Re-Thinking the Urban Watershed with Site Level Infiltration Practices

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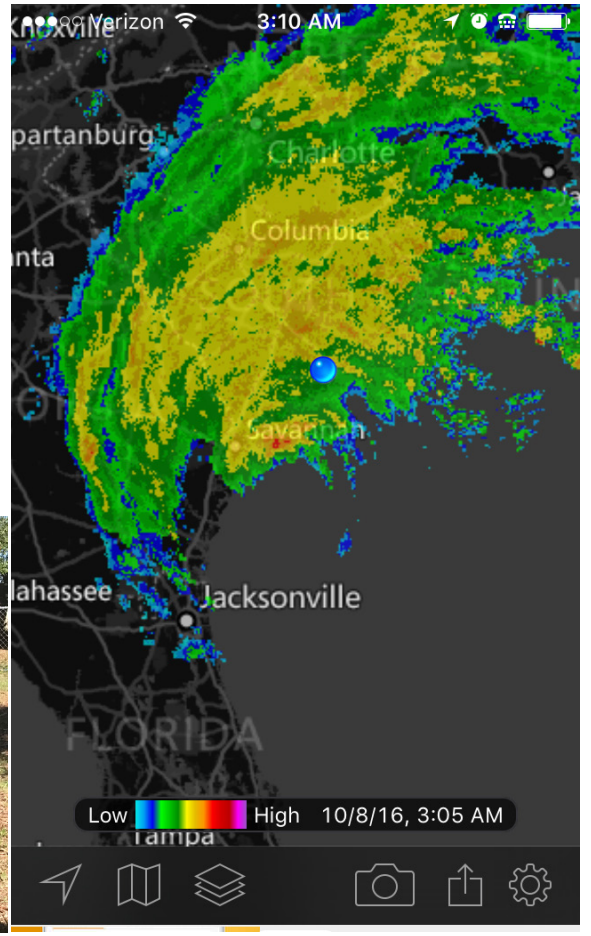
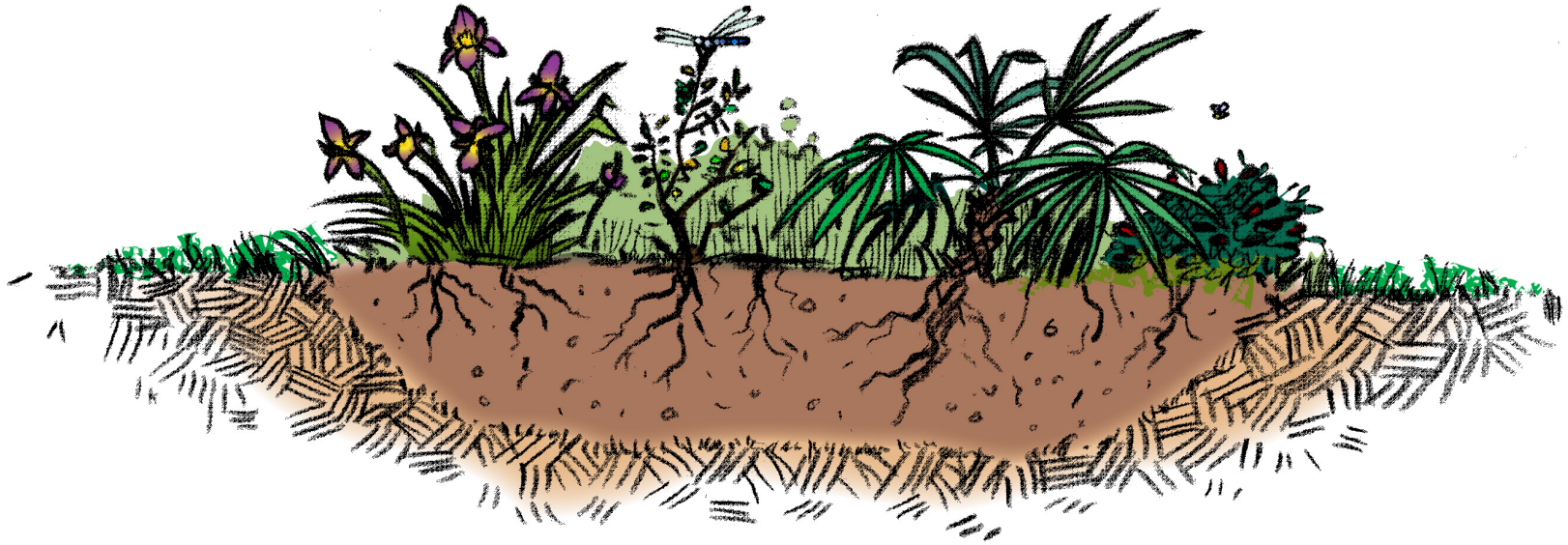
The ”Events”


Verizon
3:10 AM
Charlotte
Columbia
Jacksonville
FLORIDA
Low
High
10/8/16, 3:05 AM

Residential-scale treatment train approach

A **rain garden** is a depressed garden designed and located to receive water runoff from a roof, driveway or lawn. Rain gardens work with nature to collect, filter and infiltrate runoff.

-A Guide to Rain Gardens in South Carolina



Rain Garden 10,000 Foot View

Step 1: Assessment & Siting



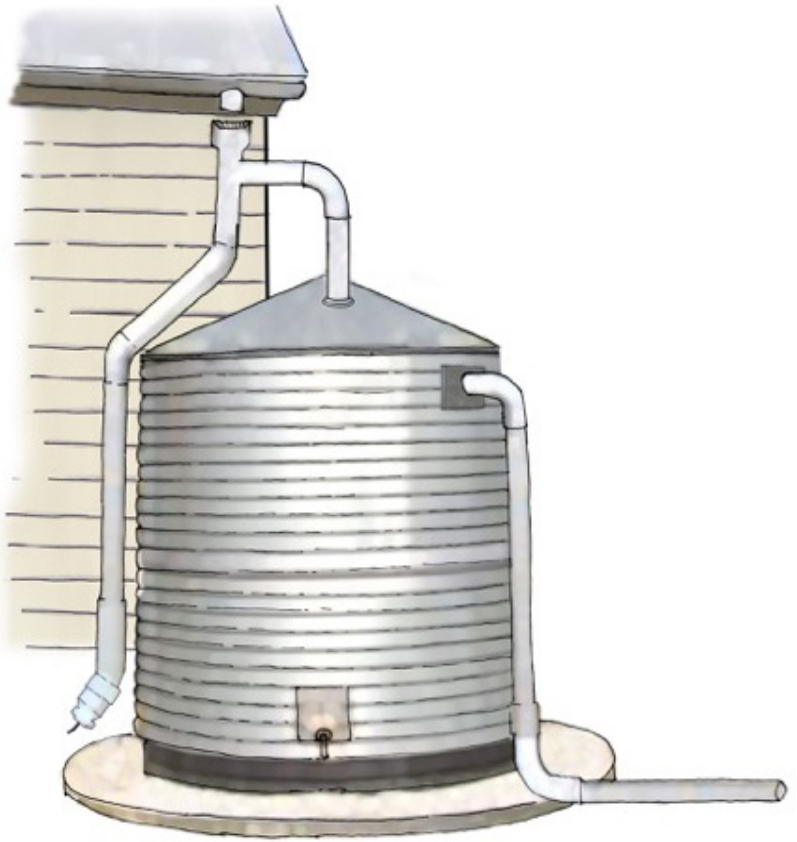
Step 2: Size, Design & Shape



Step 3: Amend, Plant & Mulch




Harvest The Rain



Identify Capacity & Need

Estimate capacity by multiplying the square footage of the roof area by 0.623 to get the number of gallons per one inch rain event.

Use The Water!

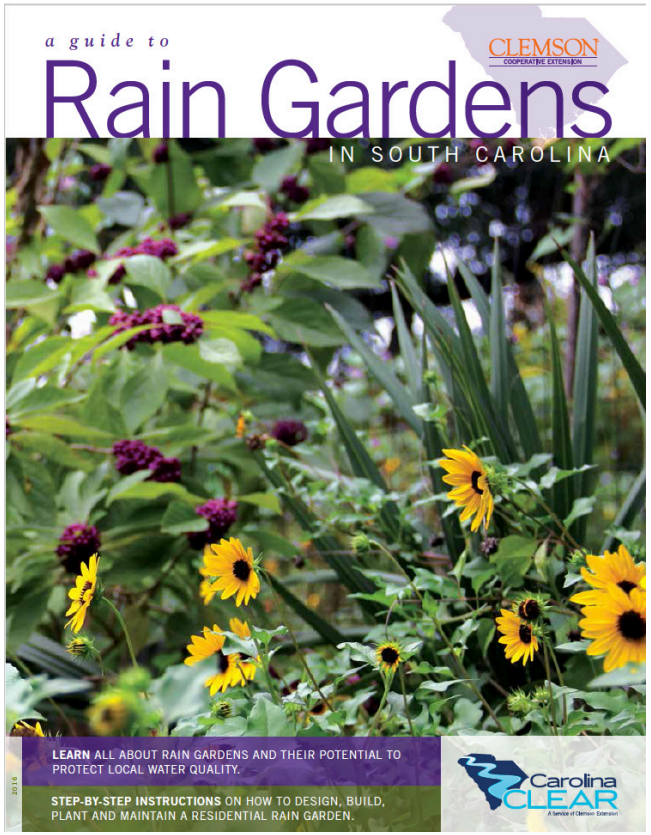
Before & After

Treatment Train

Resources

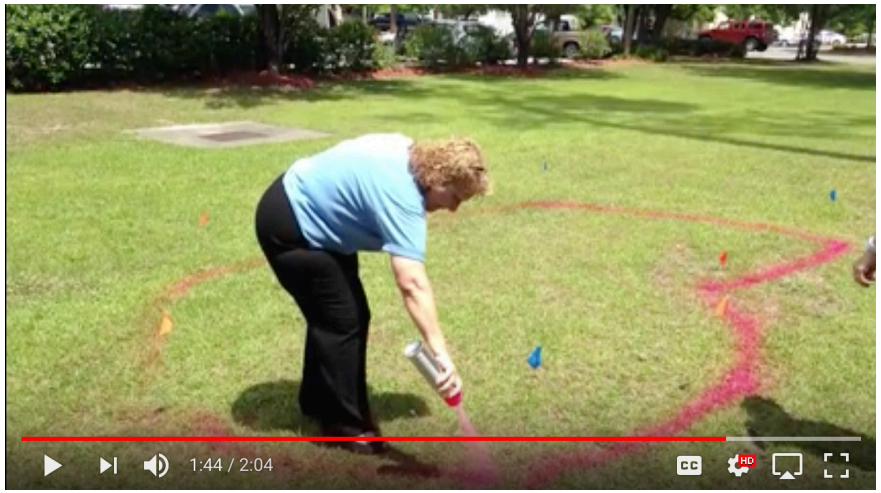
Carolina Rain Garden Initiative

clemson.edu/raingarden



MASTER RAIN GARDENER

A PROGRAM OF CLEMSON EXTENSION



Resources

Carolina Clear & The Ashley Cooper Stormwater Education Consortium

clemson.edu/carolinaclear or ashleycooper.org

Carolina CLEAR
A Service of Clemson Extension

ASHLEY COOPER
STORMWATER EDUCATION CONSORTIUM
A SERVICE OF CLEMSON EXTENSION

Resources

Carolina Yards

clemson.edu/cy

Carolina YARDS
A CLEMSON EXTENSION SERVICE

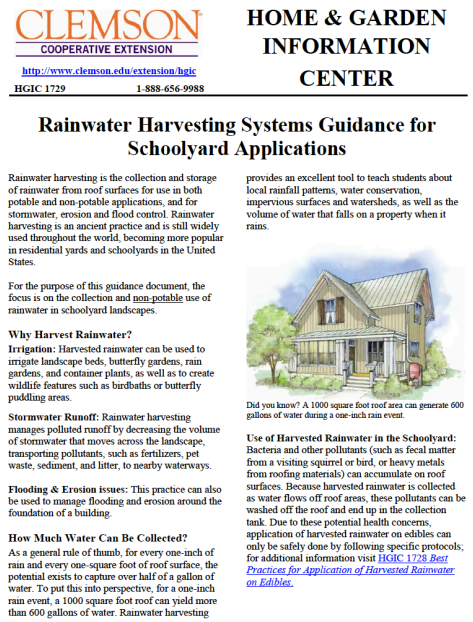
Search the Plant Database

REGION	Select	*Which part of South Carolina are you in?*
SC NATIVE	Select	*Are you looking for a plant native to South Carolina?*
PLANT TYPE	Select	*What kind of plant are you looking for?*
SUNLIGHT	Select	*How much sunlight shines in your yard?*
SOIL TYPE	Select	*What kind of soil do you have in your yard?*
SOIL pH	Select	*What is the pH of your soil?*
SOIL MOISTURE	Select	*How wet is the soil in your yard?*
SALT TOLERANCE	Select	*Do you require a salt-tolerant plant?*
WILDLIFE	Select	*What animals would you like to attract or deter?*
STORMWATER	Select	*Will this plant be used in a stormwater management practice?*

Home & Garden Information Network

clemson.edu/hgic

Search “rainwater harvesting” and “rain g



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http://www.clemson.edu/extension/hgic
HGIC 1729 1-888-656-9988

HOME & GARDEN INFORMATION CENTER

Rainwater Harvesting Systems Guidance for Schoolyard Applications

Rainwater harvesting is the collection and storage of rainwater from roof surfaces for use in both potable and non-potable applications, and for stormwater, erosion and flood control. Rainwater harvesting is an ancient practice and is still widely used throughout the world, becoming more popular in residential yards and schoolyards in the United States.

For the purpose of this guidance document, the focus is on the collection and non-potable use of rainwater in schoolyard landscapes.

Why Harvest Rainwater?

Irrigation: Harvested rainwater can be used to irrigate landscape beds, butterfly gardens, rain gardens, and container plants, as well as to create wildlife features such as birdbaths or butterfly puddling areas.

Stormwater Runoff: Rainwater harvesting manages polluted runoff by decreasing the volume of stormwater that moves across the landscape, transporting pollutants, such as fertilizers, pet waste, sediment, and litter, to nearby waterways.

Flooding & Erosion issues: This practice can also be used to manage flooding and erosion around the foundation of a building.

How Much Water Can Be Collected?

As a general rule of thumb, for every one-inch of rain and every one-square foot of roof surface, the potential exists to capture over half of a gallon of water. To put this into perspective, for a one-inch rain event, a 1000 square foot roof can yield more than 600 gallons of water. Rainwater harvesting provides an excellent tool to teach students about local rainfall patterns, water conservation, impervious surfaces and watersheds, as well as the volume of water that falls on a property when it rains.

Did you know? A 1000 square foot roof area can generate 600 gallons of water during a one-inch rain event.

Use of Harvested Rainwater in the Schoolyard: Bacteria and other pollutants (such as fecal matter from a visiting squirrel or bird, or heavy metals from roofing materials) can accumulate on roof surfaces. Because harvested rainwater is collected as water flows off roof areas, these pollutants can be washed off the roof and end up in the collection tank. Due to these potential health concerns, application of harvested rainwater on edibles can only be safely done by following specific protocols; for additional information visit HGIC 1728 *Best Practices for Application of Harvested Rainwater on Edibles.*

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