

## Permeable Pavers

Permeable pavers provide a solid ground surface, strong enough to take heavy loads, while at the same time allow water to filter through the surface and voids in between, and reach the underlying soils. Permeable pavers can reduce storm water runoff and any pollutants it may carry.



*Permeable pavers reduce storm water runoff, thus less polluted water is likely to enter our waterways.*

## Rain Harvesting

Residential irrigation can account for 40% of a city's total water usage. Rain barrels not only store water, they help decrease demand for water during the sweltering summer months and during times of drought. Just 1/4 inch of rainfall runoff from the average roof will completely fill a typical barrel.

Rain barrels can provide an ample supply of this free "soft water" containing no chlorine, lime or calcium. Because it tends to have fewer types of sediment and dissolved salts than

municipal water, rain water is ideal for many applications, including vegetable gardens, raised planter beds for botanicals, indoor tropical plants like ferns and orchids, car washing, and cleaning windows.

Rain barrels now come in many styles with a variety of additional modern features. And most rain barrels come with a screw on, perforated top with a screen (mesh) under the lid to keep out mosquitoes, bugs, debris, pets and children.

## Natural Landscaping

Consider native plants, wildflowers and grasses for landscape around large properties and residential developments instead of planting traditional turf grass. Because natural landscaping is adapted to the Southwestern geography, hydrology and climate, it requires fewer pesticides, fertilizers and watering to maintain. It costs less to install than traditional landscaping and, after the initial few years, reduces maintenance costs, combats erosion, and accommodates storm and flood waters better.

# Residential Green Infrastructure Guide



Green infrastructure applications and approaches can reduce, capture, and treat stormwater runoff at its source before it can reach the storm drain system. Site-specific practices, such as tree planting, downspout disconnections, rain harvesting/gardens, permeable pavers and natural landscaping are designed to mimic natural hydrologic functions and decrease the amount of water resistant area and stormwater runoff from individual sites.



**Harris County**



**Clean Water Clear Choice**

# Tree Planting

# Rain Water Collection

## Tree Benefits

From their beautiful rustle on a windy day, to the cool shade they provide on a hot one, trees are full of benefits.

### Lowers Your A/C Bill:

Carefully planted trees around your home can slash your energy bill dramatically. Trees will shade your house, and prevent it from warming up.

### Controls Noise Pollution:

Trees muffle urban noise very effectively. Trees, planted at strategic points around your house, can decrease noises from roads, freeways and airports.

### Helps the Atmosphere:

A single tree absorbs one ton of carbon dioxide in its lifetime. That's a lot less greenhouse gas in our air!

### Helps Prevent Flooding:

A large tree can collect up to 760 gallons of rainfall in its crown, thereby reducing runoff of polluted stormwater and flooding.

### Fights Soil Erosion:

Roots bind the soil and leaves break the force of wind and rain on soil. A tree is an excellent natural tool that reduces soil erosion, conserves rainwater, and reduces water runoff and sedimentation after storms.



*Planting a tree is good for your home, health and the environment.*

### A Beautiful Addition to your Yard:

Trees provide privacy, emphasize views, screen out objectionable views, and can substantially increase home values.

## Rain Gardens

You can have a great looking garden that puts water in its place by capturing rainwater from your roof, driveway and sidewalks and diverting it into a beautiful rain garden. There it can slowly soak into the ground to filter contaminants, and keep polluted water from going down the storm drain system.

A rain garden uses the absorption of amended soils and the pollutant removal activities of nature that can absorb runoff more efficiently, sometimes as much as 30% - 40% more than a standard lawn. Capturing rainwater in a rain garden, holding the water for a short time, and then slowly releasing it into the soil can reduce the rush of a large storm – quickly, neatly and naturally.

Rain gardens are designed to be drained within four hours after a 1" rain event. Underdrained rain gardens typically are designed to drain within 2 hours of a similar storm event. This is achieved through the use of highly porous planting media and an underdrain which carry the cleaned rainwater away from the garden.

As a result, the plants selected for the bioretention area need to be able to withstand both the extremes of flooding and drought.

A rain garden is a good option to help lower the impact of impervious (water resistant) surfaces and polluted runoff because they are a low-tech sustainable solution.



**Rain Garden Questions?**  
Contact your local master naturalist, master gardener or the Texas AgriLife Extension Service or visit <http://agrilifeextension.tamu.edu/>

### Down Spout Repositioning

A repositioned down spout can redirect normally wasted rain water to your lawn, trees or bushes.

### Down Spout Disconnection

Disconnecting the downspout from the drain pipe stops storm water from reaching the storm drain system. The water can now be managed on your property. A downspout can be directed onto a permeable surface

such as a lawn or rain garden to soak into the ground naturally, or into a storage tank (e.g. rainbarrel or a larger rain harvesting tank) to be used later.