

## LOW IMPACT DEVELOPMENT:

# Rain Gardens, Pervious Concrete & Green Roofs

Last issue, we introduced you to new development requirements that will be coming to Auburn called Low Impact Development (LID). These requirements are for new construction and redevelopment. These requirements are set forth by the Washington Department of Ecology and relate to the management of stormwater runoff. These standards will be written into the City's code and will present new regulations that the City, residents and developers will need to be aware of before construction. City staff is embarking on a public education effort over the next year as the City adopts the new LID regulations.

In basic terms, LID is a new way of managing storm water. Typically stormwater is collected in pipes and ponds, and then discharged into our streams and rivers. LID emphasizes preserving existing soil and vegetation so that rainwater soaks into the ground where it falls, letting the soil remove pollutants and reducing runoff to streams and rivers. Other benefits of LID include more open space and natural areas, reduced flooding, and recharge of our groundwater supplies, which is the major source of drinking water in Auburn.

As Auburn moves forward to incorporate LID into its development codes in compliance with the Department of Ecology's Municipal Stormwater Permit, more LID facilities will be seen around the City. Some of those things could be rain gardens, permeable pavements or green roofs that may be incorporated into both public and private projects to help manage stormwater in a more natural way.



For more information on Low Impact Development requirements, contact the City of Auburn Community Development & Public Works Department at 253-931-3010 or visit [auburnwa.gov/StormWater](http://auburnwa.gov/StormWater).



## Rain Gardens

Rain gardens are one of the most versatile techniques for stormwater management based on LID principles. On the surface, a rain garden resembles any other decorative garden. However, the location of the garden and the plants used can make a landscaped area into a functional stormwater facility. Deep-rooted native, drought-resistant plants fill a small depression that is shaped and

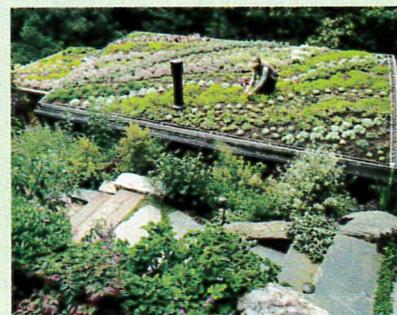
sized to fit into available spaces where runoff from impervious surfaces can be directed to the facility. Specially designed soils allow water to infiltrate into the ground, which reduces the amount of surface runoff collected by the storm sewer system.



## Pervious Pavement

A key principle of LID design is the reduction of hard surfaces that create stormwater runoff laden with pollutants. Pervious pavements provide the functionality of traditional concrete and asphalt, but with a much different outcome when it comes to stormwater runoff. Pervious concrete and asphalt surfaces look like traditional paved surfaces, and they provide the same stable surface

for driving, walking or biking. The difference is that these green stormwater infrastructure materials are porous, allowing stormwater to seep through into the ground. Their success is dependent on the ability of the underlying soils to absorb the water, so not every paved surface can be replaced with permeable pavement. Sidewalks, driveways, parking lots and even some public roads are all potential locations of pervious pavement technologies being applied to limit and control runoff through infiltration. Right here in Auburn there are already locations with permeable pavement - just check out Division St. downtown or the north parking lot at the Les Gove Community Campus.



## Green Roofs

The hard surfaces that are the main source of runoff aren't limited to what is on the ground. The roofs of buildings also make up a significant amount of impervious surface within urban areas. Green roofs offer an alternative that turns the average building into a stormwater management facility. Specially designed trays are filled with soil and low-maintenance, drought-resistant

plants and grasses that thrive when the rains come, and are able to survive without additional water during our dry summers. The soil and plants soak up water and prevent it from carrying the pollutants common to traditional rooftops into the storm system and the natural bodies of water the system discharges to. These roofs are structurally supported by trusses and walls designed for the purpose, so they will mostly be found on new buildings.