Why do I have a bioretention area? 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.

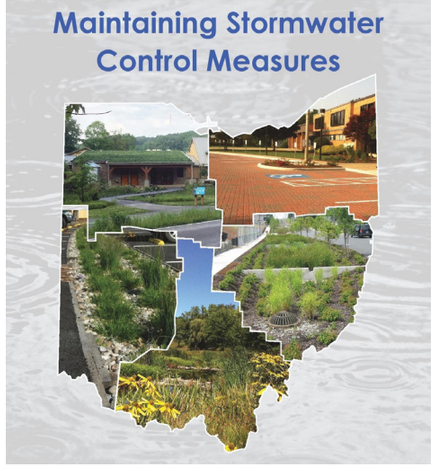
Development typically results in the construction of an engineered stormwater control measure (SCM) to provide flood control and remove pollutants from stormwater runoff before draining to nearby waterways. The engineer who designed your bioretention area should have provided you with a long-term operation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

- Details about bioretention can be found on page 7
- Details about routine and non-routine maintenance can be found on page 30
- Bioretention area maintenance details can be found on page 32
- A bioretention area inspection checklist can be found on page 53



For additional questions regarding SCM maintenance, please contact:

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Bioretention Areas

A Maintenance Guide

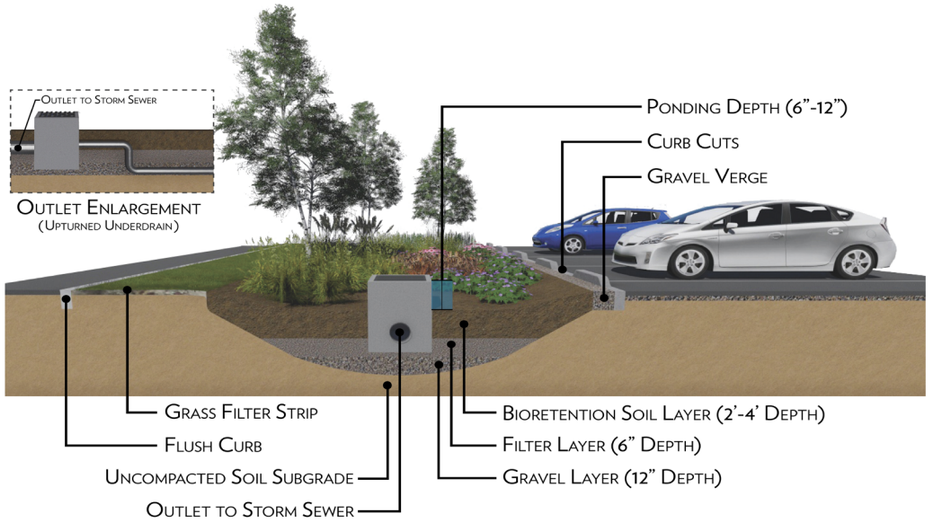
Ohio Environmental Protection Agency

cuyahoga SOIL&WATER conservation district

What is bioretention? Why do I have to inspect and maintain it?

Bioretention areas are vegetated stormwater control measures (SCMs) with a depression made of specialized soils and a perforated under drain. The goal of bioretention areas is to catch stormwater runoff and infiltrate it slowly over 24 hours so that pollutants are absorbed and downstream flooding and erosion is reduced. There are over 300 bioretention areas in Cuyahoga County.

Maintaining the intended function of bioretention areas requires that the bioretention soils do not get compacted or clogged with fine sediment (clay and silt) and that pipes in and out of the bioretention area remain clog free. It is also important to maintain bioretention vegetation to allow for nutrient uptake as well as inspection and maintenance access.



Typical bioretention area cross-section view. Source: Chagrin River Watershed Partners,Inc.

What routine maintenance tasks should I be performing?

Routine inspection and maintenance of bioretention areas is key to ensure adequate function. Routine maintenance should be as affordable as common landscaping and can be performed by property management professionals.

Biweekly - Monthly

- Remove trash, debris and fine sediment
- Weed and prune bioretention vegetation

As Needed and After Rain Events

- Unclog pipes and overflow structures
- Repair (stabilize) areas experiencing erosion

Annually

- Replenish mulch (There should be 2-3 total inches of coarse hardwood mulch)

How can I reduce the cost of maintenance?

Like your car, home, or a waste water treatment plant, bioretention areas need maintenance to function.

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

- Keep the property and bioretention area clean.
  - Do not throw trash, yard clippings, or toxic substances into the bioretention area or storm drains.
- Do not over apply fertilizers in areas draining to the bioretention.
  - Test soil before fertilizing.
- Prevent erosion with well-established vegetation.
  - Use native vegetation when possible for added stormwater uptake.
- Protect the bioretention area from snow storage and salt in the winter to prevent compaction, clogging and plant loss.
  - Communicate with plowing staff that snow should not be stored in the bioretention area.

What maintenance is required if bioretention areas stop functioning?

Non-routine bioretention area maintenance, due to neglect or age, can be costly and may require a contractor with more specialized stormwater experience.

Common non-routine maintenance includes:

- Replace dying plants
- Clean the perforated under drain
- Aerate compacted soils
- Replace specialized soil
- Repair structural component(s)
- Reconstruct the bioretention area

Routine and non-routine bioretention area maintenance should be accounted for in the property budget.
When properly maintained, bioretention areas can be a beautiful addition to your landscape.