



## Stormwater 101: Pet Waste



**IF YOU THINK PICKING UP PET WASTE IS UNPLEASANT, TRY SWIMMING IN IT!**

Stormwater runoff washes bacteria from pet waste directly into our streams and waterways. This bacteria pollutes our waterways and threatens our health.

Make the connection...pick up after your pet.

**YOU are the solution to stormwater pollution!**



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### Neighbors & Businesses Help Improve Burnt Mill Creek Watershed

Restoration efforts are multiplying in the polluted Burnt Mill Creek (BMC) Watershed as a result of passionate involvement from citizens, businesses, local community leaders and state agencies. This partnership is utilizing a 3-year USEPA (Environmental Protection Agency) grant to reduce stormwater pollution in the watershed by installing Best Management Practices (BMPs) and educating watershed residents. Grant project partners include:

- Citizens and businesses in the BMC watershed
- City of Wilmington Stormwater Services
- NC State University's Watershed Education for Communities and Officials (WECO) and Dept. of Biological and Agricultural Engineering
- Cape Fear River Watch
- UNC-Wilmington
- New Hanover County Planning Department
- New Hanover Soil & Water Conservation District
- NC Ecosystem Enhancement Program (NCEEP).

A major grant goal is to provide educational presentations to community groups and businesses and discuss how to reduce stormwater runoff pollution by installing on-the-ground Best Management Practices (BMPs). To date, BMPs sponsored by the grant have been installed at the Wilmington Family YMCA (*pervious pavement, rain gardens*) and Stonestrow Condominiums (*stormwater wetland*). Upcoming installations under consideration include a stormwater wetland at a City park and rain gardens at Port City Java's corporate headquarters on Market Street.

In addition, a partnership was formed with The Bottom Empowerment Group, a community advocacy group in the oldest part of the BMC watershed. At a recent community workshop, citizens learned how to help beautify their neighborhood and reduce stormwater runoff pollution through the installation of backyard BMPs.

Restoration takes time, but momentum continues to build in the Burnt Mill Creek Watershed as more citizens and business owners enthusiastically step up to the plate to participate. If you are interested in reducing stormwater runoff from your neighborhood or business property in the BMC Watershed, BMP sites are still being sought for the project. Please contact Christy\_Perrin@ncsu.edu or (919) 515-4542.

Submitted by Christy Perrin, NCSU, WECO



A pervious parking lot and rain garden were installed at the Wilmington Family YMCA off Market Street.



At a neighborhood meeting, residents of the Bottom Neighborhood learn about installing BMPs in their own yards.

# Stormwater Watch Newsletter

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## Stormwater Services

Stormwater Services maintains and improves the public drainage system for the protection of our community and the environment.



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### Reader Feedback?

Do you receive more than one newsletter? If you are moving soon, do we have your new address information? Do you want to see something included in a future newsletter? **We want to hear from you!** Contact us with your comments or suggestions at 341-5895 or jennifer.butler@wilmingtonnc.gov

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## A Balancing Act ~ Caring for your lawn *AND* our waterways

**Did you know that you can prevent water pollution from lawn care and gardening activities?** Stormwater runoff and improper irrigation methods can transport fertilizers, pesticides, sediment, yard debris, and other pollutants directly into our waterways.

What you do in your yard and on your property **directly** impacts our waterways. Poor lawn care practices can result in fish kills, aquatic weed and algae growth, impaired aquatic habitat, recreational water closures, and disturbed aesthetic views of our waterways. The following lawn and garden tips will help you improve and protect our waterways. Remember, **YOU** are the **SOLUTION** to stormwater **POLLUTION!**

### FERTILIZER

Fertilizing properly can save you time and money and prevent water pollution. Over-fertilizing your lawn may seem insignificant, but careless application on hundreds of lawns can add up to major problems for our waterways, including high nutrient levels, algal blooms, and low dissolved oxygen.

- ◆ GET A SOIL TEST- It's free, will save you time and money, and provides specific nutrient needs and application rates for your lawn. Soil testing kits and services are **free** from the New Hanover County Cooperative Extension, 6206 Oleander Drive, 452-6393.
- ◆ Grasscycle - leave grass clippings on the lawn; they are a cheap, safe, and effective natural fertilizer and soil conditioner.
- ◆ Avoid fertilizing before it rains.
- ◆ Keep fertilizer off paved surfaces like sidewalks, streets, and driveways.



If fertilizer is applied too heavily or unevenly, it may burn the grass or result in a patchy lawn. To avoid this, use the following method:

- ◆ Estimate your lawn area in square feet: pace off the length and width of your yard (1 large pace equals 2 ft.). Multiply length x width to get total square feet.
- ◆ **Example:** If your yard is 10 paces wide, that would equal 20 ft. and 12 paces long, that would equal 24 ft. Then multiply 20 ft. X 24 ft., for a total of 480 square feet of lawn area. Calculate and measure the correct amount of fertilizer for the total

square feet per application rates on the bag of fertilizer.

- ◆ Be sure to calibrate your (fertilizer) spreader so that you are applying the correct amount of fertilizer. Drop spreaders do the best job of keeping fertilizer on the lawn, so you don't get it on the sidewalk, street, or driveway.

### \$\$\$ave Money, Protect Our Waterways, & Have a Green Lawn!

**S**oil testing can save you time and money when it comes to fertilizing your lawn. For example, if you have 1,000 square feet of lawn area you could:

**OPTION A:** Fertilize twice a year, at an average of \$25.00 a session for time and materials (at a cost of \$50 a year).

**OPTION B:** Get a **free** soil testing kit, analysis, and advice from the NHC Cooperative Extension. Apply the exact nutrients your lawn needs and "grasscycle" regularly, and you could greatly reduce or eliminate the need for fertilizer.

**Grasscycling** means leaving grass clippings on your lawn to provide up to 25% of your lawn's total fertilizer needs- naturally. Grass clippings contain about 4% nitrogen, 2% potassium, and 1% phosphorus. Clippings break down fast and serve as a food source for bacteria in the soil, which are doing many beneficial things, such as decomposing thatch.

Getting your soil tested and grasscycling will save you time and money, and will ultimately help improve Wilmington's waterways!



Make the Connection between Lawn Care & Water Quality!

### PESTICIDES & HERBICIDES



The majority of insects found on a lawn are beneficial. Pesticides are poisonous and can actually harm birds and animals that keep unwanted insects in check.

- ◆ Landscape with native plants; they are naturally resistant to diseases and pests.
- ◆ Weed by hand and use natural predators, such as ladybugs, to control pests.
- ◆ Use pesticides as a last resort, use them sparingly, and spot treat only.
- ◆ Avoid applying pesticides before it rains.

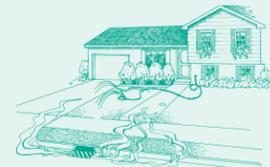
### MOWING



Proper mowing techniques prevent water loss, reduce weeds, and keep your lawn healthy and growing.

- ◆ Mow only when the grass is dry.
- ◆ Alternate mowing patterns.
- ◆ Don't cut grass too short- lack of shade will dry out the soil and cause weed and insect problems.
- ◆ Mower blades should be kept sharp, because dull blades leave grass wounded and vulnerable to pests and diseases.

### IRRIGATION



Over-watering or irrigating improperly can wash fertilizers, pesticides, motor oil, and other chemicals into our waterways. Proper irrigation practices can save time and money, as well as protect our waterways.

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- ◆ Irrigate when the soil is nearly dry.
- ◆ Water the lawn, not the sidewalk, street, or driveway. Adjust sprinklers if necessary.
- ◆ Water in the early morning to discourage lawn disease and reduce evaporation.
- ◆ Irrigate slowly so that water doesn't run off or compact the soil.
- ◆ Use a rain gauge or tuna can to measure the amount of water you're putting on your lawn; 1/2" to 1" is plenty of water for most lawns.
- ◆ Plant drought-tolerant native plants to reduce irrigation needs.
- ◆ Use a rain barrel to collect rainwater, irrigate your landscape and save \$\$\$.

### YARD WASTE



Yard waste, such as leaves and grass clippings, that are blown into streets, storm drains or ditches, can cause algal blooms, oxygen depletion and fish kills in waterways. Clogged drains and ditches can also cause street and property flooding.

- ◆ Grasscycle - leave grass clippings on the lawn as a natural fertilizer/soil conditioner.
- ◆ Leaves and yard clippings can be composted and used as a mulch.
- ◆ Bag or containerize waste for collection day or take to a disposal facility.
- ◆ **Do not** blow, sweep, or hose leaves and other debris into a street, storm drain, ditch, or waterway (*City ordinance*).

### EROSION



Sediment impacts aquatic life, habitat, and water quality, and can lead to property flooding.

- ◆ Re-seed bare lawn areas or install plants.
- ◆ Mulch exposed soil in gardens and flower beds.
- ◆ Plant groundcover, trees, and shrubs in order to anchor soil in place, reduce erosion, and filter pollutants in runoff.
- ◆ Keep sediment off sidewalks, driveways, and other hard surfaces.
- ◆ Follow all construction site runoff laws and practices.

### LANDSCAPING WITH NATIVE PLANTS



Native plants require less water and virtually no fertilizer and pesticides. They are adapted to the region and are drought, disease, and pest-resistant. Native plants help create a healthy and diverse ecosystem, and require a lot less maintenance than a traditional lawn. Landscaping with native plants can save you time and money spent on fertilizer, pesticides, and irrigation.

**PLEASE SHARE THESE TIPS WITH YOUR LANDSCAPING COMPANY AND NEIGHBORS!**