

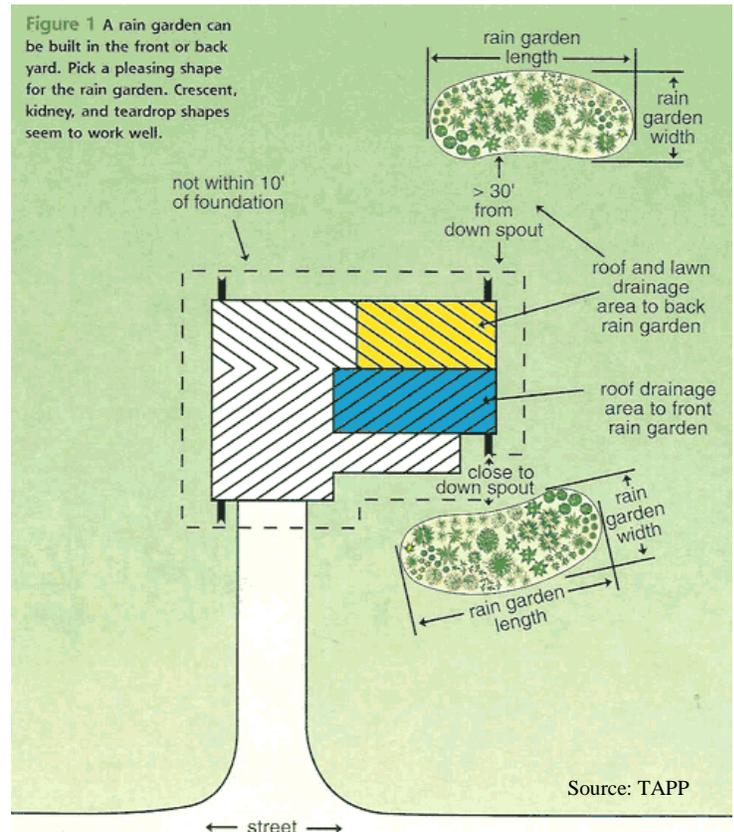
When rain falls on natural areas, it is slowed down, filtered by soil and plants, and allowed to soak back into the ground. When rain falls on impervious surfaces like rooftops, roads, and parking lots, rain does not soak into the ground, and storm water runoff is created. Stormwater runoff picks up pollution such as fertilizer, pesticides, sediment, motor oil, litter, and pet and yard waste. It delivers these pollutants to ponds, streams, rivers, and into Sarasota Bay.

Backyard rain gardens are a fun and inexpensive way to improve water quality and enhance the beauty of your yard or business. Rain gardens are placed between stormwater runoff sources (roofs, driveways, parking lots) and runoff destinations (storm drains, streets, and streams).

A rain garden is a shallow depression in the ground that captures runoff from your driveway or roof and allows it to soak into the ground. Plants and soil work together to absorb and filter pollutants and return cleaner water through the ground to nearby waterways. Rain gardens also reduce flooding and rain garden plants provide habitat for beneficial insects and wildlife!

The rain garden fills with a few inches of water after a storm, and the water slowly filters into the ground. Because water is only in the rain garden for a day or two, it is not likely that it becomes a breeding ground for mosquitoes. Some considerations when installing a rain garden are:

➤ Rain gardens can be designed in all shapes and sizes, they can be formal or informal. They should be

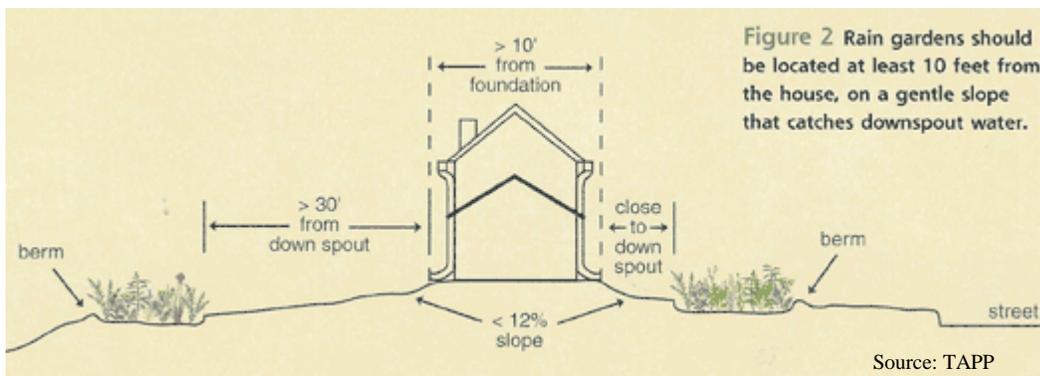


located away from the building on a gentle slope so that rain water is not retained close to the building.

➤ The efficiency of a rain garden will depend on several factors: how large and/or deep the garden is, how well the soil drains, and how much surface area will drain into the garden. William Hunt from North Carolina Cooperative Extension devised a simple

calculation. He recommends that when soils are sandy, the rain garden should be roughly 8.5 percent of the surface area that drains into it. For instance, if your roof is 2,000 square feet, the rain garden would measure $2,000 \times 0.085 = 170$ square feet.

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The Florida-Friendly Landscaping™ Program is based on Environmental Landscape Management (ELM) practices, and was developed in 1992 by the University of Florida, Sarasota Bay and Tampa Bay National Estuary programs, the Environmental Protection Agency, the Florida Department of Environmental Protection, the Southwest Florida Water Management District, and local governments. The main objective of the program is to educate the public on how to develop and maintain sustainable landscapes that reduce the nutrient load in stormwater runoff and impact the environment as little as possible.

Valuable natural resources are put at risk everyday by the decisions made in the landscape. It has been documented that certain landscaping practices contribute to many different forms of air, noise and water pollution. The Florida-Friendly Landscaping™ Program is working to change behavior by teaching alternative forms of design and maintenance practices to create and sustain a landscape that is more ecologically in step with the surrounding environment.

For more information about the Florida-Friendly Landscaping™ Program and other programs available at UF/IFAS Sarasota County Extension, visit our website at <http://sarasota.extension.ufl.edu>

- A typical rain garden is between 4 and 8 inches deep. If the rain garden is deeper than 8 inches, it may cause water to stand. To help you determine this depth, lay a garden hose or string in a desirable shape. Put stakes along the uphill and downhill sides, and run a level string between the stakes. Measure down from the string to the desired depth.

- Hand dig or use a rotor tiller to create the basin of the rain garden. After digging the basin, do a percolation test (see below) to determine the soil's infiltration rate, and incorporate compost to increase the percolation rate if needed.

PERCOLATION TEST

1. Remove both ends of a 48-ounce can. Mark a line 2 inches from the bottom.
2. Pound the can 2 inches into the soil, so that the marked line is level with the ground's surface
3. Pour one quart of water into the can. Time how long it takes the water to drain into the soil.
 - 2 minutes or less = excellent percolation.
 - 2 to 8 minutes = somewhat compact or dense soil, but acceptable drainage.
 - more than 8 minutes = overly compact or dense soil, incorporate compost to improve percolation.

- Deep rooted plants are an essential component of the rain garden. When selecting plants it is important to consider the mature size of the plant (for proper spacing), bloom time and color. For more information about plant selection for the rain garden see fact sheet AP-04102010-004: *Rain Gardens: Plant Selection and Maintenance*.
- Regular maintenance is required to keep your rain garden looking good and functioning well. Be sure to include this in your plan and budget!

Resources:

- ◇ *Rain Barrels and Rain Gardens*. Town of Ft. Myers Beach.
- ◇ *Rain Gardens*. West Michigan Environmental Action Council.
- ◇ *Rain Gardens*. Think About Personal Pollution (TAPP), Tallahassee.
- ◇ *Hunt, W. F. Designing Rain Gardens*. North Carolina Cooperative Extension Service.



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