

Stormwater Division

Pervious Pavement



What is Pervious Pavement?

Pervious pavement (also known as permeable 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. Pervious 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.

Pervious 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 pervious pavement to manage stormwater. Pervious 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?

Pervious 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 pervious 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 pavers

What are the benefits of pervious pavement?

- Decreases the amount of runoff leaving a site
- Improves water quality by filtering pollutants like oil, grease and metals 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

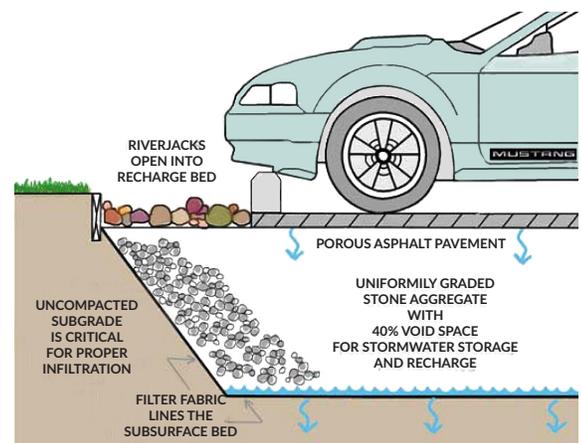


Diagram of pervious asphalt
(Source: Kitsap County Low Impact Development Guidance Manual)

How much does it cost compared to regular pavement?

Pervious 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 pervious pavement a cost-effective way to manage stormwater.

Can pervious 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 pervious pavement includes vacuum sweeping, inspecting for sedimentation and clogging, and pressure washing. Overall, maintenance is relatively easy.

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

People can help keep pervious 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 pervious pavement.



Kitsap County's high-efficiency street sweepers maintain the County's pervious asphalt roads

How strong is it?

Pervious 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 pervious pavement. In fact, research in New Hampshire has shown that pervious 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 Low Impact Development?

Low Impact Development (LID) is a stormwater management approach that uses natural features to keep stormwater runoff close to its source. Frequently used LID practices include rain gardens, green roofs, bioretention, and pervious pavement. In using these techniques, we can make developed areas act more like a forest, absorbing rainwater and improving water quality.



Pervious asphalt in Bremerton

You can see some existing pervious pavement projects in Kitsap County at the Homebuilders Association of Kitsap County, Blueberry Park in Bremerton, Wildcat Lake, Horseshoe Lake and Point No Point parking lots.

For more information: Learn about Kitsap County Low Impact Development projects, including pervious pavement, at kitsaphba.org/LID. See demonstrations at youtube.com and search under pervious pavement.



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