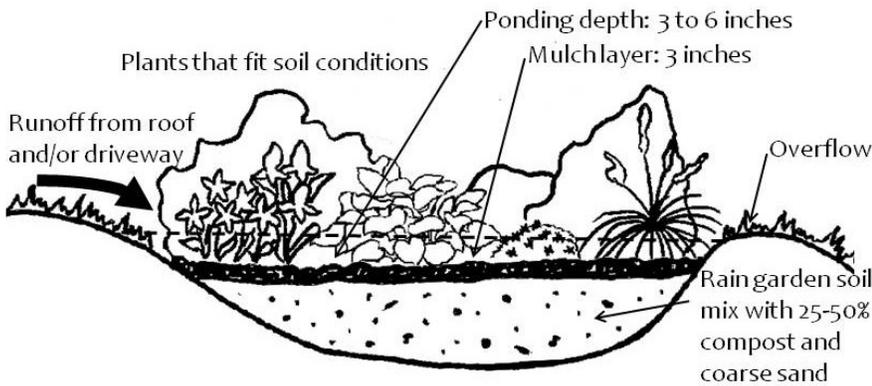


# WATERways

Volume 14, Number 2: November 2010



## Rain Gardens: Attractive Solutions to Pollution



Rain gardens are bowl-shaped areas in a landscape designed to capture and soak in rainwater from roofs and driveways. Special plants are chosen that can withstand “wet feet” for a few hours.

Rain gardens add beauty to your yard while reducing the time and resources you will spend maintaining a lawn. These gardens filter pollutants like bacteria, fertilizer, and sediment. They also help protect against erosion and flooding by reducing the surge of water that rushes to streams during a storm.

Rain gardens hold water for up to two days after a storm, allowing it to slowly soak into the ground. Water should drain in less than three days to prevent mosquitoes.

### Already have a rain garden?

E-mail a photo of the garden to StormwaterEducation@DurhamNC.gov to be featured on our website!

### Steps to Building a Rain Garden

#### Find a good spot

Observe how water flows in your yard. Choose a location that is between the rainwater source and its destination. You may need to attach a flexible plastic pipe to a downspout to direct water to the garden.

#### Check the soil

A simple infiltration test will ensure that the rain garden drains well. Dig a hole one foot deep. Fill it with water. If it drains in less than 12 hours, you can build a rain garden. If it drains in 12-36 hours, a rain garden may be possible but you will likely need design help. If it takes more than 36 hours to drain, choose a backyard wetland instead. **Call 811 before you dig** to check the location of utility lines.

#### Size the garden

To size the garden, first determine the square footage of roof and driveway area draining to the garden. If

### Free Rain Gardens

Do you live in a neighborhood within Northeast or Third Fork Creek watersheds? If so, you can apply for a rain garden to be installed in your yard for free!

To find out your watershed, visit the City of Durham website at [www.DurhamNC.gov](http://www.DurhamNC.gov). Click on Online Services, Online Mapping, then GoMaps. Type your address in “Quick Search” *without* the final word for Road, Court, Circle, etc. Click on “Water Features” and check the box for Watersheds.

To apply, contact Robert Louque at 560-4326, ext. 30215 or by e-mail at [Robert.Louque@DurhamNC.gov](mailto:Robert.Louque@DurhamNC.gov).

Northeast Creek watershed rain gardens will be installed in summer, 2011. Third Fork Creek gardens will be installed the following summer.

Funding for the gardens is provided through a grant from the State.

one-half of your 1,000 square foot roof plus 200 square feet of driveway are contributing runoff to the garden, your total drainage area is 700 square feet.

Next choose a ponding depth of three inches or six inches. Ponding depth

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determines how much water your garden will hold during a storm.

A ponding depth of three inches is best for the clay soils in our area. This means that the garden will be three inches below the rest of your landscape.

For a three-inch deep garden, divide drainage area by 10. Your rain garden would be 70 square feet (700 divided by 10). For a six-inch deep garden, divide by 20. For a 700 square foot drainage area, the garden would be 35 square feet.

#### Prepare soil

For a three inch deep rain garden, dig down at least a foot to mix in a soil amendment. Amend the soil by 25-50% with compost or a mix of compost and coarse, washed sand. Use the extra soil you dug out to build a berm on the side of the garden where the water will overflow once the garden is full.

Add three inches of double shredded hardwood mulch. The top of the mulch layer should be three inches lower than the water entry point.

#### Plant

Choose plants from a rain garden plant list for our area. NC State's website, [www.bae.ncsu.edu/topic/raingarden](http://www.bae.ncsu.edu/topic/raingarden), includes plant lists and sample layouts. Include as many native plants as possible to attract birds and pollinators. Planting in full to partial sun is best.

#### Maintain

Water your rain garden in the first two years while plants get established. It should not need watering after the first two years. Weed as needed. Replace mulch every three years.

#### Enjoy!

Treasure this new addition to your yard. Take pride in doing your part for clean water. Encourage your neighbors to try it. E-mail a photo of your completed garden to [Sormwater-Education@durhamnc.gov](mailto:Sormwater-Education@durhamnc.gov).

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### Rain Garden Resources

- ◆ North Carolina Cooperative Extension's website provides step-by-step directions, photos, and plant lists for our area. [www.bae.ncsu.edu/topic/raingarden](http://www.bae.ncsu.edu/topic/raingarden)
  - ◆ The Low Impact Development Center website has additional design guidelines and garden templates. [www.lowimpactdevelopment.org/raingarden\\_design](http://www.lowimpactdevelopment.org/raingarden_design)
  - ◆ *Rain Gardening in the South* by Helen Kraus and Anne Spafford, Eno Publishers, 2009, is a colorful and comprehensive book.
  - ◆ Local landscaper Cheryl Shiflett hosts a blog and online book at <http://raingardenhandbook.com>
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## Durham Canines for Clean Water

Sixty dogs and their companions have taken a pledge to scoop, bag, and can the poop. There are many good reasons to pick up after your canine. But here's a reason you might not have known: pet waste left on the ground gets washed into storm drains and ditches that flow into our local waterways.

This polluted runoff is not cleaned before it reaches our rivers and lakes. This means that pet waste—along with its bacteria, viruses, and parasitic worms—flows into the water we swim in, fish from, and drink.

The City of Durham Stormwater Services and Keep Durham Beautiful launched the Canines for Clean Water campaign at Woofstock 2010. Pledge signers received a personalized certificate and a dog waste bag dispenser that attaches to a leash.

Join other concerned Durham residents in pledging to help keep our water clean and safe. Visit [www.KeepDurhamBeautiful.org](http://www.KeepDurhamBeautiful.org). Click on Our Programs, Cleanups, and then Canines for Clean Water. Take the pledge and encourage your neighbors to do the same.



*City Councilman Mike Woodard and Lillie pose for their Canines for Clean Water Certificate photo at Woofstock.*

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**Public Works Department - Stormwater Services - 919-560-4326**

[www.durhamnc.gov/stormwater](http://www.durhamnc.gov/stormwater)

Design/Plan Review - Drainage/Flooding Concerns - Floodplain Information

Stormwater Public Education - Surface Water Quality

**Notice Under the Americans with Disabilities Act:** Citizens who require assistance should call (919) 560-4197, ext. 21254, TTY (919) 560-1200 or e-mail [ADA@durhamnc.gov](mailto:ADA@durhamnc.gov).

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