

# CLEMSON UNIVERSITY

March 25, 2011

Dan Ahern, PE BCEE  
Stormwater Manager  
Beaufort County Stormwater Utility  
120 Shanklin Road  
Beaufort, SC 29906

Dear Mr. Ahern,

We will be pleased to assist you in an advisory capacity to develop a hydrologic study on two watersheds to determine the impact of development on stormwater runoff. We will assist you based on the following communication from you:

The county has identified two similar watersheds where one is developed and the other is undeveloped. They both are about 1,000 acres and have similar percentages of wetland and upland (60% upland and 40% wetland).

One is in the upper reaches of the Okatie River and is fully developed in Sun City

The other is in Palmetto Bluff and is a currently undeveloped watershed draining into the New River. They are within about 10 miles of each other and both exit through a pipe.

Stormwater runoff volume is a current concern in Beaufort County and is being controlled in new development. The watershed in Sun City may be a factor in the fecal coliform impairments in the Okatie River that is closed to shellfish harvesting.

Retrofits may involve reducing total volume from this watershed. Having a study allowing a determination of excess stormwater flow will be very helpful in determining needed reduction.


Therefore we are requesting assistance to help the Stormwater Utility to

1. Develop a plan to monitor each watershed with recommendation on what/where and how to monitor.
2. Evaluate data collected by the Utility.

The Utility is willing to fund this assistance on an annual basis of \$25,000 for two years.

As you know, Dr. Bud Badr, Adjunct Associate Professor of Civil Engineering is ready to start providing the assistance needed upon the receipt of the "go-ahead" from you.

Sincerely,

  
Nadim M. Aziz, Ph.D.  
Professor and Chair



DEPARTMENT OF CIVIL ENGINEERING

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**BEAUFORT COUNTY STORMWATER UTILITY**  
**120 Shanklin Road**  
**Beaufort, South Carolina 29906**  
**Voice (843) 255-2801 Facsimile (843) 255-9478**



March 18, 2011

TO NERRS Science Collaborative FY2011 Funding Opportunity

Subject: Letter of Commitment- SCDNR Application to Evaluate Impact of Innovative Best Management Practices (BMP) on Estuarine Water Resources

Dear Proposal Reviewers,

The Beaufort County Stormwater Utility is committed to supporting the efforts of the South Carolina Department of Natural Resources (SCDNR) to evaluate the impact of innovative best management practices on our estuarine waters.

Beaufort County is strongly committed to protecting its waters and is taking efforts to restore impacted waters. The county's water quality efforts date from 1998 when the county established water quality practice requirements. The county has seen a 30% increase in population since that time and has managed to maintain the same percentage of open Shellfish Harvesting waters. Unfortunately the impairments that existed before 1998 have remained. The county completed a major Stormwater Management Plan in 2006 that identified opportunities to retrofit areas that had impairments. The stormwater utility in partnership with the county's municipalities has also awarded a contract to further study retrofit opportunities. This has led to identification of more retrofit opportunities. The county is now in a position to construct 1 to 2 projects per year. It is estimated that the county will be committing to \$1,000,000 of water quality retrofit projects in FY2012 and 2013. This will be a little less than 25% of the current annual construction and maintenance budget of the Utility and this change over has been in planning for a number of years.

This proposed project will greatly increase the capacity of the Utility's ability to assess the impact of this investment. The current monitoring program is limited and will not address biologic impacts and the effect of the stormwater volume. This project will provide scientific data that will allow the Utility to demonstrate impacts from the retrofit investment or allow changes to improve the restoration of our water resources. The Stormwater Utility is strongly committed to constructing water quality retrofit BMP's but does not have the capacity to fully evaluate the impacts for this investment.

The 2006 Stormwater Management Plan identified potential sites for regional BMP's totaling over \$11,000,000. This plan has been approved by the County and Municipalities and the Stormwater Utility is now budgeting for construction of some of these identified sites. The Utility is committing to invest at least a \$1,000,000 of water quality retrofit projects as part of this project. We are also committing to financially support, by reducing costs to homeowners, the proposed "Private Homeowners-Business Stewardship" retrofit idea since the impacts of these individual small scale BMP's are not known. This project will supply scientific data that can be used to support future efforts to deploy individual efforts.

The Stormwater Utility is committed to this project because we see this collaboration with SCDNR as a great way to get credible scientific feedback to make future decisions on restoring our County's waters to their intended uses. We expect that the project will give feedback on the impacts of the selected BMP's and allow us to use the data to demonstrate the beneficial impacts of the investment. If the projects do not

show significant improvements we hope to then use the study to modify projects to improve impacts. The proposed project has been presented to the Beaufort County Stormwater Utility Advisory Board (composed of appointed members from county and municipalities) and they passed a resolution recommending that the County/Stormwater Utility support this collaboration.

This project is a great way to leverage a scientific study to evaluate impacts of planned efforts and allow for adaptive changes based on results of the study. The Stormwater Utility sees this as a study that can either justify a major investment by the local community or provide additional information to allow the Utility to modify retrofits to maximize improvement in our estuarine waters.

Dan Ahern PE., BCEE  
Manager  
Beaufort County Stormwater Utility



**Unaudited**  
 BEAUFORT COUNTY, SOUTH CAROLINA  
 STATEMENT OF NET ASSETS  
 Stormwater Utility  
 February 28, 2011 & February 28, 2010

	<u>February 28, 2011</u>	<u>February 28, 2010</u>
<b><u>ASSETS</u></b>		
Current Assets		
Cash and Investments with Trustee	\$ 2,544,796	\$ 2,623,254
Receivables, Net	87,747	-
Inventories	186,916	165,047
Total Current Assets	<u>2,819,459</u>	<u>2,788,301</u>
Capital Assets	2,885,105	2,741,187
Accumulated Depreciation	<u>(1,646,064)</u>	<u>(1,354,019)</u>
	1,239,041	1,387,168
Total Assets	\$ 4,058,500	\$ 4,175,469
<b><u>LIABILITIES</u></b>		
Liabilities		
Account Payable	21,188	32,159
Accrued Payroll	83,159	48,856
Accrued Compensated Absences	3,757	3,501
Total Current Liabilities	<u>108,104</u>	<u>84,516</u>
Long Term Liabilities		
Accrued Compensated Absences	71,379	66,528
Net Other Postemployment Benefits Obligation	<u>382,750</u>	<u>321,420</u>
Total Long Term Liabilities	454,129	387,948
Total Liabilities	562,233	472,464
<b><u>NET ASSETS</u></b>		
Invested in Capital Assets, Net of Related Debt	1,239,041	1,387,168
Unrestricted (Deficit)	<u>2,257,225</u>	<u>2,315,837</u>
Total Net Assets	<u>\$ 3,496,266</u>	<u>\$ 3,703,005</u>

**Unaudited**  
 BEAUFORT COUNTY, SOUTH CAROLINA  
 STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS  
 Stormwater Utility  
 For the Period Ended February 28, 2011

	Budget FY 2011	February 28, 2011	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,177,379	\$ 2,959,098	(218,281)	93%
Stormwater Utility Project Billings	1,226,990	-	(1,226,990)	0%
Total Operating Revenues	<u>4,404,369</u>	<u>2,959,098</u>	<u>(1,445,271)</u>	<u>67%</u>
Operating Expenses				
Personnel	2,348,058	1,467,216	(880,842)	62%
Purchased Services	1,026,987	520,039	(506,948)	51%
Supplies	454,264	253,262	(201,002)	56%
Capital Purchases	290,060	-	(290,060)	0%
Depreciation	285,000	203,560	(81,440)	71%
Total Operating Expenses	<u>4,404,369</u>	<u>2,444,077</u>	<u>(1,960,292)</u>	<u>55%</u>
Operating Income (Loss)	-	515,021	515,021	-100%
Net Assets, Beginning	<u>2,981,246</u>	<u>2,981,246</u>		
Net Assets, Ending	<u>\$ 2,981,246</u>	<u>\$ 3,496,267</u>	515,021	117%

**Unaudited**  
 BEAUFORT COUNTY, SOUTH CAROLINA  
 STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS  
 Stormwater Utility  
 For the Period Ended February 28, 2010

	Budget FY 2010	February 28, 2010	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,868,238	\$ 2,982,822	(885,416)	77%
Stormwater Utility Project Billings	536,135	233,248	(302,887)	44%
Total Operating Revenues	<u>4,404,373</u>	<u>3,216,070</u>	<u>(1,188,303)</u>	<u>73%</u>
Operating Expenses				
Personnel	2,424,050	1,585,845	(838,205)	65%
Purchased Services	857,038	327,159	(529,879)	38%
Supplies	503,725	330,987	(172,738)	66%
Capital Purchases	601,751	13,491	(588,260)	2%
Depreciation	76,652	189,962	113,310	248%
Total Operating Expenses	<u>4,463,216</u>	<u>2,447,444</u>	<u>(2,015,772)</u>	<u>55%</u>
Operating Income (Loss)	(58,843)	768,626	827,469	-1306%
Non-Operating Revenues (Expenses)				
Gain (Loss) on Sale of Capital Assets	(38,337)	-	38,337	0%
Total Non-Operating Revenues (Expenses)	<u>(38,337)</u>	<u>-</u>	<u>38,337</u>	<u>0%</u>
Change in Net Assets	(97,180)	768,626	865,806	-791%
Net Assets, Beginning	<u>2,934,379</u>	<u>2,934,379</u>		
Net Assets, Ending	<u>\$ 2,837,199</u>	<u>\$ 3,703,005</u>	865,806	131%