Stormwater 101: Cigarette Butts

Attention smokers! A new campaign is underway to curb cigarette litter and its impact on our environment. Spearheaded by Keep America Beautiful of New Hanover County (KAB), efforts to curb cigarette butt litter have resulted in new cigarette ashtrays installed downtown and at local beaches.

In addition, educational coasters, placemats and literature are also being distributed to businesses and patrons. As part of this effort Stormwater Services has **free pocket ashtrays** for citizens, courtesy of KAB. The ashtrays hold numerous butts and keep the smell and debris inside when closed. Pick one up at Stormwater Services, 209 Coleman Dr. or call 343-4777.

CIGARETTE BUTTS.....

- are the most littered item in the world with more than 4.5+ trillion discarded each year!
- wash directly into local waterways via stormwater runoff.
- are not biodegradable! The filters contain plastic fibers, called cellulose acetate, and a plasticiser, called triacetin (glycerol triacetate), which can persist in the environment as long as traditional forms of plastic.
- contain toxins that leach into waterways and harm aquatic life.
- have been found in the stomachs of dead fish, birds, whales and other marine creatures who have mistaken them for food.
- start deadly fires!

PUBLIC SERVICES
Richard A. King
Director

STORMWATER SERVICES
(910) 343-4777
David B. Mayes, P.E.
Manager

Jennifer D. Butler
Outreach & Education Coordinator

Matt Hayes, AICP
Planning/Mapping Manager

Jim Quinn
Senior Engineering Technician

Alicia Herrmann
Engineering Technician

Matt Reames
Engineering Technician

Ben Adei, EI
Staff Engineer

Pat Higgins
Administrative Support

STORMWATER MAINTENANCE
(910) 341-4646
Harvey London
Drainage Manager

BILLING & COLLECTIONS
(910) 341-7806

Stormwater Services

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

CITY OF WILMINGTON STORMWATER SERVICES
PO Box 1810
Wilmington, NC 28402-1810
(910) 343-4777 or Dial 711 TTY/Voice
www.wilmingtonnc.gov/publicservices/stormwater

Spring '08 Rain Barrel Sale.

- Reduce runoff from your property and help protect water quality.
- Save money on your water bill.
- Water your landscape for **free!**
- Water your plants with chlorine and chemical-free rainwater.

***To be notified about the sale this spring, email your name, address, and phone # to rain@nhswcd.org**

*This newsletter is printed on 100% post-consumer recycled fiber, processed chlorine-free and made with windpower. Forest Stewardship Council certified.

Stormwater Watch Newsletter

Fall 2007 ~ Annual Report Issue

CITY OF WILMINGTON STORMWATER SERVICES

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Sweeping Wilmington's Streets Clean

Stormwater runoff drains directly to our waterways through a complex, interconnected system of storm drains, pipes, ditches, creeks, ponds and stormwater BMPs, such as constructed wetlands. Maintenance of this system is comprehensive and consists of four areas: Open Drainage, Closed Drainage, BMP Maintenance and **Street Sweeping.**

The City of Wilmington operates an aggressive street sweeping program to improve the cleanliness, health and safety of the City by preventing sediment, dirt, sand, heavy metals, debris, oils and microscopic particles from entering the drainage system. Senior Crew Foreman, Jeremy Thorpe says, "Street sweeping is an important front-line defense for our stormwater drainage system because we collect debris and materials before they end up in our waterways."

The Street Sweeping Crew consists of operators and chasers. Operators drive and operate the sweepers, while chasers remove large debris from the path of the sweeper and operate the dump trucks that carry the collected debris. The sweeper fleet includes 4-wheel vacuum sweepers and 3-wheel mechanical sweepers that operate on curbed streets, amounting to nearly 450 miles of sweeping on City streets, 134 miles on DOT streets and 27 miles of bike lanes. Sweepers operate at 3-5 miles an hour and it takes two weeks to sweep all of the curbed streets in the City.

Street sweepers are equipped with water tanks, rotating brooms and sprayers that help to reduce dust and loosen particles on the road, making them easier to collect. In fact, the vacuum sweepers are so strong they can "inhale" a brick off the street. This ability explains why the sweepers are called in to clean up after large public events such as Azalea Festival, Riverfest and the 4th of July Fireworks Celebration.

"We're always out there, keeping our city clean, keeping up the beautification of our streets", says Lawrence Johnson, a street sweeper operator for 8 years. Sweepers operate Monday-Thursday from 7am-3pm and on Fridays from 3am-11am. The flex schedule on Fridays allows them to sweep areas of the city when there are less parked cars and less traffic congestion.

George Williams, an operator with the City for the past 14 years, remembers when the City only had two street sweepers and a lot less streets to sweep. Now they have six sweepers and a lot more territory to cover. George says he often tries to accommodate citizens, "I'll pause if I see someone running out of the house with their keys to move their car". However, the entire crew agrees that it can be frustrating when they've swept a street and then receive calls later in the day saying they've *"missed a spot"* because someone has come out and moved their vehicle.

Street Sweeper Crew: *George Wiliams, Ernest Mosely, James Anderson, William Johnson, Lawrence Johnson, Jeremy Thorpe. Jimmy Royal (not pictured).*

The crew cites several challenges to sweeping a large urbanized city, including traffic congestion, impatient drivers, more development and more streets to maintain, and large piles of leaves and yard waste that citizens and landscapers place in the street. In particular, pine straw can roll up into a ball and jam the sweeper, putting it out of commission temporarily. In addition to yard waste, items like sticks, limbs, cardboard boxes, glass bottles, and wayward trash cans are other items that can cause problems for the street sweepers.

Despite these challenges, the crew takes great pride in keeping our streets and waterways clean.

In-House PROJECTS

Stormwater Services maintenance crews perform in-house drainage improvement projects throughout the year. Projects include installing new pipes, culverts, and manholes and repairing roads, all of which are essential elements in maintaining the storm drainage system throughout the City of Wilmington.

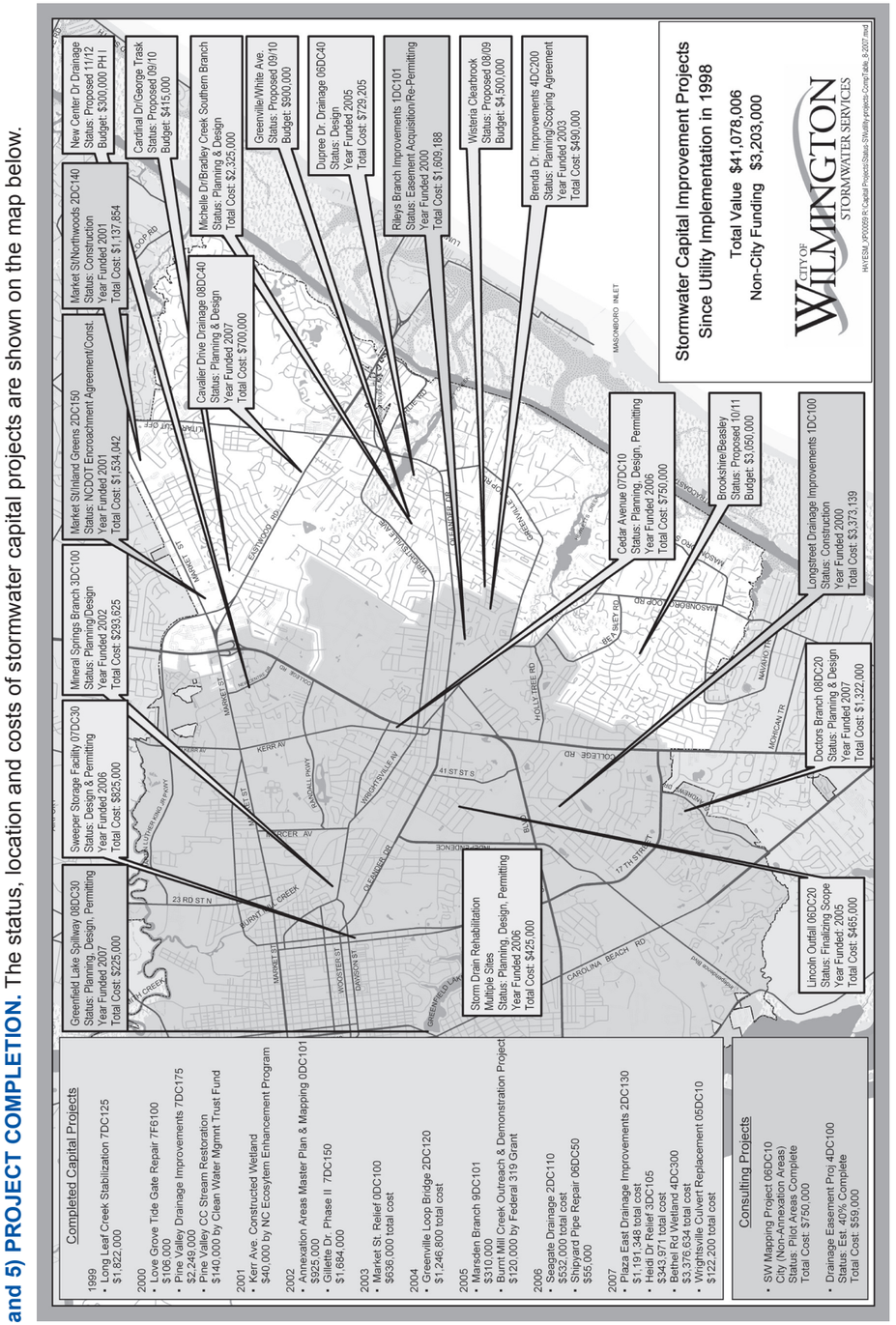
PROJECT LOCATION	COST $
2230 Charles Paine Dr.	$26,895
4300 Block Fairlawn Dr.	$67,127
Faith Baptist Church (Dobson St.)	$22,142
100 block of Grainger Pt. Rd.	$10,273
Greenville Loop Rd. & Woodland Trace	$4,619
Kelly Rd. & Beasley St.	$71,714
4800 block of Maple Ave.	$16,943
1010 Robert E Lee Dr.	$13,811
115 Sand Hill Dr.	$10,382
4150 Sunglow	$8,624
813 Wood Cove	$4,732
City Golf Course	$2,918
3200 Blk Camden Circle	$3,338
Mary Bridgers Park Wetland Construction	$22,275
TOTAL	**$285,793**

Stormwater Utility ~ Maintenance Chart

Fiscal Years 99/00 thru 06/07

Maintenance Description	Unit	FY 99/00*	FY 00/01	FY 01/02	FY 02/03	FY 03/04	FY 04/05	FY 05/06	FY 06/07
Clean Structures	Each	12,143	9,069	6,922	12,919	11,931	13,158	11,908	11,858
Clean Lines	Linear ft.	406,966	260,231	315,716	241,167	154,511	161,597	123,931	170,282
Cave-in Repair	Each	470	497	314	294	280	293	277	244
Structure Repair	Each	70	121	118	116	105	110	101	95
Construct Structures	Each	4	42	39	26	41	29	21	27
Reset Structure Covers	Each	238	198	289	227	257	240	258	312
Replace Structure covers	Each	198	192	174	182	150	153	191	182
Ditch Cleaning (by hand)	Linear ft.	361,300	307,554	470,683	346,282	349,416	332,567	196,530	278,779
Slope Mowing	Linear ft.	859,788	502,642	564,023	450,866	528,310	538,559	468,543	401,600
Right-of-Way Mowing	Acres	123	175	181	159	194.13	181.29	177.28	140.46
Culvert Cleaning	Each	632	162	757	1,471	814	1570	921	591
Sweep Streets	Miles	11,400	13,310	15,685	13,337	13670	9704	9,801	7,161
Street Sweeping Disposal	Truckloads	545	773	886	888	961	859	761	480

*Significant increases or decreases in maintenance activities from year-to-year may reflect hurricane clean-up response, lack of rainfall and storm event response activities.

Capital Projects Map

STORMWATER RUNOFF is a major cause of property flooding and poor water quality. To address these issues, Stormwater Services implements **CAPITAL IMPROVEMENT PROJECTS** throughout the City. These projects aim to improve and maintain the storm drainage system, reduce flooding issues and improve water quality. Capital projects take time to implement and involve 5 major stages from start to finish: **1) PLANNING, 2) DESIGN & PERMITTING, 3) EASEMENT ACQUISITION, 4) CONTRACTOR SELECTION & CONSTRUCTION, and 5) PROJECT COMPLETION.** The status, location and costs of stormwater capital projects are shown on the map below.