

Why do I have permeable pavement? 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 permeable pavement 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.

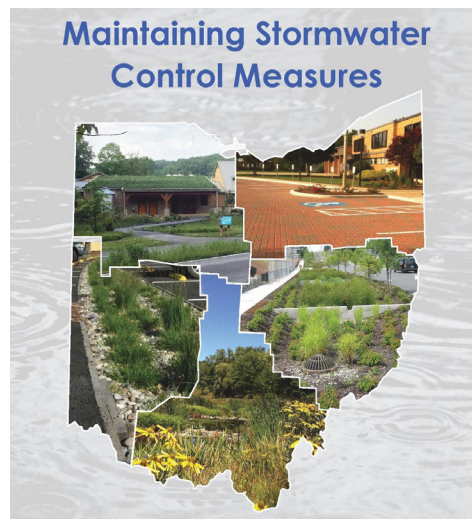


Where can I find more information?

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 permeable pavement can be found on page 15
- Details about routine and non-routine maintenance can be found on page 30
- Permeable pavement maintenance details can be found on page 35
- A permeable pavement inspection checklist can be found on page 61



For additional questions regarding SCM maintenance, please contact:

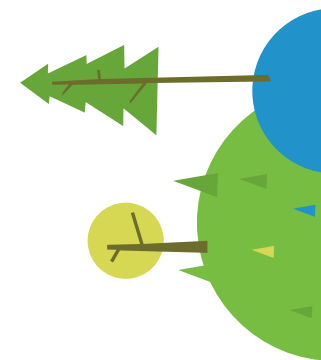
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Permeable Pavement A Maintenance Guide



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What is permeable pavement?

Why do I have to inspect and maintain it?

Permeable pavement is a layered pavement system with a porous surface and layers of stone that act as a reservoir for stormwater runoff. Rather than run over the surface of permeable pavement, stormwater filters through the porous pavement surface and into the stone reservoir, allowing sediment and pollutants to settle out while holding back water to then drain it slowly into the ground. In Northeast Ohio, many soils do not drain sufficiently for direct infiltration of stormwater runoff. In those cases, it is common to include a perforated underdrain pipe in the stone layers that routes stormwater to nearby streams.

Permeable pavement comes in many designs including permeable interlocking concrete pavers, pervious concrete, porous asphalt, or vegetated geogrids. These systems provide structure and stability for parking and driving while allowing water to pass through the pavement. Permeable pavement can achieve required runoff detention and infiltration without taking up the space required for a stormwater basin. There are over 50 permeable pavement applications in Cuyahoga County.

Routine maintenance is necessary to ensure permeable pavement functions as designed. Sediment and debris removal is the primary maintenance task, and it should be performed at least twice per year. When done frequently, debris and sediment can be removed with a shop vacuum or leaf blower. Minor clogging can be addressed with a regenerative air sweeper. If clogging extends below the surface, a vacuum truck will be needed.

What routine maintenance tasks should I be performing?

Routine maintenance of permeable pavers should be as affordable as common landscaping and can be performed by property management professionals. Rental of a regenerative air sweeper or vacuum truck will be more costly and require specialized stormwater experience.

At least twice per year

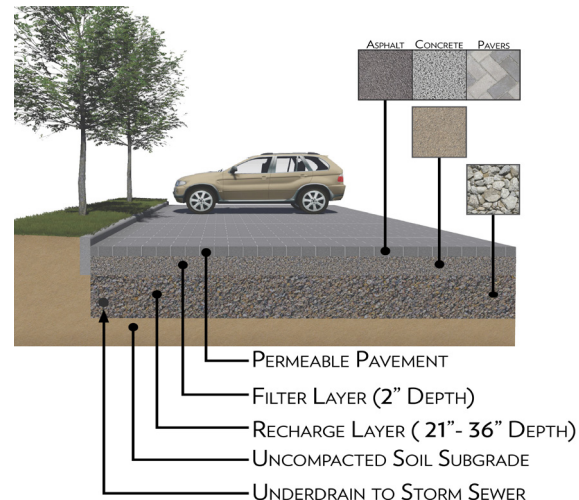
- Clean pavement of debris and sediments.
- Remove weeds, grass, or other plants growing on the surface of the pavement. Use herbicide as needed to avoid pulling out pavement filter material.

Annually

- Inspect pavement surface for structural integrity. Repair as needed.

After Large Rain Events

- Monitor pavement to ensure it dewateres and does not pond.



*Typical permeable pavement cross-section view.
Source: Chagrin River Watershed Partners, Inc.*



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

As Needed

- Replace washed gravel between permeable pavers (especially after vacuuming).
- Seed and straw unvegetated (bare) areas draining to the pavement.
- Water vegetated grid pavement areas.

Long-Term

- Avoid sealing, repaving with non-porous materials and sediment clogging of permeable pavement.

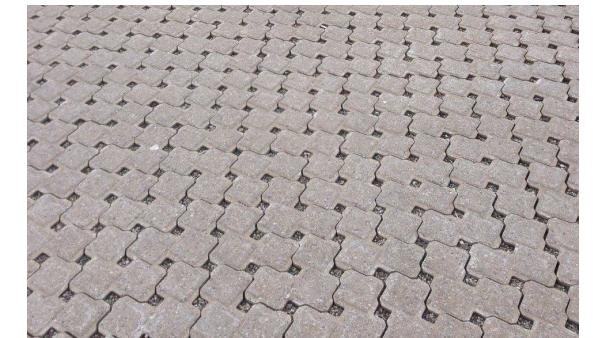
Winter Considerations

- Lift the plow blades 0.5 inches above the surface and/or use blade with a rubber edge.
- Do not pile and store snow on the permeable pavement.
- Do not apply sand or cinders.
- Use less salt. The interaction between the porous surface and the soil beneath may result in less ice.

How can I reduce the cost of maintenance?

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

- Don't neglect routine maintenance.
- Keep the property and permeable pavement clean.
 - Do not throw trash, yard clippings, or toxic substances into the parking lot or storm drains.
- Do not over apply fertilizers in areas draining to the permeable pavement.
 - Test soil before fertilizing.
- Prevent sedimentation with well-established perimeter vegetation.
 - Use native vegetation when possible for added stormwater uptake.
- Manage salt and deicers carefully.
 - Sweep up and properly dispose of salt to protect surrounding vegetation and pavement from winter damage.



Routine and non-routine permeable paver maintenance should be accounted for in the property budget.