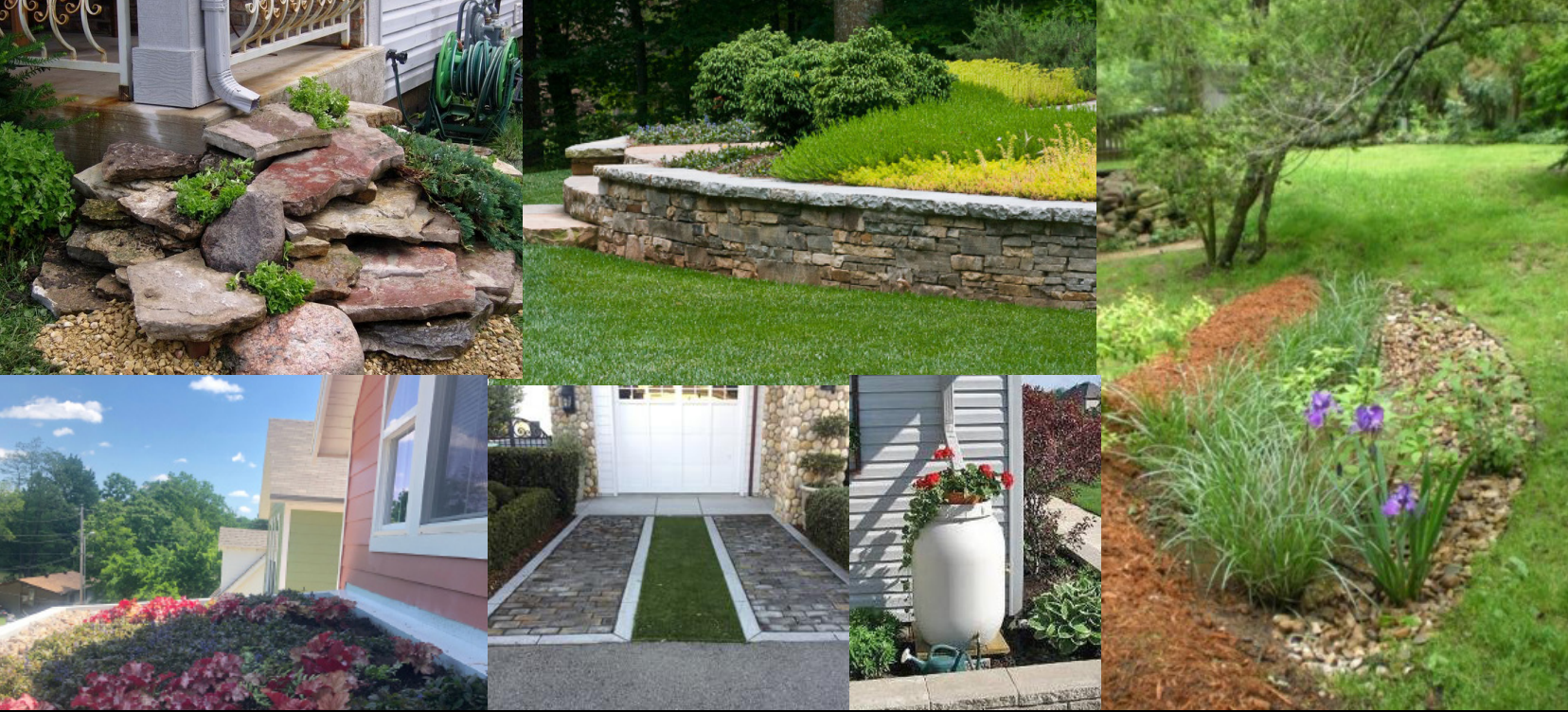


Residential LID Options

Which is the right one for you?

Know the Flow

#KnowTheFlowNWA

Low Impact Development - LID

One inch of rainfall creates approximately 623 gallons of water falling on a 1,000-square foot roof. Impervious surfaces such as roofs, sidewalks, and driveways prevent rain from soaking into the ground. When it rains, stormwater runs over these hard surfaces picking up pollutants such as yard debris, trash, fertilizers, vehicle fluids, and pet waste, which are washed into storm drains that connect to local creeks.

Low Impact Development or LID are methods and techniques that are used to slow down, spread out and soak in stormwater on site. Incorporating these practices reduces the amount of stormwater leaving your property and slows it down. Reducing the speed and volume of water helps protects the receiving streams and minimize erosion.

On the reverse-side, there are options that may work for your home to help slow down, soak in or spread out stormwater as it flows over your property.

For more information, contact the Northwest Arkansas Stormwater Education Program at UofA Cooperative Extension Service at 479-444-1755 or www.uaex.edu/nwastormwater.

UofA DIVISION OF AGRICULTURE RESEARCH & EXTENSION
University of Arkansas System

NWArkansas stormwater education

RESIDENTIAL LID OPTIONS

Gauges rank costs and if it needs professional installation. These are averages and can vary greatly based on individual projects. Go to **uaex.edu/nwastormwater f**or more details on these LID practices.

REDIRECT DOWNSPOUTS

To slow stormwater runoff and reduce pollution, add a splash guard or extender to your gutter's downspout to direct to runoff to surfaces that can soak up water such as a yard or garden. Washed out spots at the base of gutters can cause soil to wash away. Rain chains can be a simple, aesthetically pleasing alternative to downspouts that can minimize the velocity of stormwater.

Diversion berms, or swales, can be constructed to reduce runoff velocity and erosive flows and to promote infiltration and plant growth by retaining water in depressions.

RAIN BARRELS/CISTERNS

Rain barrels can be a creative option for redirecting downspouts with added perks. Harvesting stormwater can offer many benefits including:

- Reducing use of treated water for home irrigation
- Lowering peak demands on public water systems
- Reducing stormwater runoff volume and velocity which reduces potential for further erosion downstream

Cisterns have the capacity to harvest more water but can be more costly. What are your water needs?

RAIN GARDENS

Rain gardens are landscaped depressions that collect rainfall. These bowl-shaped gardens are designed to capture stormwater runoff and allow it to slowly soak into the soil, recharging groundwater and removing stormwater pollutants.

The garden's flat bottom helps distribute rain water evenly across the planted area. Topsoil amended with compost and sand allows the water to slowly soak into the ground within a few days so there is no standing water to breed mosquitoes.

POROUS PAVERS

Porous pavers can be an attractive way to let runoff sink in by turning hard surfaces soft. Sidewalks, driveways or even patios spaces can become areas that allow water to sink in rather than runoff.

Pavers need to have sub-basin designs that provide a space for water to go as it passes through the pavers.

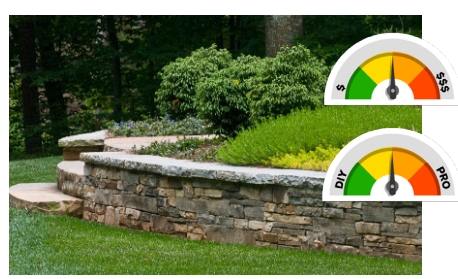
Consider what long-term maintenance your pavers may require. If they become clogged with sediment or debris, they are no longer functioning to allow water to soak in.

GREEN ROOFS

A green roof is simply one that fosters the growth of vegetation. The general design of a green roof consists of four distinct layers: an impermeable roof membrane and root barrier, a drainage layer, lightweight growth media, and adapted vegetation.

Extensive green roofs are a surface treatment for rooftops, typically less than 6 inches in depth, involving the addition of growth media and plants to create a sustainable green space on a flat or nearly flat roof.

Intensive green roofs have deeper soil beds allowing more type of vegetation but are more expensive.



TERRACED LANDSCAPE

Sloped landscapes create the potential for erosion. Terracing the slope by creating a structural wall on the downslope face can slowdown excess runoff. Planters can be used for added green space.

Cost and the ability to do this project yourself depends greatly on the scale of the project. Small slopes my be fixed with a manual digging and hand placed rocks. Larger slopes will require heavy excavation and may use large rocks or retaining walls. Some may even need underdrains to help move the water once the area is saturated.