

Paying For and Promoting Sustainable Development

Low Impact Development Summit



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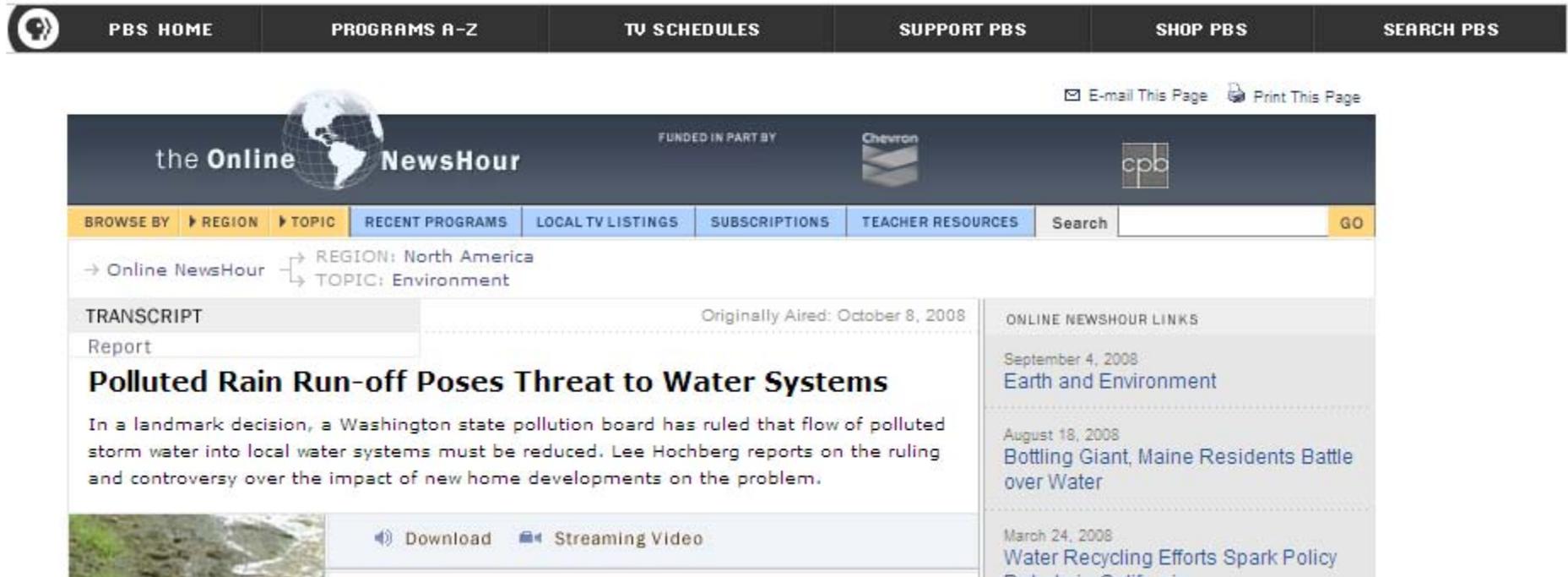
Environmental Finance Center

- “How do you pay for it?” Center
- One of nine centers across the country.
- Part of US EPA Environmental Finance Program



Polluted Rain Run-off Poses Threat to Water System

PBS Special (October, 2008)



The screenshot shows the PBS NewsHour website interface. At the top, there is a navigation bar with links for PBS HOME, PROGRAMS A-Z, TV SCHEDULES, SUPPORT PBS, SHOP PBS, and SEARCH PBS. Below this is a dark blue header with the text "the Online NewsHour" and a globe icon. To the right of the header, it says "FUNDED IN PART BY" followed by the Chevron and cpb logos. Below the header is a navigation bar with links for BROWSE BY, REGION, TOPIC, RECENT PROGRAMS, LOCAL TV LISTINGS, SUBSCRIPTIONS, and TEACHER RESOURCES. There is also a search bar with a "GO" button. Below the navigation bar, there is a breadcrumb trail: "→ Online NewsHour" followed by "REGION: North America" and "TOPIC: Environment". The main content area features a "TRANSCRIPT" section with the title "Polluted Rain Run-off Poses Threat to Water Systems" and the text: "In a landmark decision, a Washington state pollution board has ruled that flow of polluted storm water into local water systems must be reduced. Lee Hochberg reports on the ruling and controversy over the impact of new home developments on the problem." Below the text is a small image of a polluted stream and two buttons: "Download" and "Streaming Video". To the right of the main content is a sidebar titled "ONLINE NEWSHOUR LINKS" with three entries: "September 4, 2008 Earth and Environment", "August 18, 2008 Bottling Giant, Maine Residents Battle over Water", and "March 24, 2008 Water Recycling Efforts Spark Policy Debate in California".

http://www.pbs.org/newshour/bb/environment/july-dec08/runoff_10-08.html

Innovative incentives

Market-Based Mechanisms for Promoting Low-Impact Development, Mitigating Legacy Stormwater Discharges, and Restoring Urban Floodplains in the Saluda-Reedy Watershed, SC.

Upstate Forever

Greenville, SC

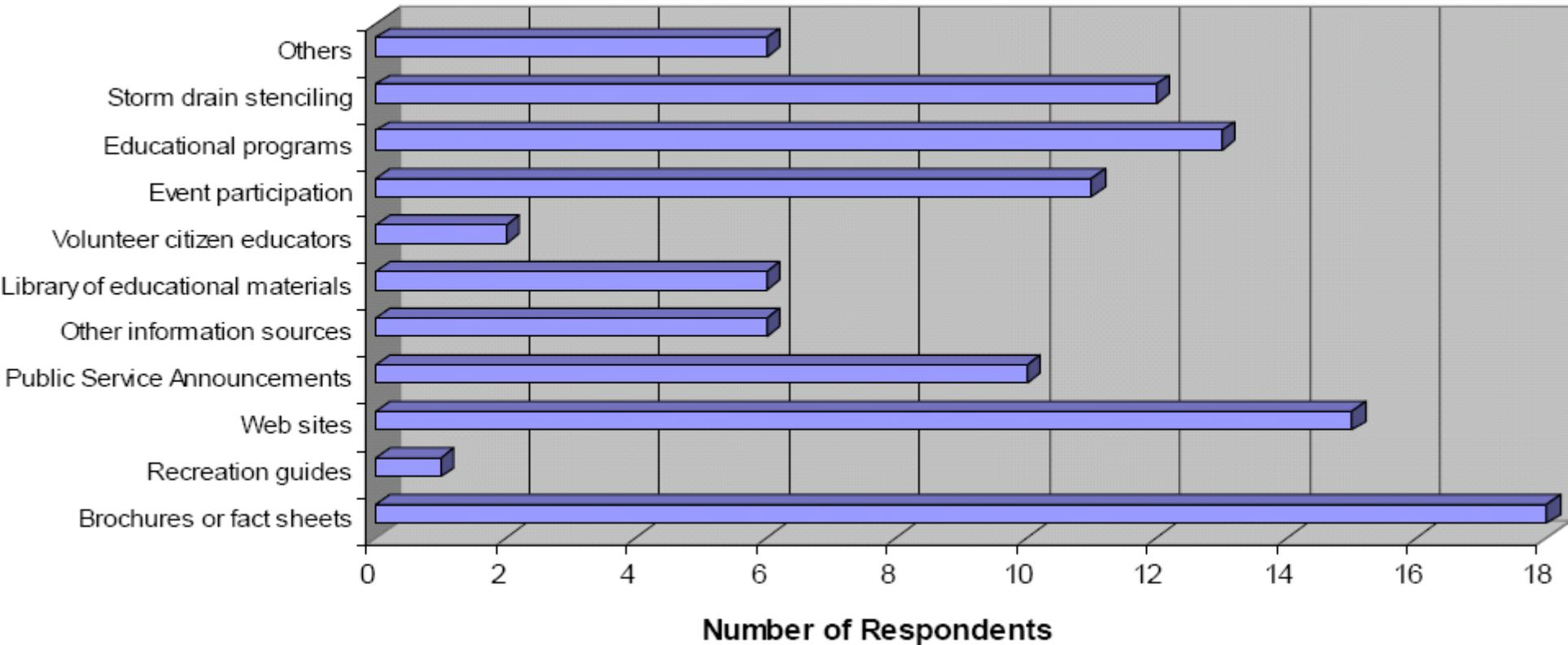
- Stormwater Banking Program
- Floodplain Restoration Bank

<http://www.upstateforever.org/>

Phase II Minimum Measures

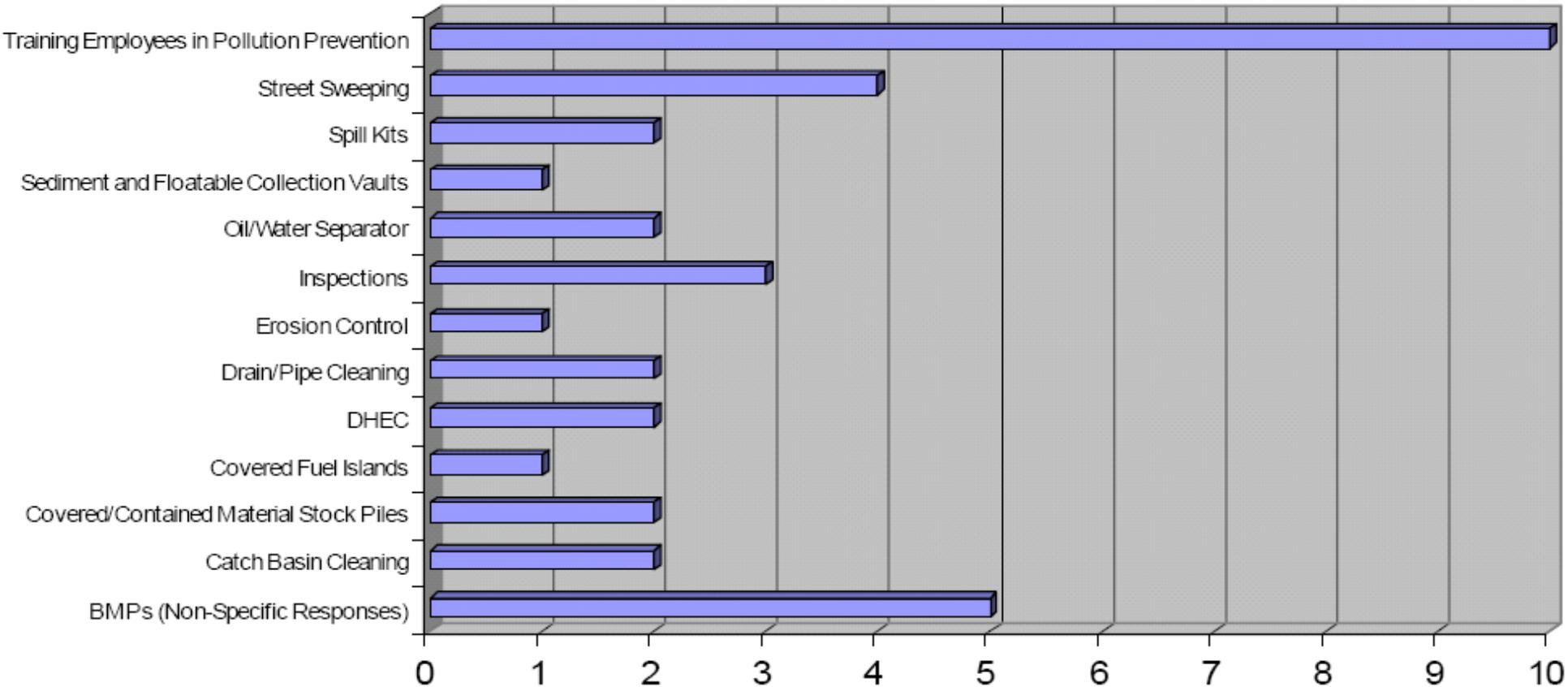
1. Public Education and Outreach
2. Public Involvement/Participation
3. Detect and eliminate illicit discharges
4. Mitigate Construction Runoff
5. Post-construction management
6. Pollution/Prevention and good housekeeping

Public education strategies



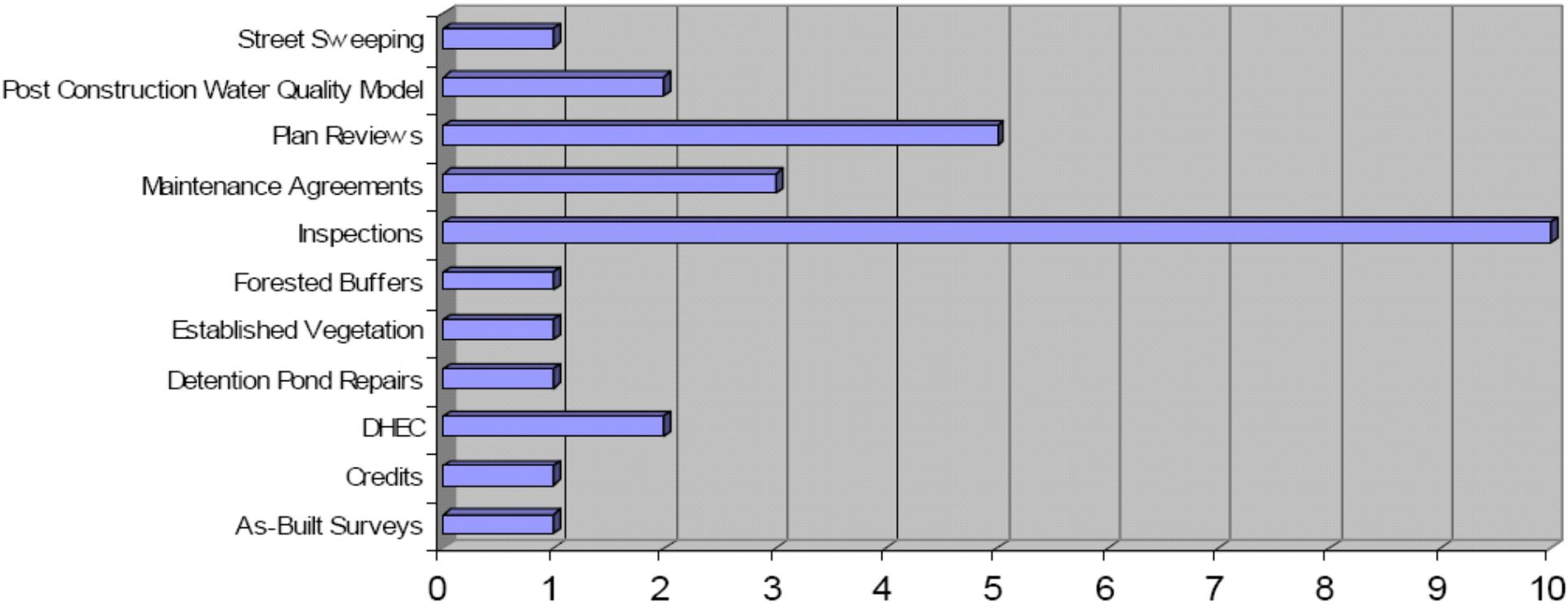
Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Good housekeeping measures



Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Post-construction runoff control



Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

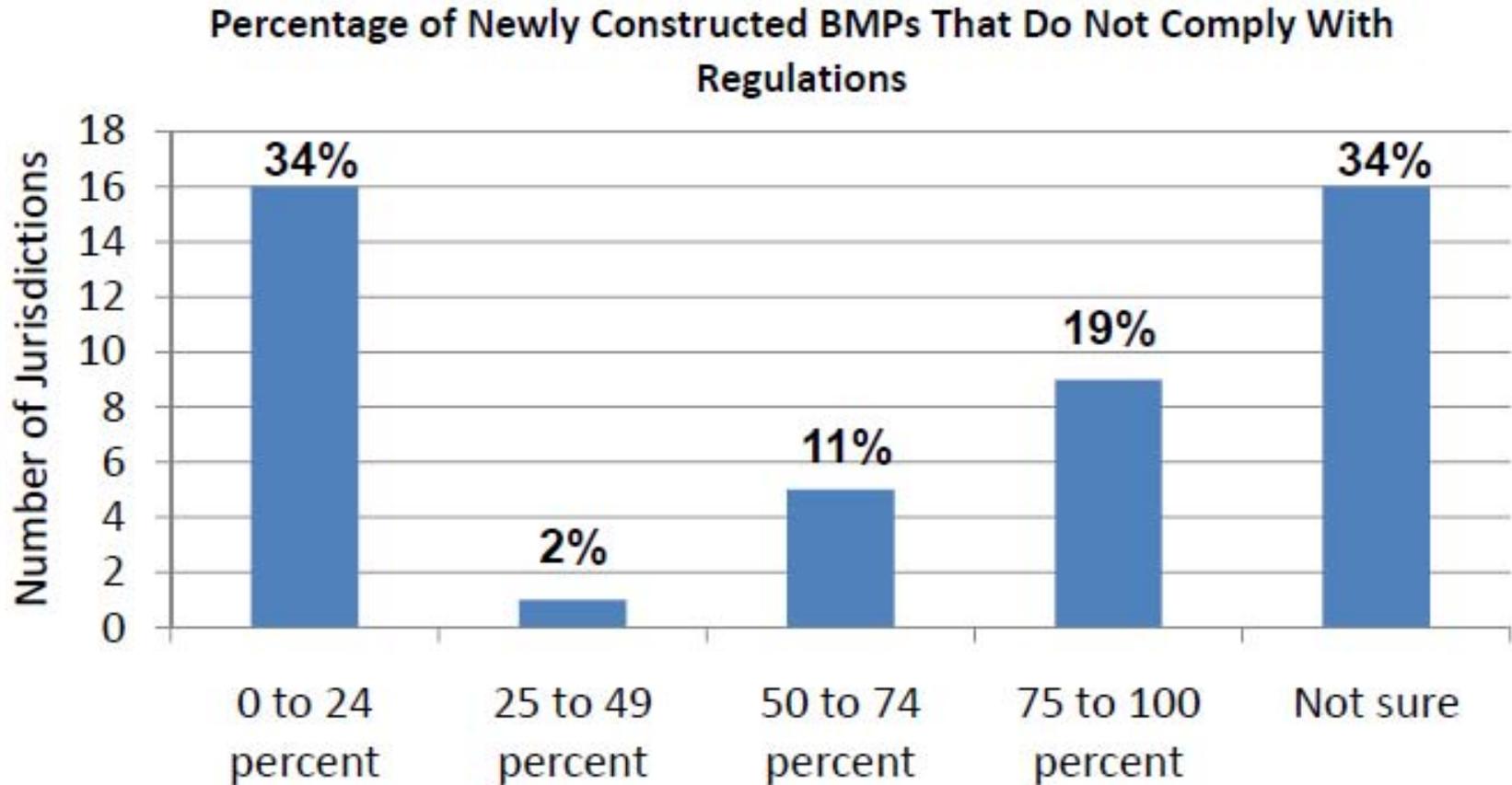
Public Administration Challenge

- BMP's are an engineering solution
- Decentralized and on private property
- Public sector responsible for “adequate long-term maintenance”
- We don't yet know what the best practices are

Three broad goals

- Ensuring that the planned BMP is appropriate for the site
- Ensuring that the BMP is correctly built
- Ensuring that the BMP is maintained properly and continues to operate satisfactorily

Ensuring BMPs are built correctly



*Data Source: Glenn Barnes. "Post-Construction Stormwater Management in North Carolina Today." UNC SOG. April 1, 2008.

Keeping track of BMP's

11. How does your program keep track of BMPs and related work done to manage their performance? Check all that apply:

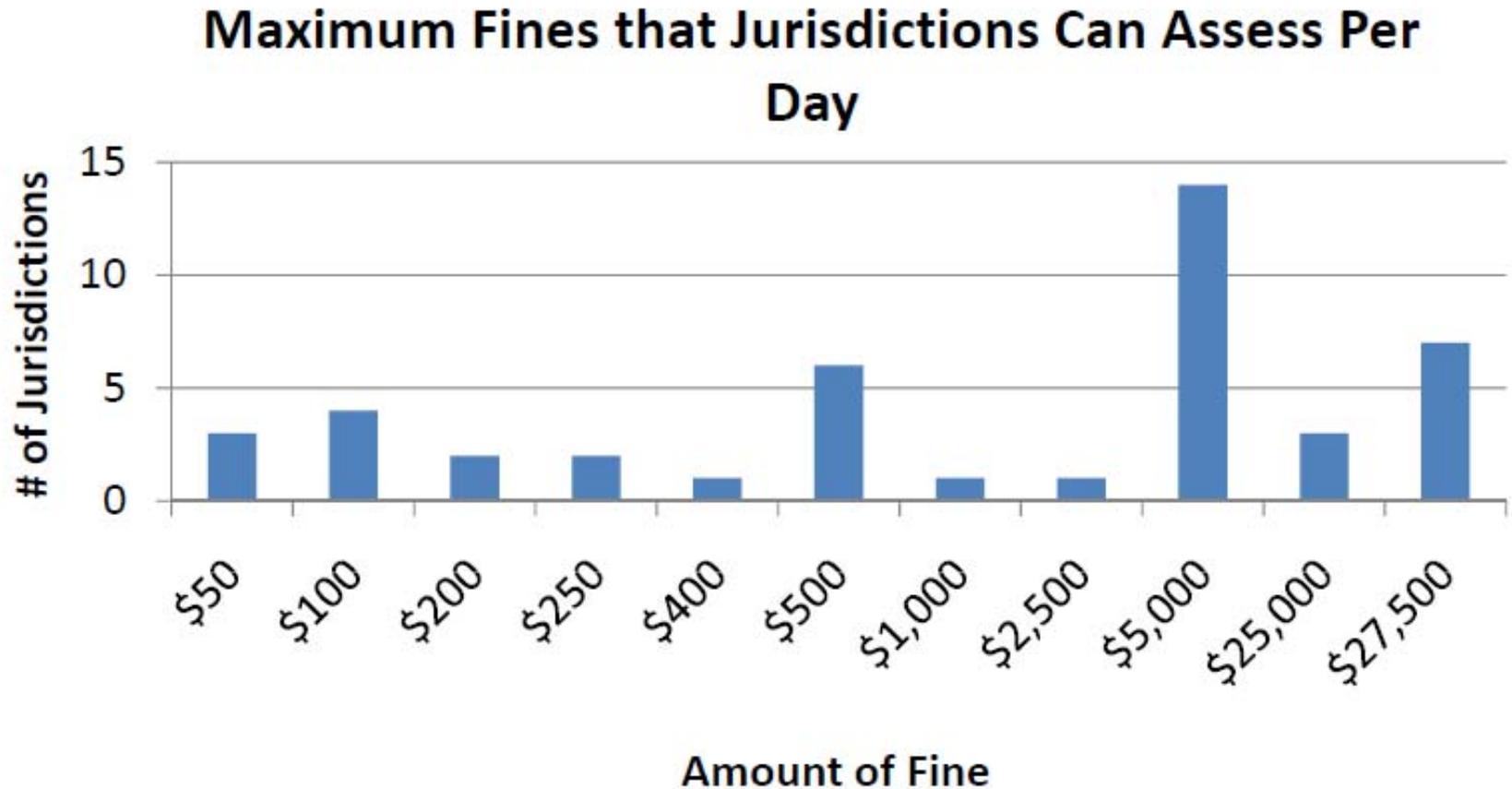
Answer	Response	%
Paper copies of forms, plans, etc.	51	93%
Microsoft Excel or Microsoft Access database	32	58%
GIS database	33	60%
ASIST	2	4%
Other software package	6	11%
Total who answered question	55	

Inspections...

19. *What is the approximate time between inspections of your BMPs?*

Answer	Response	%
1 year	37	65%
2 years	0	0%
5 years	1	2%
Other inspections frequency	7	12%
We're not sure	12	21%
Total	57	100%

Ensuring Proper BMP O&M



*Data Source: Glenn Barnes. "Post-Construction Stormwater Management in North Carolina Today." UNC SOG. April 1, 2008.

Ensuring Proper BMP O&M

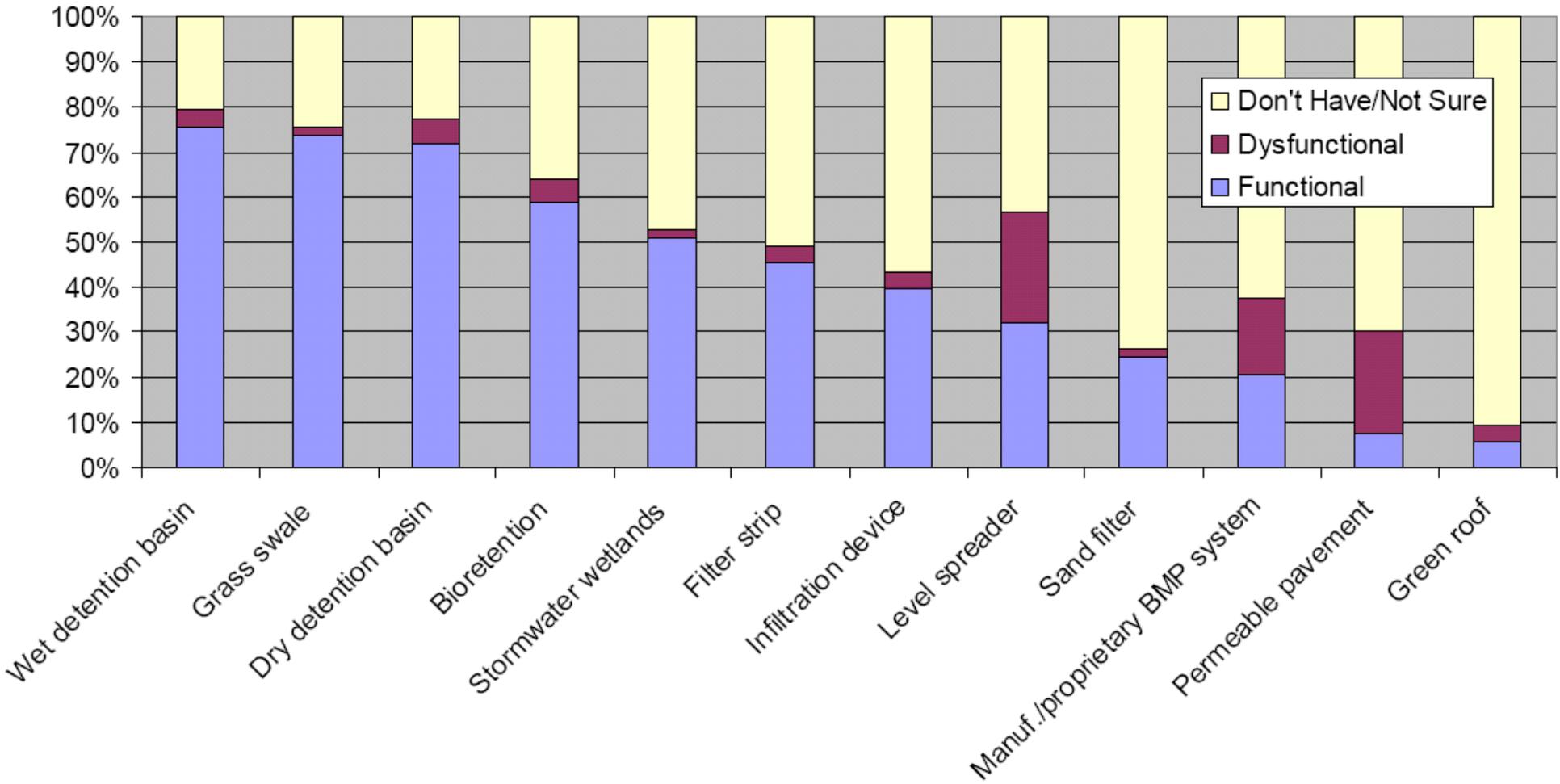
Approximately 4,750 BMPs from survey respondents

In 2006, the total number of fines issued:

5

*Data Source: Glenn Barnes. "Post-Construction Stormwater Management in North Carolina Today." UNC SOG. April 1, 2008.

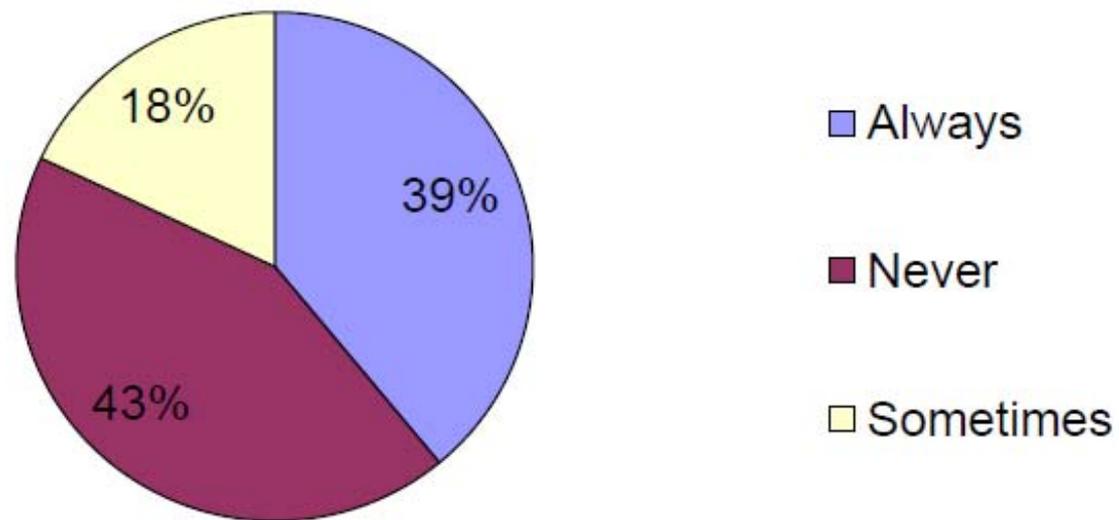
Long-term BMP performance



Bruce & Barnes. *Survey of Local Government Post-Construction BMP Maintenance and Enforcement in North Carolina*. Triangle J COG & EFC. Sept. 2008

Ensuring Proper BMP O&M

Percent of Jurisdictions that Require Financial Guarantees

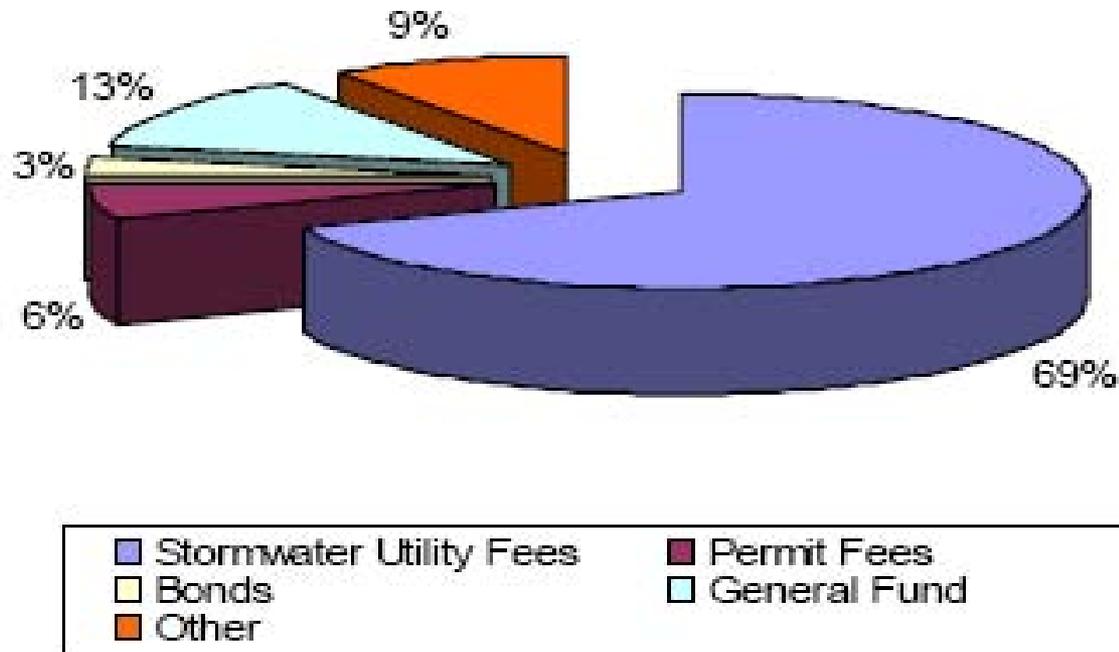


*Data Source: Glenn Barnes. "Post-Construction Stormwater Management in North Carolina Today." UNC SOG. April 1, 2008.

Methods of raising revenue for stormwater management

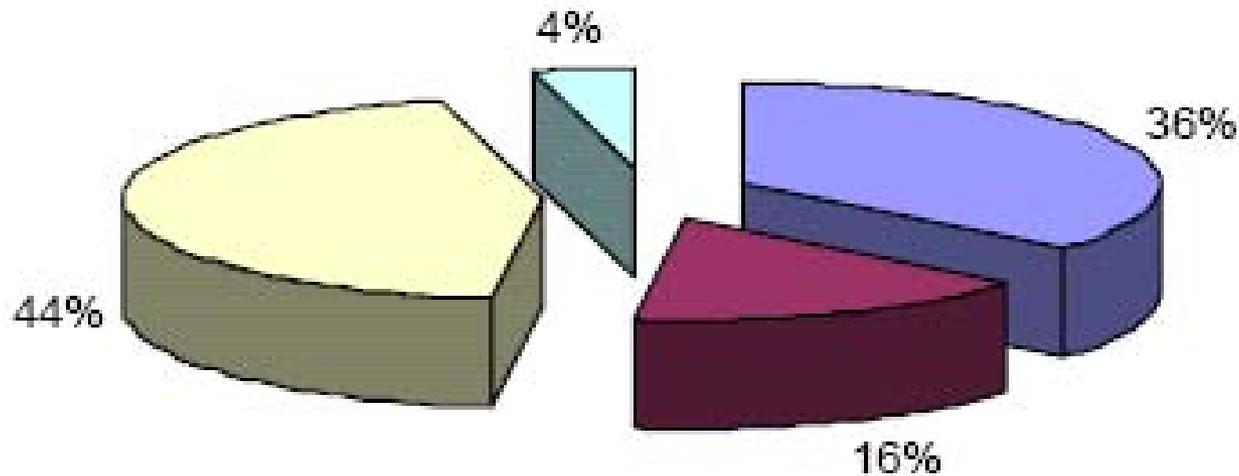
- Taxes
- Public Enterprise Fees
 - Stormwater Management/Utility Fees
 - Impact Fees
- Regulatory Fees
- Fines and Penalties
- Contractual agreements
- Assessments

Funding/Finance Mechanisms



Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Fee collection methods



■ Annual tax bill	■ Separate stormwater utility bill
■ Combined utility bill	■ Other

	Combined Utility Bills	Annual Tax Bills
North Carolina	84%	16%
Florida	75%	18%

Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Factors that can (, should, & do) influence revenue choices

- Legal
- Community perspectives and goals
- Fairness
- Revenue stability and reliability
- Political
- Administrative
- Inertia
- Peer pressure

3 ways to pay

- Taxes
- Penalties
- Fees
 - Impact fees vs. recurring fees
 - Flat Fees
 - Tiered Fees
 - Fee reductions (or incentives)

Who taxes, who uses fees?

4. Does your jurisdiction assess an ongoing stormwater fee on developed properties, based on amount of impervious surface or some other factor?

Answer	Response	%
Yes	25	42%
Not yet, but we are actively in the process of establishing a stormwater fee (either alone or in partnership with another jurisdiction)	4	7%
No, but we are considering doing so	13	22%
No, and we have no plans to establish a stormwater fee in the foreseeable future	17	29%
Total	59	100%

Revenue Choices and Incentives for Encouraging “Good” Behaviors

- Fee vs. Taxes
- Regulatory fees vs. service fees
- To tier or not to tier
- To waive or not to waive

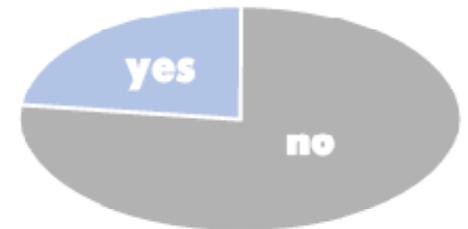
Community Objectives

- Growth Pays for Itself
- Polluter Pays
- Protect the Disadvantaged
- Keep it Simple

Impact Fees

Are one-time impact/capital recovery fees applied to new stormwater utility customers or new development?

77% No
23% Yes



Slide Source: 2005 Stormwater Utility Survey, Black and Veatch

Impact fees for promoting LID

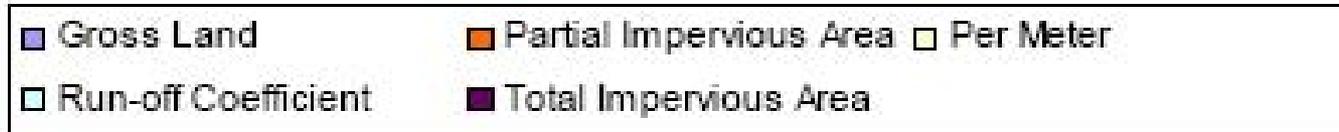
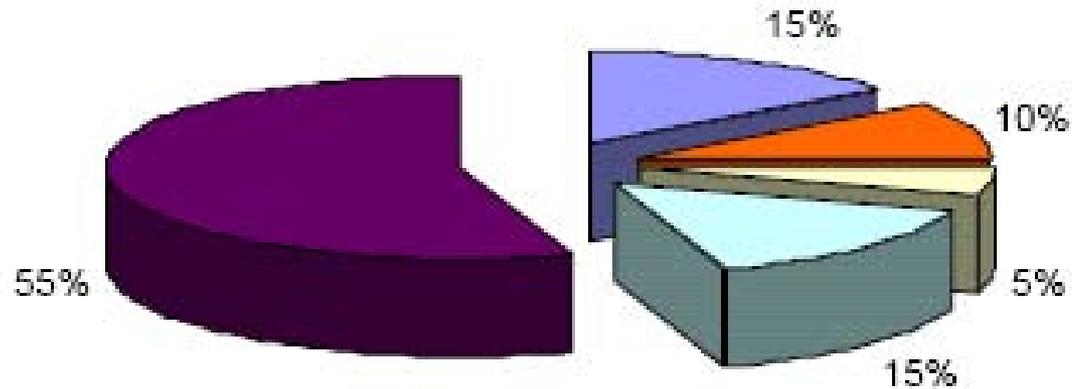
- OWASA example

Water Service Availability Fee for a 5/8" meter at single-family residence	
< 1,300 square foot home	1,095.00
1,300 - 1,700 square-foot home	1,336.00
1,701 - 2,400 square-foot home	1,691.00
2,401 - 3,100 square-foot home	2,890.00
3,101 – 3,800 square-foot home	3,930.00
>3,800 square-foot home	6,597.00
5/8" meter, residential, irrigation only	3,202.00
5/8" meter, multifamily residential	1,179.00

Impact Fees

- **SECTION 6-1-910.** "South Carolina Development Impact Fee Act".
- **6-1-930.**(A)(1) Only a governmental entity that has a comprehensive plan,...
- **6-1-940.** (4) inform the fee payer that: (a) he may negotiate and contract for facilities or services with the governmental entity in lieu of...
- **6-1-950.** Procedure for adoption of ordinance imposing impact fees.
- **6-1-960.** Recommended capital improvements plan; notice; contents of plan. . . .
- **6-1-970.** Exemptions from impact fees. . . .

ERU Basis



Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

City or County	Residential Rate	Commercial Rate	Multi-Family Rate
City of Columbia	\$3.95	Number of ERUs x \$3.95	Number of ERUs x \$3.95
City of Conway	\$5.25	Based on a declining block rate. The first 50 ERUs are charged 1 x the ERU rate. The next 50 ERUs are charged at a rate of 0.9 x the ERU rate, the next 50 x 0.8 x the rate, the next 50 x 0.7 x the rate, the next 50 x 0.6 x the rate, & everything above 250 ERUs x 0.5 x the rate.	Based on a declining block rate. The first 50 ERUs are charged 1 x the ERU rate. The next 50 ERUs are charged at a rate of 0.9 x the ERU rate, the next 50 x 0.8 x the rate, the next 50 x 0.7 x the rate, the next 50 x 0.6 x the rate, & everything above 250 ERUs x 0.5 x the rate.
Dorchester County	\$2.43	Pervious (40% or less of total area is impervious): \$75 per acre; Impervious (more than 40% impervious): \$150 per acre; Maximum charge is 75 acres	Considered Impervious Commercial
City of Easley	\$2.00	\$2.00	\$2.00

Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Tiered Stormwater Fees

City or County	Residential Rate	Commercial Rate	Multi-Family Rate
City of Greenville	1,640 sq. ft. or less = \$2.75; more than 1,640 sq. ft. = \$4.83	Number of ERUs x \$4.83	Number of ERUs x \$4.83

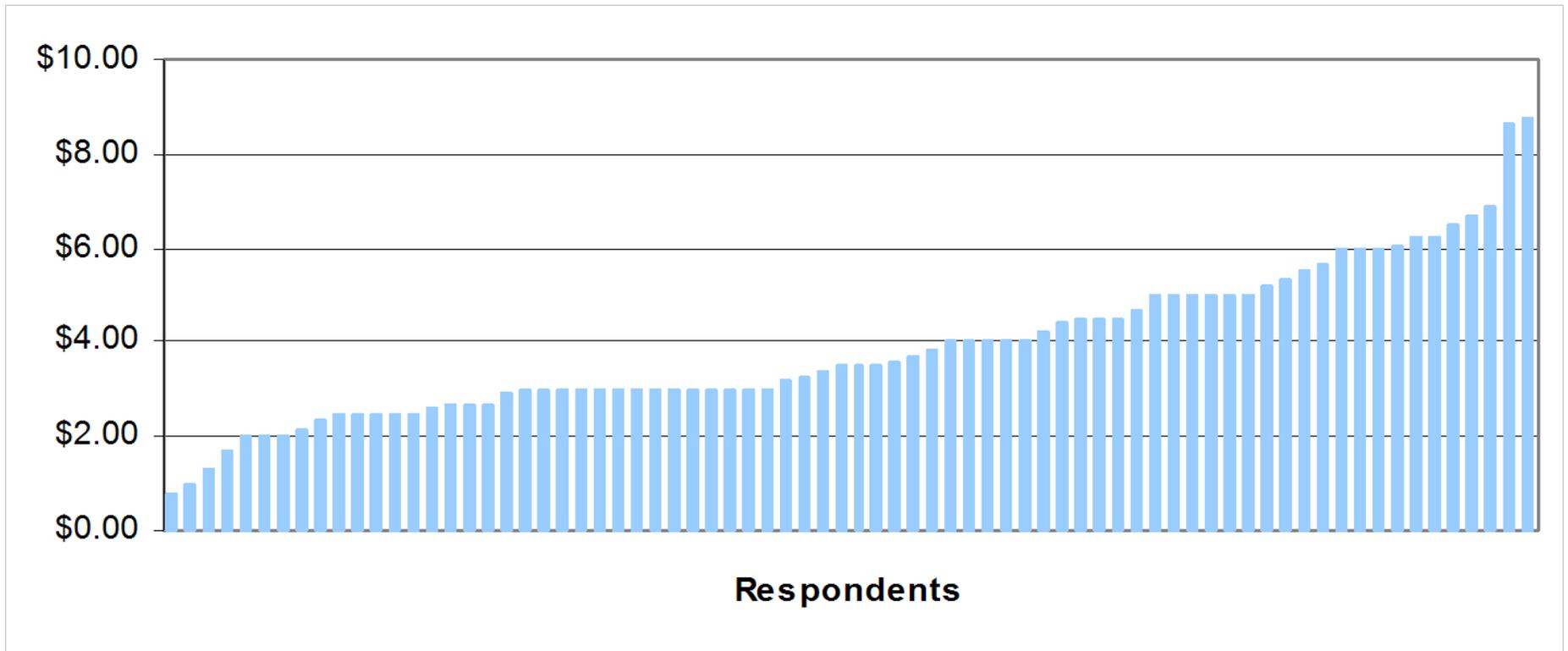
Berger and Tomes. *An Analysis of Stormwater Management Rates and Practices*. University of South Carolina IPSPR. November 2006

Multi-functional fees

6. Does your jurisdiction offer a reduction in the fee, either in the form of a percentage reduction or some other credit, for any of the following reasons? Check all that apply:

Answer	Response	%
No	8	32%
Yes, if a retrofit project implemented to treat runoff from the site	13	52%
Yes, if nonstructural practices (e.g., good housekeeping, pollution avoidance) are implemented	2	8%
Other reason for fee credit or reduction	6	24%
Total who answered question	25	

Florida Stormwater Fees (2005)



Slide Source: FSA 2005 Stormwater Survey, www.florida-stormwater.org

Monthly NC Stormwater Fees for an Average Single-Family Detached Residential Unit (assumes 2,455 square feet impervious cover)

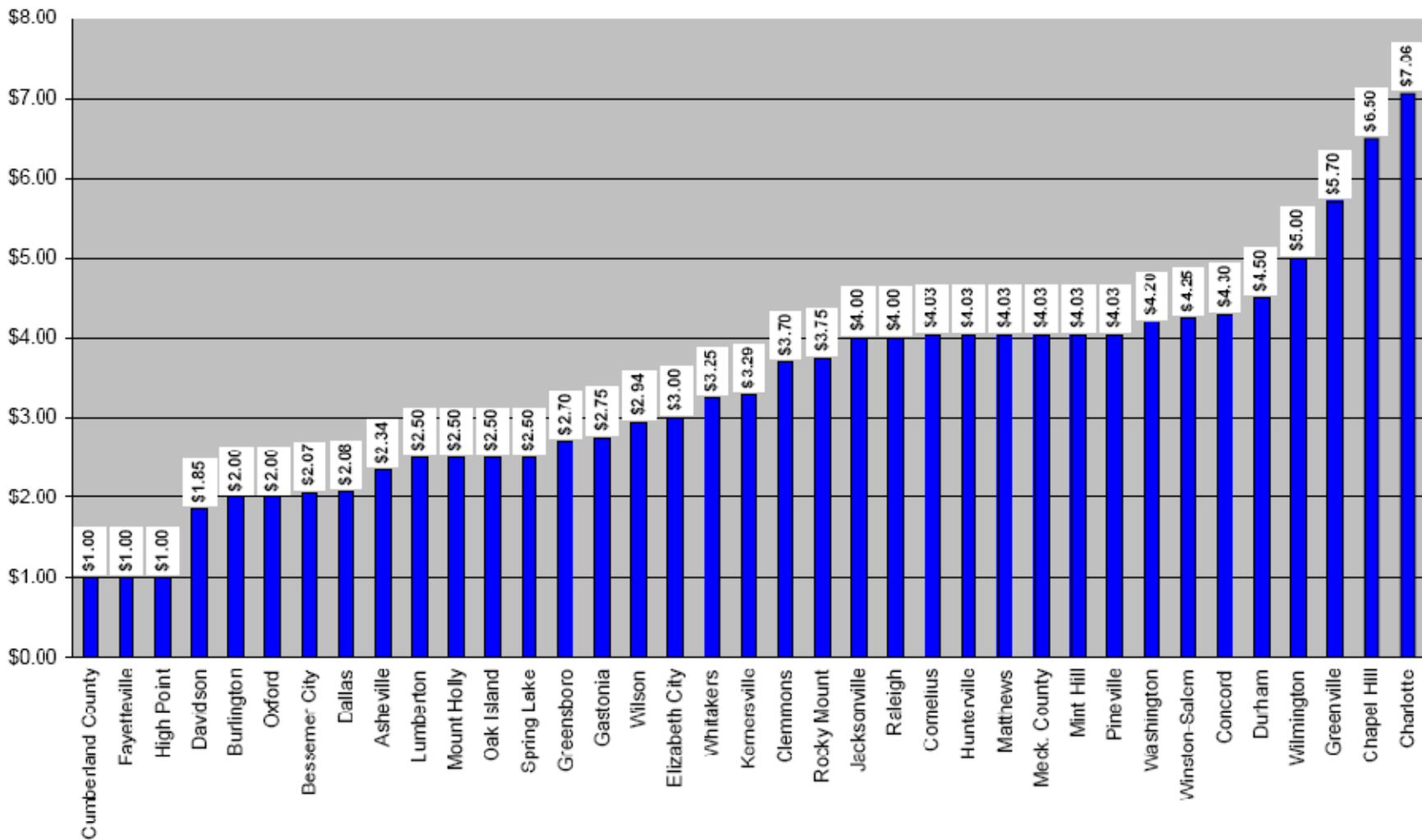


Chart Source: Triangle J Council of Governments 2006 Stormwater Survey

Monthly NC Stormwater Fees for an Average Gas Station (Nonresidential) (assumes 25,976 square feet impervious cover)

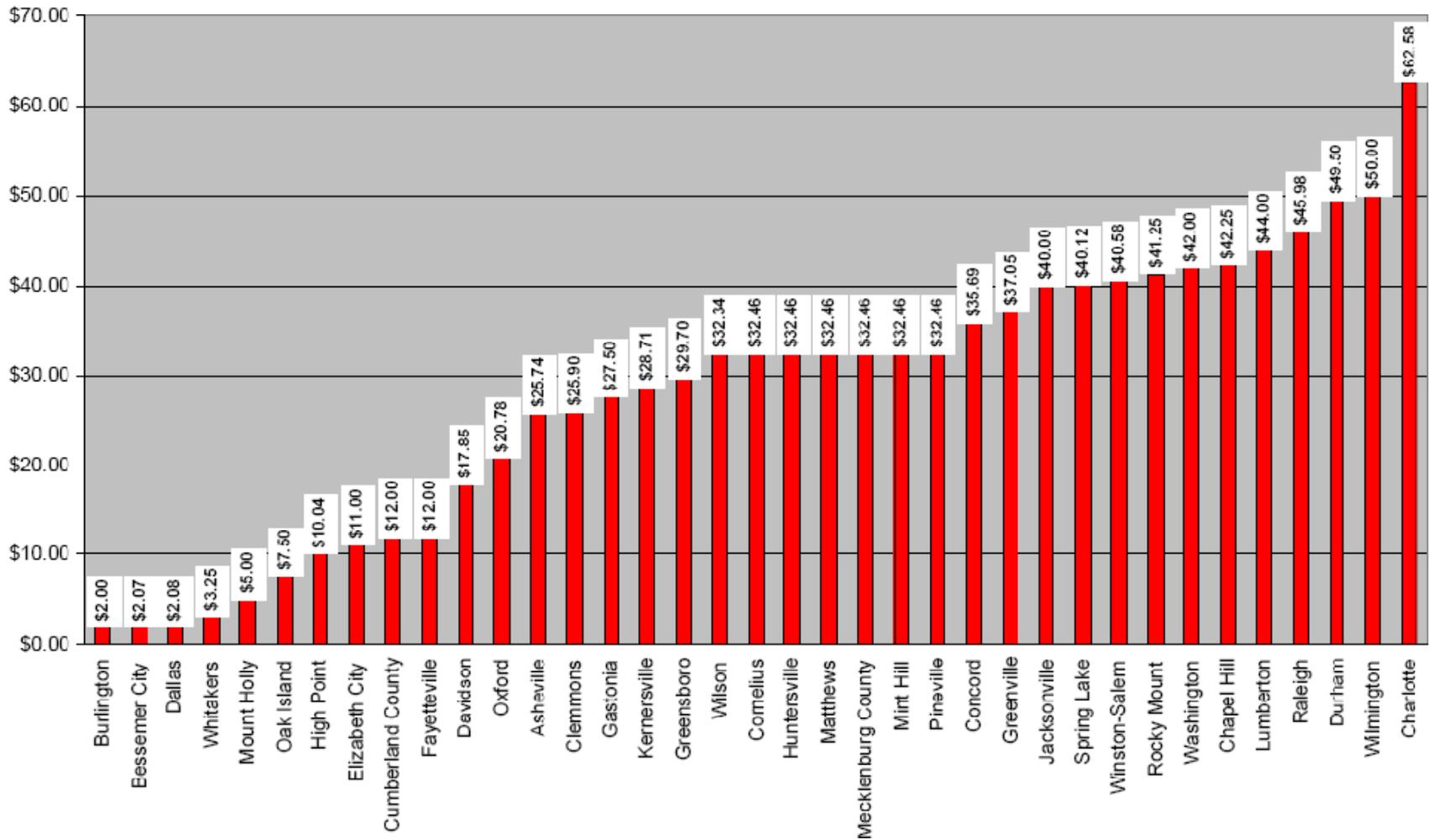


Chart Source: Triangle J Council of Governments 2006 Stormwater Survey

The Great Fairness Debate: Tax vs. Fees

Smith Chapel Baptist Church v. City of Durham (350 N.C. 805 (1999))

Good news, bad news....

- It's a fee not a tax
- Fees based on impervious surface are fine
- Nothing implies fees for churches are problematic
- but, most non-structural stormwater revenue needs can not be included in fees...



Durham, North Carolina



- 2006-07 budget = \$8,068,718
- \$2.17/mo < 2,000 sq ft of impervious surface
- \$4.50/mo. \geq 2,000 sq ft
- Other/com.: \$4.50 per month for each ERU (2,400 sf.)

Durham Property Taxes

- Property tax rate = 60.3 cents per \$100 property valuation
- Assessed Value - Real Property
\$13,740,351,450
- Tax Levy on Real Property \$82,854,319

It would take 5.8 cents/\$100 to generate \$8,068,718

\$300,000 House



- Current Fees
 - **\$54/year**
(\$4.50/mo. on water bill)
- If budget funded by property tax
 - **\$174/year**

\$15,000 “House”



- Current fees
 - **\$26/year (\$2.17/mo.)**
- If budget funded by property tax
 - **\$8.70/year**

Church (24,000 Sq. Ft Impervious Area)



- Current fees
 - **\$540/yr** (\$45/mo.)
- If budget funded by property tax
 - **\$0**

Future limits on stormwater fees?

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the island packet online

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Block Party
Featuring Jon Bruner
Sat. March 14
2:30 Until

Kelly's Tavern
837-3353
Located behind Haverly's at the Moss Creek

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Bill would exempt some from paying stormwater fees

By MICHAEL WELLES SHAPIRO
mshapiro@islandpacket.com
843-706-8142
Published Friday, January 9, 2009

Durham Bulls Ballpark (163,200 sf)



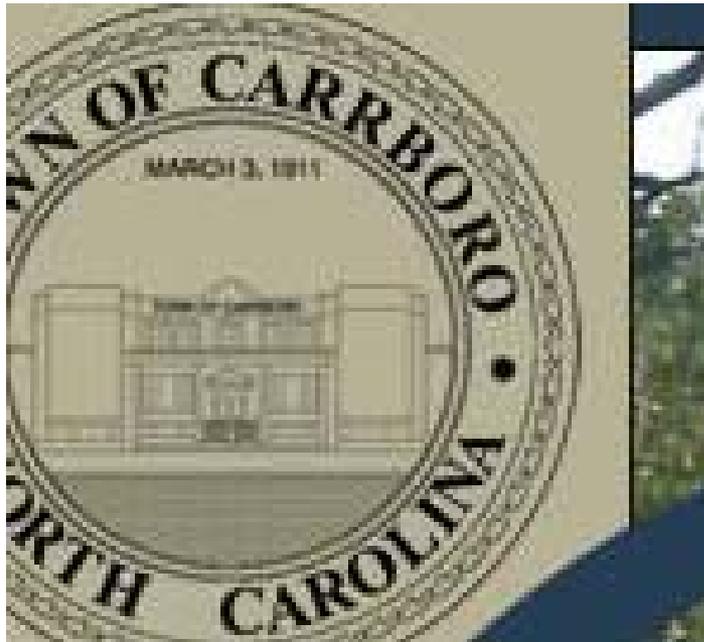
- Current fees
 - Fee = \$306/mo.
(\$3,672/yr)
- If funded by property tax
 - **\$0**

Impact on Budgets: Village of Clemmons



- Population: 16,900;
- Budget \$4.5 million
- Stormwater budget FY 2005-2006: \$475,000
- Tax Rate 9.85 cents per \$100 valuation
- ERUs Billed: 10,900
- Stormwater Fee: \$44.40/yr per ERU (\$3.70 mo.)
- Town Employees: 14 total (Pub. Works - 8 employees with 1 stormwater administrator)

Impact on Budgets: Town of Carrboro

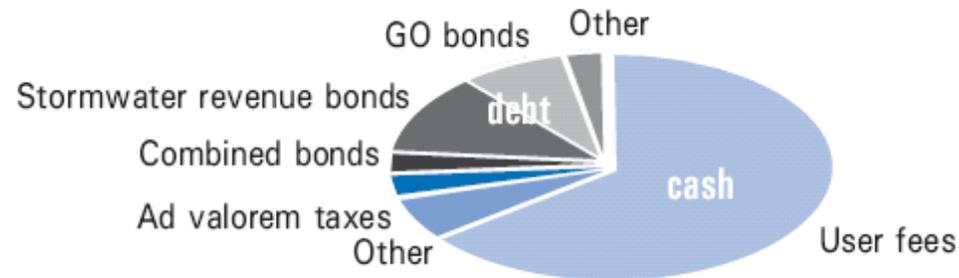


- Tax base =
\$1,373,733,504
- Population 18,000
- Budget (05-06)
\$16,000,000
- Tax rate = 62.44 cents
per \$100 of property
valuation
- Stormwater budget???
(114,000??)
- Employees??

Funding Capital Improvements (n=99)

How is the majority of capital improvement needs financed?

76%	Cash financed
64%	From user fees
2%	From ad valorem taxes
10%	Other
24%	Debt financed
10%	Stormwater revenue bonds
8%	General Obligation (GO) bonds
4%	Combined bonds
2%	Other



Slide Source: 2007 Stormwater Utility Survey, Black and Veatch

Commercial Debt

- General Obligation Bonds
- Revenue Bonds

SC Clean Water SRF

- 2.50% Non-point Source
 - up to \$4 million per borrower
 - 25% of cost must apply to BMPs
- 3.50% Standard Rate
- <http://www.scdhec.net/environment/water/srf-cw.htm>

SOUTH CAROLINA CLEAN WATER Comprehensive Priority List of CWSRF Projects

	Sponsor/Project Name	DHEC Project Number	SRF Loan Amount Estimate	PROJECT DESCRIPTION	Total Points	Is the sponsor ready to proceed with the project? (yes/no)
1	Mt. Pleasant WSC Center Street WWTP Upgrade	511-26	\$13,913,675	Upgrade to include 2 new clarifiers, air diffuser system in chlorine contact tank, blow inlet silencers, noise control, new belt press dewatering building, aeration blowers and new building to house the blowers, DO controls, new diffusers and conversion to contact stabilization activated sludge system.	85	Yes
2	James Island PSD Lighthouse Point, Phase II Sewer Line	543-01	\$3,000,000	Installation of approximately 21,000 LF of sewer line and force mains and three pump stations	75	Yes
3	Moncks Corner PWC Wastewater Treatment Plant Expansion	584-01	\$2,000,000	Increase Moncks Corner WWTP from 1.6 MGD to 3.2 MGD.	75	Yes
4	City of Georgetown Hwy. 17 Drainage Improvements	412-12	\$3,000,000	Drainage area improvements for an approximate 200-Acre drainage basin	65	Yes
5	Doonee County Sewer Commission Septage and Grease Recycling Facility	Job-17	3,750,000	Design and installation of a septage and grease processing facility of the Coneross Creek WWTP	65	NO
	Doonee County Sewer Commission			Construction of a gravity sewer system for the Richland Creek Basin		

Questions?

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