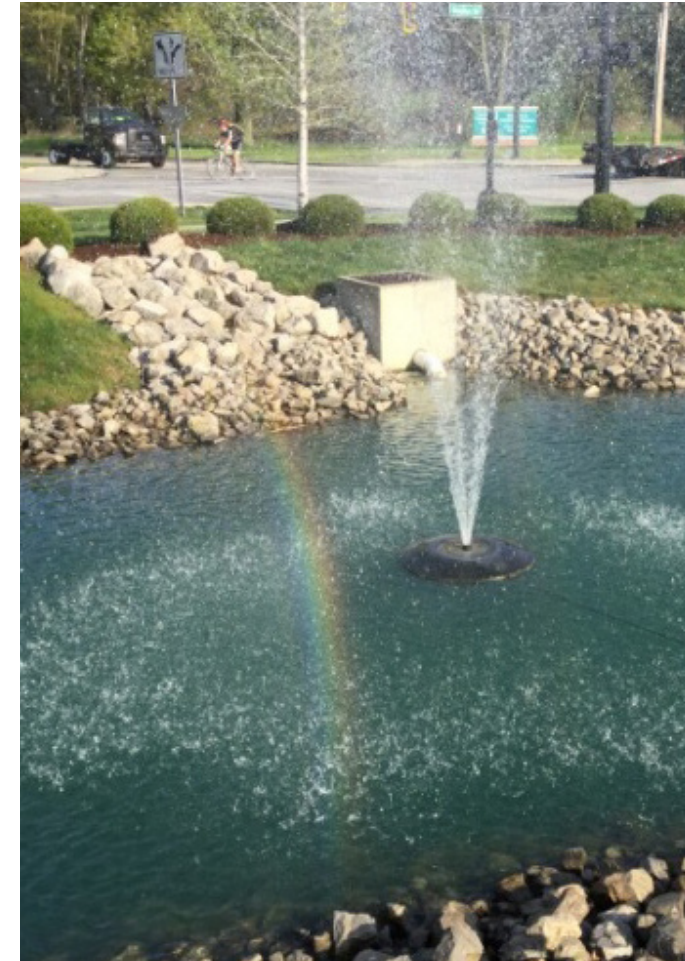
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Stormwater Basins

A Maintenance Guide



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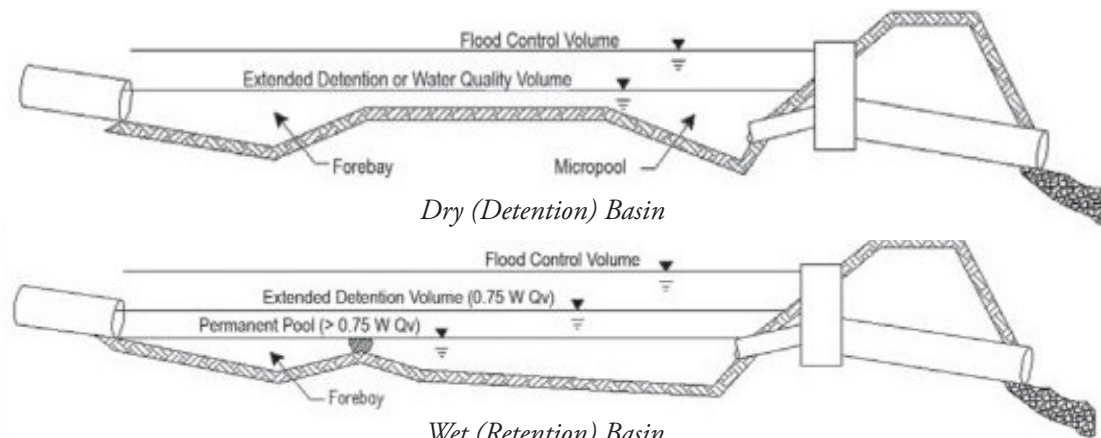
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What is a stormwater basin? Why do I have to inspect and maintain it?

Wet (retention) and dry (detention) basins are bowl shaped stormwater control measures (SCMs) designed to settle out sediment and pollutants and hold back stormwater runoff during rain events. There are hundreds of stormwater basins in Cuyahoga County.

The goal of a stormwater basin is to catch stormwater runoff and then release it slowly over 24-72 hours so that pollutants and sediment settle to the basin bottom, and downstream flooding and erosion is prevented. Many older stormwater basins drain completely between storm events, but newer basins have small pools called forebays (near the inlet) and micropools (near the outlet) that hold water year round in order to let sediment and pollutants settle.

Maintaining the intended function of stormwater basins requires that basin vegetation, designed volume and infrastructure are maintained.



Typical stormwater basin cross-section views. Source: Ohio Rainwater and Land Development Manual

What maintenance tasks should I be performing?

Routine inspection and maintenance of stormwater basins is key to ensure adequate function. Routine maintenance should be as affordable as common landscaping and can be performed by property management professionals. Non-routine maintenance can be costly and may require a contractor with more specialized stormwater experience.

Maintenance for dry and wet basins is very similar, though older retention basins designed in line with streams typically experience higher sediment loading.

Monthly and After Rain Events

- Remove trash and debris from basin and outlet structures
- Mow embankment to prevent tree establishment (a vegetative buffer can be left around wet basins and mowed once a year)

Annually

- Inspect embankment and outlet structures for damage and proper flow. Repair as necessary.
- Remove woody vegetation (trees and shrubs) from embankment/dam
- Repair eroding areas with soil grading/ amendments and seeding
- Monitor sediment accumulation

Semi-annually

- Remove invasive plants (typically narrowleaf cattail and reed canary grass)

3-7 years

- Remove sediment from forebays when accumulation has reached 6 inches

15-20 years

- Dredge sediment when basin volume is reduced by 25%



Just like your car, home, or a waste water treatment plant, stormwater basins need maintenance to function properly.

When properly maintained, basins can be a beautiful addition to your landscape.

How can I reduce the cost of maintenance?

Several good housekeeping habits can help prevent non-routine maintenance needs.

- Keep the property and stormwater basin clean.
 - Do not throw trash, yard clippings, or toxic substances into the basin or storm drains.
- Do not over apply fertilizers in areas draining to the stormwater basin.
 - Test soil before fertilizing.
- Prevent erosion with well-established perimeter vegetation.
 - Use native vegetation when possible for added stormwater uptake.
 - A 3-5 foot natural vegetated buffer can also dissuade geese.



Routine and non-routine stormwater basin maintenance should be accounted for in the property budget.