



# Stormwater Services Annual Newsletter

Town of Wrightsville Beach Public Works Department

April 2008

## 2007

- *Town Adopts Stormwater Ordinance*
- *Infrastructure Inventory Completed*
- *Storm Drain System Cleaning Underway*
- *UNCW Water Quality Testing Continues*

## 2008

- *Expected Stormwater Rules Changes*
- *Design Manual Update*

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Just over one year ago, in March, 2007, the Town received its stormwater permit from the State of North Carolina in compliance with Federal Environmental Protection Agency regulations. Since then, the Town has adopted a stormwater ordinance, began a permitting and inspection program, initiated a water quality study with UNCW, completed a stormwater system inventory and established a stormwater system maintenance plan.



**Stormwater Ordinance.** The Stormwater Ordinance was adopted by the Board of Aldermen in June 2007. The ordinance is comprised of two major sections: stormwater permitting and illicit discharge. The permitting section describes how the program is to be administered, who is required to obtain a permit, when a permit is required and what penalty actions can be taken for non-compliance. In short, a stormwater permit is required: 1) anytime there is soil disturbing activity that exceeds 500 square feet, 2) whenever there is a change in pervious surface area or 3) whenever the post-construction stormwater runoff from a parcel is greater than the pre-construction runoff level.



The illicit discharge section of the ordinance discusses items that are prohibited from being deposited either directly or indirectly in the storm drain system or the area waterways. As an example, it is illegal for anyone to deposit yard waste (e.g. grass trimming, leaves, etc) in the streets, storm drains or local water body. A direct mailing was accomplished to notify local area landscape and maintenance businesses of the new ordinance, but we are still encountering some of the smaller, "family-owned" businesses who are unaware of the change.

**Infrastructure Inventory.** Beginning in November, 2007, an inventory was completed on the entire stormwater system. The inventory goals included:

- Accurately mapping all system components
- Assigning an identification code to each component
- Identifying inlets that require stenciling to indicate that contents drain to local waters
- Assessing the condition of the inlets and pipes

The inventory also included the use of a Global Positioning System (GPS) to accurately locate the inlet structures and system outfalls and to transfer them to a computerized mapping system.

Accomplishing this inventory was no small task. In fact, within the jurisdiction of Wrightsville Beach there are nearly 650 stormwater inlets that collect stormwater runoff and direct it to the local waterways. The runoff travels to the waterways through nearly 56,000 linear feet (10.6 miles) of pipe and is deposited at approximately 100 locations around the Town.

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Despite the fact that Wrightsville Beach Public Works Department cares for the entire system, the Town only owns 48% of the storm drain pipes, 46% of the inlet structures and 41% of the outfalls. The other system components are owned by either the North Carolina Department of Transportation, New Hanover County, or private individuals.

**Storm Drain Maintenance.** The Water and Sewer Division of the Public Works Department has been working hard to remove debris from the storm drain system. The Town's goal is to clean a minimum of 10% of the publicly-owned portion of the system each year. This amounts to approximately 4,745 linear feet (0.9 miles) of pipe per year. The cleaning activity for 2008 is planned for the Live Oak area of Harbor Island and North Lumina, from Asheville to Salisbury streets. These sections of the storm drain system were selected because they contained the largest amount of debris.



As of the beginning of April, over 4 yards of sand and debris has been removed from the stormwater system. Some of the items removed are pictured in the photo below. One item located in a drain pipe on Jasmine was causing such a problem with drainage that the Public Works crew had to cut a hole in the street to access the pipe and remove the item. It is for this reason that both the Town of Wrightsville Beach and the City of Wilmington have been trying to educate people on how pollution affects the stormwater system, and ultimately the surrounding water bodies.



**Water Quality Testing.** In August 2007, the Town contracted with UNCW to conduct a Bacteria Source Tracking (BST) study to help identify the source of bacteria that has been causing the Department of Environmental and Natural Resources Division of Environmental Health to issue swimming advisories for portions of Banks Channel. This study is using cutting edge DNA technology in an attempt to identify the source of the bacteria. The research team at the Center for Marine Sciences believes that they may be able to identify whether the bacteria is coming from humans, animals or birds. If this study is successful, it will help the Town determine how best to resolve the bacteria issue.

**Anticipated Stormwater Rule Changes for 2008.** The North Carolina Division of Water quality anticipates the release of new stormwater rules in August of this year. The proposed changes to the rules will increase the number of properties that must control and treat stormwater runoff. It also changes the volume of stormwater runoff that must be controlled and treated by those properties requiring a permit. A copy of the proposed rule changes can be found at: <http://h20.enr.stste.nc.us/su/documents/CoastalRules-15NCAC02H.1005asadoptedbyEMC.doc>



**Stormwater Design Manual Update.** Part I of the Stormwater Design Manual, which is intended for use by contractors and designers, is undergoing revision to strengthen current stormwater design criteria. This update was initiated by the moratorium that was placed on paving of gravel parking lots by the Board of

Aldermen in November 2007. Anticipated changes will affect the types of future activities which will be required to treat and control stormwater runoff. While under revision, the manual will also be brought into compliance with the proposed Division of Water Quality rule changes. The revised manual is expected to go before the Board of Aldermen in April 2008 for approval.

