

**WATERWAYS** is a semiannual newsletter to inform Durham residents about various elements of the City of Durham's stormwater management program. Public Education, Stormwater Infrastructure (drainage and flooding), and Water Quality are the three main areas in Stormwater Services.

## Plant Trees for Clean Water

### **Trees help keep water healthy...**

Fall is the perfect time of year to plant trees. Trees clean the water by trapping and soaking in pollutants like fertilizer and sediment. Trees are especially important next to creeks, streams, lakes and even ditches. They provide a **buffer** between the waterway and the land, soaking in polluted runoff. Deep roots also help stabilize stream banks and keep them from collapsing. Stream buffers help prevent floods by slowing floodwater down and giving water a chance to soak into the ground. Trees and shrubs along streams serve as wildlife habitats for birds and create shade that helps moderate water temperatures, keeping fish healthy.

Vegetated buffers are nature's simple and effective way to battle pollution. By planting and preserving buffers today we help avoid the high cost of pollution tomorrow.

### **You can make a difference! Here's how to be a good stream neighbor...**

- ◆ Let areas next to a stream go natural. Plant some native plants and trees or at the very least, let the grass next to your stream banks grow a little taller.
- ◆ Test your soil before you apply fertilizer (free through NC Cooperative Extension, 721 Foster St.).
- ◆ Avoid fertilizing the area right next to the stream. Wait to fertilize your lawn until there is no rain in the forecast. Use compost instead of fertilizer whenever possible.
- ◆ Don't dump grass, leaves, or other yard clippings into streams or street gutters. Instead, compost your yard waste or contact the Solid Waste Department for a yard waste bin.
- ◆ Use a rain barrel and slowly let the water out into your landscape before the next rain.
- ◆ Create a rain garden to help runoff soak in.

### **How to Plant a Tree**

*Plant in November or December for best results*

**Step 1:** Dig planting hole *at least* 2.5 times the root ball width, same depth as root ball in middle and a little deeper around bottom edge of hole to help excess water drain away.

**Step 2:** Place tree in hole with root flare visible (at or above ground level). In heavy clay soils, plant slightly above ground level and mound the soil up.

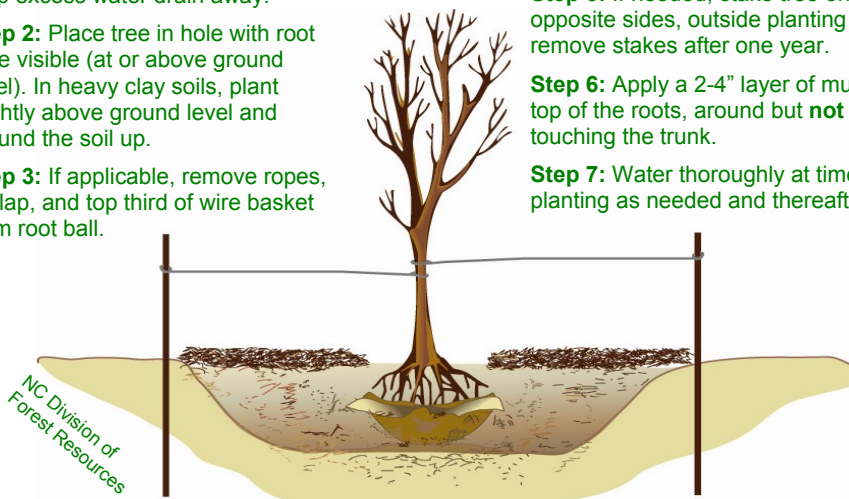
**Step 3:** If applicable, remove ropes, burlap, and top third of wire basket from root ball.

**Step 4:** Fill hole around root ball with soil; pack in gently. Do not amend the soil in the tree pit.

**Step 5:** If needed, stake tree on opposite sides, outside planting hole; remove stakes after one year.

**Step 6:** Apply a 2-4" layer of mulch on top of the roots, around but **not** touching the trunk.

**Step 7:** Water thoroughly at time of planting as needed and thereafter.



### **Do you have an existing buffer on your property?**

If you have a stream on your property, you could be required by state and local laws to maintain an undisturbed buffer from 50 to 100+ feet in width. That means no mowing, cutting, or removing buffer vegetation. Call the Planning Department at 560-4137 if you are unsure.

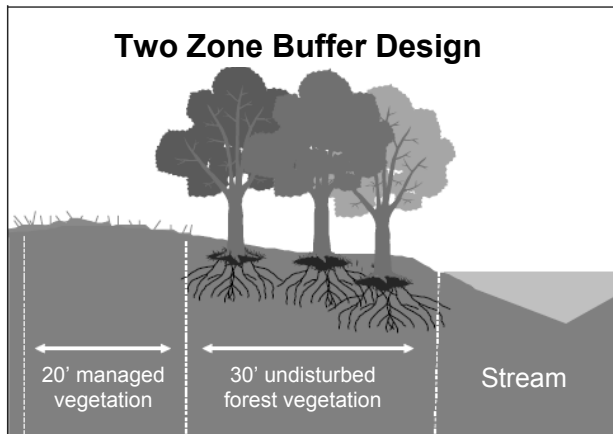
Buffer rules are in place to protect regional drinking water sources like Falls Lake and Jordan Lake. Buffers also protect the streams that feed into these reservoirs.

Buffers are required in new developments. Keeping a good supply of streamside trees and shrubs is important to downstream neighbors!

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## What makes a good buffer?

Many researchers recommend two zones for a stream buffer. For a 50 foot buffer, the 30 feet closest to the stream should be forested. The next 20 feet should be grassed. This approach helps stormwater runoff to spread out, slow down, and soak in. Pollutants like fertilizer and sediment are trapped and/or absorbed by the vegetation.



## Choosing your trees

It is always best to plant species that are native to your area. In general, the following species are good choices for the North Carolina Piedmont.

Evergreen (does not lose leaves and can provide visual screening):

- Carolina Laurelcherry (*Prunus caroliniana*)
- Wax Myrtle (*Myrica serifera*)
- Eastern Red Cedar (*Juniperus virginiana*)



Deciduous (loses leaves in fall and can help regulate house sunlight and temperature):

- Eastern Redbud (*Cercis canadensis*)
- Tag Alder (*Alnus serrulata*)
- River Birch (*Betula nigra*)
- Red Maple (*Acer rubrum*)

## More information on buffer plantings

The NC State Stream Restoration Program and NC Cooperative Extension maintain lists of recommended tree and shrub species for buffers. Links to both lists are available in the “What Can I Do” section of the website [www.NCCleanWater.org](http://www.NCCleanWater.org). The NC Botanical Garden is also a great source for native plants and information ([www.ncbg.unc.edu](http://www.ncbg.unc.edu)).



Volunteers plant trees for a stream-side buffer in Durham. Species planted included beautyberry, red chokeberry, and river birches.

## Winterizing your Lawn



Advice on fall fertilizing varies widely. Some fertilizer makers even recommend fertilizing twice before winter.

Paying for water pollution is expensive, and over-fertilizing is one cause of that pollution. **Know before you sow!** The type and amount of inputs for a healthy lawn depend on your specific grass type and your specific soil type. Prior to seeding and fertilizing this fall, test your soil to see what nutrients it needs. You may be surprised at the results!

Pick up a soil test box at the NC Cooperative Extension office at 721 Foster Street. Analysis is free!

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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).

