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EPA toughens stormwater runoff regulations for the northeast region

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The EPA has toughened their stormwater regulations as they identify runoff from parking lots and driveways as a significant source of water pollution. Some New England states and municipalities are following suit by enacting stricter regulations to reduce stormwater runoff.

Stormwater collects pollutants off of pavements. Vehicles drip oil, gas, and antifreeze and emit hydrocarbons from exhaust pipes onto the pavement. Fertilizer, pesticides and pet waste can also be present. To date, the conventional approach has been "end-of-pipe" practices, such as detention ponds or structural systems that convey water into sewers or culverts. Unfortunately, storm drains do not lead to water treatment plants and the stormwater with its collected contaminants ends up in streams, ponds, lakes, rivers and oceans.

New regulations are being enacted that stipulate runoff be managed on-site through more natural approaches. LID practices such as infiltration, capture and reuse of water, evapotranspiration, as well as limiting the amount of impervious surfaces are strongly being encouraged. The goal is to utilize the features across the site to minimize runoff to achieve pre-development hydrology.

Because pavement constitutes the largest structure on developed property, it promises to hold the key to meeting the new objectives. By simply changing the composition of the surface to a porous pavement, rainwater is allowed to infiltrate into the ground below. As the water passes through, an open-graded stone base beneath the surface captures some of the impurities, particularly those found in the "first flush", resulting in cleaner water entering the soil.

Porous pavement is a broad term that encompasses pervious concrete, porous asphalt and permeable concrete pavers. Unlike porous asphalt and pervious concrete that achieve their infiltration properties by eliminating fines in the mix design, pavers themselves are not porous. They have the same composition and physical characteristics as high strength interlocking concrete pavers - 8,500 psi plus! Permeable pavers are molded with indentations that form a series of openings across the pavement. The openings and joints in the surface funnel water into the base where it is filtered as it drains slowly into the soil. Permeable interlocking concrete pavements provide a safe, dependable walking and driving surface and, properly installed, are snow plow safe! Permeable pavers are available in a choice of colors and shapes, and they can be placed in a variety of interesting laying patterns.

And while low impact development techniques may be viewed as more expensive, in the case of porous pavements, studies have shown that they are no more costly than conventional pavements using structural systems that collect and convey stormwater but do little to improve water quality.

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