

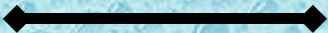
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**Town of Hillsborough  
Public Works Department  
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**Our Stormwater Drains  
to the Eno River!**

# Town Proposes New Regulations

One requirement of the Town of Hillsborough's federal stormwater permit is to establish a program to manage the quantity and quality of stormwater runoff from new development.

Currently, development projects within the town's jurisdiction only need to control the amount of stormwater runoff (the first 1/2 inch of rainfall that falls on the project). However this soon will change. To comply with the federal permit, the town must adopt stricter stormwater controls for new development. This not only includes controlling the amount of stormwater runoff, but also includes requiring treating the runoff to remove pollutants.

The actual requirements will depend on the type of development. Two categories of development will be defined: low-density (less than 24 percent built-upon or impervious area) and high-density projects (24 percent or more built-upon area).

The logic behind this is simple; the more built-upon area, the more stormwater runoff there is from a site. The speed of the runoff also increases, and less stormwater soaks into the ground. More built-upon area also means more pollutants in the runoff. For instance, parking lots often contain oil and grease from parked vehicles. When it rains those pollutants are carried off by stormwater.

Low-density projects will be required to use nonstructural stormwater practices to allow stormwater to soak into the ground. Runoff leaving the site must flow through vegetated channels rather than pipes since vegetation helps remove pollutants from the runoff.



*Structural stormwater controls, like this bioretention cell, may become commonplace in new Hillsborough developments.*

High-density projects must use structural or "engineered" stormwater controls to treat the stormwater runoff leaving the site. This includes treating the quantity (the difference between pre- and post-development for the 1-year, 24-hour storm) and the quality of the stormwater. Both high- and low-density projects also must comply with the town's stream buffer requirements.

Additionally, the Town is located in the Neuse River Basin, which is designated as a nutrient sensitive watershed. Increased nutrients in stormwater runoff can lead to reduced oxygen levels in our waterways, which can cause fish kills and other adverse impacts. Both low- and high-density projects will have to comply with the Neuse River Basin stormwater requirements. Essentially, this requires new development to reduce the amount of nitrogen in the stormwater runoff.

A public hearing was held in July to receive comment on the proposed changes. The Town Board approved the changes this month, and changes will become effective Oct. 1.

**You Have the POWER to Change Our Environment** by joining other Orange County residents for **NC Big Sweep**, a statewide initiative promoting litter-free watersheds. In just a few hours, YOU can make a BIG difference by helping pick up litter from 9 a.m. to 1 p.m., Oct. 6. To sign up, contact Water Resource Officer Terry Hackett at 245-2588 or [thackett@co.orange.nc.us](mailto:thackett@co.orange.nc.us).

# Neuse River Basin Rules

The Town of Hillsborough and most of northern Orange County lies within the Neuse River Basin or watershed. This simply means that the creeks, rivers and streams in these areas eventually drain to the Neuse River. In the late 1990s, the Neuse River experienced major fish kills that prompted North Carolina to enact regulations to help protect water quality in the basin.

These rules include protecting riparian buffers and reducing nutrients in stormwater runoff that reaches waterways within the Neuse Basin. Riparian or stream buffers refer to undisturbed forested areas along streams and rivers. These buffers have many functions, but primarily they help to filter pollutants from stormwater runoff.

Nutrients, specifically excess nitrogen, can have adverse impacts on aquatic ecosystems. When excess nitrogen enters a waterbody, it acts as a fertilizer for algae, causing it to grow. As algae grows and eventually dies, it uses a great deal of oxygen from the water. This leaves little oxygen for the fish and other aquatic animals, which can cause significant fish kills.

While nitrogen is found naturally, increased development causes more nitrogen to occur in stormwater runoff. Simply stated, increased development decreases the amount of stormwater that can infiltrate or "soak into the ground" where nitrogen can be removed. To combat this, the state enacted rules to protect stream buffers that help to remove nitrogen. The rules also require new developments to estimate their nitrogen levels in the runoff. If the project is above a certain amount, structural stormwater controls must be built to remove the nitrogen.

Orange County has long been at the forefront in protecting water resources. It makes sense that the county would seek local delegation from the state to enforce the Neuse buffer and stormwater rules.

In 2003, the county enacted the *Stormwater Ordinance for Lands within the Neuse Basin*. The county even has enacted its own stream buffer rules that go beyond the requirements of the Neuse to help protect water quality.

Currently, the Town of Hillsborough is exempt from the Neuse stormwater portion of the rules. That

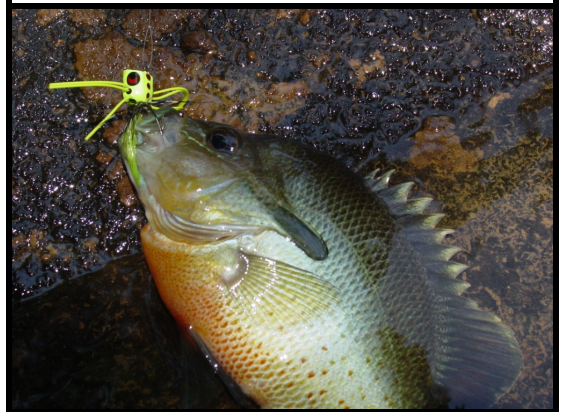
soon will change when new stormwater post-construction requirements go into effect (see related article on Page 1). The town does have its own stream buffer



rules, which are more stringent than the Neuse rules require.

The Neuse buffer and stormwater rules are enforced locally by Orange County Erosion Control, a division within the Planning and Inspections Department. Staff are responsible for reviewing and approving stormwater management plans, conducting surface water identifications and reviewing stream buffer impacts. Erosion Control staff will provide these services for Town of Hillsborough projects through an existing interlocal agreement. This will bring all of the lands within the Neuse River Basin in Orange County under similar water quality protection rules. For more information, please contact Terry Hackett. His contact information is listed below.

## *I Live in the Eno ...*



The **redbreast sunfish** (*Lepomis auritus*) is perhaps the brightest colored sunfish found in the Eno River. Besides their bright color, they can be distinguished by the long, narrow extension of the gill cover.

It is also known as robin, redbelly, yellowbelly sunfish and bream. Redbreast sunfish feed on a variety of foods, especially bottom-dwelling insect larvae, snails, clams, shrimp crayfish and small fish.

They prefer flowing water and often concentrate around boulders, logs, aquatic vegetation and tree roots along the bank. These fish are wonderful sport on lightweight tackle, especially fly rods since they readily will strike surface popping bugs like the one pictured did. It was caught in the Eno River.

The state record for a redbreast sunfish is 1 pound, 12 ounces, caught in May 1983 in Bladen County, but there might be a state record lurking in our own Eno River!



### *For more information, contact:*



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