



PROTECTING AND ENHANCING THE NATURAL ENVIRONMENT THROUGH COMPREHENSIVE ENVIRONMENTAL PROGRAMS

MICRO-SCALE PRACTICES

Micro-scale practices are small stormwater management features used to capture and treat stormwater on-site in small areas, typically less than one acre in size. Micro-scale practices can be installed throughout an area to create a system that resembles natural drainage characteristics.

Landscape infiltration uses landscape vegetation to capture and filter rainwater in an area with minimal slope. The water filters through the vegetation and planting soil before passing through a gravel layer below, where it infiltrates the native soil. **Micro-Bioretenion** uses a filter bed mixture of sand, soil and organic matter to capture and treat storm water runoff from impervious surfaces (like parking lots or driveways). **Rain Gardens** are small, concaved landscape feature designed to capture and temporarily pond stormwater and allow it to filter into the soil over 24-48 hours. Enhanced Filters are a modification to the other micro-scale practices to enhance



Rain Garden



Micro-Bioretenion

WHY IT'S IMPORTANT TO MAINTAIN YOUR MICRO-SCALE PRACTICES

An unmaintained micro-scale area may:

- Stop filtering the rainwater and allow trash and pollutants to enter into our local streams.
- Be difficult or expensive to restore if left unmaintained.
- Allow water to pool on the surface long enough to allow mosquitoes or other insects to breed (longer than 3 days).

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groundwater filtration and recharge.

Who is responsible for this maintenance?

As the property owner, you are responsible for all maintenance of your micro-scale practices.

MAINTENANCE AND MONITORING

The different types of micro-scale practices have some specific maintenance requirements that are unique to them.

- **Landscape Infiltration** – if sediment builds up on the surface of the landscaping, remove it along with the top 2-3 inches of the surface and replace. If standing water persists after the filtering media has been maintained, it may be necessary to clean or replace the underlying gravel/soil/sand bed.
- **Micro-Bioretenion** – the top 2-3 inches of mulch should be replaced as necessary.
- **Rain Gardens** – similar maintenance requirements to traditional landscaping.
- **Enhanced Filters** – periodically check for the presence of water in the observation well. If water is present longer than 48 hours after a rain event, the enhanced filter might be clogged or require maintenance or replacement.

FREQUENCY*	ACTIVITY*
During the first year	<ul style="list-style-type: none"> • Replant any areas where the plants do not appear to be taking hold.
As needed	<ul style="list-style-type: none"> • If certain plants are not surviving, replace with more appropriate plants. • Occasional pruning/replacement of dead vegetation is necessary. • Watering is necessary during extended dry periods. • If water ponds for longer than 48 hours or if algae growth is observed, the top few inches of planting soil/filter media should be removed and replaced.
Annually, as needed	<ul style="list-style-type: none"> • In areas where micro-scale practices are used to treat heavy metals (ex. roads, parking lots), replace the mulch bed annually.

* Follow manufacturer's guidelines

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<https://www.annapolis.gov/450/Stormwater-Management>

This fact sheet provides SWM practices information and maintenance requirements that are general in nature. Additional maintenance may be required based on the unique nature of your stormwater management practice.

Troubleshooting Issues

Symptom	Possible Cause	Solution
Poor plant health	Your plants may be the wrong plant type for your shade and moisture conditions or they may be smothered by weeds.	Remove dead or diseased plants and plant new vegetation as needed. Also be sure to regularly remove weeds and other invasive plants.
Standing water for 48 hours after a rain storm	Clogging due to leaf litter, sediment, or debris accumulation.	Remove any visible debris from the surface. If a bioretention area, where possible, inspect the perforated pipe for blockages.
Erosion or bare soil	The rainwater is moving too fast and/or vegetation is lacking or nonexistent.	Stabilize the eroded areas by planting new vegetation. Consider using rocks to slow the flow of rainwater.
No mulch or visibly reduced mulch	Mulch naturally decomposes over time. Large storms can also move mulch.	Replenish mulch to a total depth of 3 inches across the entire area. Use of double-shredded mulch is recommended.

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INVASIVE PLANTS

“Invasive” describes a species that, when introduced into an ecosystem aggressively establishes itself at the expense of native plants or animals (*Maryland Department of Natural Resources*). Regularly inspect vegetation and remove invasive/nuisance plant species. For more information on invasive plants in Maryland, please go to the Maryland Department of Natural Resources website at: <http://dnr.maryland.gov/invasives/Pages/default.aspx>.



Stormwater Management in Hinsdale, IL