

Beaufort County
Stormwater Management Utility Board
Meeting Agenda May 2, 2012

Location: **County Council Chambers**
Beaufort SC, 29901

April 13, 2012 draft,

- 1) **Call to Order:** Don Smith
 - A. Approve meeting agenda
 - B. Approval of minutes from previous meeting: April 4, 2012
([backup](#))

- 2) **Introductions**

- 3) **Public Comment**

- 4) **Reports**
 - A. SW/Form-based Code – Subcommittee report
 - B. Monitoring Update–Bob Klink
 - C. Quarterly Financial Report – Alan Eisenman
([Financial update](#))
([Financial report](#))
 - D. Upcoming Professional Contracts Report – Dan Ahern
([Upcoming professional contracts](#))
([FY 13 education outreach priorities](#))
([Clemson Extension statement](#))
([Okatie east wetland](#))
 - E. Utility Updates – Dan Ahern ([backup](#))
 - F. Maintenance Project Report – Eddie Bellamy ([backup](#))

- 5) **Unfinished Business**
 - A. Regional Coordination – Dan Ahern
 - B. IGA Agreements – Rob McFee ([backup](#))

- 6) **New Business** –
 - A. BMP Manual Presentation – Dan Ahern/Bob Klink ([backup](#))
 - B. Draft 303d list and 2011 Shellfish data – Dan Ahern ([backup](#))

- 7) **Public Comment**

- 8) **Next Meeting/Agenda** ([backup](#))

- 9) **Adjournment**

Beaufort County Stormwater Management Utility Board (SWMU Board)
Meeting Minutes

April 4, 2012 at 2:00 p.m. in Beaufort County Council Chambers
Draft April 20, 2012

Board Members

Present

Don Smith
Allyn Schneider
James Fargher
William Bruggeman
John Youmans
Donald Cammerata

Absent

Lady's Island Vacant

Ex-Officio Members

Present

Scott Liggett
Ron Bullman
Andy Kinghorn

Absent

Tony Maglione

Beaufort County Staff

Dan Ahern
Robert Klink
Lori Sexton
Eddie Bellamy
Rob McFee
Carolyn Wallace

Visitors

Reed Armstrong, Coastal Conservation League
Steve Andrews, A&B
Kathryn Madden, PRSF
Richard Brooks, Bluffton Today
Joe Croley, HH- Chamber

County Council

1. Meeting called to order – Don Smith

- A. Agenda approved
- B. March 7, 2012 Minutes were approved as posted

2. Introductions –

3. Public Comment - none

4. Reports –

A. Stormwater (SW)/Form based code – Subcommittee Report

No actions since last meeting. Staff sent out February 2012 code version with draft minutes.

B. Monitoring Annual Report – Bob Klink

Did have our meeting on March 27, 2012. The meeting discussed the new monitoring sites established by the ToB in May River. Also discussed were:

- Water Budget study update – two weeks away from installing all equipment.
- Coastal Carolina University Lab is doing Microbial Source tracking – have been doing work in Horry County and might be a resource if we want to get involved in MST again.
- Still coordinating transition from GEL to USCB and GEL annual report is posted.
- There was a meeting March 29th with the County and USCB on the Water Quality Lab and the county will try to assist USCB to develop the capacity for a water quality lab. Dan will address how this is related to the Utility goals and council agenda later.

- Next Meeting is May 22, 2012 at 1:30 at PW Conference Room.

C. Upcoming Professional Contracts Report – Dan Ahern

There is only one change from last month. This is the addition of an expected contract to get permits and design the water retrofit called Okatie East. This contract will be going through council approval. Contract will be with Ward Edwards. Construction cost will be relatively small and is estimated to be around 100,000. The other action taken this month was a memo to Mr. Kubic to request the modification of the existing Clemson Extension contract to include the \$10,000 increase to fund Carolina Clear's effort to develop the FY2013 consolidated education plan. Reviewed the transition to a Low County Education Consortium in FY13 that will be coordinated by Carolina Clear.

D. Utility Updates – Dan Ahern

Financials Forms: Were attached to the agenda are the Utility financials developed by our financial sections. Alan Eisenman will present the Quarterly review next month.

Webcasts: Utility hosted a webinar on March 21 sponsored by SESWA. This was on "Emerging NPDES Policy Initiatives in the Southeast". This was the first webcast we participated with SESWA and the attendees said it was very useful. There will be a follow-on webcast to an earlier CWP webcast on retrofitting and this one will focus on construction costs of retrofit on April 18, 2012. This will be in BIV #2.

2011 Shellfish Data/ Draft 303d list: Just last week we got the 2011 Shellfish data from SCDHEC and reviewed the draft 2012 303d list of impaired waters. The Board decided it wanted a presentation for next month on the draft list and preliminary results for 2011 monitoring data. DHEC reports that this study verified modeling done by BJWSA and this will help in establishing the revised prohibited area in the Beaufort River.

10 Year Utility Report: Happy to report that the Utility has completed the requested revisions of the project summaries. The remaining efforts are now to complete the audit and finalize the report.

Paper Presentation: Our paper on the monitoring of the BJWSA ASR discharge was to be presented at the SC Environmental Conference March 13, 2012. We have also been selected to present this paper at SESWA at their annual conference in October. This data is coming about as a surprise since people need to think what happens after they discharge.

BMP Update: The final draft of the reformatted BMP manual has been received. The last item to be added was a modification of our Step 2 help sheet that will allow for more flexibility for homeowner to meet the Step 2 requirements. We now plan to initiate the modification to the web-based program that has been carried on our professional contract report for some time.

The draft manual has been posted on the Stormwater web site and we invite you to review prior to our scheduled presentation at the May SW Board meeting. Will be asking Board to authorize this manual at this meeting.

SWU Board Responsibilities and Duties: Attached to agenda were the Duties from the ordinance section dealing with SW Management Utility Board. This had been discussed last month's meeting and Board decided to review periodically. Don Smith asked about the CIP review. The Utility has not developed a multiyear CIP. Andy Kinghorn asked if retrofit planning could benefit from a CIP.

William Bruggeman asked about the Utility Bldg. upgrade status. It is still priority but there were a number of changes and now the contact in facilities division left and there is a backlog of projects to address in the division.

E. Maintenance Project Reports – Eddie Bellamy

Reported on three major projects (1) Major Road; (2) Chesterfield Lake Drive; (3) Laurel Street E. /Pine Grove Outfall and 14 minor and/or routine maintenance projects reported in the shortened format.

All projects will be posted on Stormwater web site. Discussed divide between major and minor projects and factors impacting time it takes to report project to the Board. Also discussed the time it takes to make maps for the reports. The project map development is tied to maintaining the drainage layer in the GIS system.

5. Unfinished Business –

A. Regional Coordination – Dan Ahern

The SWIC met March 15, 2012. At this meeting the Committee finalized recommendations on the SW Management Plan and relooked at the SWU priorities to check they were in sync with the current County Council agenda items. It was determined that they were in sync except if the proposed Water Quality Office becomes a reality. The committee added a coordination goal, if this comes to pass. A revised list of priorities was attached to agenda. As Bob mentioned Mr. Kubic has now made the Water Quality Lab the solution to the County Council agenda item for a Water Quality Office. This was already linked to one of our top 10 goals so we might drop the number 11 goal.

At this meeting we also conducted the annual review of the administration fee determination and Carolyn Wallace gave a presentation with a FY2013 budget keeping the SFU rate at \$2.80. The next meeting will be April 28, 2012.

Don Smith asked about monitoring costs to transitioning from GEL to USCB. We don't expect costs to increase with the transition.

B. IGA Update – Rob McFee

Reported that he has been conducting meetings with ToPR and expects a revised agreement that can be taken through the approval process.

6. New Business –

A. Stormwater Management Plan Recommendations – Dan Ahern/SWIC

There was a board request and recommendation that the SWIC look at the 2006 SW management plan and report back to the board on any recommendations to be considered. A signed copy of the recommendations by program element in the Management plan was attached to agenda. It was noted that we are now 6 year of a 10 year plan.

Don Smith asked if we were acting on the headwaters recommendations. Mentioned that a project meeting is scheduled with USCB and Waddell Mariculture Center to see if there was a way to identify critical headwaters.

Andy Kinghorn asked about the recommendation to give priority for securing retrofit sites. Ron Bullman said this was an original recommendation in the plan that had not been acted on and the SWIC felt they needed to highlight.

B. FY2013 Budget – Carolyn Wallace

Presented the proposed FY2013 budget in a highlight format on a power point. The Board received a one page summary that compared proposed and last year budget. The power point reviewed revenue sources:

- Utility Admin Fees - \$309K
- Utility Activity Fees - \$3.16M
- Reimbursement Project - \$63K
- Interest - \$11K
- Cost Share Efforts - \$308K
- SW Reserve - \$160K

The projected Activity Costs by SW Plan Elements were presented as:

- Administration - \$309K
- Control Regulation - \$114K
- WQ Monitoring - \$148K
- WQ Controls - \$441K
- Annual Maintenance - \$2.36M
- Public Info/Outreach - \$75K
- Drainage Enhancement - \$25K
- Additional Studies - \$375K (if LIDAR is approved – estimated \$300K)

Don Cammerata asked about support to the Military. This is still an issue that needs resolution and currently there are no interactions due to disagreement on fee payment. The budget is based on collected fees and does not include delinquent fees.

Don Smith asked how LIDAR relates to aerial photography. They are generally separate procured. Other departments participate in aerial photography cost. Scott Liggett asked how we arrive at the Annual Maintenance figure. The Annual maintenance figure is the balance after the other activity costs are subtracted from the overall Utility Activity budget. Don Cammerata asked how we separate construction and routine maintenance. This is being separated by project numbers between routine or major restoration projects.

7. Public Comment – None

8. Next meeting agenda – Board reviewed and approved the proposed May agenda with addition of impaired water briefing. Don Smith asked Board members to review as necessary the Draft BMP manual and be ready to vote on it at May meeting.

9. Meeting adjourned.

Unaudited and Preliminary
BEAUFORT COUNTY, SOUTH CAROLINA
STATEMENT OF NET ASSETS
Stormwater Utility
March 31, 2012 & March 31, 2011

	March 31, 2012	March 31, 2011
<u>ASSETS</u>		
Current Assets		
Cash and Investments with Trustee	\$ 2,842,386	\$ 2,321,464
Inventories	119,640	186,916
Total Current Assets	2,962,026	2,596,793
Capital Assets	2,798,912	2,888,645
Accumulated Depreciation	(1,731,443)	(1,618,010)
	1,067,469	1,270,635
Total Assets	\$ 4,029,495	\$ 3,867,428
<u>LIABILITIES</u>		
Liabilities		
Account Payable	35,515	169,301
Accrued Payroll	31,357	35,006
Accrued Compensated Absences	4,470	3,757
Total Current Liabilities	71,342	208,064
Long Term Liabilities		
Accrued Compensated Absences	70,038	71,379
Net Other Postemployment Benefits Obligation	569,398	392,245
Total Long Term Liabilities	639,436	463,624
Total Liabilities	710,778	671,688
<u>NET ASSETS</u>		
Invested in Capital Assets, Net of Related Debt	1,067,469	1,270,635
Unrestricted	2,251,248	1,925,105
Total Net Assets	\$ 3,318,717	\$ 3,195,740

Unaudited and Preliminary
 BEAUFORT COUNTY, SOUTH CAROLINA
 STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS
 Stormwater Utility
 For the Period Ended March 31, 2012

	Budget FY 2012	March 31, 2012	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,344,133	\$ 2,969,131	(375,002)	89%
Stormwater Utility Project Billings	64,278	-	(64,278)	0%
Interest	11,389	-	(11,389)	0%
Total Operating Revenues	<u>3,419,800</u>	<u>2,969,131</u>	<u>(450,669)</u>	<u>87%</u>
Operating Expenses				
Personnel	1,986,780	1,343,681	(643,099)	68%
Purchased Services	770,938	498,106	(272,832)	65%
Supplies	426,223	235,985	(190,238)	55%
Depreciation	285,859	216,571	(69,288)	76%
Total Operating Expenses	<u>3,469,800</u>	<u>2,294,343</u>	<u>(1,175,457)</u>	<u>66%</u>
Operating Income (Loss)	(50,000)	674,788	724,788	-100%
Non-Operating Revenues (Expenses)				
Gain (Loss) on Sale of Capital Assets	50,000	50,000	-	100%
Total Non-Operating Revenues (Expenses)	<u>50,000</u>	<u>50,000</u>	<u>-</u>	<u>100%</u>
Change in Net Assets	-	724,788	724,788	
Net Assets, Beginning	<u>2,593,929</u>	<u>2,593,929</u>		
Net Assets, Ending	<u>\$ 2,593,929</u>	<u>\$ 3,318,717</u>	724,788	128%

Unaudited and Preliminary
BEAUFORT COUNTY, SOUTH CAROLINA
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS
Stormwater Utility
For the Period Ended March 31, 2011

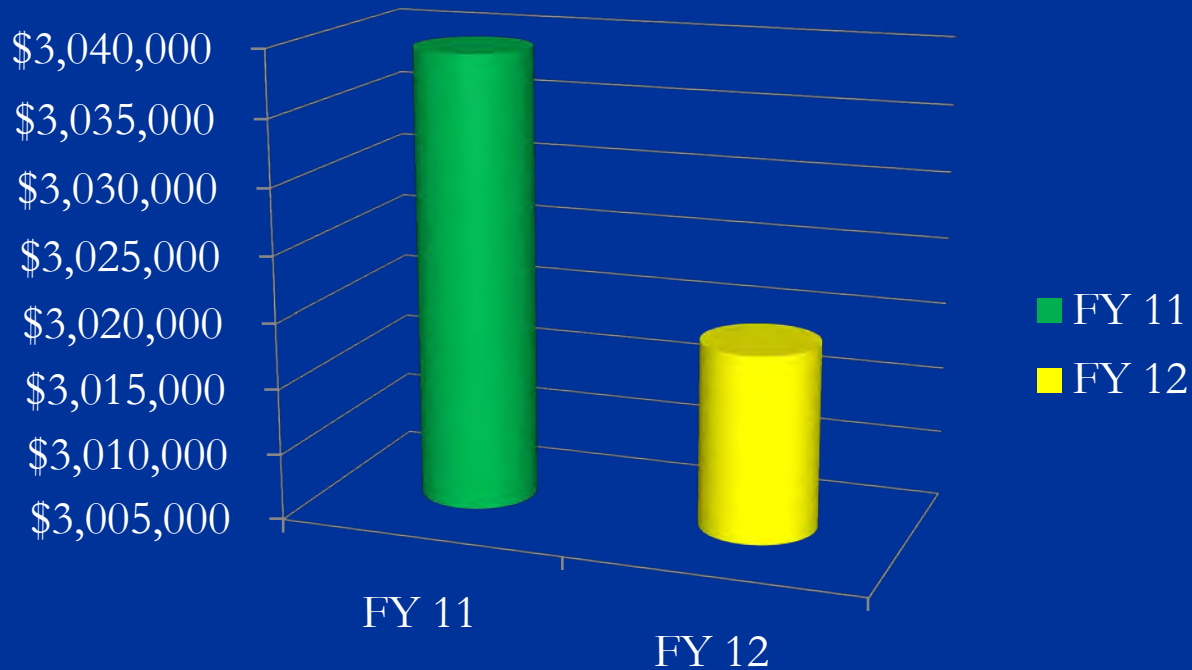
	Budget FY 2011	March 31, 2011	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,089,579	\$ 3,038,600	(50,979)	98%
Stormwater Utility Project Billings	244,278	666	(243,612)	0%
Total Operating Revenues	<u>3,333,857</u>	<u>3,039,266</u>	<u>(294,591)</u>	<u>91%</u>
Operating Expenses				
Personnel	2,347,051	1,645,494	(701,557)	70%
Purchased Services	1,026,987	615,467	(411,520)	60%
Supplies	398,728	314,216	(84,512)	79%
Capital Purchases	458,327	-	(458,327)	0%
Depreciation	111,652	230,329	118,677	206%
Total Operating Expenses	<u>4,342,745</u>	<u>2,805,506</u>	<u>(1,537,239)</u>	<u>65%</u>
Operating Income (Loss)	(1,008,888)	233,760	1,242,648	-23%
Non-Operating Revenues (Expenses)				
Gain (Loss) on Sale of Capital Assets	(38,337)	(9,266)	29,071	24%
Total Non-Operating Revenues (Expenses)	<u>(38,337)</u>	<u>(9,266)</u>	<u>29,071</u>	<u>24%</u>
Transfers In (Out)	(10,000)	(10,000)	-	100%
Change in Net Assets	(1,057,225)	214,494	1,271,719	-20%
Net Assets, Beginning	<u>2,981,246</u>	<u>2,981,246</u>		
Net Assets, Ending	<u>\$ 1,924,021</u>	<u>\$ 3,195,740</u>	1,271,719	166%



Stormwater Management Utility Board

March Unaudited Financials

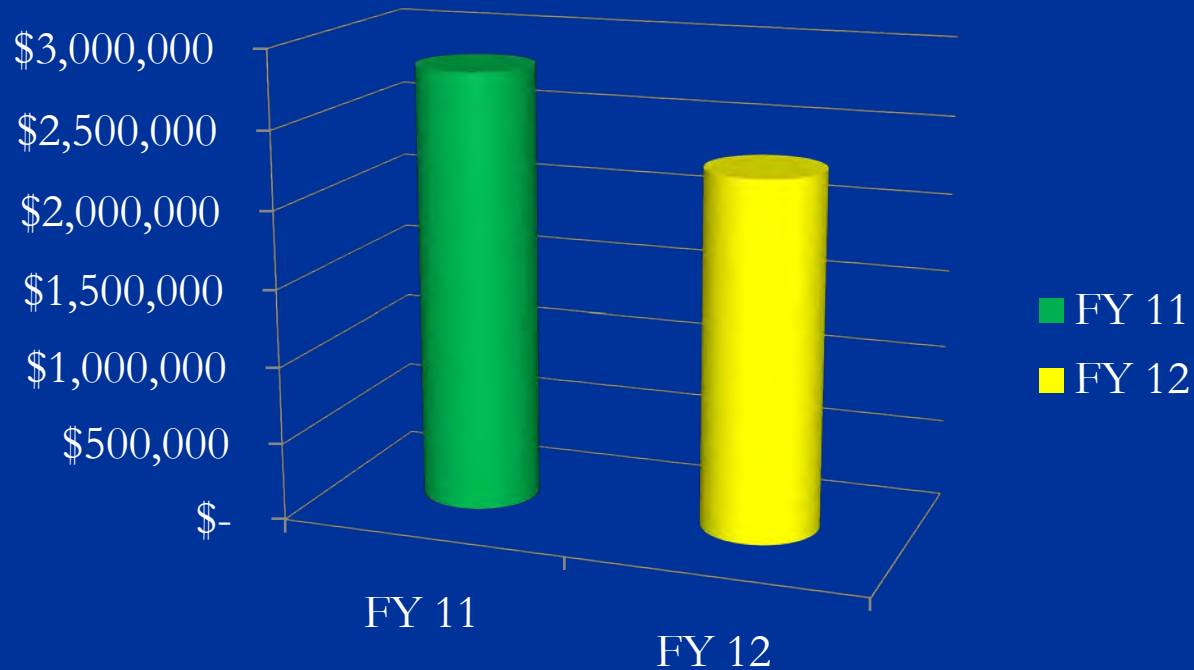
Revenues from Income Statement



Revenues decreased \$20,000 or 0.6%

March Unaudited Financials

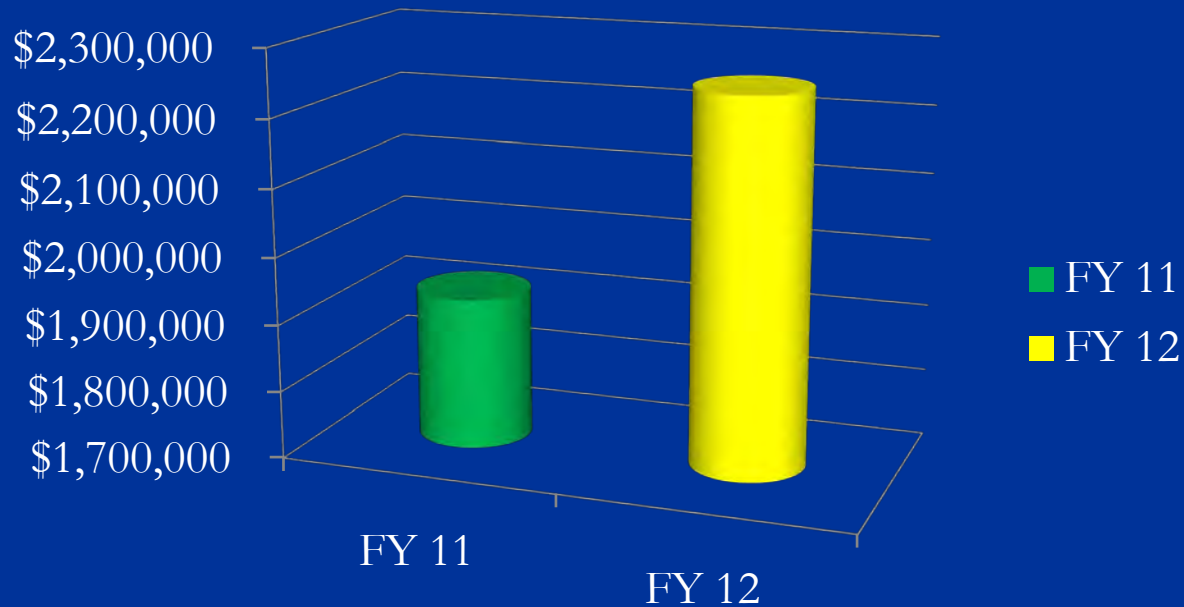
Expenses from Income Statement



Expenses decreased by \$530,000 or 19%

March Unaudited Financials

Unreserved Fund Balance from Balance Sheet



Increased by \$326,000 or 17%



Professional Contracts – May 2012 Report –

Covers all contracts on track to get approved

Format will be

1. Contact Name
2. Contractor
3. Amount
4. Purpose and Description
5. Status
6. Projects funded from last report

Administrative Parking Lot – Additional Consultant Services; Andrews and Burgess; \$5,000; additional engineering associated with pervious pavement and contractor demo assistance and paving contract supervision.

Upgrade of On-lot Web Program – Create and Solve; estimated \$2,000; Will be a program upgrade to include more bioretention options than rain gardens. This will be initiated when we get volume credit information from CDM under BMP manual upgrade.

Carolina Clear Education Transition Program – Clemson Extension; \$10,000; Will be to transition this year to a single Carolina Clear contract in FY2013. This contract will be for Carolina Clear to work with current education partners and meet with the SW Board and SWIC to develop priorities for FY2013 and submit a proposal for FY2013. Will be requesting motion from Board so County Administrator can sign.

Carolina Clear FY13 Outreach/Education Program – Clemson Extension; \$67,665; This is the proposed FY 2013 amount submitted under the Clemson County Extension Program Support Agreement. Will have presentation later on agenda and then this agreement input from board will be taken to Natural Resources and County Council for approval.

Okatie East Retrofit – Ward Edwards; \$46,600: This agreement will be to get regulatory permits, extensive surveying determine Island West pond elevations and design of outfall structure. Will be taking to Natural Resources Committee in June. Five Tasks in contract:

1. Tree and Topographic surveying (SC)	\$5,300
2. Modeling and Analysis	\$15,000
3. BMP Design Phase	\$7,500
4. Wetland impact permitting (SC)	\$13,800
5. Construction Permitting (hourly) est	\$5,000

Projects Funded since Last Report

None

Proposed Scope for Collaborative Stormwater Outreach and Involvement Programming in Beaufort County 2012 – 2013 Fiscal Year

The initial focused and collaborative outreach program to be launched by Carolina Clear in Beaufort County has been drafted based on discussions with SWIC entities, community representatives, local educators already versed in environmental outreach in the area, and Clemson Extension. The plan looks to build capacity towards areas of great interest adding to stormwater education that has already been completed and is still needed and capitalizing on programs and vehicles for information delivery that already exist, adding the use of approaches that will motivate more sustainable changes of behavior that will protect water quality.

1. GENERAL STORMWATER AWARENESS

Privately owned television channels and government-run public access channels will be explored and utilized as a first vehicle for improving general stormwater awareness and simple ways each individual can be involved in preventing stormwater pollution and increasing infiltration of rain water.

Slides or videos will be provided, as formats are amenable, to broadcast these public beneficial messages. Media has been produced with the end user in mind, and Carolina Clear's most recent video has been tested for its ability to be reinterpreted by members of the general public.



As needed, rotations on cable channels will be evaluated as supplemental.

2. HOMEOWNER EDUCATION ON WATERSHED-FRIENDLY LANDSCAPE PRACTICES

The Carolina Yards & Neighborhoods Program was developed originally by the University of Florida-IFAS and modified with permission for use in South Carolina in 2002. This program, through the use of 9 low impact landscaping principles, outlines easy steps towards achieving a "Carolina Yard." This teaching tool emphasizes choosing low maintenance plants, efficient irrigation, integrated pest



management, and yards connectivity to waterways. New means to recognize homeowners have been added to the program as have recognition items emphasizing the “social norm” that we are trying to create for this environmentally conscious landscape management behavior change.

This program will be delivered to communities, citizen groups, and through the creation of a speaker series.

More information about the program at www.clemson.edu/cyn.

3. COMMUNITY EDUCATION AND INVOLVEMENT IN THE DEMONSTRATION OF SHORELINE AND POND NUTRIENT AND SEDIMENT MANAGEMENT

Shoreline buffers, or ecotones, are critical areas for the slowing of runoff, treatment of nutrients, increasing biodiversity, stabilizing shorelines and creation of habitat at the waterfront. Especially significant is the dropping out of sediment that occurs when runoff that is carrying sediment is slowed by vegetation, before meeting with surface water. Therefore, additional benefits of buffers can be seen in the increased longevity and function of the adjacent waterbody and the cost savings realized from less required maintenance.

“Life on the Waterfront” is one of the 9 principles of the above-mentioned Carolina Yards & Neighborhoods program, and this collaborative outreach effort will address the need for buffer awareness and adoption throughout the region through a more strategic focus on this one principle.



Resources will be developed for homeowners and associations to choose their own shoreline design from planting options and designs that will be created and made available through this partnership. Along with planting designs, a plant list will be developed with information on where to find these plants locally.

Additionally, three demonstrations will be built so that the target audience can view first-hand how these practices are installed, what they will look like as they grow, and what benefits they have to the shoreline that are different from a manicured aesthetic. Shoreline buffer demonstrations will be at stormwater ponds or lagoons at publicly owned and visible facilities.

Preferably at the same pond as one shoreline buffer demonstration, will be the installation of a floating vegetated island. These floating islands have shown a remarkable ability to utilize nutrients from the water column for plant growth, therefore helping minimize the potential fish kill from nutrient overload and dipping dissolved oxygen levels in the ponds. Planting and maintenance recommendations will be made available and also published for distribution on a new website within the Carolina Clear web structure that all partners can link to from their pages and news materials.



Educational signage will be created and produced for all demonstration projects for long-term, passive education with information on where to go online for more information.

4. MEASURING REGIONAL ENVIRONMENTAL ATTITUDES, BEHAVIORS, AND KNOWLEDGE RELATED TO STORMWATER AND WATER QUALITY

The initial crafting and piloting will begin during this timeframe for the statistically relevant telephone survey data collection effort on respondents' knowledge, attitudes and behaviors as they relate to stormwater, watersheds, and water quality. Targeted for the fall of 2013, respondents will be asked questions that gauge their awareness of if stormwater is treated before discharge to how a household determines an appropriate amount of fertilizer for their lawn. This effort will establish a baseline for future survey work and for associating measurable response changes due to education and involvement efforts in the region.

The survey will be instrumented by faculty at the Clemson University Department of Sociology and Anthropology and delivered by students.

C L E M S O N U N I V E R S I T Y
C O U N T Y E X T E N S I O N P R O G R A M S U P P O R T A G R E E M E N T
(C E P S A)

SPONSOR: Beaufort County Public Works Stormwater Management Utility

PAGE: 1 of 5

This agreement between CLEMSON University (hereafter referred to as CLEMSON) and the SPONSOR (listed above) is entered into for the purpose of supporting an Extension Agent - Horticulture in the Beaufort County office.

CLEMSON'S RESPONSIBILITIES: CLEMSON agrees to:

1. Assign a professional who will be responsible for activities described in Appendix A.
2. Steve Meadows (Field Operations) will Monitor the performance of the Extension Agent - Horticulture and ensure the agent receives continuing training.
3. Administer the CEP SA funds in accord with the laws of South Carolina and the stipulations of THE SPONSOR.
4. Provide to the SPONSOR, upon request, a summary of expenditures made in support of the Extension Agent - Horticulture.

SPONSOR'S RESPONSIBILITIES The SPONSOR agrees to:

1. Provide funds in the amount of \$67,665 as described in the detail budget in Appendix B which includes all in-kind contributions.
2. Provide a representative for the program described in Appendix A who will as needed serve on the any applicable committee.
3. SPONSOR will pay CLEMSON the above amount, upon invoice, on a quarterly basis.

PERIOD OF PERFORMANCE: The period of performance shall begin on July 1, 2012, and end June 30, 2013.

COMMON RESPONSIBILITIES: CLEMSON and the SPONSOR agree to:

1. The parties acknowledge and agree that the intent of this arrangement is to support a position of County Extension Agent - Horticulture for Beaufort County. To the extent that the provisions of the Fair Labor Standards Act or other laws governing wages and hours might be found to apply to the County Extension Agent - Horticulture, CLEMSON agrees to ensure compliance and to conform with all other reporting procedures as designated by this position.

2. Individually and collectively execute, expedite, and fulfill the conditions of this AGREEMENT and the mutually composed APPENDIX "A" and "B" in the best interests of SPONSOR and CLEMSON.
- 3.
4. Sponsor will allow Clemson to reallocate funds within budget categories in Appendix B and Other than reallocation, Mutually negotiate a revised and/or amended APPENDIX "A" or "B" should SPONSOR'S requirements or CLEMSON's conditions significantly change during the term of this AGREEMENT.

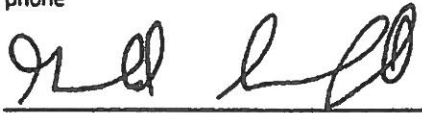
TERMINATION: This AGREEMENT may be terminated by any party at any time by providing written notice to the other parties at least thirty days prior to the work termination date. Upon termination, CLEMSON will provide SPONSOR with a summary of expenditures and refund any unexpended Public Service Agreement funds. The summary of expenditures shall be considered final and accepted thirty (30) days after transmission to the SPONSOR, in the absence of communication to the contrary.

ENDORSEMENTS:

SPONSOR: _____
 authorized institutional official date

_____ address

_____ phone fax

CLEMSON UNIVERSITY:  4/16/2012
 PB Gerald Sonnenfeld, PhD, Vice President for Research date

Office of Sponsored Programs 300 Brackett Hall, Clemson, SC 29634-5702
 _____ address

864 656 2424 864 656 0881
 phone fax

OSP ONLY - AGREEMENT NUMBER : _____

STATEMENT OF SERVICES TO BE PROVIDED BY CLEMSON

APPENDIX A:

- Promote Beaufort County stormwater BMP's by conducting community presentations relating to application of the **Carolina Yards and Neighborhoods** principles, including **Backyard Buffers, Carolina Clear** and **Coast-A-Syst** materials.
- Write articles regarding homeowner practices which focus on water conservation and pollution prevention. Disseminate articles through local mass media as well as homeowner associations and other newsletters.
- Develop and provide educational display booths at select community events.
- Develop and present **irrigation workshops** for homeowners and landscapers designed to improve understanding of appropriate irrigation practices and assist them in maintaining systems at peak performance.
- Continue **Master Gardener** training with strong emphasis in pollution prevention and water conservation.
- Develop links on local websites directing residents to the **Carolina Yards and Neighborhoods, Coast-a-Syst, and Carolina Clear** websites.
- Develop water quality education opportunities for elementary, middle, and high school students.
- Develop grant and other funding to enhance program delivery.
- Investigate innovative approaches to water pollution prevention and conservation (e.g., rain barrels). Implement new programs as appropriate.
- Coordinate with Clemson Extension Commercial Horticulture staff to develop water pollution prevention and conservation awareness for, and encourage changes in, landscape professionals.
- Collaborate with Beaufort County staff as well as individuals from other agencies and private industry in developing programs to address water pollution prevention/conservation as appropriate.
- Maintain program accountability documents and provide data to Beaufort County Stormwater Utility on a quarterly basis.

Additions: Carolina Clear will partner with Beaufort County Stormwater Utility to conduct the following:

- Coordinate a working local partnership that communicates regional stormwater education and involvement activities; make available tools to report activities for regional representation.
- With input from partner agencies and communities and readily available sources, develop a regional outreach plan that targets specific audiences with region-specific objectives, as necessary.
- Oversee and direct the implementation and evaluation of a coordinated outreach activity in partnership with the Port Royal Sound Foundation.
- Begin Phase I of statewide telephone survey instrumentation. This shall include identifying region-specific questions to be added to the baseline questions asked across the state, testing questions with faculty, and piloting questions by phone. Actual survey will begin fall 2013.
- Provide materials for outreach and education to be distributed by partners and established at community buildings (1 display per community).
- Report back to Utility Board work completed over the course of the agreement.
- Work towards involving Jasper County in regional stormwater education and involvement efforts that will meet future compliance expectations of the NPDES MS4 General Stormwater Permit.
- Work through Clemson Extension to deliver compliance-appropriate stormwater education and involvement outreach.

APPENDIX B: REQUESTED BUDGET

Salary	\$ 13,828
Fringe Benefits 32.2%	\$ 4453
Materials/supplies	\$ 3,577
Travel	\$ 1307
Total	\$ 23,165

Additional Funding

Outreach to be delivered by
Port Royal Sound Foundation
via subcontract \$25,000

Phase 1 of survey delivery
Dept. of Sociology \$7500

Travel, materials, salary for
Additional staff required \$12,000

NEW TOTAL REQUEST \$67,665

E N D O F A G R E E M E N T



Post Office Box 381 - Bluffton, SC 29910
1613 Paris Avenue - Port Royal, SC 29935
T 866.837.5250
F 843.837.2558
www.WardEdwards.com

April 20, 2012

Mr. Dan Ahern
Beaufort County Engineering
102 Industrial Village Road, Bldg 3
Beaufort, SC 29906
Sent by email to dahern@bcgov.net

Okatie East Wetland Enhancement

Service Authorization No. 1
Edwards Reference: 090096A

Thank you for the opportunity to continue working with Beaufort County on this project. We look forward to a successful project with you and creating a good pilot retrofit project that can be applied to other basins throughout the County. Based on our recent correspondence, we understand that you require the modeling and design services for the Okatie East Wetland Enhancement proposed from our previous Regional Retrofit Study.

The scope and fees in this proposal package provide for the requested engineering services, along with the surveying and wetland permitting services needed to get the project to construction.

We appreciate this opportunity to submit a proposal to provide the services that we discussed. Please review the contents of this package and feel free to contact me if you have questions. I can be reached at (843) 322-6020.

SCOPE:

The project involves the design of a regional stormwater quality retrofit within the Okatie East Branch of the Okatie River 3 (headwaters) water quality basin from the 2006 Beaufort County Stormwater Master Plan. The proposed BMP will be a wetland restoration and enhancement of a jurisdictional wetland running through the Island West community. The restoration and enhancement will be accomplished by the removal of a failing steel culvert running under an old logging road that transects the wetland just upstream of Hampton Parkway. The culvert will be replaced with a new adjustable outlet structure that will detain runoff from smaller rainfall events while allowing runoff from larger rainfall events to pass relatively unimpeded. The BMP concept was developed in the 2010-2011 Beaufort County Regional Stormwater Quality BMP Retrofit Study prepared by Ward Edwards.



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F 843.837.2558
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ASSUMPTIONS/EXCLUSIONS

- The easements needed to construct the proposed improvements are being acquired by Beaufort County.
- The existing wetlands are under restrictive covenants from the original Island West Wetland Master Plan. The proposed wetland modifications will require additional permitting effort, beyond the standard jurisdictional impacts. Additional wetland mitigation credits may be needed by the County
- Beaufort County Stormwater plans to construct the project itself, so bidding and construction inspection services are excluded from the scope. If any inspection and closeout services are needed at a later date, they will be handled under a separate contract.

Task 1: Tree & Topographic Survey

Ward Edwards will provide the following surveying service through a sub-consultant. The scope of the survey will include:

- The survey is to be prepared on SC State Plane Coordinates and use NAVD 88.
- Tree & topographic data of the existing culvert, logging road and the surrounding area (approximately 3 acres) is to be collected. This is to include:
 - Pipe invert
 - Top of and bottom of the logging road berm
 - Channel inverts and tops of bank at 25-ft intervals and at all changes of direction. The channel survey is to extend 200-ft upstream (east) of the culvert, and 100-ft downstream (west)
 - The eastern edge of Hampton Parkway
 - Locate any property corners and wetland flags located in the survey area
- GIS grade Topographic information on 13 ponds in the Island West Community including
 - Normal water level
 - Average top of bank
 - Size and inverts of interconnecting pipes
- Topographic survey of the pipes under Blythe Island Drive including
 - Pipe sizes
 - Pipe inverts
 - Channel inverts and tops of bank 50-ft upstream and downstream of culvert ends
 - Existing road edges and centerline of pavement above culverts

- Topographic survey of the existing channel running between Hampton Pkwy and Blythe Island Drive including
 - Cross sections at every 50-ft and at all major changes of directions.
 - Channel invert
 - Top of bank
 - Ground shots 25-ft beyond both sides of the top of bank





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Task 2 - Modeling & Analysis Phase

Ward Edwards will analyze the existing conditions and the proposed conditions in greater detail in order to design the proposed BMP such that it will not impact the function of the existing ponds within Island West. The Modeling & Analysis will include the following:

- Gather record drawings and original design information that is available from permitting agencies and other sources
- Use survey data provided by the County, LiDAR contours, aerial photography, record drawings and other available information to map out the existing drainage patterns within Island West.
- Create a hydrologic and hydraulic model of the Island West pond system and the wetland system in order to establish the existing conditions. The model will be run to estimate the current peak pond stages and discharges through the wetland system.
- Using the existing conditions model, a proposed conditions model will be developed in order to analyze the proposed changes to the logging road and proposed outlet control structure. An iterative design process will be used to determine the optimum outlet structure size and design
- Ward Edwards will prepare a summary report outlining the existing and proposed model. The report will estimate the proposed benefit to water quality based on a runoff volume reduction. The report will be suitable for permitting the project with SCDHEC-OCRM, the Army Corp of Engineers, and the Town of Bluffton.
- Ward Edwards will support the County in gaining final approval from the property owners to allow the construction of the proposed BMP. Ward Edwards will attend up to two information meetings with stakeholders, and up to two Stormwater Utility Board meetings to present the model results.



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Task 3 - BMP Design Drawings

Ward Edwards will prepare the BMP Design Drawings, suitable for permitting and constructing the proposed culvert modifications. Services in the phase will include:

1. Prepare design plans detailing the civil construction associated with this project. Plans are prepared using AutoCAD software and paper copies are printed on 24" x 36" sheets.
Design drawings will show:
 - a. Clearing and demolition plans;
 - b. Staking plans;
 - c. Site grading and stormwater plans;
 - d. Erosion & sediment control plans;
 - e. Construction details and technical specifications.

2. Prepare spreadsheet summarize the engineer's opinion of probable construction costs.

Task 4 - Wetland Permitting

Newkirk Environmental, Inc. (NEI) will coordinate with the client, project attorney and project engineer to finalize and arrange replacement of existing restrictive covenants along with completing permit drawings suitable for submittal to the USACE and SCDHEC. More specifically NEI will assist the project in obtaining a permit to replace an existing culvert with a new outlet control structure and alter approximately 400 LF of timber road across wetlands. This will include necessary site visits, attendance at team meetings and review of draft plans and permit drawings. Upon completion of suitable permit drawings, Newkirk Environmental, Inc. will prepare and submit a Joint Permit application package, including a description of and justification for the proposed project, to the USACE and SCDHEC. NEI will calculate the mitigation requirements for the permit as part of the permit package.

Following submittal of the application, Newkirk Environmental, Inc. will serve as a liaison between the applicant and the various state and federal regulatory agencies throughout the permit review and decision process and, as necessary, arrange and coordinate meetings, facilitate actions, conduct project coordination with the project team and assist the permitting and certifying agencies to an initial conclusion. This will include response to comments or questions and coordination of additional information as needed.



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Task 5 - Construction Permitting Phase

Ward Edwards will perform the following tasks as a part of this phase of the contract:

1. Prepare appropriate applications and submittal packages to the regulatory agencies with jurisdiction over the plans. Application and review fees will be paid by the Client, and are not included in the Ward Edwards fee for this project;
2. Coordinate the receipt of comments from review agencies;
3. Prepare and submit plan revisions to the agencies.
4. Support wetland impact permitting with Newkirk

The wetland impact permitting will be assisted by sub-consulting with Newkirk Environmental. This proposal includes a separate phase for the document preparation and agency follow-up by Newkirk. Ward Edwards' involvement in the wetland permitting effort will be billed under this Phase. The agencies for which applications and submittal packages will be prepared for this project are as follows:

- a. SCDHEC-OCRM NPDES and CZC
- b. Beaufort County Encroachment Permit
- c. Town of Bluffton

FEES:

The below fees are based on your prompt payment of our invoices and on the orderly and continuous progress of the Project. Reimbursable expenses will be billed as incurred. Billing references appear on all invoices for ease of reference to this agreement.

Service Description	Fee Type	Fee Amount
Task 1: Tree & Topographic Surveying	Fixed Fee	\$ 5,300
Task 2: Modeling & Analysis	Fixed Fee	\$ 15,000
Task 3: BMP Design Phase	Fixed Fee	\$7,500
Task 4:Wetland Impact Permitting	Fixed Fee	\$13,800
Task 5: Construction Permitting	Hourly Consulting	\$5,000
Reimbursable Expenses	As incurred	per the PSA
Total Project Fees		\$46,600



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Terms and conditions appear in the Professional Services Agreement (PSA) dated January 1, 2011. Beaufort County is the CLIENT in this Agreement. When signed below, this proposal and the referenced PSA represent the entire understanding and agreement of this Project between you and Ward Edwards and serve as the authorization for Ward Edwards to proceed with professional services. Modification must be made in writing and signed by both Ward Edwards and CLIENT.

SERVICE AUTHORIZATION:

By: Paul Mue
 Ward Edwards, Inc.

Approved By: _____
 Beaufort County

Date: _____

In an effort to improve account communication and reduce paper waste, we will submit our project invoices electronically (Adobe PDF format). If you prefer to receive mailed hard copies of the invoices and have any other special account considerations such as a purchase order number or copying accounting personnel, please provide the additional billing preferences below.

Invoices for this Service Authorization should be directed to:			
Contact(s):		Company:	
Mailing Address:		City, State, Zip:	
Phone:		Facsimile:	
EMAIL Address(s):			
Additional Billing Info:			

Stormwater Fee Policy for Preserved Land

January 2012

Purpose: To encourage perpetual stewardship that will help preserve our County's waters and minimize impacts of stormwater runoff.

Incentives:

The Beaufort County Stormwater Fee reductions:

1. **Freshwater wetlands** on parcels with perpetual conservation easement (County ordinance 99-109 (a) (1)) can receive a credit against their stormwater fees. If a landowner has documented wetlands, per National Wetlands Inventory or certified by SC DHEC and ACOE, the associated stormwater fees will be credited for this acreage. A property owner must provide documentation of the perpetual conservation easement and some annual certification that the parcel is being maintained per the conservation easement.
2. **Agricultural Runoff Rates** - Properties which have a perpetual conservation easement which is monitored annually may have their agricultural land runoff rate reduced to the lowest rate. This monitoring can be supplied by a "qualified conservation organization" within the meaning of Section 170(h) of the Internal Revenue Code; whose purpose is conservation of open space (e.g. Land Trust, Nature Conservancy, Ducks Unlimited, etc.). The current ordinance has two agricultural rates that at current County rate of \$50 per Single Family Unit (SFU) leads to the following fee per acre:
 - a. Cropland and undisturbed timberland \$0.43/acre
 - b. Disturbed timberland and open space \$2.13/acre

Parcels having managed timber and lands under other conservation practices will have their rates lowered to lowest rate with following documentation:

- Conservation easement recorded on deed (including a restriction on clearing activities within 100 feet of any river edge).
- Certification that the Qualified Conservation Organization will be reviewing annually
- Agricultural land use in Tax System

3. **Federal and State Preserved Land** – For federal and state property that has as its purpose the preservation of land (Wildlife refuge etc) Beaufort County can accept certification from a federal/state agency designated for environmental protection (e.g. Department of Natural Resources, US Fish and Wildlife Service, etc.) that the property is being managed as if under a conservation easement. This will allow the first two incentives to apply as appropriate.

Project Summaries

May 2012



Beaufort County Public Works *Stormwater Infrastructure* Project Summary

Project: Pleasant Point Drive Outfall

Completed: Oct-11

Project #: 2006-030

Project Total: \$125,965.74

Narrative Description of Project:

Project improved 1,799 L.F. of drainage system. Bush hogged 1,500 L.F. of workshelf. Reconstructed 450 L.F. of outfall ditch. Constructed 333 L.F. of outfall ditch. Installed (4) catch basins, 1,016 L.F. of outfall pipe, rip rap and hydroseeded for erosion control.

Site Photographs

Before



During



After



Project: Pleasant Point Drive Outfall

Activity: Drainage Improvement











Project #: 2006-030

Township: Lady's Island

Completed: October 2011

Legend

Drainage Type

-  River
-  Stream
-  Outfall
-  Lateral
-  Lateral Pipe
-  Roadside
-  Roadside Pipe
-  Crossline
-  D/W
-  Access
-  Piped
-  Bleeder
-  Parcels

Constructed 333 LF of outfall ditch.

Installed (4) catch basins, 976 LF of outfall pipe, rip rap and hydroseeded for erosion control.

Installed 40 LF of outfall pipe.

Reconstructed 450 LF of outfall ditch.

Bush hogged 1,500 LF of outfall ditch.

ALFRED ALSTON CT

PLEASANT POINT DRIVE

0 70 140 280 420 560 Feet

1 inch = 201 feet

Prepared By: BC Stormwater Management Utility

Date Print: 4/25/12

File: C:/sethdata/projects/projectmaps/Pleasant Pt Dr 8-030



Beaufort County Public Works *Stormwater Infrastructure* Project Summary

Project: Baywood Subdivision

Completed: Feb-12

Project #: 2012-523

Project Total: \$16,347.45

Narrative Description of Project:

Project improved 1,555 L.F. of drainage system. Cleaned out 1,555 L.F. of roadside ditch. Jetted (39) driveway pipes and (2) crossline pipes.

Site Photographs

Before



During



After



Project: Baywood Subdivision - Baywood Drive/ Bayberry Lane/ Lilac Lane

Activity: Drainage Maintenance


Project #: 2012-523

Township: Bluffton

Completed: February 2012

Legend

Drainage Type

-  River
-  Stream
-  Outfall
-  Lateral
-  Lateral Pipe
-  Roadside
-  Roadside Pipe
-  Crossline
-  D/W
-  Access
-  Piped
-  Bleeder
-  Parcels

Cleaned out 1,000 LF of roadside ditch.

Jetted (29) driveway pipes.

Jetted (2) crossline pipes.

Jetted (1) crossline pipe.

Cleaned out 555 LF of roadside ditch.

0 25 50 100 150 200 Feet

1 inch = 126 feet

Prepared By: BC Stormwater Management Utility
Date Print: 4/19/12
File: C:/sethdata/projects/projectmaps/Baywood SD



Beaufort County Public Works *Stormwater Infrastructure* Project Summary

Project: St. Pauls Church Road Outfall

Completed: Mar-12

Project #: 2012-559

Project Total: \$18,227.24

Narrative Description of Project:

Project improved 700 L.F. of drainage system. Cleaned out 700 L.F. of outfall ditch. Installed (1) access pipe. Repaired washouts. Installed rip rap for erosion control.

Site Photographs

Before



During



After



Project: St. Pauls Church Road Outfall

Activity: Drainage Maintenance

Project #: 2012-559

Township: Port Royal Island

Completed: March 2012

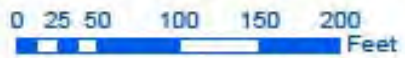
Repaired washouts.

Installed (1) access pipe.

Cleaned out 700 LF of outfall ditch.

Legend

- Drainage Type**
- River
 - Stream
 - Outfall
 - Lateral
 - Lateral Pipe
 - Roadside
 - Roadside Pipe
 - Crossline
 - D/W
 - Access
 - Piped
 - Bleeder
 - Parcels



1 inch = 108 feet



Beaufort County Public Works Stormwater Infrastructure Project Summary

Project: Rice Road

Completed: Apr-12

Project #: 2011-062

Project Total: \$47,092.68

Narrative Description of Project:

Project improved 1,460 L.F. of drainage system. Bush hogged 1,460 L.F. of outfall ditch. Grubbed and cleared 250 L.F. of workshelf. Project improved 1,747 L.F. Constructed 136 L.F. of roadside ditch and 130 L.F. of swale. Cleaned out 743 L.F. of roadside ditch. Installed (2) catch basins, (1) crossline pipe, 60 L.F. of outfall pipe, 400 L.F. of roadside pipe, straw mat and rip rap for erosion control. Repaired washout and driveway pipe. Cleaned out (1) catch basin. Jetted (2) driveway pipes and 250 L.F. of roadside pipe. Handseeded and hydroseeded for erosion control.

Site Photographs

Before



During



After



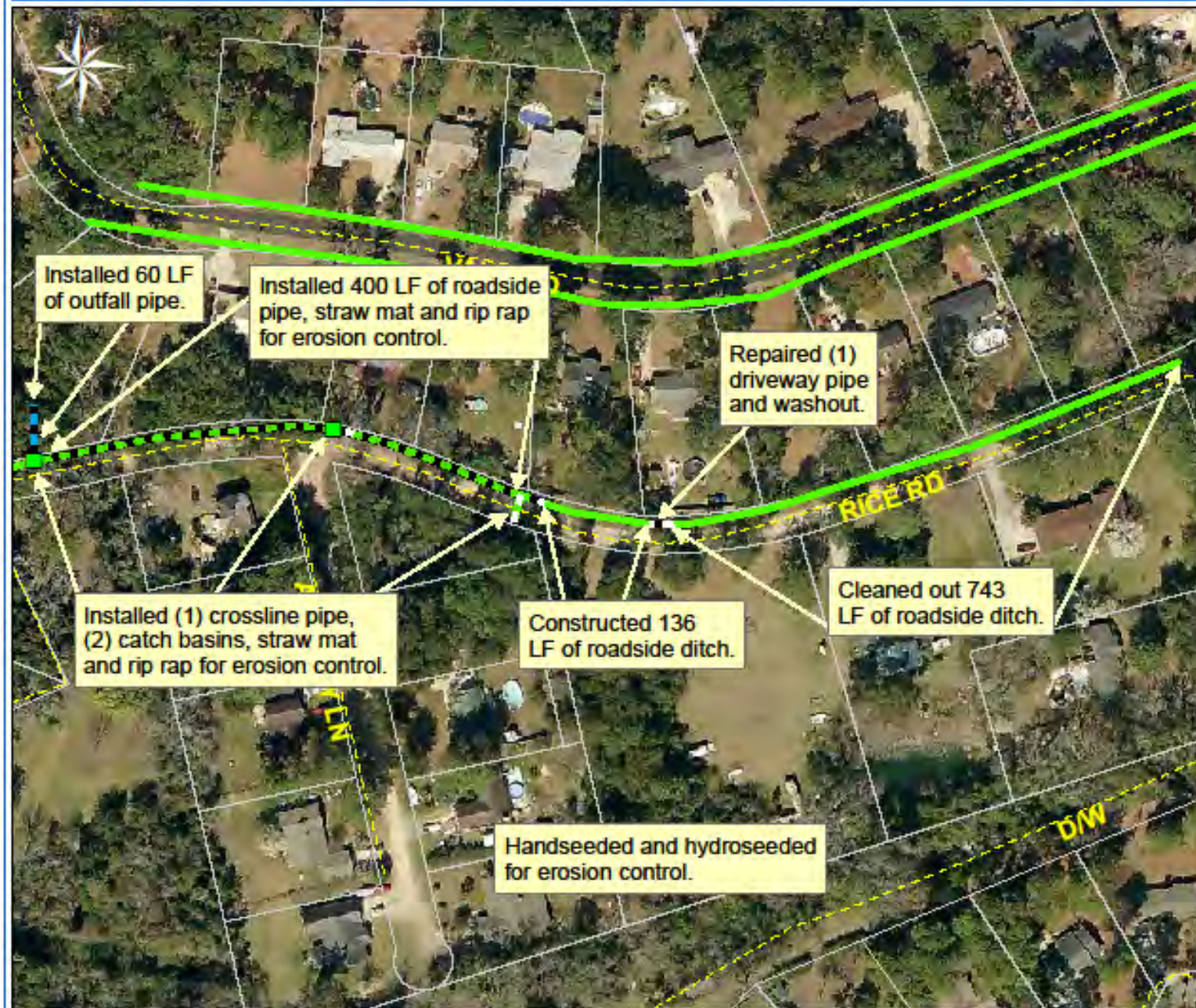
Project: Rice Road Map 1

Activity: Drainage Improvement

Project #: 2011-062

Township: Port Royal Island

Completed: April 2012



Legend

Drainage Type

-  River
-  Stream
-  Outfall
-  Lateral
-  Lateral Pipe
-  Roadside
-  Roadside Pipe
-  Crossline
-  D/W
-  Access
-  Piped
-  Bleeder
-  Parcels

0 50 100 200 300 400 Feet

1 inch = 141 feet

Prepared By: BC Stormwater Management Utility

Date Print: 4/17/12

File: C:/sethdata/projects/projectmaps/Rice Rd 11-062 Map1

Project: Rice Road Map 2

Activity: Vacuum Truck

Project #: 2011-062

Township: Port Royal Island

Completed: April 2012



Legend

Drainage Type

-  River
-  Stream
-  Outfall
-  Lateral
-  Lateral Pipe
-  Roadside
-  Roadside Pipe
-  Crossline
-  D/W
-  Access
-  Piped
-  Bleeder
-  Parcels



1 inch = 141 feet

Prepared By: BC Stormwater Management Utility

Date Print: 4/17/12

File: C:/sethdata/projects/projectmaps/Vac/Rice Rd 11-062 Map2

Small Drainage Projects

- Port Royal Island Bush Hog
Feb. 12– Port Royal Island
 - Bush hogged 108,278 ft. of outfall ditch & 7,077 ft. of roadside ditch.
 - Cost - \$56,046 or \$.49 per lineal foot.

Small Drainage Projects

- Wimbee Landing Road
Feb. 12 – Sheldon
 - Removed several blockages from the roadside ditch caused by the damming activities of beavers.

Small Drainage Projects

- Pleasant Point Drive Outfall
Feb. 12 – Lady's Island
– Repaired a washout.

Small Drainage Projects

- Thomas Sumpter Street Outfall
Mar. 12– Lady's Island
 - Cleaned out 365 ft. of outfall ditch and jetted out 232 ft. of outfall pipe.

Small Drainage Projects

- Backache Acres Pond
Mar. 12 – Sheldon
 - Installed grass pavers for pond emergency overflow.

Small Drainage Projects

- Oakhurst Road Outfall
Apr. 12 – Sheldon
 - Cleaned out 1,035 ft. of outfall ditch and jetted (2) crossline pipes.

Small Drainage Projects

- Coker Lane Outfall
Apr. 12 – Sheldon
 - Cleaned out 1,633 ft. of outfall ditch and jetted out (2) pipes.

Small Drainage Projects

- Chowan Creek Bluff Outfall
Apr. 12 – Lady's Island
 - Cleaned out 1,300 ft. of outfall ditch and installed (1) bleeder pipe.

Small Drainage Projects

- Devonwood Drive
 - Apr. 12 – Lady's Island
 - Replaced (1) crossline pipe.

Small Drainage Projects

- Beaufort High School Parking Lot
Apr. 12 – Lady's Island
 - Repaired (1) sinkhole mistakenly thought to be stormwater related. This is a reimbursable project.



Reformatted BMP Presentation

SW Utility Board

May 2, 2012

Outline

- **Short History of County/Utility's BMP manuals**
- **Reasons to reformat**
- **Other impacts on Manual**
- **Description of changes and additions**

History of Stormwater Controls

- 1994 – Flooding leads to Peak Controls
- 1995 – Closing of Broad Creek in HHI leads to Clean Water Task Force
- 1998 – Adoption of First Water Quality requirements – First BMP Manual
- 2009 – May River closure leads to Runoff Volume Controls

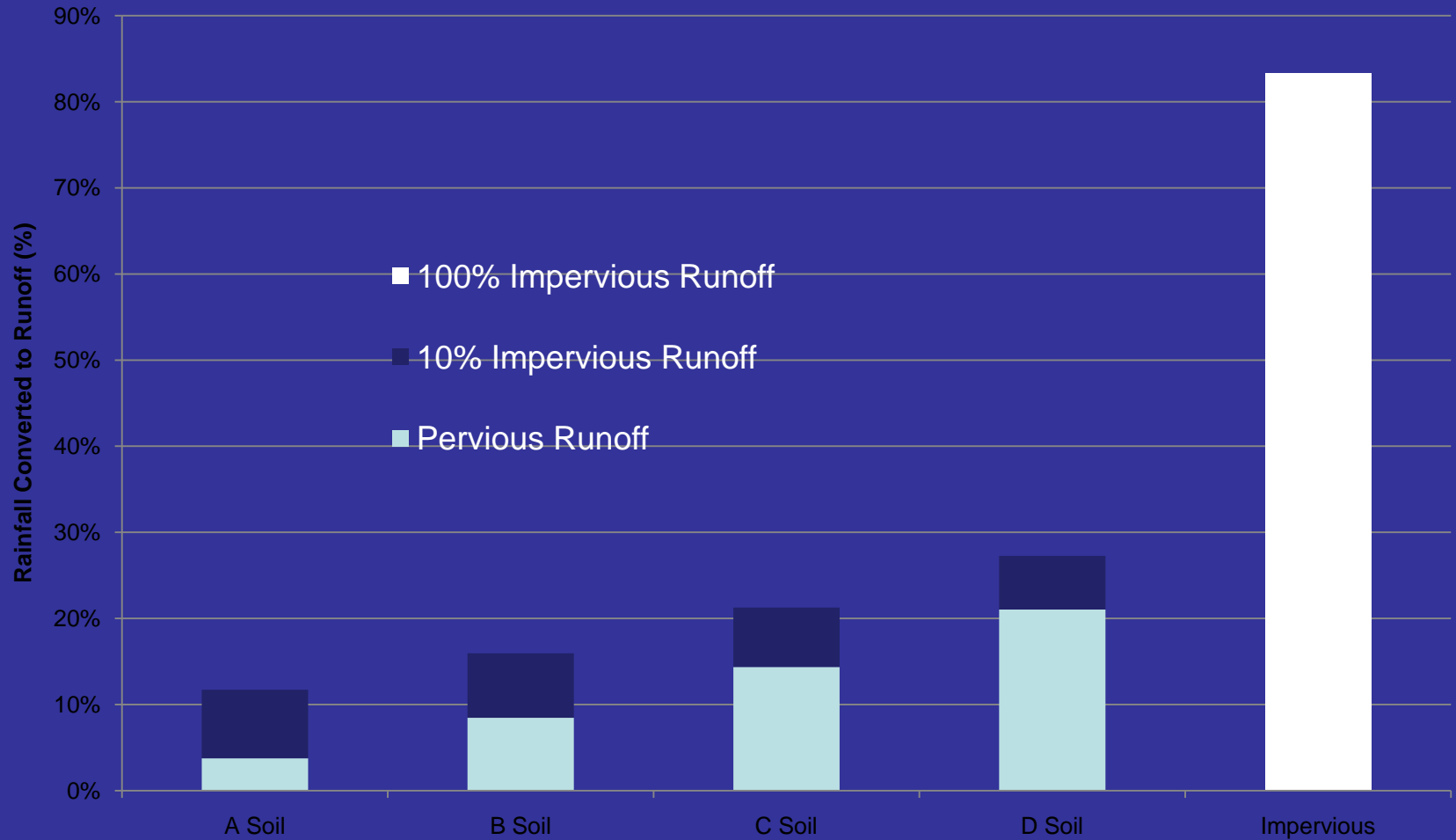
BMP Revisions

- **1998 – First BMP – Phosphorus**
- **2003 – Added Bacteria as targeted pollutant**
- **2008 – Added LID BMPs and Appendix adding Town of Bluffton SW Ordinance**
- **2009 – Added Nitrogen as targeted pollutant**
- **2010 – Added volume practices in Appendix C**

Equivalent/Effective Impervious Surface

- **Metric that measures how effectively impervious surface runoff is reduced relative to pre-development pervious surface runoff**
- **1998 –Adopts Antidegradation Goal on 10% Impervious Surface**
- **2003 - Adopts 5% goal for Bacteria**
- **2009 – Adopts 10% goal for Nitrogen**
- **2010 – Adopts 10% goal as equivalent to 95 percentile rainfall event**

Impervious Surface and Runoff



Reasons to Reformat

- **Manual had not been reformatted in any previous additions**
- **Turned out First practice was volume control which was an appendix**
- **Old water quality examples in manual did not show relationship to volume reductions**

Other Impacts on Manual

- **Form-based code initiative**
 - **Moving Division 4 of ZDSO to Manual**
 - **Simplifying Form-based code SW standards**
 - Lists purpose, exceptions
 - Lists antidegradation goals (% equivalent impervious surface) and peak requirement
 - Refers to BMP manual for details
- **Reviewing Step 2 Exemption Requests**

Other Impacts on Manual

- **FEMA Community Rating System**
 - **Peak shaving requirements**
 - **Credits for volume controls**
- **Improvements to Step 2 on-lot controls**
 - **Providing alternatives to Rain garden**
 - **Method to improve web-based system**
- **Pond Holding period concerning Copper**

BMP Stakeholder Input

- **Engineer Workshop – Feb 24, 2011**
 - **Input of flow of manual**
 - **Suggestions for improvements and additions**
 - **Movement of background info to Appendices**
- **Engineer Workshop – Jan 24, 2011**
 - **Decided not to establish peak flow credits**

BMP Manual Changes

- **Section 1 – minor changes**
- **Section 2 – moved SW regulations from ZDSO to this section**
- **Section 3 –**
 - **Moved documentation to Appendix –**
 - **Moved volume control to first section**
 - **Redid example sheets and exhibits**
 - **Added parts of Section 5 to this section**

BMP Manual Changes

- **Section 4 – Moved to Appendix B**
- **Section 5 – Most moved to Appendix A
some brought to Section 3**
- **Section 6 – Is now section 4**
- **Appendix A – Forms in Section 3 – new
A includes reference information**

BMP Manual Changes

- **Appendix B – Moved to appendix C –
New B is old section 4**
- **Appendix C – volume control moved to
Section 3 and Appendix A – New C is
maintenance agreement form and
Sediment control certification form**
- **Appendix D – moved to appendix C –
new D is Drainage plan requirements**

New Additions to BMP

- **Section 3**
 - Recalculated example forms
 - Wet Pond holding requirement
 - Addition Practice description
- **Section 2 – ZDSO SW Design Regulations**
- **Appendix E -New Worksheet and instructions for On-lot volume control**

Request of SW Board

- **Requesting Board Concurrence with Utilizing New Reformatted BMP**
 - **Minor additions**
 - **Better flow and easier to understand**
 - **Easier to use**
 - **Reviewed at SWIC mtg April 26, 2012**



Questions

Bob Klink
Dan Ahern

A STORMWATER MANAGEMENT AND UTILITY AGREEMENT

BETWEEN BEAUFORT COUNTY, SOUTH CAROLINA, AND

THE TOWN PORT ROYAL, SOUTH CAROLINA

DATED: _____

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WHEREAS, this Agreement is made on this ____ day of _____, 2012, by and between Beaufort County, South Carolina, and the Town of Port Royal, South Carolina, for the purpose of establishing the terms and conditions of the participation by the Town in a county-wide stormwater utility, which utility shall be operated by the County.

ARTICLE 1 - TITLE AND PURPOSE

1.00 *Title:* This intergovernmental agreement between Beaufort County, South Carolina, and the Town of Port Royal, South Carolina, shall be known as the “Stormwater Management and Utility Agreement Between Beaufort County, South Carolina, and the Town of Port Royal, South Carolina.”

1.01 *Purpose:* This Agreement is made for the purpose of defining the roles, responsibilities and financial relationship between the County and the Town with respect to the establishment, administration and operation of the Beaufort County Stormwater Utility, which includes the following:

- (a) Establishment of rates;
- (b) Use of revenue;
- (c) Acquisition of existing stormwater infrastructure;
- (d) Construction of new stormwater infrastructure;
- (e) Maintenance of stormwater infrastructure;
- (f) Operation of stormwater infrastructure;
- (g) Regulation and use of stormwater infrastructure; and,
- (h) Enhancement of water quality.

1.02 *References to County Ordinances:* This Agreement hereby incorporates by reference

Beaufort County, South Carolina, Ordinances 2005-33, 2008-29, and 2009-21 regarding the establishment of a Stormwater Utility. In the case of any conflict between the provisions of the Ordinances and this Agreement, the provisions of this Agreement shall control.

ARTICLE 2 - DEFINITIONS

2.00 *Definitions:* When used in this “Stormwater Management and Utility Agreement between Beaufort County, South Carolina, and the Town of Port Royal, South Carolina,” the following words shall have the meanings set forth in this Article 2:

2.01 *Agreement:* This Stormwater Management and Utility Agreement between Beaufort County, South Carolina, and the Town of Port Royal, South Carolina.

2.02 *County:* Beaufort County, South Carolina.

2.03 *County Wide Stormwater Management Study:* The study conducted by the County to determine the drainage infrastructure and maintenance needs within the various watersheds within the County. This became the Beaufort County Stormwater Master Plan dated February 20, 2006.

2.04 *Cost of Service Analysis and Rate Study:* The study conducted by the County which was adopted by County Council on August 22, 2005 to determine an equitable and appropriate rate structure for Stormwater Utility User Fees within all areas of the County, so that fees charged by the Stormwater Utility will be in compliance with provisions of S. C. Code Ann. 48-14-120(C)(Supp. 2010), and S. C. Regs. 72-310 (Supp. 2010).

2.05 *Stormwater Utility User Fee; Single Family Unit Rate (SFU).* The single-family unit fee rate shall be defined as the impervious area measurements obtained from a statistically representative sample of all detached single-family structures within Beaufort County. The

representative value will be 4,906 square feet.

2.06 *NPDES:* The National Pollutant Discharge Elimination System stormwater regulatory program established by the United States Environmental Protection Agency to address pollutants in stormwater discharged to waters of the United States. Phase II of this regulatory program impacts communities under 100,000 in population, small construction sites between one acre and five acres, and industrial sites owned and operated within communities under 100,000 population.

2.07 *Public Stormwater:* Stormwater runoff which is conveyed through a public drainage easement or public road right of way, and/or which some portion is generated from a public road right of way.

2.08 *Stormwater Infrastructure:* Real property, interests in real property, improvements to real property such as ditches, drains, pipes, culverts, catch basins, pumps, or the like, or any combination of them, used or useful in the collection and disbursement of storm and surface water, or the control of flooding. As used herein, Stormwater Infrastructure does not include drainage systems or facilities that are not publicly owned, and which do not carry public stormwater.

2.09 *Stormwater Management:* Control of storm and surface water, erosion, stormwater quality protection and flooding through the use of Stormwater Infrastructure, and the creation and enforcement of development standards related to storm and surface water.

2.09 *Stormwater Management Plan:* The plan developed by the County that addresses planning, design and construction of capital improvements to the Stormwater Infrastructure; acquisition of real property or interests in real property for the purposes of Stormwater Management; maintenance and repair of Stormwater Infrastructure; regulation of the use of

Stormwater Infrastructure; acquisition of equipment and other assets; regulation of impacts including any that may be mandated under the NPDES Phase II regulations, contracting with engineering, financial, legal, construction and other professionals for services in support of the Stormwater Utility, emergency preparedness related to storms and hurricanes, acquisition or construction of Stormwater Infrastructure, or any other functions required, useful or prudent for a program of Stormwater Management.

2.10 *Stormwater Utility User Fees:* Stormwater Utility User Fees shall mean the service fee imposed pursuant to this article for the purpose of funding costs related to stormwater programs, services, systems, and facilities. These fees will be calculated based upon the residential category for a parcel and/or the nonresidential parcel's impervious area and/or the vacant/undeveloped land category, as pursuant to the provisions of Beaufort County Ordinance 2005-33.

2.11 *Stormwater Utility:* The administrative organization created for the purposes of planning, designing, overseeing, funding, building, and maintaining Stormwater Infrastructure, either directly or through cooperative arrangements with other governmental bodies; and for administering and managing Stormwater Management throughout Beaufort County.

2.12 *Town:* The Town of Port Royal, South Carolina.

ARTICLE 3 - TERM OF THIS AGREEMENT

3.00 *Term of This Agreement:* The term and duration of this Agreement shall be as follows in this Article 3.

3.01 *Initial Term of this Agreement:* The Initial Term of this Agreement shall be for a

period of ten (10) years, commencing on the date of the execution hereof.

3.02 *Periodic Review of this Agreement:* The Stormwater Implementation Committee shall conduct periodic review of this Agreement to determine if it remains current and with the state of the art stormwater management and practices applicable to coastal areas. The Stormwater Implementation Committee shall provide recommendations to the municipalities and County for updates to the agreement if necessary.

3.03 *Extension of this Agreement:* The term of this Agreement may be extended at any time by the mutual agreement of the parties hereto, or upon the expiration of the initial ten (10) year term set forth in Article 3.01 above.

3.04 *Termination of this Agreement:* This Agreement may be terminated by either party hereto, by delivering written notice of the termination to the other party. Termination under this Article shall only be effective on the final day of any given County fiscal year. The written notice of termination shall be provided by the party terminating the Agreement no less than one hundred eighty days prior to the date the termination will be effective.

3.05 *Effect of Termination:* Upon termination of this Agreement under any provision of this Article 3, or otherwise, all rights and obligations of any party hereto, specifically including but not limited to the right of the County to charge Stormwater Utility User Fees to property owners in the Town, shall immediately end.

3.06 *Conveyance of Assets:* Upon termination of this Agreement under any provision of this Article 3, the County shall convey to the Town all of its right, title and interest in any Stormwater Infrastructure, including any stormwater easements, within the municipal limits of the Town. However, this shall not include Stormwater Infrastructure on County owned parcels or County road rights of way within the limits of the Town.

3.07 *Rebate of User Fees:* Upon termination of this Agreement under any provision of this Article 3, the County shall return to the Town any collected but unspent or unobligated Stormwater Utility User Fees collected from within the Town Limits.

ARTICLE 4 – FINANCE AND FUNDING

4.00 *Financial and Funding Relationship:* The Town shall provide the County with its Stormwater Utility User Fee collection Rate for its fiscal year prior to August 15 each year of this Agreement. This will be in the form of a letter to the County Administrator from the Town Manager. The Town shall also provide to the County an annual report of its stormwater fee expenditures for each fiscal year. This report shall be delivered by September 1 each year this Agreement is in effect.

4.01 *Use of Revenue:* In accordance with the provisions of S. C. Code Ann. 48-14-120(C) (Supp. 2010), and S. C. Regs. 72-310 (Supp. 2010), all Stormwater Utility User Fees collected within the Town, less an administrative fee, shall be returned to the Town. The administrative fee is to be calculated as a fixed dollar amount for each single family unit (SFU) billed by the Stormwater Utility. The Utility shall define its administrative costs each year during the annual budget process. For fiscal year 2012 the fee shall be \$2.80 per Single Family Unit (SFU) base rate applied to the fee paying lands within the limits of the Town. After fiscal year 2012, the Stormwater Implementation Committee shall conduct annual reviews of the Utility's administrative budget and recommend to the municipalities and County any changes to the amount billed per SFU. Along with its recommendation the Stormwater Implementation Committee and the County Stormwater Utility shall provide the Town an itemized proposal and

a written explanation for adjustments to the administrative services and deliverables to be provided in the coming fiscal year. Any proposal that requires Town Council approval shall be submitted to the Town by March 1 of each calendar year all other requests for approvals shall be submitted to the Town by March 15 of each calendar year. The Town shall provide a written recommendation of acceptance or rejection to the County Stormwater Utility by April 15 of the same year. Once agreed upon, the fee shall serve as the basis for the annual administrative fee to be calculated per Town SFU, and included in each entity's annual budget.

(a) The administrative fee shall be used by the County to defray the County's administrative costs in managing the Stormwater Utility.

(b) The Town shall use Stormwater Utility User Fees to provide Stormwater Management within the Town, including, but not limited to:

(i) The acquisition, design, construction, and maintenance of Stormwater Infrastructure, or repayment of bonded indebtedness issued to fund construction of Stormwater Infrastructure, in so far as the law and covenants of the bonds allow, or for repayment to the Town for general fund or other funds spent by the Town to fund Stormwater Management activities;

(ii) Acquisition of Stormwater Infrastructure, including any easements or other interests in real property which shall be held in the name of the Town;

(iii) Maintenance of Stormwater Infrastructure by the Town and its contractor(s,) or by direct services of the Stormwater Utility. Charges for services by the Stormwater Utility; shall be negotiated and approved by

the County and the Town, as is provided in Articles 4.03, 4.05(a), 5.05, and 5.07 below; The Town shall have the right of non exclusive use of direct maintenance services, and there shall be no minimum dollar amount required to be spent annually by the Town on any services provided by the Stormwater Utility;

(iv) Plan review and site inspections related to compliance with stormwater ordinances and standards for development within the Town as set forth in Articles 4.05, 4.06 and 4.07 below;

(v) NPDES Phase II permit compliance;

(vi) Payment of bond indebtedness or repayment of funds borrowed from the general fund or any other fund for the purpose of funding Stormwater Management projects or activities; and,

(vii) Any other services related to Stormwater Management.

4.02 *Further Agreements Authorized:* The Town and the County may negotiate and enter into agreements to share costs and responsibilities related to NPDES permit compliance. Such agreements and cost allocations shall be reflected in each entities annual budget and must be authorized by the Town Council and County Council.

4.03 *Cost of Services:* If the Town chooses to utilize the direct services of the Stormwater Utility, however described, they shall be accounted for at the County's actual cost of the equipment, materials, and personnel utilized in the delivery of the services.

4.04 *Setting of Stormwater Utility User Fee Rate (SFU's):* The Town shall be responsible each year for setting the Stormwater Utility User Fee Rate to be assessed on parcels

within the Town. The Stormwater Utility User Fee rate shall be set in accordance with S. C. Code Ann. 48-14-120(C) (Supp. 2010), and S. C. Regs. 72-310(G) (Supp. 2010), or any other applicable law or regulation.

4.05 *Plan Review and Site Inspection:* For all activities that constitute development within Town limits, the Town will provide review of plans and site inspections to ensure compliance with applicable laws, ordinances and regulations related to storm and surface water, erosion control and flooding

4.06 *Coordination of Services:* The Town shall identify a representative of its staff to serve as the contact person and coordinator for Stormwater Management Services, including services provided by the County within the Town, long range planning and water quality initiatives such as the NPDES Phase II requirements compliance, notification of problems, facilitating emergency access within any planned or future Planned Unit Developments within the Town, and advising the County on site-specific conditions within the Town.

ARTICLE 5 – ADMINISTRATION OF STORMWATER UTILITY

5.00 *Stormwater Utility:* The County has established a Stormwater Utility that administers funds and conducts a Stormwater Management program throughout the County.

5.01 *Stormwater Management Plan:* The County shall have the responsibility to develop and maintain a Stormwater Management Plan to be administered by the Stormwater Utility.

5.02 *Relationship of Plan to Agreement:* The Stormwater Management Plan developed and maintained by the Stormwater Utility shall incorporate the obligations of the County and Town

under this Agreement. In the case of any conflict between the provisions of the Stormwater Management Plan and this Agreement, the provisions of this Agreement shall control.

5.03 *Stormwater Utility User Fees:* The Stormwater Utility shall bill and collect parcel based Stormwater Utility User Fees from property owners, tenants, or other appropriate parties, pursuant to its authority and subject to any intergovernmental agreements, including this Agreement, and may also apply for, acquire and use any other funding from any public or private source in support of the Stormwater Management Plan as allowed by law.

5.04 *County Responsibilities:* The County, through the Stormwater Utility, shall have the following responsibilities:

(a) *Collection and Distribution of Fees:* Stormwater Utility User Fees within the Town limits shall be charged and collected by the County in accordance with the provisions of Article 4.0 of this Agreement; the Stormwater Utility User Fees shall be collected in accordance with S. C. Code Ann. 48-14-120(C) (Supp. 2010), and S. C. Regs. 72-310(G) (Supp. 2010), or any other applicable law or regulation, and shall not include provisions for relief from the payment of the Stormwater Utility User Fees; the County shall distribute the Town's Stormwater Utility User Fees less the County administrative costs as defined in Article 4.01, in the same manner as ad valorem taxes are distributed for each year this Agreement is in effect;

(b) *Provision of Services:* Provision of the services required under this Agreement.

(c) *Budgeting and Expenditure:* Setting the budget for the Stormwater Utility, and spending the revenues in accordance with any applicable ordinances

or agreements, including this Agreement;

(d) *Administrative Activities:* Managing all administrative activities of the Stormwater Utility, including but not limited to, fee assessment, collection and distribution, maintenance of accounting records, maintenance of stormwater data, implementation of the master plan, acquisition of easements, coordination with other agencies, reporting to the stormwater utility board;

(e) *Accounting:* Maintaining an accounting of revenues and expenditures on a jurisdictional or geographic basis, as may be set or described under any applicable ordinance or agreement, including this Agreement, the County shall provide the Town with an itemized annual accounting of all Stormwater Utility User Fees within the Town limits in the form of a budget report, including but not limited to: how parcel fees were determined, calculated, and assessed; total fees collected; total Administrative costs retained by the County; total fees in arrears, on which parcels and the status of the collection attempt(s) on such parcels; fee credits applied for; fee credits paid; and fees that required adjustment since the last billing. This budget report shall be parcel based and provided to the Town annually prior to February 15 throughout the term of this agreement as a electronic document compatible with the most current version of Microsoft Office. The County shall also maintain an annual accounting of all administrative costs associated with operating the Utility. Either the Town or County, at the sole expense of the requesting jurisdiction, may request a professional audit of any of the budget reports;

(f) *Operation and Maintenance:* At the direction and approval of the Town,

provide for the operation and maintenance of Stormwater Infrastructure within the Town; and,

5.05 *Delivery of Services:* The County shall coordinate the delivery of services hereunder through the Town Manager or his designee, via a Job Order Process as agreed to by the Town and County. All delivery of County services upon parcels within the Town limits shall be approved in writing by the Town before any work is performed or any funds may be returned to the County, and all delivery of stormwater infrastructure services within County Rights of Ways shall be coordinated with the Town.

5.06 *Coordination with Other Jurisdictions:* From time to time a need for coordination between all incorporated jurisdictions within the County and the County may occur, and it shall be the responsibility of the County to facilitate such coordination. The County will work with designated representatives from all jurisdictions within the County to ensure effective communication regarding issues impacting the Stormwater Infrastructure and the Stormwater Management Plan.

5.07 *Qualifications and Extents of Service:* Stormwater infrastructure in public road Rights of Ways, whether State, County or Municipal, shall be maintained by the road owner, as these areas are exempt from Stormwater Utility User Fees per Section 99-109 (b) of County Ordinance 2005-33. The Town shall retain the right to determine the qualifications for, extent of, and level of service required to maintain the Stormwater Infrastructure within the limits of the Town, with the exception of County and State road Rights of Way, which shall be designed and maintained in accordance with their current standards.

5.08 *Fee Credits:* The Town shall be notified of and will have the authority to review and comment on all County stormwater fee credit applications requested upon parcels within the

Town limits prior to such adjustments being made.

5.09 *Easements:* The Town and County will allow mutual blanket encroachments upon each other's existing easements, but only to enable the Town and/or County to perform stormwater utility related work within the limits of the Town.

ARTICLE 6: STORMWATER ORDINANCES AND DEVELOPMENT STANDARDS

6.00 *Applicable Standards:* The current hydrologic and hydraulic engineering and design standards of the County (BMP Manual) shall prevail in the design, construction, operation and maintenance of any portion of the Stormwater Infrastructure within the Town, unless superseded in the future by the creation of new hydrologic and hydraulic engineering and design standards of the Town, County or State, as may be required for specific work performed in Town, County or State rights of way with the exception of Redevelopment Areas. The Redevelopment Areas are shown on Attachment "A" to this document. The Town agrees that future stormwater volumes in the Redevelopment Area will not exceed those that exist prior to redevelopment of said properties unless it is scientifically documented that specific stormwater pollutants are generated and draining from the site and are causing site specific degradation of water quality in the receiving stream. In such a case, a Redevelopment Area will be required to correct stormwater discharge pollutant loads to a level that no longer degrades water quality in the receiving stream.

6.01 *State or Federal Laws or Regulations:* The Town and the County shall at all times comply with any applicable State or Federal Laws or regulations relating to Stormwater Management, Stormwater Infrastructure, erosion control or pollution.

6.02 *Plan Review and Site Inspection:* The Town shall be responsible for the review and

approval of all development plans within the Town, to ensure that all applicable regulations pertaining to construction site erosion, sedimentation, and pollution control as well to post-construction stormwater quantity and quality control are met. The Town shall be responsible for providing inspections during construction of all Town owned stormwater systems. The Town will continue its practice of review of privately owned stormwater systems upon completion to ensure that construction conforms with the approved development stormwater plan.

ARTICLE 7 – NPDES MS4 PHASE II PERMIT COMPLIANCE

7.00 *NPDES Compliance:* Should the Town be designated by the State of South Carolina for compliance with the NPDES program, the Town shall be responsible for the development of the NPDES MS4 Phase II permit application, the development of Best Management Practices required by the permit, and the implementation of the program of Best Management Practices set forth in the permit.

7.01 *Roles and Responsibilities:* The Town and County shall hold separate NPDES MS4 Phase II permits and shall each be responsible for maintaining compliance with their respective permit requirements.

7.02 *Coordination of Activities:* It is expected that some aspects of NPDES MS4 Phase II requirements will lend themselves to coordination and cooperation between the Town and the County. In such instances, coordination between the Town and the County shall be on the basis of a specific Minimum Control Measure (MCM) and shall be established by a separate written agreement that specifies the objectives, product deliverables, schedules, funding distribution, and the roles and responsibilities of each party in addressing these measures.

7.03 *Annual Reporting:* The Town and County will each be responsible for preparing an

annual report documenting the activities undertaken in support of NPDES MS4 Phase II permit requirements during the previous year and submitting the report to the South Carolina Department of Health and Environmental Control.

7.04 *Permit Related Costs:* All costs related to the NPDES MS4 Phase II permit shall be borne by the permit holder. In instances where the Town and County coordinate to meet permit requirements, costs may be shared on a basis that is detailed in a separate written agreement.

ARTICLE 8 – DATA ACQUISITION AND MANAGEMENT

8.00 *Roles and Responsibilities:* The Town and County shall each be responsible for acquiring and maintaining data sets that are relevant to Stormwater Management in their respective jurisdictions.

8.01 *Cost Sharing:* Cost sharing agreements for data acquisition may be made between the Town and County on a project-specific basis. The terms and details of any cost sharing agreement shall be detailed in a separate written agreement between the Town and County.

8.02 *Data Sharing:* The Town and County shall share acquired data at the request of the other. In such instances the Town and County will agree to abide by each entity's current data distribution policy.

8.03 *Data Types:* Types of data that the Town and County will acquire, maintain, and may share include but are not limited to, GIS data, aerial photography, LIDAR data, water quality monitoring data, stream gage data, financial and accounting data.

ARTICLE 9 – OTHER AGREEMENTS

9.00 *Scope and cost sharing:* From time to time various projects may be shared in

scope and/or cost between the County and the Town, or the County and multiple Municipalities within the County via Memos of Understanding, Contracts, and/or Joint Resolutions.

9.01 *Agreement Recommendations:* The Stormwater Implementation Committee shall be the vehicle whereby agreements of project scope and cost sharing between the County and multiple Municipalities within the County are reviewed and recommended to the Municipalities and County. It is understood that the Stormwater Implementation Committee shall have no authority to financially commit the Town or County to any project of any type and only will provide technical recommendations for such projects. . For agreements solely between the Town and the County, the Stormwater Implementation Committee Review is not required.

9.02 *Agreement approvals:* Other agreements between the County and the Town must be approved by the Town Council and the County Council or their designees.

ARTICLE 10 - MISCELLANEOUS

10.00 *Provisions Applicable to This Agreement:* The following general provisions are applicable to this Agreement:

10.01 *Binding Effect:* This Agreement shall inure to the benefit of and shall be binding upon the Town and County and their respective successors and assigns, if any are permitted hereunder.

10.02 *Amendment, Changes and Modifications:* Except as otherwise provided herein, this Agreement may not be effectively amended, changed, modified or altered without the written consent of the Town and the County.

10.03 *Severability:* In the event that any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render

unenforceable any other provision hereof.

10.04 *Execution in Counterparts:* This Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

10.05 *Applicable Law:* This Agreement shall be governed by and construed in accordance with the laws of the State of South Carolina.

10.06 *Captions:* The captions or headings herein are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Agreement.

10.08 *Plural/Singular:* Where appropriate, the use of the singular herein shall include and be deemed to be the plural, and the use of the plural herein shall be deemed to include the singular.

10.09 *No Third Party Beneficiaries:*The Town and the County hereto affirmatively represent that this Agreement is made solely for the benefit of the parties hereto and their respective successors and assigns and not for the benefit of any third party who is not a signature party hereto. No party other than the signature parties and their respective successors and assigns hereto shall have any enforceable rights hereunder, or have any right to the enforcement hereof, or any claim for damages as a result of any alleged breach hereof.

10.10 *Notices:* All notices, applications, requests, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when delivered in person, or mailed by regular first class mail, postage prepaid (in such case, delivery shall be deemed complete upon mailing), addressed as follows, or to such other place as may be designated in writing by the parties.

To the Town: THE TOWN OF PORT ROYAL
Van Willis, Manager
700 Paris Ave.
Port Royal,, SC 29935

To the County: BEAUFORT COUNTY, SOUTH CAROLINA
Gary Kubic, Manager
Post Office Box 1128
Beaufort, SC, 29902

10.11 *No Waiver:* No failure of either party hereto to exercise any power or right given to such party hereunder, or to insist on strict compliance by any other party to its obligations hereunder, and no custom or practice of the parties at variance with the terms hereof shall constitute a waiver of any party's right to thereafter demand strict compliance with the terms of this Agreement.

10.12 *Further Assurances and Corrective Documents:* The Town and the County agree to do, execute, acknowledge, deliver or cause to be done all such further acts as may be reasonably determined to be necessary to carry out this Agreement and give effect to the provisions hereof. The Town and the County agree that each shall, upon request, execute and deliver such other or corrective documents as may be reasonably determined to be necessary to carry out this Agreement and each of the provisions hereof.

In Witness Whereof, The Town of Port Royal, South Carolina, and Beaufort County, South Carolina, by and through their duly authorized officers, have set their hands and seals on

this ___ day of _____, 2012.

WITNESSES:

THE TOWN OF PORT ROYAL,
SOUTH CAROLINA

By: _____

Samuel Murray, Mayor

Attest: _____

Van Willis,, Town Manager

WITNESSES:

BEAUFORT COUNTY, SOUTH CAROLINA

By: _____

Wm. Weston J. Newton, Chairman

Attest: _____

Gary Kubic, Manager



Reformatted BMP Presentation

SW Utility Board

May 2, 2012

Outline

- **Short History of County/Utility's BMP manuals**
- **Reasons to reformat**
- **Other impacts on Manual**
- **Description of changes and additions**

History of Stormwater Controls

- 1994 – Flooding leads to Peak Controls
- 1995 – Closing of Broad Creek in HHI leads to Clean Water Task Force
- 1998 – Adoption of First Water Quality requirements – First BMP Manual
- 2009 – May River closure leads to Runoff Volume Controls

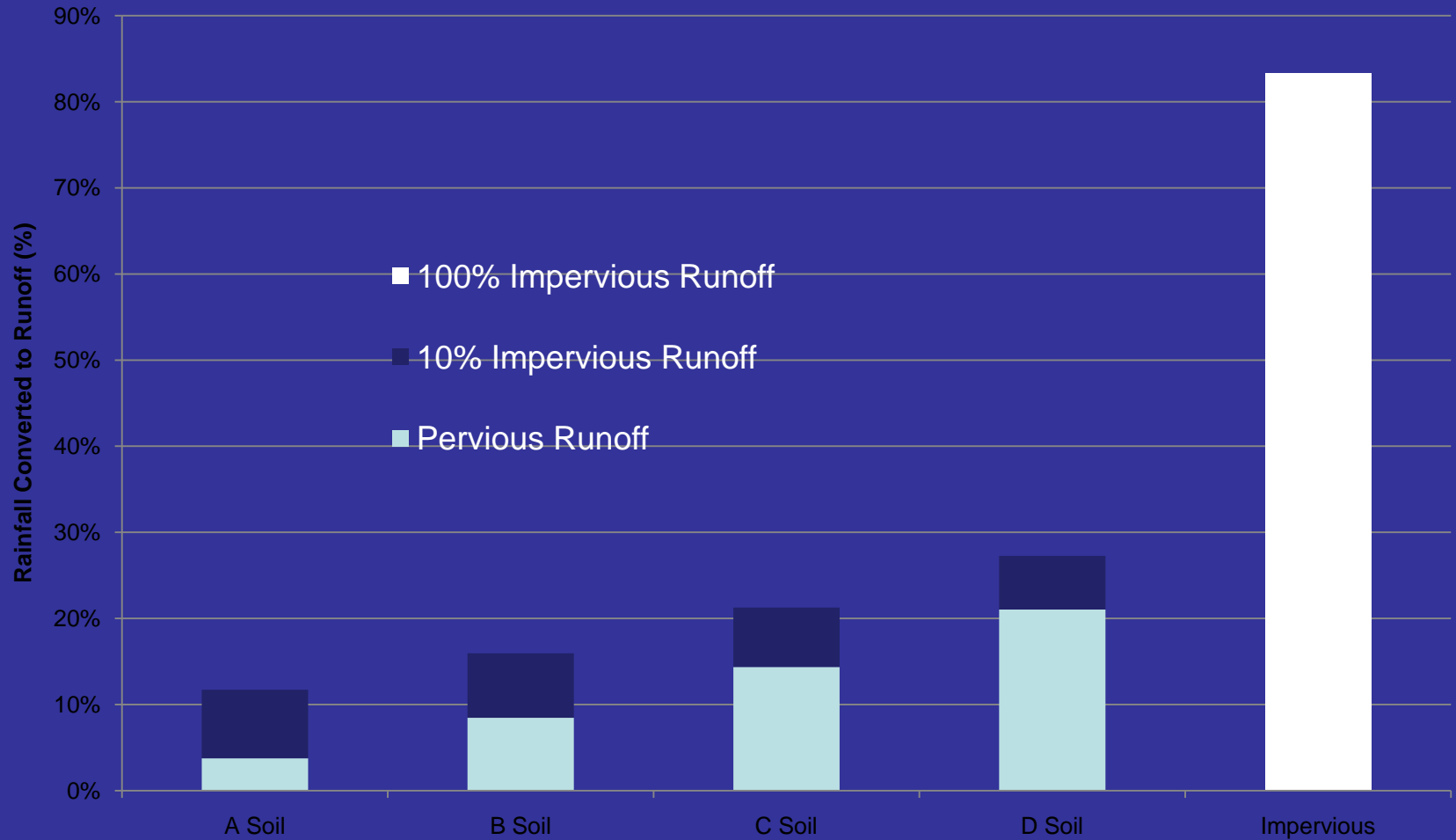
BMP Revisions

- **1998 – First BMP – Phosphorus**
- **2003 – Added Bacteria as targeted pollutant**
- **2008 – Added LID BMPs and Appendix adding Town of Bluffton SW Ordinance**
- **2009 – Added Nitrogen as targeted pollutant**
- **2010 – Added volume practices in Appendix C**

Equivalent/Effective Impervious Surface

- **Metric that measures how effectively impervious surface runoff is reduced relative to pre-development pervious surface runoff**
- **1998 –Adopts Antidegradation Goal on 10% Impervious Surface**
- **2003 - Adopts 5% goal for Bacteria**
- **2009 – Adopts 10% goal for Nitrogen**
- **2010 – Adopts 10% goal as equivalent to 95 percentile rainfall event**

Impervious Surface and Runoff



Reasons to Reformat

- **Manual had not been reformatted in any previous additions**
- **Turned out First practice was volume control which was an appendix**
- **Old water quality examples in manual did not show relationship to volume reductions**

Other Impacts on Manual

- **Form-based code initiative**
 - **Moving Division 4 of ZDSO to Manual**
 - **Simplifying Form-based code SW standards**
 - Lists purpose, exceptions
 - Lists antidegradation goals (% equivalent impervious surface) and peak requirement
 - Refers to BMP manual for details
- **Reviewing Step 2 Exemption Requests**

Other Impacts on Manual

- **FEMA Community Rating System**
 - **Peak shaving requirements**
 - **Credits for volume controls**
- **Improvements to Step 2 on-lot controls**
 - **Providing alternatives to Rain garden**
 - **Method to improve web-based system**
- **Pond Holding period concerning Copper**

BMP Stakeholder Input

- **Engineer Workshop – Feb 24, 2011**
 - **Input of flow of manual**
 - **Suggestions for improvements and additions**
 - **Movement of background info to Appendices**
- **Engineer Workshop – Jan 24, 2011**
 - **Decided not to establish peak flow credits**

BMP Manual Changes

- **Section 1 – minor changes**
- **Section 2 – moved SW regulations from ZDSO to this section**
- **Section 3 –**
 - **Moved documentation to Appendix –**
 - **Moved volume control to first section**
 - **Redid example sheets and exhibits**
 - **Added parts of Section 5 to this section**

BMP Manual Changes

- **Section 4 – Moved to Appendix B**
- **Section 5 – Most moved to Appendix A
some brought to Section 3**
- **Section 6 – Is now section 4**
- **Appendix A – Forms in Section 3 – new
A includes reference information**

BMP Manual Changes

- **Appendix B – Moved to appendix C –
New B is old section 4**
- **Appendix C – volume control moved to
Section 3 and Appendix A – New C is
maintenance agreement form and
Sediment control certification form**
- **Appendix D – moved to appendix C –
new D is Drainage plan requirements**

New Additions to BMP

- **Section 3**
 - Recalculated example forms
 - Wet Pond holding requirement
 - Addition Practice description
- **Section 2 – ZDSO SW Design Regulations**
- **Appendix E -New Worksheet and instructions for On-lot volume control**

Request of SW Board

- **Requesting Board Concurrence with Utilizing New Reformatted BMP**
 - **Minor additions**
 - **Better flow and easier to understand**
 - **Easier to use**
 - **Reviewed at SWIC mtg April 26, 2012**



Questions

Bob Klink
Dan Ahern



Impaired Waters Update

SW Utility Board

May 2, 2012

Outline

- **Water Use and Standards**
- **Impaired Waters List – 303d**
- **Stormwater Related Impairments**
- **Recent Shellfish Monitoring Data**
- **Possible conditions when new prohibited areas are designated**

Classifications and Standards

- **All Waters of State are classified**
 - **ORW – Outstanding Resource Waters**
 - **SFH – Shellfish Harvesting Waters**
 - **SW – Freshwaters**
 - **SA &SB – Tidal Saltwaters**
- **All waters have certain designated uses**
 - **Contact Recreation**
 - **Aquatic Life**

Classifications and Standards

- **Some waters have additional designated uses**
 - ORW
 - SFH
- **For each water use there are standards linked to use like**
 - Bacteria; temperature; pH; turbidity; metals; oxygen ; prohibitions; etc

Key Standards

- **Bacteria**
 - SFH – 14/43
 - SA & SB – 200/400
- **Oxygen**
 - SFH, SA , SB – 5, 5, 4
- **Turbidity**
 - SFH, SA, SB – 25 NTU
- **Toxic Pollutants - ex Copper**
 - SFH, SA, SB – 5.8/3.7 ug/l (CMC/CCC)

Other Standards

- **Prohibitions**

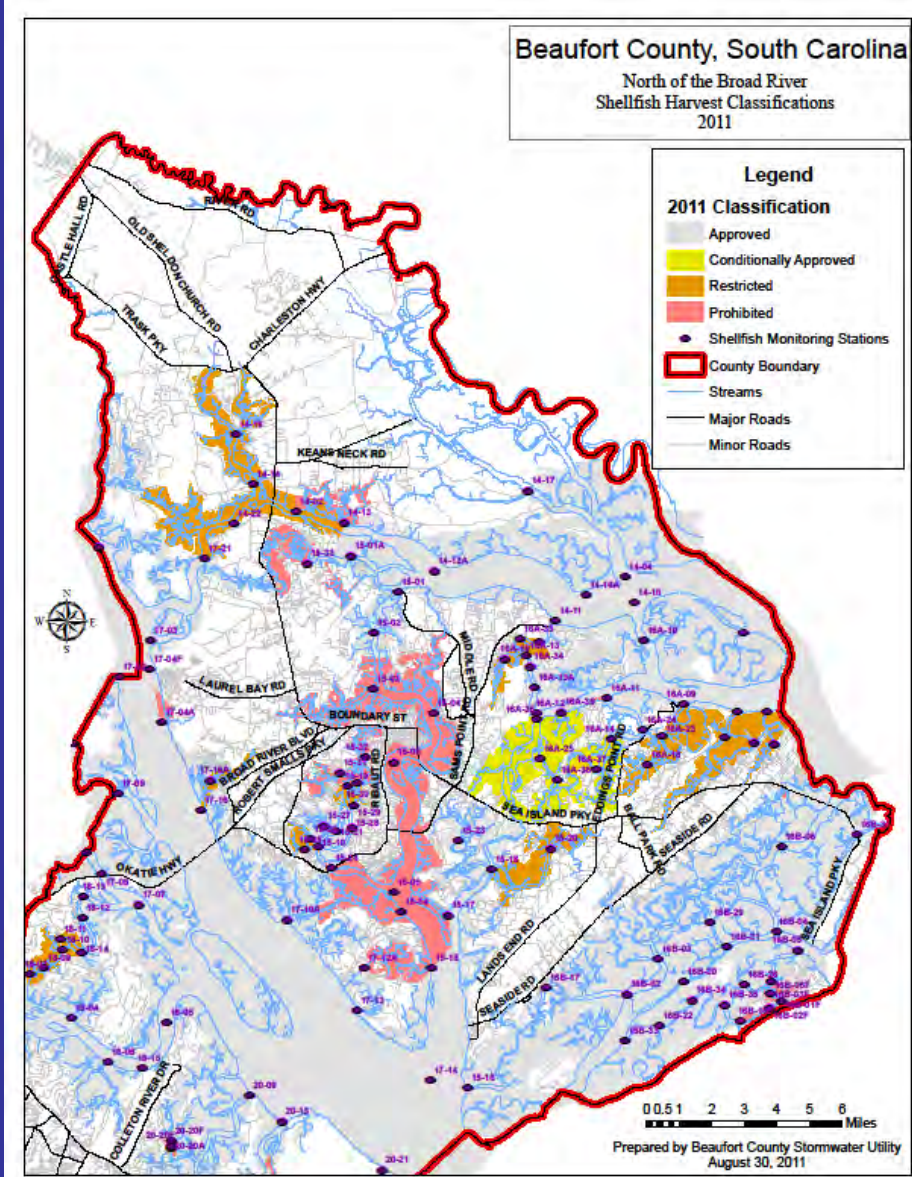
- **ORW – No WWTP discharges; dumping/disposal**

- **SA, SB, Freshwater, SFH – Fish consumption**

Impaired Waters List

- **Monitoring Establishes whether Standards are being met (305B)**
- **Violations listed by Use restricted and Cause**
 - **Shellfish Harvesting – Fecal Coliform**
 - **Aquatic Life – Copper, Turbidity, DO**
 - **Recreation – Fecal Coliform**

Monitoring Stations



Draft 2012 Waters List

- **Shellfish Harvesting Use Impairments**
 - 26 sites with elevated Fecal coliform
- **Aquatic Life**
 - 4 sites with low DO
 - 2 sites with high CU and 2 with CU/Turb
 - 10 sites with Turbidity
- **Recreation**
 - 2 sites with elevated fecal coliform

Impacts of TMDLs on List

- **Developing a TMDL removes impaired waters from list and put on to new list of waters with approved TMDL**
 - **Okatie River Shellfish violations – 4 sites**
 - **Beaufort River low DO violations – 7 sites**
- **The Impaired list also has targeted years for TMDL development**

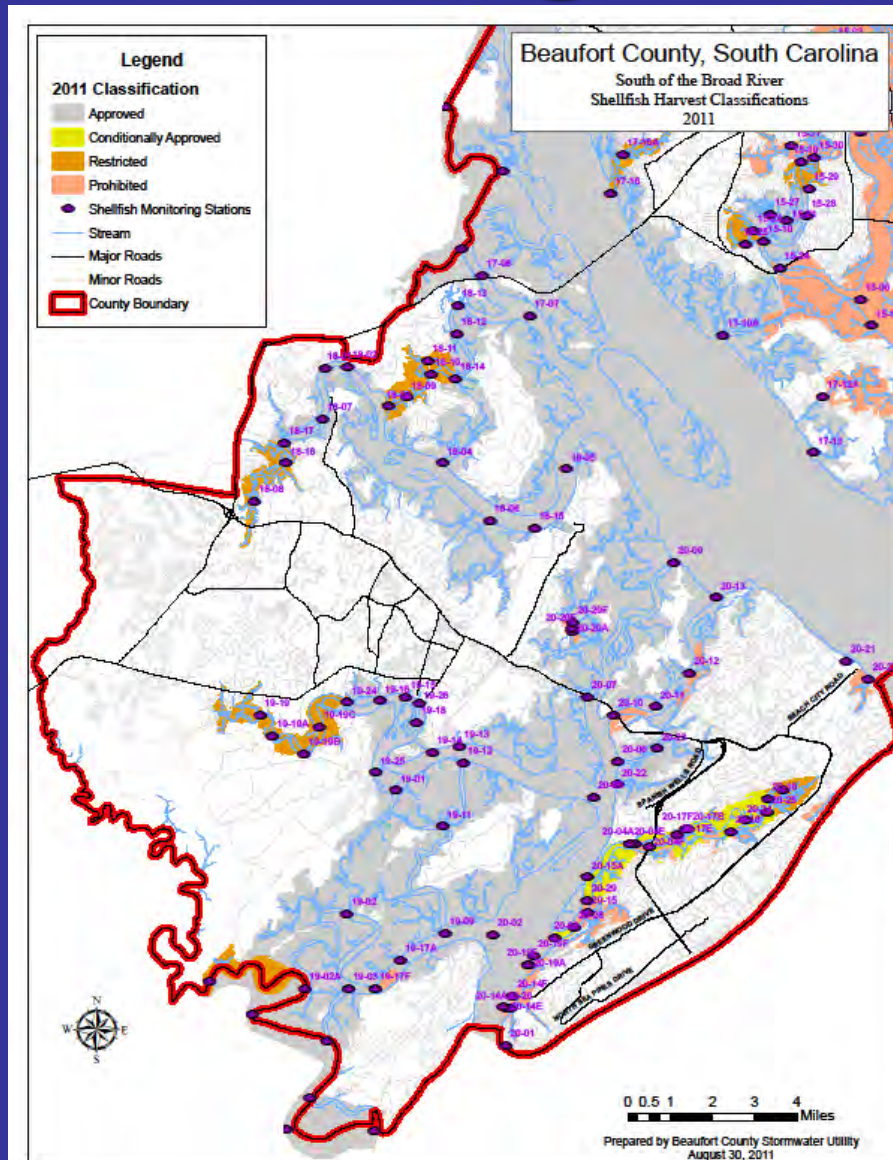
Target Years for TMDLs

- **Target Dates for TMDLs**
 - **Fish Haul Creek FC - 2013**
 - **St Helena Sound Turbidity – 2013/2014**
 - **St Helena Area FC - 2014**
 - **Battery Creek FC - 2016**
 - **May River FC - 2020**
 - **Metal violations - 2020-2025**

Historic Changes

Standard Violated	2008	2010	2012 draft
FC in SFH	44	28	26
Turbidity	6	6	10
Dissolved Oxygen	5	5	4
Copper	4	3	2
Copper/Turbidity	2	2	2
FC in Recreation	1	2	2

Monitoring - South



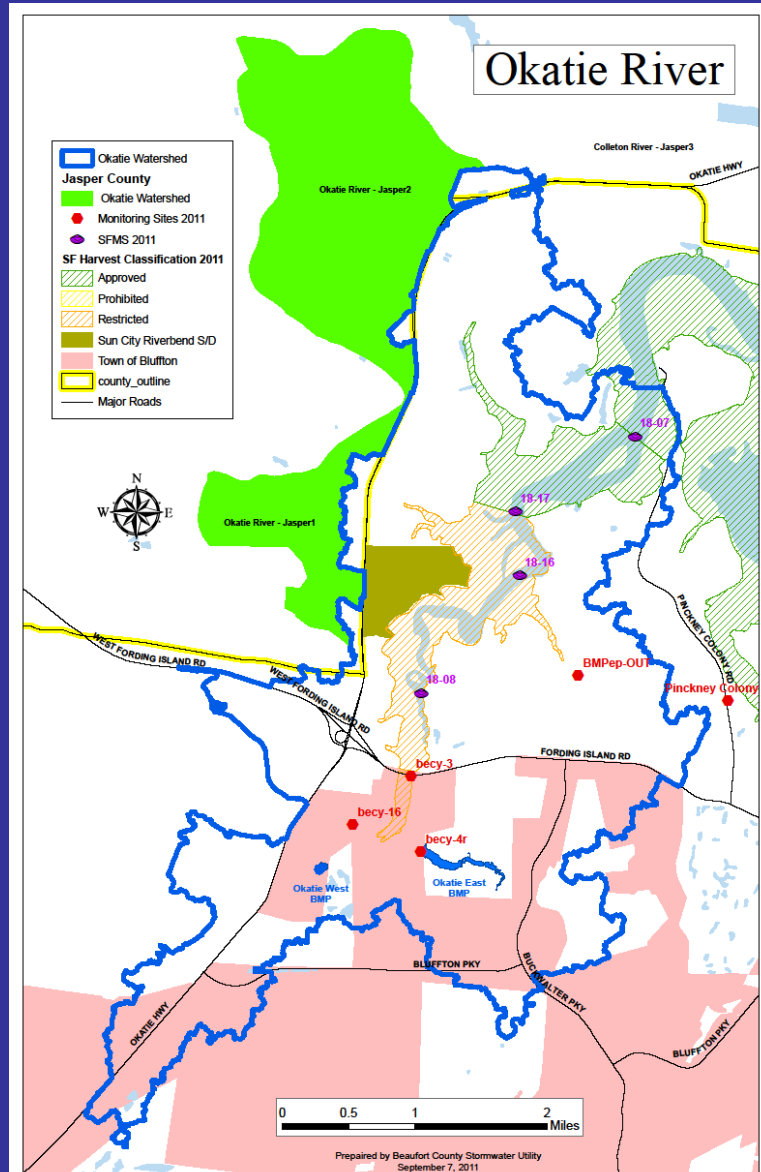
Presentation of Shellfish Monitoring Data

- Will present 2009 – 2011 data in simple format - #/#
 - First # is number samples above 14
 - Second # is number of samples above 43
- Areas presented; Okatie and May Rivers, Battery, Huspah, and Capers Creeks
- 2011 data from new Stations

Okatie River Data

Okatie Stations	2009	2010	2011
18-08	9/5	10/4	8/5
18-16	7/3	5/1	9/3
18-17	4/0	3/1	4/0
18-07	0/0	3/0	2/1
18-01	0/0	2/0	3/1
18-02	0/0	3/0	3/1

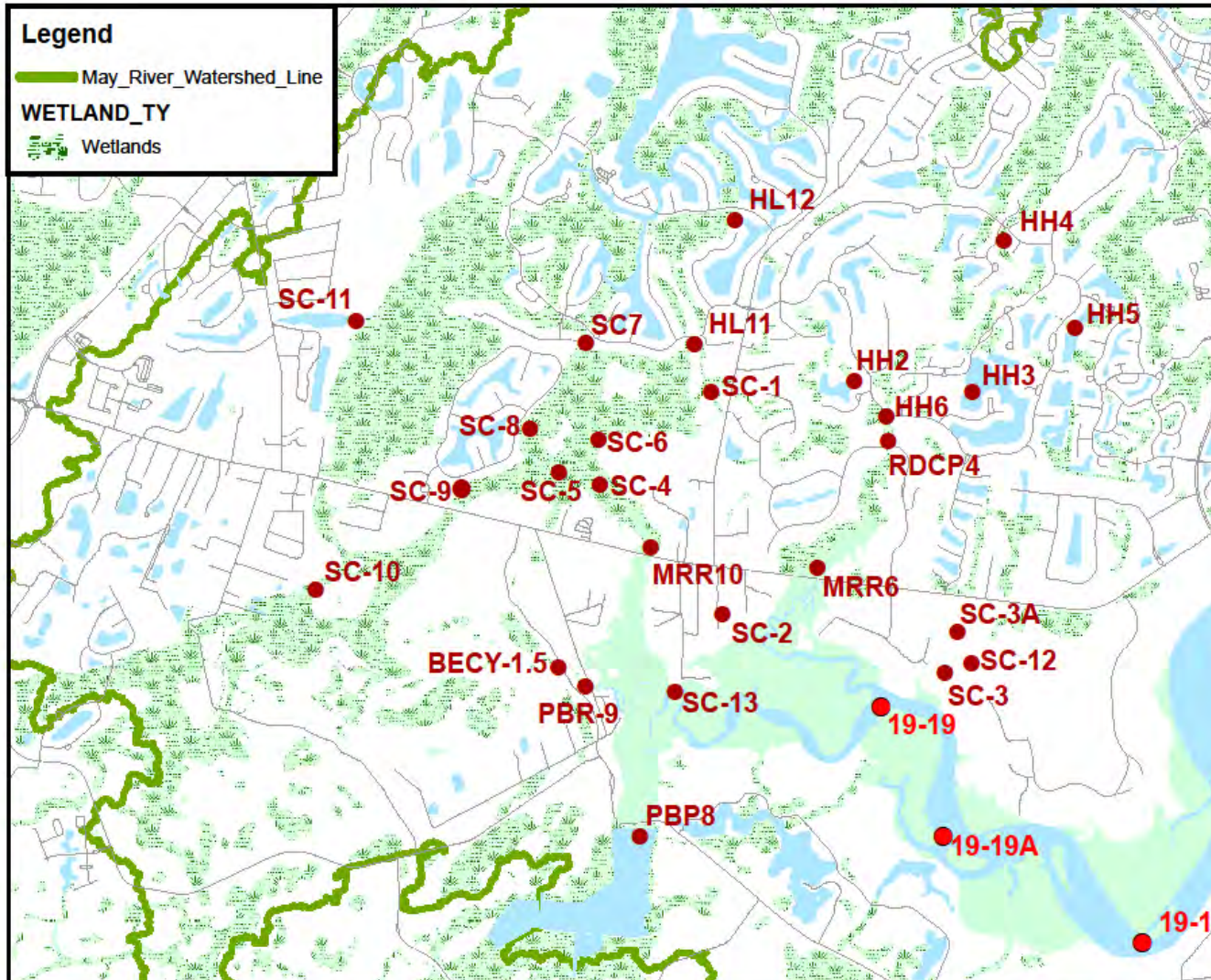
Okatie River Stations



May River Stations

May River Stations	2009	2010	2011
19-19	12/3	10/6	7/5
19-19A	6/2	9/5	7/1
19-19B	6/3	8/4	6/1
19-19C	3/0	5/2	3/0
19-24	3/1	2/2	2/0

May River Stations

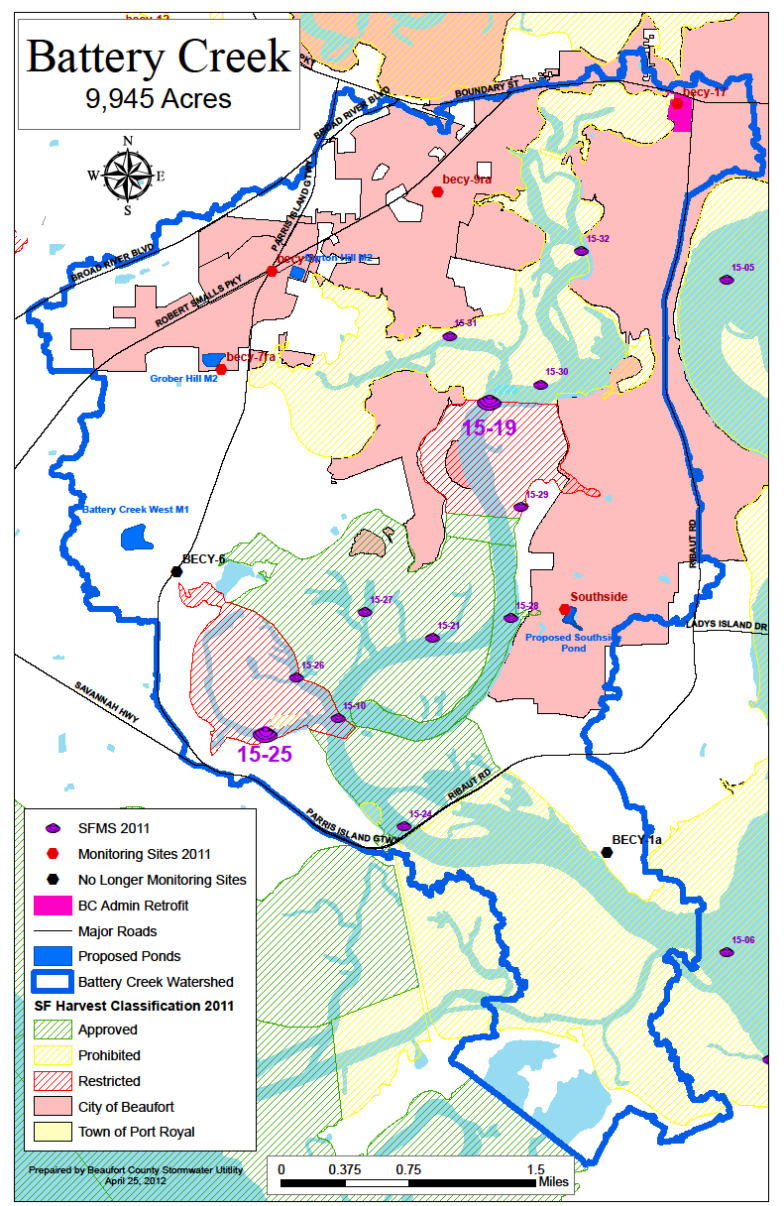


SCDHEC Shellfish & Weekly Sampling Sites within Stoney and Rose Dhu Cree

Shellfish Data Battery Creek

Battery Creek	2009	2010	2011
15-30	5/2	3/3	4/3
15-19	3/2	6/0	5/2
15-29	3/2	4/0	2/0
15-26	4/1	4/1	3/0
15-25	2/0	6/3	2/1
15-10	1/0	0/0	1/0

Battery Creek Stations



Huspah Creek Data

Huspah Creek	2009	2010	2011
14-18	2/2	9/3	4/1
14-14	2/1	6/3	1/0
Whale	Branch	Stations	
14-22	2/0	2/2	0/0
14-02	2/2	4/1	1/0
17-21	2/1	1/0	1/0

Longer Term Analysis

Station	2006	2007	2008	2009	2010	2011
14-18	5/2	4/0	8/2	2/2	9/3	4/1
14-14	3/1	1/0	3/0	2/1	6/3	1/0
15-20	4/1	3/1	6/2	3/2	7/3	5/1
15-18	0/0	1/0	0/0	0/0	1/1	1/0

Recent 2011 Data

- **Albergotti Creek – 15-03 – 2/1**
- **Beaufort River Sites**
 - 15-04 – 1/1
 - 15-05 – 1/1
 - 15-06 – 2/0



Questions

**This is unofficial analysis
SC DHEC has final decision on
water use status**

**Beaufort County
Stormwater Management Utility Board
Meeting Agenda June 6, 2012**

Location: **County Council Chambers
Beaufort SC, 29901**

April 23, 2012 draft,

- 1) **Call to Order:** Don Smith
 - A. Approve meeting agenda
 - B. Approval of minutes from previous meeting: May 2, 2012

- 2) **Introductions**

- 3) **Public Comment**

- 4) **Reports**
 - A. SW/Form-based Code – Subcommittee report
 - B. Monitoring Update–Bob Klink
 - C. Upcoming Professional Contracts Report – Dan Ahern
 - D. Utility Updates – Dan Ahern
 - E. Maintenance Project Report – Eddie Bellamy

- 5) **Unfinished Business**
 - A. Regional Coordination – Dan Ahern
 - B. IGA Agreements – Rob McFee

- 6) **New Business** –
 - A. 10 Year Report – Alan Eisenman and Auditors
 - B. SESWA LID Case Studies

- 7) **Public Comment**

- 8) **Next Meeting/Agenda**

- 9) **Adjournment**