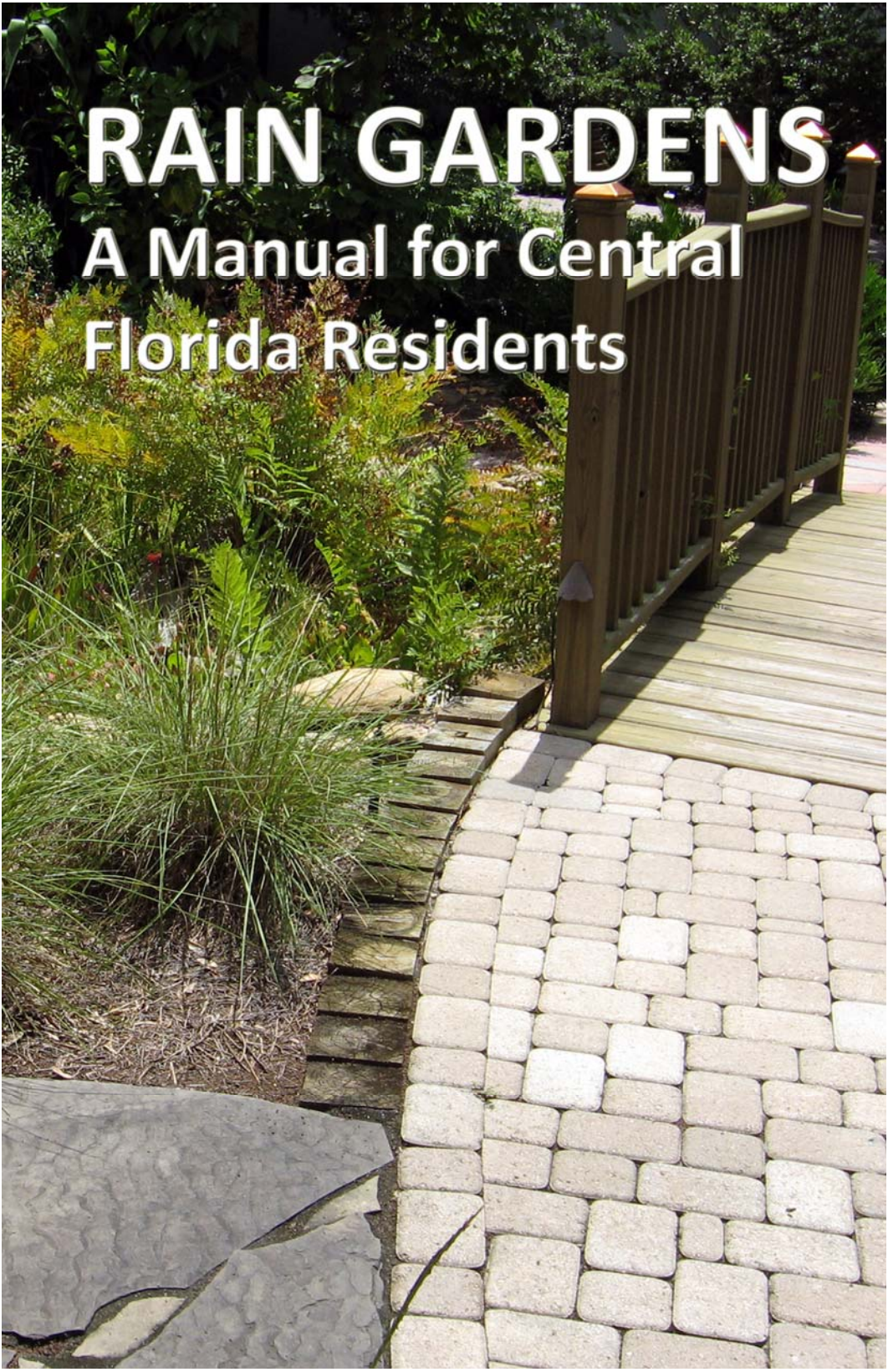
RAIN GARDENS

A Manual for Central Florida Residents



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Introduction

After decades of hearing environmental messages and increased education and awareness, Floridians are recognizing the need to protect our precious water resources from stormwater pollution. Landscaping plays a major role in the capture and filtration of stormwater runoff – rain or irrigation water that travels off our yards into nearby surface ponds and stormwater drains.

One inch of rainfall can produce 16 times more runoff by volume on a 1 acre parking lot than the same one inch of rainfall on a completely vegetated area of equal size. A properly landscaped and maintained yard can potentially reduce runoff by as much as 30 percent, compared to a yard with bare areas of exposed soil and patchy landscaping. A rain garden is a type of landscaped area with appropriate flowers, grasses and other vegetation that catches rain water from a roofline or gutter system and filters it back into the ground, where it can recharge groundwater resources.

So why are rain gardens important? As Florida cities grow and build, replacing green spaces and natural areas with manicured lawns, concrete sidewalks and asphalt pavement, there is an increase in stormwater runoff. This often leads to increased urban flooding, increased pollutants from yards, parking lots and streets, and increased costs in municipal stormwater treatment systems. Rain gardens help to reduce this stormwater runoff, and the more rain gardens that are constructed in communities and neighborhoods, the more significant the benefit. Rain gardens are a big part of the Florida-Friendly Landscaping™ concept.

Based on studies in other states, rain gardens have the ability to filter approximately 40% of metal pollutants from roof shingles, automobile fluids and soil. Approximately 15% of nitrogen from fertilizers, pet waste and organic matter can by filtered by rain gardens as well.

Rain gardens have multiple functions. They recharge the local aquifer by increasing the amount of water that filters into the ground; reduce the amount of urban pollutants – fertilizer, pesticides, car oil, etc. – that get carried away by stormwater runoff and enter nearby surface water bodies; provide habitat for birds, butterflies, and beneficial insects; and improve property value by adding curb appeal to the landscape. Unlike bioretention areas, rain gardens allow runoff to infiltrate the groundwater supply.

The purpose of this handbook is to provide homeowners with the tools needed to design, install and maintain a rain garden in a residential landscape. Many of the concepts can be transferred to commercial sites as well, but care is needed in areas of very large stormwater generation – like parking lots and paved areas – that may need filtration prior to entering a rain garden.

Fact. Act. Payback!

FACT: PLANTS SUITED TO YOUR YARD WILL REQUIRE MINIMAL AMOUNTS OF WATER, FERTILIZER, AND PESTICIDES.

ACT: CHOOSE THE RIGHT PLANT FOR THE RIGHT PLACE BY GROUPING PLANTS ACCORDING TO THEIR WATER NEEDS.

PAYBACK:

1) Healthy plants that are getting the right amount of water;
2) Reduced chances of pest infestation and disease;
3) Reduced time and money spent on landscape maintenance;
4) Increased enjoyment of the overall landscape!!!

Stormwater Runoff 101

Water is the essence of life. In an average year, Florida receives over 50 inches of rain water, especially during the summer months. With more than 8,400 miles of tidal shoreline, 8,000 lakes, 20 major rivers and estuaries, and the largest underground aquifer in the United States, Florida has an abundance of water resources.

Yet, as Florida's population grows, the demand for this water continues to strain our natural resources. This is, in part, due to a loss of natural green space and an increase of impervious surfaces like rooftops, concrete and asphalt, which prevent rain water from filtering back to our groundwater systems. Today, the leading threat to Florida's water resources and quality of this resource is nonpoint source pollution.

Every time it rains, pollutants such as soil particles, pesticides, fertilizers, oil, grass clipping and other waste travel over yards and driveways in the form of stormwater runoff. This stormwater runoff contributes to pollution in our surface waterways.

The good news? It can be controlled.

Reducing stormwater runoff from your property is simple. Following these behaviors can make a difference, one step at a time…

- Install and maintain a Florida-Friendly Landscape that absorbs runoff and allows it to filter back into the soil.
- Choose drought-tolerant plants that don't need a lot of irrigation.
- Install practical areas of drought-tolerant turf for play, entertainment, pets, etc. Use ground covers as turf alternatives in low traffic areas of the landscape.
- Maintain 2"-3" of mulch in plant beds to reduce erosion and retain soil moisture, minimizing watering needs.
- Water in the early morning hours to avoid water loss from wind and evaporation.

- Follow local watering restrictions, and water only as needed. Many Florida-friendly plants, once established, can survive with little supplemental irrigation.
- Install low-volume irrigation in plant beds to minimize overspray and excess watering of plants.
- Install a functioning rain shut-off device on all irrigation systems to avoid unnecessary watering.
- Use a rain gauge to track rainfall and determine if supplemental watering (on your assigned day) is necessary.
- Use rain barrels or cisterns to collect rain water for landscape irrigation. Rain barrels capture storm water runoff, reduce erosion around the foundation of the house, and provide a free source of water for your plants.
- Install a rain garden.

Fact. Act. Payback!

FACT: FERTILIZERS CAN BE HAZARDOUS TO THE ENVIRONMENT AND YOUR YARD.

ACT: FERTILIZE ONLY "AS NEEDED," AND USE SLOW-RELEASE FERTILIZERS WITH EQUAL AMOUNTS OF NITROGEN AND POTASSIUM, BUT LITTLE OR NO PHOSPHORUS.

PAYBACK:

1) Healthier plants that are getting the right amount of nutrients;
2) Fewer applications of fertilizer throughout the year;
3) Reduced pollution of waterways from runoff!!!

Building a Rain Garden

Step 1: Size and Placement

In many parts of the country, slope becomes an issue when constructing a rain garden, but in Florida, that is rarely a problem. Depending on the size of your lot, a rain garden can be placed near the house to catch roof runoff or farther out in the yard to catch runoff from the roof and the surrounding lawn area.

Keep the following guidelines in mind to help determine the best place for your rain garden:

DOs	DON'Ts
DO place your rain garden at least 10 feet from the house to prevent water from seeping into the foundation.	**DON'T** place your rain garden within 25 feet of a septic tank or well.
DO place your rain garden in full sun, away from tree roots.	**DON'T** cut large tree roots to make room for your rain garden. This may severely damage the tree.
DO choose an existing low spot in your yard if it normally drains quickly after a heavy rain.	**DON'T** choose a site that has standing water. The purpose of a rain garden is to encourage infiltration.

Before you begin, take a stroll around your property and make some casual observations about the terrain. Consider your existing landscape and how a rain garden will fit into the overall design, while still being functional. Remember, a rain garden can be placed in the front, side or back yard. It's up to you.

In some Florida lots, the side yards are large and can be difficult to maintain with healthy turfgrass. Consider "blurring" property lines with your neighbor and construct a shared rain garden that provides both homes with stormwater capture!

Determining the size of your rain garden is critical, and time and cost will always be important considerations. A typical residential rain garden ranges from 100 to 300 ft^2. Rain gardens smaller than 100 ft^2 will not allow for a wide diversity of plants. On the other hand, a rain garden larger than 300 ft^2 will take a considerable amount of time and money to construct.

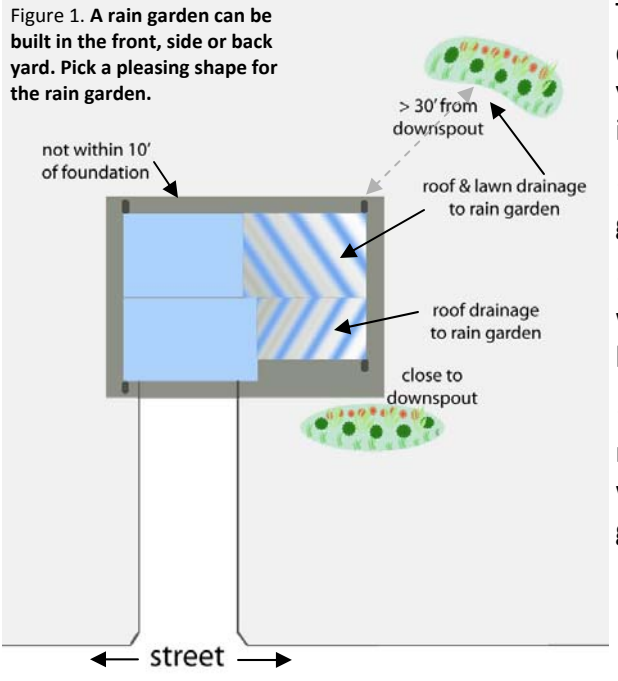


Figure 1. **A rain garden can be built in the front, side or back yard. Pick a pleasing shape for the rain garden.**

The factors that will determine the size of your rain garden include:

- the depth of the garden,
- the type(s) of soil in which the garden will be planted, and
- the total area of roof and/or lawn that will drain into the garden.

How deep should my rain garden be?

Because of the prevalence of sandy soils in Central Florida, a typical rain garden is between four and eight inches deep. If deeper than eight inches, a rain garden might hold water for too long and provide a breeding ground for mosquitoes. Additionally, it may create a tripping hazard. A rain garden much less than four inches deep will need an excessive amount of surface area to provide enough water storage to infiltrate the larger storms typical of Florida's rainy season.

Regardless of the depth, the goal is to keep the garden level. This is to ensure the most efficient collection and infiltration of water without losing excess over the sides of the rain garden.

The slope of the area should determine the depth of the rain garden. Find the slope of your lawn by following these steps:

1. Pound one stake in at the uphill end of your rain garden site (typically the side closest to the house) and pound the other stake in at the downhill end.

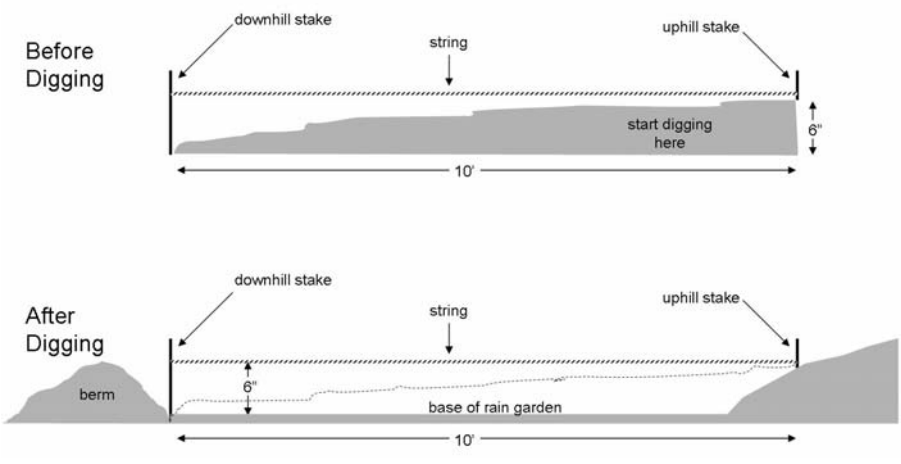
2. Tie a string to the bottom of the uphill stake and run the string to the downhill stake.

3. Using a string level or the carpenter's level, make the string horizontal and tie the string to the downhill stake at that height.

4. Measure the distance (in inches) between the two stakes.

5. Now measure the height (in inches) on the downhill stake between the ground and the string.

6. Divide the height by the distance and multiply the result by 100 to find the area's percent slope. If the slope is greater than 12%, it's best to find another site or talk to a professional landscaper.



Using the slope of the area, select the depth of the rain garden from the following options:

- If the slope is less than 4%, build a 3 to 5-inch deep rain garden.
- If the slope is between 5% and 7%, build a 6 to 7-inch deep rain garden.
- If the slope is between 8% and 12%, build an 8-inch deep rain garden.

What type(s) of soil do I have?
After choosing your rain garden depth, identify the area's soil type. Sandy soils have the fastest infiltration; clay soils have the slowest. Since clay soils take longer to absorb water, rain gardens in this type of soil must be larger than rain gardens in sand or silt. If the soil feels very gritty and coarse, you probably have sandy soil.

Fact. Act. Payback!

FACT: MOST FLORIDA-FRIENDLY PLANTS DO BEST IN A SOIL pH RANGE OF 5.5 TO 7.0.

ACT: TEST THE pH OF YOUR SOIL BEFORE PLANTING. MANY COUNTY EXTENSION OFFICES CAN TEST YOUR SOIL.

PAYBACK:
1) Knowledge of site conditions and plants' needs;
2) Improved ability of plants to absorb nutrients;
3) Overall improvement in the health of your landscape!!!

Two quick tests can ensure your soil will handle a rain garden:

1. Dig a hole about 6 inches deep where the rain garden will be located and fill the hole with water. If the water takes more than 24 hours to soak in, the soil is not suitable for a rain garden.

2. Take a handful of soil and dampen it with a few drops of water. After kneading the soil in your fingers, squeeze the soil into a ball. If it remains in a ball, then work the soil between your forefinger and thumb, squeezing it upward into a ribbon of uniform thickness. Allow the ribbon to emerge and extend over the forefinger until it breaks from its own weight. If the soil forms a ribbon more than an inch long before it breaks, and it also feels more smooth (clay) than gritty (sand), the soil is not suitable for a rain garden.

Source: Michigan State University Extension

The USDA Natural Resource Conservation District (NRCS) has an online Web Soil Survey tool that allows you to narrow in on your specific neighborhood to determine the type of soil there (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx). However, the soil on a small plot of a yard can be very different from the soils indicated on the map. Use the simple soil test described above for a more accurate representation of the soils in the possible rain garden location.

How large an area will drain into my rain garden?

The next step in choosing your rain garden size is to find the area that will drain to the rain garden. As the size of the drainage area increases, so should the size of the rain garden. There is some

guesswork in determining the size of a drainage area, so use the following suggestions to estimate the drainage area without spending a lot of time.

Rain gardens within 30 feet from the water source (usually a downspout)

1. When the rain garden is close to the house, almost all the water will come from the roof downspout. Walk around the house and estimate what percent of the roof feeds to that downspout. Many houses have four downspouts, each taking about 25% of the roof's runoff.

2. Calculate your home's footprint, or the area of the first floor. If you don't already know it, use a tape measure to find your house's length and width. Multiply the two together to find the approximate area of your roof.

3. Finally, multiply the roof area by the estimated percent of the roof that feeds to the rain garden downspout. This is the roof drainage area.

Rain gardens greater than 30 feet from the water source

1. If there is a significant area of ground uphill that will also drain to the rain garden, add this area to the roof drainage area. First find the roof drainage area using the steps above for a rain garden to be placed less than 30 feet from the downspout.

2. Find the area of the ground that will drain to the rain garden. Stand where your rain garden will be and look up toward the house. Estimate the part of the lawn sloping into the rain garden.

3. Measure the length and width of the uphill ground, and multiply to find the area.

4. Add the uphill area to the roof drainage area to find the total drainage area.

Determining the size of my rain garden

Now that you've figured out the depth of the garden, the soil type and the drainage area, you can calculate the surface area of the rain garden. The first step is to determine your size factor, based on one of the two tables below.

Table 1: Size factors for rain gardens within 30 feet of the water source

Soil Type	3-5 inches deep	6-7 inches deep	8 inches deep
Sand	0.19	0.15	0.08
Silt	0.34	0.25	0.16
Clay	0.43	0.32	0.20

Table 2: Size factors for rain gardens greater than 30 feet from the water source

Soil Type	Size Factor (regardless of depth)
Sand	0.03
Silt	0.06
Clay	0.10

Once you know your size factor, multiply it by the drainage area. The result will be the recommended area for your rain garden. If this number is greater than 300 ft^2, divide it up into smaller, more manageable rain gardens. For each of the smaller rain gardens, consider choosing plants with similar colors, shapes or textures to create harmony in the design and layout of the garden.

Building a Rain Garden
Step 2: Construction

Before you begin construction of your rain garden, you'll need a few tools:

- Tape measure
- Shovels
- Rakes
- Trowels
- Carpenter's level
- Wood stakes (at least 2' long)

If you plan on building your rain barrel in an area with lawn or weeds, you will first need to remove the existing vegetation. The most environmentally friendly option is to cover the area with black plastic or numerous layers of newspaper and give the plants below a few months to die. Then the dead vegetation can be dug up and removed.

A faster option would be to spray an herbicide containing glyphosate to kill the vegetation within a few days. However, do not spray chemicals if the wind is greater than 5 mph, if rain is forecast within 24 hours or if there is a chance of runoff to a nearby water body.

Digging the Rain Garden

Before you start digging, make two phone calls. The first should be to the Sunshine State One Call of Florida, Inc. line (811) to have your underground utility lines marked for free. The second call should be to your friends, asking them to help with your rain garden project.

Begin by laying string or a hose in the desired shape of the garden. Next, put stakes along the uphill and downhill sides, lining them up so that each uphill stake has a stake directly downhill. Place one stake every 5 feet along the length of the rain garden.

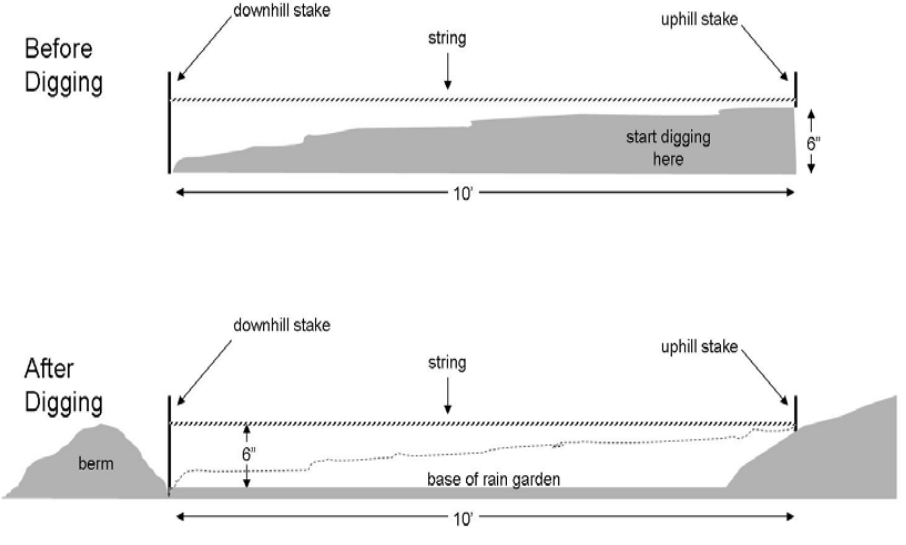
Start at one end of the rain garden and tie a string to the uphill stake at ground level. Tie it to the stake directly downhill so that the

string is level. Work in 5-foot-wide sections, with only one string at a time.

Start digging at the uphill side of the string. Measure down from the string and dig until you reach the desired depth of the rain garden. If the rain garden will be four inches deep, then dig four inches down from the string.

If the area is almost flat, you will be digging at the same depth throughout the rain garden. If the area is steeper, the high end of the rain garden will need to be dug out noticeably more than the low end, and some of the soil from the upper end can be used in the lower end to make the rain garden level. Continue digging and filling one section at a time across the length of your rain garden until it is as level as possible.

Water flowing into the rain garden will naturally try to run off the downhill edge. A berm is needed to keep the water in the garden. The berm is a “wall” across the bottom and up the sides of the rain garden. The berm will need to be highest at the downhill side. Up the sides of the rain garden, the berm will become lower and gradually taper off at the top of the rain garden.



If you plan on mixing in compost to help get the plants established faster, now is the time to do so. Dig the garden at least one inch deeper than originally planned and add a two-inch layer of compost along the entire bottom of the garden. If handy, use a tiller to mix in the compost, but this is not necessary.

Compost is organic matter, and it is a wonderful amendment to soil for all plants. Organic matter increases the water holding capacity as well as the nutrient content in soil, giving plants that extra boost for improved health and performance in the landscape.

Fact. Act. Payback!

FACT: COMPOSTED YARD WASTE AND KITCHEN SCRAPS PROVIDE A NUTRIENT-RICH SOIL AMENDMENT FOR LANDSCAPED BEDS.

ACT: START A HOME COMPOST PILE IN YOUR BACKYARD.

PAYBACK:

1) Reduction of municipal solid waste inputs by twenty percent;
2) Increased water- and nutrient-holding capacity of soil;
3) Reduction in the number of trips to the garbage can!!!

Building a Rain Garden

Step 3: Plant Choices & Installation

The larger the rain garden, the greater the diversity of plants that can be used. For grasses and bulbs, plant on one-foot centers. For larger plants, increase the spacing. Try to minimize your footsteps in the garden when planting to avoid soil compaction.

When choosing plants for your rain garden, it is important to consider the height of each plant, bloom time and color, and its overall texture. Use plants that bloom at different times to create a long flowering season. Mix heights, shapes, and textures to give the garden depth and dimension. This will keep the rain garden looking interesting even when the flowers are not blooming.

Try incorporating a diverse mixture of sedges, rushes, and grasses with your flowering species. This creates necessary root competition that will allow plants to follow their normal growth patterns and not outgrow or out-compete other species. This also helps to create a thick underground root matrix that keeps the entire plant community in balance.

Once the plants are installed, apply a large chip, hardwood mulch, two to three inches deep throughout the entire rain garden. If the rain garden is installed during the dry season, hand-water the new plants every day for at least two weeks to get the roots established.

Finally, consider enhancing the rain garden by using local or existing stone, ornamental fencing, trails, garden benches, or additional wildflower plantings. This will help give the new garden an intentional and cohesive look and provide a feeling of neatness that your neighbors will appreciate.

The following page contains a table of suggested plants to use as a starting point for your rain garden. This is not a complete list, but many of the plants are readily available at garden centers and local nurseries.

Table 3: Some suggested plants for a rain garden in central Florida
* Indicates a Florida native species

	Common Name	Botanical Name
FLOWERS	African Iris	*Dietes iridioides*
	Blue Flag Iris*	*Iris virginica*
	Canna Lily	*Canna* spp.
	Goldenrod*	*Solidago* spp.
	Milkweed (native & non-native species)	*Asclepias* spp.
	Shrimp plant	*Justicia brandegeana*
	Swamp sunflower*	*Helianthus angustifolius*
GRASSES & SHRUBS	Florida gamma grass*	*Tripscicum floridana*
	Muhly grass*	*Muhlenbergia capillaries*
	Wiregrass*	*Aristida stricta* var. *beyrichiana*
	Virginia Willow*	*Itea virginica*
GROUND COVERS	Holly Fern	*Cyrtomium falcatum*
	Periwinkle	*Vinca major*
	St. Bernard's Lily	*Anthericum sanderii*

(For photos and cultural information about each of the plants listed above, along with a complete catalog of suggested plants for your rain garden, visit the plant list at the end of this publication.)

St. Bernard's lilies
Anthericum sanderii

Canna lilies
***Canna* spp.**

During the first two years after installing the rain garden, regular maintenance will be required to keep out the weeds and replenish the mulch. Once the plants fill in, the system will be relatively self-sustainable.

Fact. Act. Payback!

FACT: MULCHES HELP CONSERVE WATER, REGULATE SOIL TEMPERATURE, AND REDUCE SOIL EROSION AND WEEDS.

ACT: MAINTAIN A 2"-3" LAYER OF MULCH (ORGANIC OR INORGANIC) IN YOUR LANDSCAPED BEDS. CYPRESS MULCH IS NOT RECOMMENDED.

PAYBACK:

1) Reduced frequency of irrigation of landscape plants;
2) Reduced destruction of Florida's cypress wetland habitat;
3) Increased aesthetics of the landscape!!!

Building a Rain Garden
Step 4: Maintenance

Like any other part of a landscape, weeding will be an ongoing maintenance issue for a rain garden. During the first year or two, as the plants fill-in and get established, hand-remove the weeds to prevent competition with desired plants and replenish the mulch as needed to maintain a 2”-3” layer over the soil. By the third year, the plants selected for the rain garden should be mature and will out-compete the weeds. However, occasional weeding of isolated patches may still be necessary.

If you choose plants that are all low-growing, like ground covers and spreading perennials, an easy way to keep them maintained would be to mow the dead plant material once a year. This will stimulate growth and help to deter weeds. This may only be feasible if your mower blade can be raised to a height of 6 inches or more. If not, use a string trimmer, weed-eater or pruning shears to cut the plants back to about 6 or 8 inches tall.

Evergreen plants, such as ornamental grasses, should be pruned selectively or cut back at the end of the growing season and once the risk of frost/freeze has passed.

Replenish mulch as needed to maintain a 2”-3” layer over the soil.

Learn your plants and their growing habits. Some grasses, like muhly grass, will need to be cut back in the spring once it has finished blooming. Spent blooms and seed heads should be removed on an as-needed basis. This will help to maintain aesthetics in the garden. Additionally, removing seeds before they fall to the ground and germinate will prevent overcrowding and competition among plants.

Certain plants, like lilies and irises, may need to be divided after a few growing seasons. Share the extra plants with friends and family, or transplant them to a suitable spot somewhere else in your yard.

Fact. Act. Payback!

FACT: HERBICIDES WILL KILL UNWANTED WEEDS BUT MAY HARM NON-TARGET PLANTS AS WELL.

ACT: HAND-PULL WEEDS ON A REGULAR BASIS, AND ONLY USE HERBICIDES AS A LAST RESORT.

PAYBACK:

1) Reduced chance of herbicide damage on desired plants;
2) Reduced risk of nonpoint source pollution and runoff;
3) Increased physical activity and exercise!!!

Suggested Plant List for Rain Gardens in Central Florida

FLOWERS & FLOWERING SHRUBS

Asclepias spp. — Milkweed

Light Range: ☀ - ●

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋 🦜

Native: Some

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 4’ x 4’

Dietes iridioides — African Iris

Light Range: ☀ - ◑

Soil Moisture: 💧 - 💧💧💧

Wildlife: None

Native: No

Perennial: Yes

Growth Rate: Slow

Mature Height & Spread: 3’ x 2’

Solidago spp. — Goldenrod

Light Range: ☀ - ◑

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋 🦜

Native: Some

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 6’ x 2’

☀ = Full sun ◑ = Part shade ● = Full shade 💧 = Dry 💧💧💧 = Wet 🦋 = Butterflies 🦜 = Birds

***Justicia carnea* — Jacobinia, Flamingo Plant**

Light Range: ◐ - ●

Soil Moisture: 💧💧💧

Wildlife: 🦜

Native: No

Perennial: Yes

Growth Rate: Slow

Mature Height & Spread: 4’ x 3’

***Canna* spp. — Canna Lily**

Light Range: ○ - ◐

Soil Moisture: 💧💧 - 💧💧💧

Wildlife: 🦋

Native: Some

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 6’ x 3’

***Helianthus angustifolius* — Swamp sunflower**

Light Range: ○

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋 🦜

Native: Yes

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 4’ x 4’

***Iris hexagona* — Louisiana iris**

Light Range: ○ - ◐

Soil Moisture: 💧💧💧

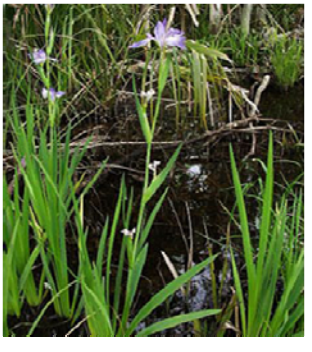
Wildlife: None

Native: No

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 4’ x 1’



***Iris virginica* — Blue flag iris**

Light Range: ☀ - ◐

Soil Moisture: 💧💧 - 💧💧💧

Wildlife: None

Native: Yes

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 4’ x 1’

***Clethra alnifolia* — Sweet pepperbrush**

Light Range: ☀ - ●

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋

Native: No

Perennial: N/A

Growth Rate: Medium

Mature Height & Spread: 5’ x 5’

***Cephalanthus occidentalis* — Buttonbush**

Light Range: ☀ - ◐

Soil Moisture: 💧💧 - 💧💧💧

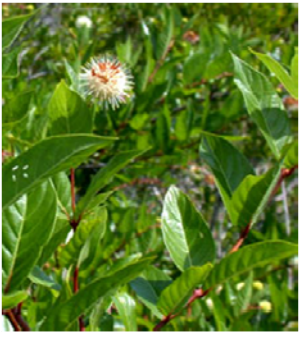
Wildlife: 🦋 🐦

Native: Yes

Perennial: N/A

Growth Rate: Medium

Mature Height & Spread: up to 20’ x 8’



***Itea virginica* — Virginia sweetspire**

Light Range: ☀ - ●

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋

Native: Yes

Perennial: N/A

Growth Rate: Slow

Mature Height & Spread: 6’ x 4’

GROUND COVERS & VINING PLANTS

***Osmunda cinnamomea* — Cinnamon fern**

Light Range: ◑ - ●

Soil Moisture: 💧💧 - 💧💧💧

Wildlife: None

Native: Yes

Perennial: Yes

Growth Rate: Slow

Mature Height & Spread: 4’ x 4’

***Phyla nodiflora* — Frog-fruit**

Light Range: ○ - ◑

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋

Native: Yes

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 6” x varies

***Justica brandegeana* — Shrimp plant**

Light Range: ○ - ◑

Soil Moisture: 💧💧 - 💧💧💧

Wildlife: 🦋 🐦

Native: No

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 3’ x 3’

***Aster carolinianus* — Carolina aster**

Light Range: ○ - ●

Soil Moisture: 💧 - 💧💧💧

Wildlife: 🦋 🐦

Native: Yes

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: up to 12’ x 4’

GRASSES & OTHER PLANTS

Muhlenbergia capillaris — Muhly grass

Light Range: ☀

Soil Moisture: 💧 - 💧💧💧

Wildlife: None

Native: Yes

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 5’ x 3’

Aristida stricta var. *beyrichiana* — Wiregrass

Light Range: ☀ - ◐

Soil Moisture: 💧 - 💧💧💧

Wildlife: None

Native: Yes

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 4’ x 3’

Tripsacum floridana — Florida gamma grass

Light Range: ☀ - ◐

Soil Moisture: 💧 - 💧💧💧

Wildlife: None

Native: Yes

Perennial: Yes

Growth Rate: Medium

Mature Height & Spread: 4’ x 6’

Alocasia spp. — Elephant ears, Taro

Light Range: ☀ - ●

Soil Moisture: 💧💧 - 💧💧💧

Wildlife: None

Native: Some

Perennial: Yes

Growth Rate: Fast

Mature Height & Spread: 10’ x 10’

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