

Kitsap County Public Works Permeable Pavement Fact Sheet



The Silverdale YMCA parking lot has pervious concrete and permeable interlocking pavers

What is Permeable Pavement?

Permeable pavement (also known as pervious and porous pavement) looks very much like ordinary pavement except it has small openings that allow water to pass through and eventually soak into the ground. Permeable pavement significantly reduces the amount of stormwater runoff compared to conventional pavement. It can be made of concrete, asphalt or pavers, and can be used for roads, sidewalks, trails, parking lots, and other surfaces.

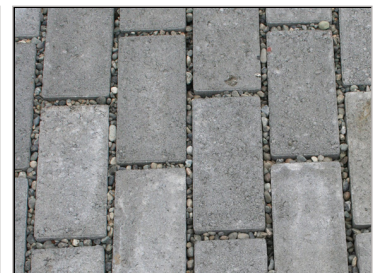
Permeable pavement has been used throughout the United States since the mid-1970s. Because it is a best management practice and a low impact development technique, cities, counties, and developers in the Puget Sound area increasingly use permeable pavement to manage stormwater. Permeable pavement systems not only reduce stormwater runoff, but also enhance water quality.



*Pervious concrete allows water to flow through it
(Photo courtesy of the National Ready Mixed Concrete Association)*

How does it work?

Permeable pavement is similar to conventional pavement, but some of the fine material is not added to the mix, resulting in spaces where water can pass through. After water drains through permeable pavement, it is held in a stone recharge bed, and then slowly soaks (infiltrates) into the ground. A layer of filter fabric separates the stone bed from the underlying soil, preventing fine particles or pollutants from moving into the underlying soil.



Example of pervious concrete and permeable interlocking pavers

What are the benefits of permeable pavement?

- Decreases the amount of runoff leaving a site
- Improves water quality by filtering pollutants from runoff
- Recharges the groundwater supply
- Reduces the speed of stormwater runoff
- Requires less need for other stormwater infrastructure such as piping, ditches, catch basins, and ponds
- Reduces ice formation during cold weather
- Reduces spray from tires, making for safer driving conditions

How much does it cost compared to regular pavement?

Permeable pavement may cost a bit more than conventional pavement to install. However, the total infrastructure cost will be less, because fewer stormwater pipes and catch basins will need to be constructed, making permeable pavement a cost-effective way to manage stormwater.

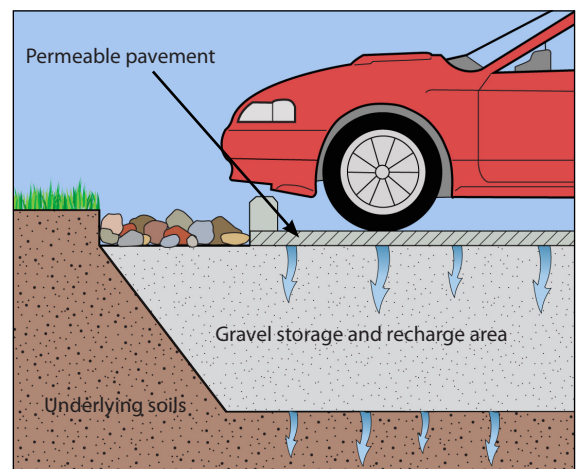


Diagram of porous asphalt

Can permeable pavement clog?

Clogging is very unlikely if the pavement is maintained. Some clogging could occur if large quantities of silt or sand are allowed on the surface. Maintenance prevents clogging.

How is it maintained?

Maintenance of permeable pavement includes vacuum sweeping, inspecting for sedimentation and clogging, and pressure washing. Overall, maintenance is relatively easy.

If permeable pavement is located on Kitsap County public property or in the public right-of-way, then the County will maintain it. Maintaining permeable pavement on private property is the responsibility of the property owner.

People can help keep permeable pavement working well by not allowing sand or other fine material on it. For example, if you have soil delivered for landscaping, do not place the soil directly on the pavement. Instead, lay down a waterproof tarp first. Also, prevent silty runoff from flowing onto permeable pavement.



Kitsap County's new high-efficiency street sweepers will maintain the County's porous asphalt roads

How strong is it?

Permeable pavement is just as strong as conventional pavement. When properly installed and maintained, it can work well for over twenty years.

Is freezing an issue?

Cold temperatures, snow and ice have not affected permeable pavement. In fact, research in New Hampshire has shown that permeable pavement is less prone to ice buildup. Salt can be used to de-ice the surface, and the pavement can be plowed. However, using sand or gravel for de-icing is not recommended, as these fine particles could clog the pavement.

What is Green Stormwater Infrastructure?

Green stormwater infrastructure uses natural features to keep stormwater runoff close to its source. Frequently used green stormwater practices include rain gardens, bioretention, and permeable pavement. In using these techniques, we can make developed areas act more like a forest, absorbing rainwater and improving water quality.

You can see some existing permeable pavement projects in Kitsap County at the Silverdale YMCA and Gordon Field near the Fairgrounds.

Kitsap County Public Works built porous asphalt projects in North, Central and South Kitsap in Fall 2010.



Porous asphalt in Kitsap County



Kitsap 1 • (360) 337-5777 • Kitsap1@co.kitsap.wa.us • www.kitsapgov.com/sswm